Uploaded Date	Channel	Video URL	Video Title	Description	
2021 02 04	NASA STI Program	https://youtu.be/26NcmoVU_FM	Receiving and Processing Isolators and the Handling of Martian Samples	Full Title: Receiving and Processing Isolators and the Handling of Martian Samples Inside a BSL-4+ Containment Facility: Summary Video Presentation Teaser For more information, see the record for this video on the NASA STI Repository: https://ntrs.nasa.gov/citations/20205010412 NASA STI Program: https://sti.nasa.gov NASA Technical Reports Server: https://ntrs.nasa.gov Facebook: https://www.Facebook.com/nasastiprogram Twitter: @NASA_STI	Transcript Link
2021 02 04	NASA STI Program	https://youtu.be/c7YprboGKZE	Martian Regolith as a Substrate for Foreign Planetary Horticulture	For more information, see the record for this video on the NASA STI Repository: https://ntrs.nasa.gov/citations/20205008585 NASA STI Program: https://sti.nasa.gov NASA Technical Reports Server: https://ntrs.nasa.gov Facebook: https://www.Facebook.com/nasastiprogram Twitter: @NASA_STI	Transcript Link
2018 05 03	NASA STI Program	https://youtu.be/RiPzzA281E0	Rocket Engine Testing the NASA Way!	Article: “Next-Generation RS-25 Engines for the NASA Space Launch System” http://go.usa.gov/xQ8Jm Related Articles: http://go.usa.gov/xQ8Jv NASA STI Program: https://sti.nasa.gov NASA Technical Reports Server: https://ntrs.nasa.gov Facebook: https://www.Facebook.com/nasastiprogram Twitter: @NASA_STI Stennis Space Center has long been known as the agency’s largest rocket testing facility and they have been extremely busy with the testing of the upgraded RS-25 engines. In fact all RS-25 Engine testing happens exclusively at Stennis Space Center! If these look familiar to you, it may be due to the fact that they were used as the space shuttle main engine for the last 30 years. Compared to the 3 RS-25 engines that the space shuttle had the SLS will utilize 4 of them to produce 2 Million pounds of thrust. The thorough testing of the RS-25 plays an essential role in upholding NASA’s high standards of efficient and reliable engines.	Transcript Link
2018 02 01	NASA STI Program	https://youtu.be/hdwbJ23ZS7s	U.S. Spacesuit Knowledge Capture Program	The U.S. Spacesuit Knowledge Capture Program, managed by NASA Johnson Space Center, seeks to capture knowledge and lessons learned from well-known experts in the fields of EVA, spacesuits, and portable life support systems. The presentation materials and the lectures with closed captioning are available through the NESC Academy Online: https://nescacademy.nasa.gov/category/5/sub/27	Transcript Link

2017 11 22	NASA STI Program	https://youtu.be/CebXCobtIgc	ELaNa - Educational Launch of Nanosatellites	The Launch Services Program (LSP) at NASA's Kennedy Space Center in Florida manages a fun and unique program known as Educational Launch of Nanosatellites or ELaNa. This program enables students in the Science, Technology, Engineering and Mathematics fields to work directly with Nanosatellites and NASA. The students are involved in all aspects of the process from Development to Assembly and testing. CubeSats are small 10x10x10 CM (About 4 Inche Cube) satellites that can do a multitude of tasks once they are released in space. These ELaNa missions are the first Educational Cargo to be carried on launch vehicles for LSP. Links: Article: ELaNa - Educational Launch of Nanosatellite Enhance Education Through Space Flight http://go.usa.gov/xnKGq Related Articles: http://go.usa.gov/xnKGm NASA STI Program: https://sti.nasa.gov NASA Technical Reports Server: https://ntrs.nasa.gov Facebook: https://www.Facebook.com/nasastiprogram Twitter: @NASA_STI	Transcript Link
2017 10 18	NASA STI Program	https://youtu.be/jQybq4ZUoYQ	Flight Evolution - PRSEUS, A Composite Material for Greener Flight	Pultruded Rod Stitched Efficient Unitized Structure or PRSEUS is a process that stitches lightweight composite materials together that can assist in the development of lighter, damage-tolerant aircraft. This product could help allow jet engines to burn less fuel therefore making it safer and greener to fly. Links: Article: Development of the PRSEUS Multi-Bay Pressure Box for a Hybrid Wing Body Vehicle http://go.usa.gov/xnCuJ Related Articles: http://go.usa.gov/xnCuS NASA STI Program: https://sti.nasa.gov NASA Technical Reports Server: https://ntrs.nasa.gov Facebook: https://www.Facebook.com/nasastiprogram Twitter: @NASA_STI	Transcript Link
2017 08 09	NASA STI Program	https://youtu.be/-CZwLp8fC6E	NASA Kennedy Space Center - Home of the Commercial Crew Program	The NASA Scientific and Technical Information Program visits NASA's Kennedy Space Center to witness the launch of the Falcon 9 rocket, which is manufactured by one of NASA's commercial providers, SpaceX. Did you know that Kennedy Space Center is the home of NASA's Commercial Crew Program? This program provides human access to the International Space Station and low Earth orbit via the commercial sector. Visit #NTRS for documents regarding the Commercial Crew Program at Kennedy Space Center: https://go.usa.gov/xRVZe Links: Article: The Evolution of the NASA Commercial Crew Program Mission Assurance Program - https://go.usa.gov/xREyJ Related Articles: https://go.usa.gov/xRVZe NASA STI Program: https://sti.nasa.gov NASA Technical Reports Server: https://ntrs.nasa.gov Facebook: https://www.Facebook.com/nasastiprogram Twitter: @NASA_STI	Transcript Link

2017 07 17	NASA STI Program	https://youtu.be/dDi3Db2-4bY	NASA Langley Research Center Gantry - STI Centennial Campaign	The NASA Scientific and Technical Information Program visits the NASA Langley Research Center Gantry, also know as the Lunar Landing Research Facility (LLRF) to celebrate the Langley Centennial birthday. This large steel structure was first used by the Apollo astronauts to practice their decent to the lunar surface. The LLRF is still used today as a crash testing site for aircraft and a water impact drop facility to NASA's Orion Multipurpose Crew Vehicle. Visit the NTRS for documents detailing research performed at the LLRF https://go.usa.gov/xNhak #nasalangley100	Transcript Link
2016 12 07	NASA STI Program	https://youtu.be/51-qNG4qvq8	NASA's Research Access Policy	NASA has developed an agency plan, and associated policy, outlining a framework for activities to increase public access to scientific publications and digital scientific data resulting from NASA-funded research. For more information, visit https://sti.nasa.gov/research-access	Transcript Link
2016 12 07	NASA STI Program	https://youtu.be/I_7p2nIce2k	PubSpace Video Tutorial for Civil Servants	An instructional video for NASA Civil Servants to serve as a guide to submitting peer-reviewed, accepted manuscripts for deposit to PubSpace. For questions, please contact the Research Access Help Desk at https://sti.nasa.gov/contact-us or navigate to https://sti.nasa.gov/research-access-frequently-asked-questions.	Transcript Link
2016 12 07	NASA STI Program	https://youtu.be/R8_TjceLiH4	PubSpace Video Tutorial for Grantees	An instructional video for NASA grantees (and some contractors) to serve as a guide to submitting peer-reviewed, accepted manuscripts for deposit to PubSpace. For questions, please contact the Research Access Help Desk at https://sti.nasa.gov/contact-us or navigate to https://sti.nasa.gov/research-access-frequently-asked-questions.	Transcript Link
2016 06 22	NASA STI Program	https://youtu.be/I9qU59RolUM	Additive Manufacturing Benefits to Engine Design	The record for the presentation is available at NTRS: http://ntrs.nasa.gov/search.jsp?R=20160007075&qs=N%3D0%26DocumentID%20160007075 The record for this supplement is available at NTRS: http://ntrs.nasa.gov/search.jsp?R=20160007756&qs=N%3D0%26DocumentID%20160007756	Transcript Link

2015 11 09	NASA STI Program	https://youtu.be/afL8mZwFwMI	On the Comparison of the Long Penetration Mode (LPM) Supersonic Counterflowing Jet to the ..	Classic tonal screech noise created by under-expanded supersonic jets; Long Penetration Mode (LPM) supersonic phenomenon -Under-expanded counter-flowing jet in supersonic free stream -Demonstrated in several wind tunnel tests -Modeled in several computational fluid dynamics (CFD) simulations; Discussion of LPM acoustics feedback and fluid interactions -Analogous to the aero-acoustics interactions seen in screech jets; Lessons Learned: Applying certain methodologies to LPM -Developed and successfully demonstrated in the study of screech jets -Discussion of mechanically induced excitation in fluid oscillators in general; Conclusions -Large body of work done on jet screech, other aero-acoustic phenomenacan have direct application to the study and applications of LPM cold flow jets. For the Oral/Visual Presentation in which this video was presented, please see the following link in the NASA Technical Reports Server (NTRS, http://ntrs.nasa.gov): http://hdl.handle.net/2060/20150016244	Transcript Link
2015 07 21	NASA STI Program	https://youtu.be/HV8CHoWP9-o	A Simplified Introduction to Disruption-Tolerant Networking	This video demonstrates how a network with DTN overlaid can improve transmission of the packets. The video shows the difference between TCP/IP, UDP/IP and Bundle Protocol (BP). For "Delay Tolerant Networking and Cubesats", the Oral/Visual Presentation in which this video was presented, please see the following link in the NASA Technical Reports Server (NTRS, http://ntrs.nasa.gov): http://hdl.handle.net/2060/20140016713. Please note that the video contains no sound.	Transcript Link
2014 08 22	NASA STI Program	https://youtu.be/bJqqZPJxJzM	NASA STI Trailer		Transcript Link
2013 08 12	NASA STI Program	https://youtu.be/cNiQBTC_UEA	Autonomous Formations of Multi-Agent Systems	Autonomous formation control of multi-agent dynamic systems has a number of applications that include ground-based and aerial robots and satellite formations. For air vehicles, formation flight ("flocking") has the potential to significantly increase airspace utilization as well as fuel efficiency. This presentation addresses two main problems in multi-agent formations: optimal role assignment to minimize the total cost (e.g., combined distance traveled by all agents); and maintaining formation geometry during flock motion. The Kuhn-Munkres ("Hungarian") algorithm is used for optimal assignment, and consensus-based leader-follower type control architecture is used to maintain formation shape despite the leader s independent movements. The methods are demonstrated by animated simulations. NTRS record: http://ntrs.nasa.gov/search.jsp?R=20130014318	Transcript Link

2013 06 17	NASA STI Program	https://youtu.be/gy_UFmGh83E	Warp Field Mechanics 102 Energy Optimization - Video - 28185 2	Second of two short videos as part of presentation to Dept. of Physics, Dickinson College, Harrisburg, PA on 21 March 2013 by Harold White (JSC-CN-28185). Presentation: Warp Field Mechanics 102: Energy Optimization PDF document available: http://ntrs.nasa.gov/search.jsp?R=20130011213 First video available: http://youtu.be/n_VQPqKUwhQ Learn more about NASA STI at http://www.sti.nasa.gov/	Transcript Link
2013 06 17	NASA STI Program	https://youtu.be/n_VQPqKUwhQ	Warp Field Mechanics 102 Energy Optimization - Video - 28185 1	First of two short videos as part of presentation to Dept. of Physics, Dickinson College, Harrisburg, PA on 21 March 2013 by Harold White (JSC-CN-28185). Presentation: Warp Field Mechanics 102: Energy Optimization PDF Document available: http://ntrs.nasa.gov/search.jsp?R=20130011213 Second video available: http://youtu.be/gy_UFmGh83E Learn more about NASA STI at http://www.sti.nasa.gov/	Transcript Link
2013 03 28	NASA STI Program	https://youtu.be/txUnWulfMEI	STS-94 Day 16 Highlights	On this sixteenth day of the STS-94 mission, the flight crew, Cmdr. James D. Halsell, Jr., Pilot Susan L. Still, Payload Cmdr. Janice E. Voss, Mission Specialists Michael L. Gernhardt and Donald A. Thomas, and Payload Specialists Gregory T. Linteris and Roger K. Crouch begin closing up shop in preparation for return to the Kennedy Space Center in Florida. Released July 1995.	Transcript Link
2013 03 28	NASA STI Program	https://youtu.be/Lea9YdavC9M	STS-94 Day 15 Highlights	On this fifteenth day of the STS-94 mission the flight crew, Cmdr. James D. Halsell, Jr., Pilot Susan L. Still, Payload Cmdr. Janice E. Voss, Mission Specialists Michael L. Gernhardt and Donald A. Thomas, and Payload Specialists Gregory T. Linteris and Roger K. Crouch express thanks to all those on the ground who prepared the shuttle, crew, and payload for an unprecedented repeat launch to complete work with the Microgravity Science Laboratory. The first flight of Columbia with the laboratory, then designated mission STS-83, was cut short due to a faulty fuel cell. Released July 1995.	Transcript Link

2013 03 28	NASA STI Program	https://youtu.be/6SNcH9iNsgo	STS-94 Day 14 Highlights	On this fourteenth day of the STS-94 mission, the flight crew, Cmdr. James D. Halsell, Jr., Pilot Susan L. Still, Payload Cmdr, Janice E. Voss, Mission Specialists Michael L. Gernhardt and Donald A. Thomas, and Payload Specialists Gregory T. Linteris and Roger K. Crouch continue to focus on Columbia's Microgravity Science Laboratory mission. The seven astronauts work around the clock on two shifts supporting the more than 30 experiments in the Spacelab module. Work in the laboratory includes plant experiment and protein crystal growth status checks as well as work in the glovebox on the Coarsening in Solid-Liquid Mixtures experiment. Released July 1995.	Transcript Link
2013 03 28	NASA STI Program	https://youtu.be/xYGNS9kJzvw	STS-94 Day 13 Highlights	On this thirteenth day of the STS-94 mission, the flight crew, Cmdr. James D. Halsell, Jr., Pilot Susan L. Still, Payload Cmdr. Janice E. Voss, Mission Specialists Michael L. Gernhardt and Donald A. Thomas, and Payload Specialists Gregory T. Linteris and Roger K. Crouch resume work on the Droplet Combustion Experiment, burning a drop of heptane fuel at one-quarter of the atmospheric pressure on Earth. The payload controllers collect volumes of data from experiments being conducted by the seven astronauts on the Microgravity Science Laboratory mission. Halsell, Still, Thomas, and Linteris are seen being interviewed by the ABC Radio Network and discussing mission objectives. Released July 1995.	Transcript Link
2013 03 28	NASA STI Program	https://youtu.be/KbEMuXwVrVs	STS-94 Day 12 Highlights	On this twelfth day of the STS-94 mission, the flight crew, Cmdr. James D. Halsell, Jr., Pilot Susan L. Still, Payload Cmdr. Janice E. Voss, Mission Specialists Michael L. Gernhardt and Donald A. Thomas, and Payload Specialists Gregory T. Linteris and Roger K. Crouch focus on developing better methods for the efficient use of fossil fuels while reducing emissions and air pollutants. The seven-astronaut crew -- divided into two teams -- provides on-orbit assistance to ground controllers throughout the mission conducting these, and as many as 30 other experiments in the Spacelab pressurized module. The goal is to emulate what laboratory work will be like on the future International Space Station. Released July 1995.	Transcript Link
2013 03 28	NASA STI Program	https://youtu.be/qEBo92zArtA	STS-94 Day 11 Highlights	On this eleventh day of the STS-83 mission, the flight crew, Cmdr. James D. Halsell, Jr. Pilot Susan L. Still, Payload Cmdr. Janice E. Voss, Mission Specialists Michael L. Gernhardt and Donald A. Thomas, and Payload Specialist Gregory T. Linteris and Roger K. Crouch conduct an interview with the CBS 'Up to the Minute' program during which they discuss the activities and progress that has been made so far on the flight. Released July 1995.	Transcript Link

2013 03 28	NASA STI Program	https://youtu.be/Y0OUwBEAiKg	STS-94 Day 10 Highlights	On this tenth day of the STS-94 mission, the flight crew, Cmdr. James D. Halsell, Jr., Pilot Susan L. Still, Payload Cmdr. Janice E. Voss, Mission Specialists Michael L. Gernhardt and Donald A. Thomas, and Payload Specialists Gregory T. Linteris and Roger K. Crouch are more than one week into mission. The seven crewmembers aboard Columbia are continuing their around-the-clock science investigations in the Spacelab module, focusing on how various materials and liquids change and behave in a microgravity environment. Released July 1995.	Transcript Link
2013 03 28	NASA STI Program	https://youtu.be/-piCwXs1yFg	STS-94 Day 09 Highlights	On this ninth day of the STS-94 mission, the flight crew, Cmdr. James D. Halsell, Jr., Pilot Susan L. Still, Payload Cmdr. Janice E. Voss, Mission Specialists Michael L. Gernhardt and Donald A. Thomas, and Payload Specialists Gregory T. Linteris and Roger K. Crouch spend their morning in the Spacelab module working on several experiments. Thomas has been working with the Large Isothermal Furnace (LIF), a vacuum-heating furnace designed to heat large samples uniformly; the Middeck Glovebox (MGBX) unit; and the Internal Flows in a Free Drop Experiment (IFFD). The IFFD experiment involves containerless processing of materials using acoustic positioning techniques. Released July 1995.	Transcript Link
2013 03 28	NASA STI Program	https://youtu.be/22HcfVFT1EQ	STS-94 Day 08 Highlights	On this eighth day of the STS-94 mission, the flight crew, Cmdr. James D. Halsell, Jr., Pilot Susan L. Still, Payload Cmdr. Janice E. Voss, Mission Specialists Michael L. Gernhardt and Donald A. Thomas, and Payload Specialists Gregory T. Linteris and Roger K. Crouch conduct status checks and perform video documentation of some of the Microgravity Science Laboratory experiments and activities in the Spacelab. The first part of Pilot Susan Still's day involves monitoring orbiter systems and working an in-flight maintenance procedure with the Shuttle Amateur Radio Experiment (SAREX). Released July 1995.	Transcript Link
2013 03 28	NASA STI Program	https://youtu.be/15Ox1bL2wr0	STS-94 Day 06 Highlights	On this sixth day of the STS-94 mission, the flight crew, Cmdr. James D. Halsell, Jr., Pilot Susan L. Still, Payload Cmdr. Janice E. Voss, Mission Specialists Michael L. Gernhardt and Donald A. Thomas, and Payload Specialist Gregory T. Linteris and Roger K. Crouch continue their around-the-clock work with the Microgravity Science Laboratory experiments. During the morning period, Thomas works with the Large Isothermal Furnace experiment and the Glovebox unit. Columbia's systems continue to operate properly, providing a stable platform for microgravity science operations. Released July 1995.	Transcript Link
2013 03 28	NASA STI Program	https://youtu.be/U7Kts1rokF4	STS-94 Day 05 Highlights	On this fifth day of the STS-94 mission, the flight crew, Cmdr. James D. Halsell, Jr., Pilot Susan L. Still, Payload Cmdr. Janice E. Voss, Mission Specialists Michael L. Gernhardt and Donald A. Thomas, and Payload Specialists Gregory T. Linteris and Roger K. Crouch continue their around-the-clock science efforts. Released July 1995.	Transcript Link

2013 03 28	NASA STI Program	https://youtu.be/gALZtvqgOMs	STS-94 Day 04 Highlights	On this fourth day of the STS-94 mission, the flight crew, Cmdr. James D. Halsell, Jr., Pilot Susan L. Still, Payload Cmdr. Janice E. Voss, Mission Specialists Michael L. Gernhardt and Donald A. Thomas, and Payload Specialists Gregory T. Linteris and Roger K. Crouch have settled into a comfortable pace in their on-orbit home, Columbia. They continue their around-the-clock efforts with the experiments being flown as part of the Microgravity Science Laboratory payload. With no significant Shuttle system issues being worked, the crew is able to devote all of its efforts toward the science objectives of the flight. Released July 1995.	Transcript Link
2013 03 28	NASA STI Program	https://youtu.be/I4jvbnqn5GA	STS-94 Day 03 Highlights	On this third day of the STS-94 mission, the flight crew, Cmdr. James D. Halsell, Jr., Pilot Susan L. Still, Payload Cmdr. Janice E. Voss, Mission Specialists Michael L. Gernhardt and Donald A. Thomas, and Payload Specialists Gregory T. Linteris and Roger K. Crouch are seen in the Microgravity Science Laboratory aboard Space Shuttle Columbia activating the final experiment facility and beginning additional experiments, among the more than 30 investigations to be conducted during the 16-day mission. Released July 1995.	Transcript Link
2013 03 28	NASA STI Program	https://youtu.be/VvSfqx-MJ1I	STS-94 Day 02 Highlights	On this second day of the STS-94 mission, the flight crew, Cmdr. James D. Halsell, Jr., Pilot Susan L. Still, Payload Cmdr. Janice E. Voss, Mission Specialists Michael L. Gernhardt and Donald A. Thomas, and Payload Specialists Gregory T. Linteris and Roger K. Crouch are seen continuing the payload activation process, as the research efforts of the Microgravity Science Laboratory (MSL) mission get into full swing. Released July 1995.	Transcript Link
2013 03 28	NASA STI Program	https://youtu.be/Isfji06wCXg	STS-94 Day 01 Highlights	On this first day of the STS-94 mission, the flight crew (the orginial crew of mission STS-83), Cmdr. James D. Halsell, Jr., Pilot Susan L. Still, Payload Cmdr. Janice E. Voss, Mission Specialists Michael L. Gernhardt and Donald A. Thomas, and Payload Specialists Gregory T. Linteris and Roger K. Crouch can be seen performing pre-launch activities such as eating the traditional breakfast, crew suit-up, and the ride out to the launch pad. Also, included are various panoramic views of the shuttle on the pad. The crew can be seen being readied in the 'white room' for their mission. After the closing of the hatch and arm retraction, launch activities are shown including countdown, engine ignition, launch, and the separation of the Solid Rocket Boosters. Released July 1995.	Transcript Link

2013 03 28	NASA STI Program	https://youtu.be/HBnclAjk_24	STS-89 Day 09 Highlights	On this ninth day of the STS-89 mission, the flight crew, Cmdr. Terrence W. Wilcutt, Pilot Frank Edwards, and Mission Specialists Michael P. Anderson, James F. Reilly, Bonnie J. Dunbar, Salizhan Shakirovich Sharipov, David A. Wolf and Andrew S.W. Thomas, prepare for the reentry phase of their mission. Bonnie Dunbar then gives a tour of the space shuttle. Released Jan. 1998.	Transcript Link
2013 03 28	NASA STI Program	https://youtu.be/hnxmEllPNtQ	STS-89 Day 08 Highlights	On this eighth day of the STS-89 mission, the flight crew, Cmdr. Terrence W. Wilcutt, Pilot Frank Edwards, and Mission Specialists Michael P. Anderson, James F. Reilly, Bonnie J. Dunbar, Salizhan Shakirovich Sharipov, David A. Wolf and Andrew S.W. Thomas, prepare to conclude their joint mission with the crew of the Mir. Endeavour separates from the Russian Space Station with a gentle push from springs in the docking mechanism attaching it to the Space Station. Following a flyaround of the station to gather additional photography of the outpost, Pilot Joe Edwards conducts a final separation maneuver to allow Endeavour to drift away from the Mir. Released Jan. 1998.	Transcript Link
2013 03 28	NASA STI Program	https://youtu.be/3PyoT65ZtGc	STS-89 Day 07 Highlights	On this seventh day of the STS-89 mission, the flight crew, Cmdr. Terrence W. Wilcutt, Pilot Frank Edwards, and Mission Specialists Michael P. Anderson, James F. Reilly, Bonnie J. Dunbar, Salizhan Shakirovich Sharipov, David A. Wolf and Andrew S.W. Thomas are interviewed by an unnamed news agency. Released Jan. 1998.	Transcript Link
2013 03 28	NASA STI Program	https://youtu.be/DQn02ruI3Qc	STS-89 Day 06 Highlights	On this sixth day of the STS-89 mission, the flight crew, Cmdr. Terrence W. Wilcutt, Pilot Frank Edwards, and Mission Specialists Michael P. Anderson, James F. Reilly, Bonnie J. Dunbar, Salizhan Shakirovich Sharipov, David A. Wolf and Andrew S.W. Thomas, are interviewed by John Holliman of Cable News Network (CNN) and Russian news media. The crew discuss the progress of the mission and activities that lie ahead for Mir crew member Andy Thomas. Released Jan. 1998.	Transcript Link
2013 03 28	NASA STI Program	https://youtu.be/mmjeC3NI7TQ	STS-89 Day 05 Highlights	On this fifth day of the STS-89 mission, the flight crew, Cmdr. Terrence W. Wilcutt, Pilot Frank Edwards, and Mission Specialists Michael P. Anderson, James F. Reilly, Bonnie J. Dunbar, Salizhan Shakirovich Sharipov, David A. Wolf and Andrew S.W. Thomas, are interviewed by an unnamed news agency. The main focus of the interview was on international cooperation in outer space. Released Jan. 1998.	Transcript Link

2013 03 28	NASA STI Program	https://youtu.be/FDZf0PLFyPI	STS-89 Day 04 Highlights	On this fourth day of the STS-89 mission, the flight crew, Cmdr. Terrence W. Wilcutt, Pilot Frank Edwards, and Mission Specialists Michael P. Anderson, James F. Reilly, Bonnie J. Dunbar, Salizhan Shakirovich Sharipov, David A. Wolf and Andrew S.W. Thomas, are interviewed by an unnamed news agency. Most of the questions are directed at Wolf and his experiences on Mir. Released Jan. 1998.	Transcript Link
2013 03 28	NASA STI Program	https://youtu.be/tmc34TIDbQ4	STS-89 Day 03 Highlights	On this third day of the STS-89 mission, the flight crew, Cmdr. Terrence W. Wilcutt, Pilot Frank Edwards, and Mission Specialists Michael P. Anderson, James F. Reilly, Bonnie J. Dunbar, Salizhan Shakirovich Sharipov, David A. Wolf and Andrew S.W. Thomas, can be seen performing a flawless docking with the Mir. The linkup occurred while the two spaceships flew over southeastern Russia, west of Kazakhstan. After the docking the two crews open the entry hatch and greet each other. Released Jan. 1998.	Transcript Link
2013 03 28	NASA STI Program	https://youtu.be/HOzRZAtaAlo	STS-89 Day 02 Highlights	On this second day of the STS-89 mission, the flight crew, Cmdr. Terrence W. Wilcutt, Pilot Frank Edwards, and Mission Specialists Michael P. Anderson, James F. Reilly, Bonnie J. Dunbar, Salizhan Shakirovich Sharipov, David A. Wolf and Andrew S.W. Thomas, take time from their schedule to discuss with radio station KNX of Los Angeles the STS-89 mission and Thomas' transfer to the Mir Space Station. Released Jan. 1998.	Transcript Link
2013 03 28	NASA STI Program	https://youtu.be/GL7GQwvlNr0	STS-89 Day 01 Highlights	On this first day of the STS-89 mission, the flight crew, Cmdr. Terrence W. Wilcutt, Pilot Frank Edwards, and Mission Specialists Michael P. Anderson, James F. Reilly, Bonnie J. Dunbar, Salizhan Shakirovich Sharipov, David A. Wolf and Andrew S.W. Thomas, can be seen performing pre-launch activities such as eating the traditional breakfast, crew suit-up, and the ride out to the launch pad. Also, included are various panoramic views of the shuttle on the pad. The crew is readied in the 'white room' for their mission. After the closing of the hatch and arm retraction, launch activities are shown including countdown, engine ignition, launch, and the separation of the Solid Rocket Boosters. Released Jan. 1998.	Transcript Link
2013 03 25	NASA STI Program	https://youtu.be/1aoeZahP-e0	STS-87 Day 15 Highlights	On this fifteenth day of the STS-87 mission, the flight crew, Cmdr. Kevin R. Kregel, Pilot Steven W. Lindsey, Mission Specialists Winston E. Scott, Kalpana Chawla, and Takao Doi, and Payload Specialist Leonid K. Kadenyuk spend a good part of their day checking out the important space craft systems that are needed to support reentry. Released Dec. 1997.	Transcript Link

2013 03 25	NASA STI Program	https://youtu.be/06JmVf7O7GE	STS-87 Day 14 Highlights	On this fourteenth day of the STS-87 mission, the flight crew, Cmdr. Kevin R. Kregel, Pilot Steven W. Lindsey, Mission Specialists Winston E. Scott, Kalpana Chawla, and Takao Doi, and Payload Specialist Leonid K. Kadenyuk focus on completion of hands-on sample processing in the microgravity glovebox facility. They also prepare the spacesuits and tools that will be used for the EVA by Scott and Doi. The crew take time out from their schedule to discuss the mission with reporters from the U.S., Japan and the Ukraine during the traditional in-flight news conference. Released Dec. 1997.	Transcript Link
2013 03 25	NASA STI Program	https://youtu.be/XZPmw-DQgiE	STS-87 Day 10 Highlights	On this tenth day of the STS-87 mission, the flight crew, Cmdr. Kevin R. Kregel, Pilot Steven W. Lindsey, Mission Specialists Winston E. Scott, Kalpana Chawla, and Takao Doi, and Payload Specialist Leonid K. Kadenyuk receive a call from Ukrainian President Leonid Kuchma and answer questions from media in Kiev. The conversations focus on Kadenyuk's first flight into space and the work ongoing to support the mission objectives. Released Nov. 1997.	Transcript Link
2013 03 25	NASA STI Program	https://youtu.be/skTtwAcdS84	STS-87 Day 13 Highlights	On this thirteenth day of the STS-87 mission, the flight crew, Cmdr. Kevin R. Kregel, Pilot Steven W. Lindsey, Mission Specialists Winston E. Scott, Kalpana Chawla, and Takao Doi, and Payload Specialist Leonid K. Kadenyuk continue work in the mini laboratory called the microgravity glovebox facility. This facility allows crew members to interactively work with two different experiments today studying the formation of composite materials in an attempt to accurately map the roles of gravity-induced convection and sedimentation on the samples. Released Dec. 1997.	Transcript Link
2013 03 25	NASA STI Program	https://youtu.be/1MC-bc4Ijaw	STS-87 Day 12 Highlights	On this twelfth day of the STS-87 mission, the flight crew, Cmdr. Kevin R. Kregel, Pilot Steven W. Lindsey, Mission Specialists Winston E. Scott, Kalpana Chawla, and Takao Doi, and Payload Specialist Leonid K. Kadenyuk continue to look at how plant growth and composite materials are affected by microgravity. The astronauts use the globebox facility to process samples for the Particle Engulfment and Pushing by a Solid/Liquid Interface experiment. Released Nov. 1997.	Transcript Link
2013 03 25	NASA STI Program	https://youtu.be/MXM62skFKdE	STS-87 Day 11 Highlights	On this eleventh day of the STS-87 mission, the flight crew, Cmdr. Kevin R. Kregel, Pilot Steven W. Lindsey, Mission Specialists Winston E. Scott, Kalpana Chawla, and Takao Doi, and Payload Specialist Leonid K. Kadenyuk continue to look at how plant growth and composite materials are affected by microgravity. The astronauts will use the Middeck Globebox Facility to process samples for the Particle Engulfment and Pushing by a Solid/Liquid Interface experiment. PEP is studying the formation of composite materials, attempting to accurately map the roles of gravity-induced convection and sedimentation in the process by removing the gravity from the equation. Released Nov. 1997.	Transcript Link

2013 03 25	NASA STI Program	https://youtu.be/PZk29PmFmWQ	STS-87 Day 09 Highlights	On this ninth day of the STS-87 mission, the flight crew, Cmdr. Kevin R. Kregel, Pilot Steven W. Lindsey, Mission Specialists Winston E. Scott, Kalpana Chawla, and Takao Doi, and Payload Specialist Leonid K. Kadenyuk continue work with the microgravity science investigations in a special glovebox facility on the middeck. The autonomous operations with the mission's prime payload continue in the payload bay of Columbia with no interaction by the crew required. Released Nov. 1997	Transcript Link
2013 03 25	NASA STI Program	https://youtu.be/d3u7DST91Ns	STS-87 Day 08 Highlights	On this eighth day of the STS-87 mission, the flight crew, Cmdr. Kevin R. Kregel, Pilot Steven W. Lindsey, Mission Specialists Winston E. Scott, Kalpana Chawla, and Takao Doi, and Payload Specialist Leonid K. Kadenyuk take time out from their duties to be interviewed by CNN. As they reach the one week mark in their 16-day flight, the STS-87 crew shift the focus of their efforts towards the variety of science experiments flying on this mission. Released Nov. 1997.	Transcript Link
2013 03 25	NASA STI Program	https://youtu.be/v1OInp_unLI	STS-87 Day 07 Highlights	On this seventh day of the STS-87 mission, the flight crew, Cmdr. Kevin R. Kregel, Pilot Steven W. Lindsey, Mission Specialists Winston E. Scott, Kalpana Chawla, and Takao Doi, and Payload Specialist Leonid K. Kadenyuk turn their attention to a variety of experiments inside the Shuttle's cabin. These experiments include the processing of several samples of materials in the glovebox facility in Columbia's middeck; the experiment called PEP, which involves heating samples and then recording the mixture as it resolidifies; and the study of plant growth in space. Released Nov. 1997.	Transcript Link
2013 03 25	NASA STI Program	https://youtu.be/gPMoQ9Frr9I	STS-87 Day 06 Highlights	On this sixth day of the STS-87 mission, the flight crew, Cmdr. Kevin R. Kregel, Pilot Steven W. Lindsey, Mission Specialists Winston E. Scott, Kalpana Chawla, and Takao Doi, and Payload Specialist Leonid K. Kadenyuk begin the final preparations for the EVA by Scott and Doi. They are to manually capture the SPARTAN Satellite. After this is accomplished they are to test tools and techniques that will be required for the assembly of the International Space Station. Released Nov. 1997.	Transcript Link
2013 03 25	NASA STI Program	https://youtu.be/94mi8XVQCIc	STS-87 Day 05 Highlights	On this fifth day of the STS-87 mission, the flight crew, Cmdr. Kevin R. Kregel, Pilot Steven W. Lindsey, Mission Specialists Winston E. Scott, Kalpana Chawla, and Takao Doi, and Payload Specialist Leonid K. Kadenyuk continue experimental work aboard Columbia. Leonid Kadenyuk focuses on studies of plant growth in weightlessness. Released Nov. 1997.	Transcript Link

2013 03 25	NASA STI Program	https://youtu.be/3-lWxR2mIhc	STS-87 Day 04 Highlights	On this fourth day of the STS-87 mission, the flight crew, Cmdr. Kevin R. Kregel, Pilot Steven W. Lindsey, Mission Specialists Winston E. Scott, Kalpana Chawla, and Takao Doi, and Payload Specialist Leonid K. Kadenyuk check out the spacesuits for the EVA planned for later during the mission. Mission Control developed plans that may allow Scott and Doi to recapture the Spartan satellite by hand during that EVA. Released Nov. 1997.	Transcript Link
2013 03 25	NASA STI Program	https://youtu.be/Uk07IJP3HYg	STS-87 Day 03 Highlights	On this third day of the STS-87 mission, the flight crew, Cmdr. Kevin R. Kregel, Pilot Steven W. Lindsey, Mission Specialists Winston E. Scott, Kalpana Chawla, and Takao Doi, and Payload Specialist Leonid K. Kadenyuk deploy the Spartan satellite with the shuttle's robot arm. Released Nov. 1997.	Transcript Link
2013 03 25	NASA STI Program	https://youtu.be/J0KAI1alduo	STS-87 Day 02 Highlights	On this second day of the STS-87 mission, the flight crew, Cmdr. Kevin R. Kregel, Pilot Steven W. Lindsey, Mission Specialists Winston E. Scott, Kalpana Chawla, and Takao Doi, and Payload Specialist Leonid K. Kadenyuk are seen conducting experiments involving the effect of weightlessness on materials and fluids. They also work with an experiment to study Earth's protective ozone layers. Released Nov. 1997.	Transcript Link
2013 03 25	NASA STI Program	https://youtu.be/vWzisHRwD-A	STS-87 Day 01 Highlights	On this first day of the STS-87 mission, the flight crew, Cmdr. Kevin R. Kregel, Pilot Steven W. Lindsey, Mission Specialists Winston E. Scott, Kalpana Chawla, and Takao Doi, and Payload Specialist Leonid K. Kadenyuk can be seen preforming pre-launch activities such as eating the traditional breakfast, crew suit-up, and the ride out to the launch pad. Also, included are various panoramic views of the shuttle on the pad. The crew is seen being readied in the 'white room' for their mission. After the closing of the hatch and arm retraction, launch activities are shown including countdown, engine ignition, launch, and the separation of the Solid Rocket Boosters. Released Nov. 1997.	Transcript Link
2013 03 21	NASA STI Program	https://youtu.be/sG2-jGoeGzc	STS-86 Day 10 Highlights	On this tenth day of the STS-86 mission, the flight crew, Cmdr. James D. Wetherbee, Jr., Pilot Michael J. Bloomfield, Mission Specialists Scott E. Parazynski, Jean-Loup Chretien, Vladimir G. Titov, Wendy B. Lawrence and Mike Foale are seen talking with four test subjects in an advance life support test underway at Johnson Space Center in Houston. The test team entered a closed chamber in Houston September 19 and will remain sealed inside until late December evaluating the effectiveness of regenerative life support systems that could be used for extended space missions. Released Oct. 1997.	Transcript Link

2013 03 21	NASA STI Program	https://youtu.be/ijl0LfqFTDE	STS-86 Day 09 Highlights	On this ninth day of the STS-86 mission, the flight crew, Cmdr. James D. Wetherbee, Jr., Pilot Michael J. Bloomfield, Mission Specialists Scott E. Parazynski, Jean-Loup Chretien, Vladimir G. Titov, Wendy B. Lawrence and Mike Foale are seen undocking from the Mir. There are various external views of the two vehicles as they fly over southeast Russia just north of Mongolia. Released Oct. 1997.	Transcript Link
2013 03 21	NASA STI Program	https://youtu.be/cHWNrV4xvjI	STS-86 Day 08 Highlights	On this eighth day of the STS-86 mission, the flight crew, Cmdr. James D. Wetherbee, Jr., Pilot Michael J. Bloomfield, Mission Specialists Scott E. Parazynski, Jean-Loup Chretien, Vladimir G. Titov, Wendy B. Lawrence and Mike Foale and the Mir crew take a break from their busy schedules to hold a news conference. They talk with media assembled in the United States, Russia and France. Released Oct. 1997.	Transcript Link
2013 03 21	NASA STI Program	https://youtu.be/LnnKd4ipKN4	STS-86 Day 07 Highlights	On this seventh day of the STS-86 mission, the flight crew, Cmdr. James D. Wetherbee, Jr., Pilot Michael J. Bloomfield, Mission Specialists Scott E. Parazynski, Jean-Loup Chretien, Vladimir G. Titov, Wendy B. Lawrence and Mike Foale are seen in preparations for a planned five-hour spacewalk to retrieve four experiment packages and to test tools and techniques for construction of the International Space Station. Parazynski and Titov are seen floating out of a hatch on Atlantis' tunnel adapter in front of the Orbiter Docking System to begin their spacewalk. They then affix a 121-pound instrument called a Solar Array Cap to the Docking Module for future use by Russian cosmonauts to seal off a suspected breach in the hull of the Spektr Module. Released Oct. 1997.	Transcript Link
2013 03 21	NASA STI Program	https://youtu.be/wFEi7Mi9Dk0	STS-86 Day 05 Highlights	On this fifth day of the STS-86 mission, the flight crew, Cmdr. James D. Wetherbee, Jr., Pilot Michael J. Bloomfield, Mission Specialists Scott E. Parazynski, Jean-Loup Chretien, Vladimir G. Titov, Wendy B. Lawrence and Mike Foale continue their transfer activities today, moving more supplies and water to the Russian outpost as U.S. astronaut Dave Wolf settles in for his four-month mission on the space station. Released Sept. 1997.	Transcript Link

2013 03 21	NASA STI Program	https://youtu.be/TEHHSZkmgBI	STS-86 Day 06 Highlights	On this sixth day of the STS-86 mission, the flight crew, Cmdr. James D. Wetherbee, Jr., Pilot Michael J. Bloomfield, Mission Specialists Scott E. Parazynski, Jean-Loup Chretien, Vladimir G. Titov, Wendy B. Lawrence and Mike Foale are seen discussing their mission objectives in an interview with CNN, PBS and the Russian media. Released Sept. 1997.	Transcript Link
2013 03 21	NASA STI Program	https://youtu.be/oGgdjVc0ZUA	STS-86 Day 04 Highlights	On this fourth day of the STS-86 mission, the flight crew, Cmdr. James D. Wetherbee, Jr., Pilot Michael J. Bloomfield, Mission Specialists Scott E. Parazynski, Jean-Loup Chretien, Vladimir G. Titov, Wendy B. Lawrence and David A. Wolf spend their first full day aboard the Atlantis-Mir space complex. The ten astronauts and cosmonauts begin the transfer of more than four tons of supplies. With that transfer, Mike Foale will conclude 134 days as a Mir crew member and board Atlantis as a member of the STS-86 crew. Foale spends time with Wolf, acquainting him with his new home and showing him the location of experiments and hardware. Released Sept. 1997.	Transcript Link
2013 03 21	NASA STI Program	https://youtu.be/WiVoWqOn0uo	STS-86 Day 03 Highlights	On this third day of the STS-86 mission, the flight crew, Cmdr. James D. Wetherbee, Jr., Pilot Michael J. Bloomfield, Mission Specialists Scott E. Parazynski, Jean-Loup Chretien, Vladimir G. Titov, Wendy B. Lawrence and David A. Wolf conduct a series of engine firings that are designed to refine Atlantis' approach to Mir. With his crewmates providing range rate and closure data obtained from a variety of tools on board, Wetherbee manually flys Atlantis up toward Mir. After docking, the hatches between the two vehicles are swung open allowing Wetherbee and Mir Commander Anatoly Solovyev to greet each other in the airlock. Wetherbee hands Solovyev a new computer for the Mir which was brought into orbit by Atlantis for installation following the docking phase of the mission. The ten crewmembers spend a few minutes greeting one another at the start of their joint work which will involve the transfer of some four tons of supplies and water from Atlantis to the Mir. Released Sept. 1997.	Transcript Link
2013 03 21	NASA STI Program	https://youtu.be/4cs2pfxRuFA	STS-86 Day 02 Highlights	On this second day of the STS-86 mission, the flight crew, Cmdr. James D. Wetherbee, Jr., Pilot Michael J. Bloomfield, Mission Specialists Scott E. Parazynski, Jean-Loup Chretien, Vladimir G. Titov, Wendy B. Lawrence and David A. Wolf discuss the mission's progress with reporters as part of the traditional crew news conference. Also included are various panoramic views of the earth as viewed from cameras mounted in the payload bay. Released Sept. 1997.	Transcript Link

2013 03 21	NASA STI Program	https://youtu.be/NzpkwOk_ObQ	STS-86 Day 01 Highlights	On this first day of the STS-86 mission, the flight crew, Cmdr. James D. Wetherbee, Jr., Pilot Michael J. Bloomfield, Mission Specialists Scott E. Parazynski, Jean-Loup Chretien, Vladimir G. Titov, Wendy B. Lawrence and David A. Wolf can be seen performing pre-launch activities such as eating the traditional breakfast, crew suit-up, and the ride out to the launch pad. Also included are various panoramic views of the shuttle on the pad. The crew can be seen being readied in the 'white room' for their mission. After the closing of the hatch and arm retraction, launch activities are shown including countdown, engine ignition, launch, and the separation of the Solid Rocket Boosters. Released Sept. 1997.	Transcript Link
2013 03 18	NASA STI Program	https://youtu.be/1DPCnw014Ig	STS-85 Day 10 Highlights	On this tenth day of the STS-85 mission, the flight crew, Cmdr. Curtis L. Brown, Jr., Pilot Kent V. Rominger, Payload Cmdr. N. Jan Davis (Ph.D.), Mission Specialists Robert L. Curbeam, Jr. and Stephen K. Robinson (Ph.D.), and Payload Specialist Bjarni V. Tryggvason watch over an experiment designed to study how cooling systems operate in space. With operating problems resolved on the Two-Phase Fluid Loop Experiment, or TPFLEX (teepee flex), investigators expect to get all the data planned for the mission. Robinson later assisted, where necessary, with the CRISTA-SPAS rendezvous activities. Released Aug. 1997.	Transcript Link
2013 03 18	NASA STI Program	https://youtu.be/8ZeQLC4jBzE	STS-85 Day 11 Highlights	On this eleventh day of the STS-85 mission, the flight crew, Cmdr. Curtis L. Brown, Jr., Pilot Kent V. Rominger, Payload Cmdr. N. Jan Davis (Ph.D.), Mission Specialists Robert L. Curbeam, Jr. and Stephen K. Robinson (Ph.D.), and Payload Specialist Bjarni V. Tryggvason finish packing up the last of the loose items in the crew cabin, and the shuttle's payload bay doors will be closed. Returning to Earth with the astronauts will be the German-built Cryogenic Infrared Spectrometers and Telescopes for the Atmosphere-Shuttle Pallet Satellite-2 (CRISTA-SPAS-2), which spent nine days flying in formation with Discovery and recording data about the composition of the Earth's atmosphere, and the Technology Applications and Science-1 (TAS-01) and International Extreme Ultraviolet Hitchhiker-2 (IEH-02) instruments, which scanned the Earth and the solar system from the payload bay. Also aboard will be the Japanese-built Manipulator Flight Demonstration (MFD) experiment, which tested a small robotic arm destined for use on the future International Space Station. Released Aug. 1997.	Transcript Link

2013 03 18	NASA STI Program	https://youtu.be/Q0KNsdpQtl0	STS-85 Day 09 Highlights	On this ninth day of the STS-85 mission, the flight crew, Cmdr. Curtis L. Brown, Jr., Pilot Kent V. Rominger, Payload Cmdr. N. Jan Davis (Ph.D.), Mission Specialists Robert L. Curbeam, Jr. and Stephen K. Robinson (Ph.D.), and Payload Specialist Bjarni V. Tryggvason watch over the Manipulator Flight Demonstration (MFD) experiment while Japanese investigators again maneuvere the Small Fine Arm remotely from a control room near Mission Control. It is the final planned work with the arm during this mission. While MFD operations are ongoing, Robinson again uses the Southwest Ultraviolet Imaging System's ultraviolet imaging telescope to observe Comet Hale-Bopp and Curbeam continue his work with the Bioreactor Demonstration System designed to perform cell biology experiments under controlled conditions. Tryggvason spends his day supporting data gathering with the Microgravity Vibration Isolation Mount experiment. Before the crew's workday began, they discussed the mission's progress with reporters in the U.S. and Canada as part of the traditional crew news conference. Questions ranged from life in space for the first time space travelers to providing a report card on the more than 24 experiments being conducted throughout the mission. Released Aug. 1997.	Transcript Link
2013 03 18	NASA STI Program	https://youtu.be/rRaFH-Eg14c	STS-85 Day 08 Highlights	On this eighth day of the STS-85 mission, the flight crew, Cmdr. Curtis L. Brown, Jr., Pilot Kent V. Rominger, Payload Cmdr. N. Jan Davis (Ph.D.), Mission Specialists Robert L. Curbeam, Jr. and Stephen K. Robinson (Ph.D.), and Payload Specialist Bjarni V. Tryggvason entered the final portion of its flight. The new Mir 24 crew of Commander Anatoly Solovyev and Flight Engineer Pavel Vinogradov, who arrived on the station the same day Discovery was launched, bid farewell to Mir 23 Commander Vasily Tsibliev and Flight Engineer Alexander Lazutkin who are returning home after 185 days in space. The Soyuz vehicle carrying the Mir 23 crew home undocked from the station. Robinson again used the Southwest Ultraviolet Imaging System (SWUIS), a 7-inch imaging telescope that is pointed out of the orbiter's middeck hatch window, to observe the Hale-Bopp comet. Curbeam continued his work with the Bioreactor Demonstration System designed to perform cell biology experiments under controlled conditions. Tryggvason spent part of his time troubleshooting a computer hard drive system that supports the Microgravity Vibration Isolation Mount experiment. Released Aug. 1997.	Transcript Link
2013 03 18	NASA STI Program	https://youtu.be/eTlezosoa7A	STS-85 Day 07 Highlights	On this seventh day of the STS-85 mission, the flight crew, Cmdr. Curtis L. Brown, Jr., Pilot Kent V. Rominger, Payload Cmdr. N. Jan Davis (Ph.D.), Mission Specialists Robert L. Curbeam, Jr. and Stephen K. Robinson (Ph.D.), and Payload Specialist Bjarni V. Tryggvason continue to test the Manipulator Flight Demonstration experiment, or Small Fine Arm, supplied by the National Space Development Agency of Japan, which was powered up for a final day of operations. The tests today, however, center on the ability of the arm to be remotely operated from the ground instead of onboard by the crew. The ground-commanded maneuvers of the arm demonstrated the usefulness of conducting work in space even while the crew is asleep or busy with other tasks. Released Aug. 1997.	Transcript Link

2013 03 18	NASA STI Program	https://youtu.be/7-RVTP4pEWc	STS-85 Day 06 Highlights	On this sixth day of the STS-85 mission, the flight crew, Cmdr. Curtis L. Brown, Jr., Pilot Kent V. Rominger, Payload Cmdr. N. Jan Davis (Ph.D.), Mission Specialists Robert L. Curbeam, Jr. and Stephen K. Robinson (Ph.D.), and Payload Specialist Bjarni V. Tryggvason today continue their work with the Bioreactor Demonstration System designed to perform cell biology experiments under controlled conditions. Tryggvason, today continues his work with the Microgravity Vibration Isolation Mount which uses magnets to levitate a platform and protect sensitive microgravity processing experiments from vibrations. Released Aug. 1997.	Transcript Link
2013 03 18	NASA STI Program	https://youtu.be/pDPkvff8lE	STS-85 Day 05 Highlights	On this fifth day of the STS-85 mission, the flight crew, Cmdr. Curtis L. Brown, Jr., Pilot Kent V. Rominger, Payload Cmdr. N. Jan Davis (Ph.D.), Mission Specialists Robert L. Curbeam, Jr. and Stephen K. Robinson (Ph.D.), and Payload Specialist Bjarni V. Tryggvason once again test the small robotic arm serving as a prototype for one that will fly as part of the Japanese Experiment Module on the International Space Station. Simulated orbital replacement unit detachment and reattachment will be the focus. Bob Curbeam discusses the progress of the flight with a television station in St Louis, before continuing his work with the Bioreactor Demonstration System designed to perform cell biology experiments under controlled conditions. Immediately after Curbeam's interview, Canadian Payload Specialist Bjarni Tryggvason is set to talk to elementary and high school students at a summer camp in Saskatchewan, Canada. Released Aug. 1997.	Transcript Link
2013 03 18	NASA STI Program	https://youtu.be/OG_-833hOd0	STS-85 Day 04 Highlights	On this fourth day of the STS-85 mission, the flight crew, Cmdr. Curtis L. Brown, Jr., Pilot Kent V. Rominger, Payload Cmdr. N. Jan Davis (Ph.D.), Mission Specialists Robert L. Curbeam, Jr., and Stephen K. Robinson (Ph.D.), and Payload Specialist Bjarni V. Tryggvason focus their attention on testing a small, robotic arm serving as a prototype for use on the future International Space Station. They also conduct experiments on the Shuttle's middeck. Released Aug. 1997.	Transcript Link
2013 03 18	NASA STI Program	https://youtu.be/Dpp6pQDDA9s	STS-85 Day 03 Highlights	On this third day of the STS-85 mission, the flight crew, Cmdr. Curtis L. Brown, Jr., Pilot Kent V. Rominger, Payload Cmdr. N. Jan Davis (Ph.D.), Mission Specialists Robert L. Curbeam, Jr., and Stephen K. Robinson (Ph.D.), and Payload Specialist Bjarni V. Tryggvason continue to conduct and monitor experiments that will help some researchers measure atmospheric phenomena while other crew members gather data on experiments and hardware that will be used on the International Space Station (ISS). Serving as a testbed for those ISS evaluations, the orbiter is functioning in excellent fashion while the crew gathers data using the Space Vision System. Released Aug. 1997.	Transcript Link

2013 03 18	NASA STI Program	https://youtu.be/CTzabycjDjg	STS-85 Day 02 Highlights	On this second day of the STS-85 mission, the flight crew, Cmdr. Curtis L. Brown, Jr., Pilot Kent V. Rominger, Payload Cmdr. N. Jan Davis (Ph.D.), Mission Specialists Robert L. Curbeam, Jr. and Stephen K. Robinson (Ph.D.), and Payload Specialist Bjarni V. Tryggvason activated instruments of the Technology Applications and Science (TAS), including the Shuttle Laser Altimeter, the Infrared Spectral Imaging Radiometer (ISIR), the Cryogenic On-Orbit Long Life Active Refrigerator (COOLAR), Two Phase Flow (TPF), Critical Viscosity of Xenon (CVX) and were initializing the Solar Constant Experiment (SOLCON) and preparing for its first observation. Work with the Japanese-built Manipulator Flight Demonstration (MFD) experiment l begins when Davis begins checkout of its Small Fine Arm, destined for use outside the International Space Station's Japanese Experiment Module. Brown is seen being interviewed by WBTV-TV, Charlotte, N.C., and WTVD-TV, Raleigh-Durham, N.C. Released Aug. 1997.	Transcript Link
2013 03 18	NASA STI Program	https://youtu.be/6c_WUFdIGBE	STS-85 Day 01 Highlights	On this first day of the STS-85 mission, the flight crew, Cmdr. Curtis L. Brown, Jr., Pilot Kent V. Rominger, Payload Cmdr. N. Jan Davis (Ph.D.), Mission Specialists Robert L. Curbeam, Jr., and Stephen K. Robinson (Ph.D.), and Payload Specialist Bjarni V. Tryggvason can be seen performing pre-launch activities such as eating the traditional breakfast, crew suit-up, and the ride out to the launch pad. Also, included are various panoramic views of the shuttle on the pad. The crew can be seen being readied in the 'white room' for their mission. After the closing of the hatch and arm retraction, launch activities are shown including countdown, engine ignition, launch, and the separation of the Solid Rocket Boosters. Released Aug. 1997.	Transcript Link
2013 03 18	NASA STI Program	https://youtu.be/Lb7Jmt7ZvYE	STS-84 Day 09 Highlights	On this the ninth day of the STS-84 mission, the flight crew, Cmdr. Charles J. Precourt, Pilot Eileen M. Collins, Payload Cmdr, Jean-Francois Clervoy (ESA), Mission Specialists Edward T. Lu, Carlos I. Noriega, Elena V. Kondakova, Jerry M. Linenger (download), and C. Michael Foale (upload) spend the morning testing Atlantis' flight control surfaces and thruster jets to ensure they are ready to support the Shuttle's high speed return to Earth. The astronauts' final day on orbit is devoted to stowing equipment and finishing experiment work in the Spacehab module in the cargo bay. In addition to 2,600 pounds of items being brought back from the Mir Space Station, Atlantis is ferrying home astronaut Jerry Linenger, who is returning to Earth after 122 days on the Mir. If Atlantis lands as planned Saturday, Linenger will have logged 132 days in space on this flight, the second longest single spaceflight by a U.S. astronaut behind the record 188-day stay in orbit by Shannon Lucid last year. Released May 1995.	Transcript Link

2013 03 18	NASA STI Program	https://youtu.be/FZYwan3Kx-I	STS-84 Day 08 Highlights	On this eighth day of the STS-84 mission, the flight crew, Cmdr. Charles J. Precourt, Pilot Eileen M. Collins, Payload Cmdr, Jean-Francois Clervoy (ESA), Mission Specialists Edward T. Lu, Carlos I. Noriega, Elena V. Kondakova, Jerry M. Linenger (download), and C. Michael Foale (upload) sing 'The Cosmonauts' Song' to Mir-23 crew members Vasily Tsibliev, Alexander Lazutkin and astronaut Mike Foale, who is beginning his four-month research mission on Mir. Foale and his new crewmates played music as Atlantis departed following the joint phase of the flight. Atlantis' undocking from Mir was modified from previous joint missions in that a flyaround of the station for photographic purposes was not conducted. Instead, Pilot Eileen Collins guided Atlantis below the Mir after the two spacecraft completed their physical separation, stopping three times at distances of 90, 300 and 1,500 feet to collect data from a European sensor device designed to assist future rendezvous of a proposed European Space Agency resupply vehicle with the International Space Station. Once the data collection was completed, the shuttle took advantage of natural orbital mechanics to drift beneath and out in front of Mir. Released May 1995.	Transcript Link
2013 03 18	NASA STI Program	https://youtu.be/CzGwQ1skNSM	STS-84 Day 07 Highlights	On this seventh day of the STS-84 mission, the flight crew, Cmdr. Charles J. Precourt, Pilot Eileen M. Collions, Payload Cmdr, Jean-Francois Clervoy (ESA), Mission Specialists Edward T. Lu; Carlos I. Noriega; Elena V. Kondakova; Jerry M. Linenger (download) and C. Michael Foale (upload) are seen saying their final farewells and closing the hatches on their two spacecraft. This wrap up five days of joint operations in which about 7,000 pounds of supplies, experiments and water were transferred between the two vehicles, as well as astronaut Mike Foale, who swapped places with Jerry Linenger for the start of a four-month research mission on the Russian outpost. The final handshakes by Commanders Charlie Precourt and Vasily Tsibliev came moments before the hatches between Atlantis and Mir swung shut. Released May 1995.	Transcript Link
2013 03 18	NASA STI Program	https://youtu.be/bQ-egbcnuDI	STS-84 Day 06 Highlights	On this sixth day of the STS-84 mission, the flight crew, Cmdr. Charles J. Precourt, Pilot Eileen M. Collins, Payload Cmdr, Jean-Francois Clervoy (ESA), Mission Specialists Edward T. Lu, Carlos I. Noriega, Elena V. Kondakova, Jerry M. Linenger (download), and C. Michael Foale (upload) continue the transfer supplies. In all, they moved about 3 tons of supplies and items earmarked for use by U.S. astronaut Mike Foale during his four month stay on the Mir as well as those designated for return to Earth for researchers and officials of the Russian Space Agency. Released May 1995.	Transcript Link

2013 03 18	NASA STI Program	https://youtu.be/N8iIGyEk6jk	STS-83 Day 02	On this second day of the STS-83 mission, the flight crew, Cmdr. James D. Halsell, Jr. Pilot Susan L. Still, Payload Cmdr, Janice E. Voss, Mission Specialists Michael L. Gernhardt and Donald A. Thomas, and Payload Specialists Gregory T. Linteris and Roger K. Crouch can be seen setting up experiments for studying the properties of combustion and the behavior of metals, materials, and fluids in the absence of gravity. The astronauts are split into red and blue teams, each working a 12-hour shift, to allow around-the-clock operations in the pressurized Spacelab science module in Columbia's cargo bay. Thomas is seen activating the Large Isothermal Furnace (LIF) experiment and the Expedite the Processing of Experiments to the International Space Station (EXPRESS) Rack while Linteris continues the activation of Protein Crystal Growth experiments. Released in July 1997.	Transcript Link
2013 03 18	NASA STI Program	https://youtu.be/0pEBJ2awNUQ	STS-84 Day 05 Highlights	On this fifth day of the STS-84 mission, the flight crew, Cmdr. Charles J. Precourt, Pilot Eileen M. Collins, Payload Cmdr, Jean-Francois Clervoy (ESA), Mission Specialists Edward T. Lu, Carlos I. Noriega, Elena V. Kondakova, Jerry M. Linenger (download), and C. Michael Foale (upload) continue their work through the overnight hours, transferring water, hardware and logistical supplies to and from each other's spacecraft. It is the third day of joint operations between the Shuttle and the Russian Space Station crewmembers. As planned, the newest member of the Mir 23 crew, Mike Foale, and astronaut Jerry Linenger continue their handover activities to prepare Foale for his 4 month stay on Mir. Foale will serve aboard the Russian outpost until he is replaced by astronaut Wendy Lawrence during Atlantis' next visit to Mir in September. Released May 1995.	Transcript Link
2013 03 18	NASA STI Program	https://youtu.be/VOQphhzb1Ow	STS-84 Day 04 Highlights	On this fourth day of the STS-84 mission, the flight crew, Cmdr. Charles J. Precourt, Pilot Eileen M. Collins, Payload Cmdr, Jean-Francois Clervoy (ESA), Mission Specialists Edward T. Lu, Carlos I. Noriega, Elena V. Kondakova, Jerry M. Linenger (download), and C. Michael Foale (upload) spend their first full day of work together conducting science investigations and transferring equipment from one spacecraft to the other. The Spacehab double module at the rear of Atlantis' payload bay was the focus of activity today as crew members conducted science experiments in the Biorack facility and transferred items to and from the Mir Space Station. In an interview with CBS News, Precourt and Tsibliev praise the sixth joint docking mission between the U.S. and Russia, indicating it is serving as a worthwhile exercise to prepare for the assembly of the International Space Station. Precourt also said the Mir appears to be in good condition despite recent systems problems, and said Mir will be a perfectly safe home for Foale for his stay on orbit. Released May 1995.	Transcript Link

2013 03 18	NASA STI Program	https://youtu.be/KNZ3fxVMXxw	STS-84 Day 03 Highlights	On this third day of the STS-84 mission, the flight crew, Cmdr. Charles J. Precourt, Pilot Eileen M. Collins, Payload Cmdr, Jean-Francois Clervoy (ESA), Mission Specialists Edward T. Lu, Carlos I. Noriega, Elena V. Kondakova, Jerry M. Linenger (download), and C. Michael Foale (upload) guide Atlantis to its docking with the Mir to cap off a 42-hour chase. Precourt greets Mir 23 Commander Vasily Tsibliev and, after embraces and handshakes, the crew members make their way into the Mir Core Module for a brief welcoming ceremony. During the ceremony, the Shuttle crew give Tsibliev and Flight Engineer Alexander Lazutkin baseball caps emblazoned with the STS-84 crew insignia as well as the traditional Russian offering of bread, tea and salt. Then, the ten astronauts and cosmonauts get down to business, first conducting a joint safety briefing to familiarize themselves with each other's craft. Released May 1995.	Transcript Link
2013 03 18	NASA STI Program	https://youtu.be/5PPYK29r3-g	STS-84 Day 02 Highlights	On this second day of the STS-84 mission, the flight crew, Cmdr. Charles J. Precourt, Pilot Eileen M. Collins, Payload Cmdr, Jean-Francois Clervoy (ESA), Mission Specialists Edward T. Lu, Carlos I. Noriega, Elena V. Kondakova, Jerry M. Linenger (download), and C. Michael Foale (upload) continues to close on the Mir Space Station in anticipation of the sixth linkup between the Shuttle and the Russian space complex. Preparations for the docking are nearly complete as Atlantis' seven astronauts worked around the clock to check out the rendezvous tools that will be used during the final phase of the approach to Mir. Released May 1995.	Transcript Link
2013 03 18	NASA STI Program	https://youtu.be/lqrejoEV5_0	STS-84 Day 01 Highlights	On this first day of the STS-84 mission, the flight crew, Cmdr. Charles J. Precourt, Pilot Eileen M. Collins, Payload Cmdr, Jean-Francois Clervoy (ESA), Mission Specialists Edward T. Lu, Carlos I. Noriega, Elena V. Kondakova, Jerry M. Linenger (download), and C. Michael Foale (upload) can be seen performing pre-launch activities such as eating the traditional breakfast, crew suit-up, and the ride out to the launch pad. Also, included are various panoramic views of the shuttle on the pad. The crew can be seen being readied in the "white room" for their mission. After the closing of the hatch and arm retraction, launch activities are shown including countdown, engine ignition, launch, and the separation of the Solid Rocket Boosters. Released May 1995.	Transcript Link
2013 03 14	NASA STI Program	https://youtu.be/9WsTX0-ux9o	STS-83 Day 03	On this third day of the STS-83 mission, the flight crew, Cmdr. James D. Halsell Jr., Pilot Susan L. Still, Payload Cmdr. Janice E. Voss, Mission Specialists Michael L. Gernhardt and Donald A. Thomas, and Payload Specialist Gregory T. Linteris and Roger K. Crouch continue to conduct experiments. The crew of the Microgravity Science Laboratory mission has successfully activated all Spacelab facilities with help from the science teams on the ground. Released July 1997.	Transcript Link

2013 03 14	NASA STI Program	https://youtu.be/AXQa6kgQ29M	STS-83 Day 04	On this fourth day of the STS-83 mission, the flight crew, Cmdr. James D. Halsell, Jr. Pilot Susan L. Still, Payload Cmdr, Janice E. Voss, Mission Specialists Michael L. Gernhardt and Donald A. Thomas, and Payload Specialist Gregory T. Linteris, and Roger K. Crouch complete science work aboard Spacelab module and begin deactivating experiments in preparation for an early return to Earth. Released July 1997.	Transcript Link
2013 03 14	NASA STI Program	https://youtu.be/QgSfPRupZaM	STS-83 Day 01	On this first day of the STS-83 mission, the flight crew, Cmdr. James D. Halsell Jr., Pilot Susan L. Still, Payload Cmdr. Janice E. Voss, Mission Specialists Michael L. Gernhardt and Donald A. Thomas, and Payload Specialists Gregory T. Linteris and Roger K. Crouch can be seen performing pre-launch activities such as eating the traditional breakfast, crew suit-up, and the ride out to the launch pad. Also, included are various panoramic views of the shuttle on the pad. The crew can be seen being readied in the 'white room' for their mission. After the closing of the hatch and arm retraction, launch activities are shown including countdown, engine ignition, launch, and the separation of the Solid Rocket Boosters. Released July 1997.	Transcript Link
2013 03 08	NASA STI Program	https://youtu.be/vNv1WOTytuw	STS-70 Post Flight Presentation	In this post-flight overview, the flight crew of the STS-70 mission, Tom Henricks (Cmdr.), Kevin Kregel (Pilot), Major Nancy Currie (MS), Dr. Mary Ellen Weber (MS), and Dr. Don Thomas (MS), discuss their mission and accompanying experiments. Pre-flight, launch, and orbital footage is followed by the in-orbit deployment of the Tracking and Data Relay Satellite (TDRS) and a discussion of the following spaceborne experiments: a microgravity bioreactor experiment to grow 3D body-like tissue; pregnant rat muscular changes in microgravity; embryonic development in microgravity; Shuttle Amateur Radio Experiment (SAREX); terrain surface imagery using the HERCULES camera; and a range of other physiological tests, including an eye and vision test. Views of Earth include: tropical storm Chantal; the Nile River and Red Sea; lightning over Brazil. A three planet view (Earth, Mars, and Venus) was taken right before sunrise. The end footage shows shuttle pre-landing checkout, entry, and landing, along with a slide presentation of the flight. Released Aug. 1995.	Transcript Link
2013 03 04	NASA STI Program	https://youtu.be/trEl5DDUv4U	STS-81 Flight Day 10	On this tenth day of the STS-81 mission, the flight crew, Cmdr. Michael A. Baker, Pilot Brent W. Jett, Mission Specialists, John M. Grunsfeld, Marsha S. Ivins, Peter J.K. Wisoff, and John Blaha, prepare for the return back to earth. The shuttle's key flight control systems are checked for entry and landing phase of the mission. Commander Mike Baker and Pilot Brent Jett activate one of Atlantis' three hydraulic power units to test the shuttle's aerosurfaces. Baker and Jett fire Atlantis' steering jets in a routine prelanding checkout. The astronauts also test a medical restraint system in the Spacehab module, placing two crewmembers in the device. Crewmembers then begin to stow items away in the crew cabin, initiate the scheduled deactivation of Spacehab systems and associated hardware. Released Jan. 1997.	Transcript Link

2013 03 04	NASA STI Program	https://youtu.be/YTZWJw0yGTA	STS-81 Flight Day 9	On this ninth day of the STS-81 mission, the flight crew, Cmdr. Michael A. Baker, Pilot Brent W. Jett, Mission Specialists, John M. Grunsfeld, Marsha S. Ivins, Peter J.K. Wisoff, and John Blaha, are flying on their own after undocking the Mir Space Station. Following the separation Pilot Brent Jett initiates a two-revolution flyaround of the Russian complex at a distance of about 560 feet. Jett fires maneuvering jets to separate Atlantis from Mir for the final time until May, when the shuttle will return on STS-84 to deliver astronaut Mike Foale to the outpost as Jerry M. Linenger's replacement. Released Jan. 1997.	Transcript Link
2013 03 04	NASA STI Program	https://youtu.be/XJA7nmKEr4E	STS-81 Flight Day 8	On this eighth day of the STS-81 mission, the flight crew, Cmdr. Michael A. Baker, Pilot Brent W. Jett, Mission Specialists, John M. Grunsfeld, Marsha S. Ivins, Peter J.K. Wisoff, and John Blaha, bid farewell to Jerry Linenger and cosmonauts of Mir. Prior to hatch closure, the astronauts and cosmonauts conduct a formal farewell ceremony in the Mir Core Module. They then field questions from Russian and U.S. reporters in a joint news conference. Commander Mike Baker, Pilot Brent Jett and Mission Specialists Jeff Wisoff, John Grunsfeld, Marsha Ivins and John Blaha say goodbye to Mir 22 Commander Valery Korzun, Flight Engineer Alexander Kaleri and the newest Mir crewmember, astronaut Jerry Linenger. The hatches on the two spacecraft are closed. Released Jan. 1997.	Transcript Link
2013 03 04	NASA STI Program	https://youtu.be/iUKB9zhauvo	STS-81 Flight Day 7	On this seventh first day of the STS-81 mission, the flight crew, Cmdr. Michael A. Baker, Pilot Brent W. Jett, Mission Specialists, John M. Grunsfeld, Marsha S. Ivins, Peter J.K. Wisoff, and John Blaha, and the cosmonauts of the Russian Space Station Mir continue to transfer hundreds of pounds of water, supplies, and logistical items to each other's spacecraft. More than 1,300 pounds of water have now been transferred from Atlantis to the Mir to resupply the Russian outpost, along with equipment that will be used by astronaut Jerry M. Linenger during his four-month research mission. A bioprocessing device and an experiment used to grow cartilage cells during astronaut John Blaha's four month stay on the Mir is also transferred to Atlantis for the trip back to Earth. Linenger spends most of the day collecting water samples from the Mir for analysis back on Earth and Blaha continues to exercise on a treadmill on the Mir to stay in shape for his return to Earth and a readaptation to gravity after four months of weightlessness. Released Jan. 1997.	Transcript Link
2013 03 04	NASA STI Program	https://youtu.be/qweIEvJf9OA	STS-81 Flight Day 6	On this sixth day of the STS-81 mission, the flight crew, Cmdr. Michael A. Baker, Pilot Brent W. Jett, Mission Specialists, John M. Grunsfeld, Marsha S. Ivins, Peter J.K. Wisoff, and John Blaha, and the cosmonauts of the Mir Space Station continue to transfer hundreds of pounds of food, water and supplies between each other's spacecraft for a third day. Jerry M. Linenger spent several hours continuing to familiarize himself with his new orbital home, unpacking experiment hardware and helping astronaut John Blaha transfer biomedical samples back to Atlantis for Blaha's trip back to Earth. Blaha is wrapping up his four-month tour of duty in space. Released Jan. 1997.	Transcript Link

2013 03 04	NASA STI Program	https://youtu.be/2LG6e_v7EC0	STS-81 Flight Day 5	On this fifth day of the STS-81 mission, the flight crew, Cmdr. Michael A. Baker, Pilot Brent W. Jett, Mission Specialists, John M. Grunsfeld, Marsha S. Ivins, Peter J.K. Wisoff, and John Blaha, and the Mir cosmonauts including astronaut Jerry M. Linenger continue with the transfer of food, water and supplies between the two spacecrafts for a second day of joint operations. With both spacecraft in excellent shape, the nine crewmembers float back and forth between Atlantis and the Mir, hauling bags of water, satchels of logistical supplies and experiment hardware. The supplies and hardware will be used by cosmonauts and Linenger during his four months of scientific research aboard the Mir. Linenger, who officially became a Mir crewmember earlier, spends time with his precedessor; John Blaha to get familiar with his new home. Released Jan. 1997.	Transcript Link
2013 03 04	NASA STI Program	https://youtu.be/V6gf6FoxWhk	STS-81 Flight Day 3	On this third day of the STS-81 mission, the flight crew, Cmdr. Michael A. Baker, Pilot Brent W. Jett, Mission Specialists, John M. Grunsfeld, Marsha S. Ivins, Peter J.K. Wisoff, and Jerry M. Linenger, spend most of their workday completing preparations for the rendezvous and linkup of the Space Shuttle with the Mir Space Station. Pilot Brent Jett finishes the checkout of navigation tools that will be used during the rendezvous. Later he joins John Grunsfeld and they install a camera in the Orbiter Docking System to provide television views of the docking target on the Mir. Commander Mike Baker will use this later as he flies Atlantis to its docking with Mir. Released Jan. 1997.	Transcript Link
2013 03 04	NASA STI Program	https://youtu.be/4IIX2-zICrk	STS-81 Flight Day 4	On this fourth day of the STS-81 mission, the flight crew, Cmdr. Michael A. Baker, Pilot Brent W. Jett, Mission Specialists, John M. Grunsfeld, Marsha S. Ivins, Peter J.K. Wisoff, and Jerry M. Linenger, prepare for the fifth linkup of the Space Shuttle and the Mir Space Station. The Atlantis docks with Mir at a point 210 nautical miles above the Earth southeast of Moscow, culminating a three-day rendezvous. Two hours after docking, the hatches between Atlantis and Mir are opened and Baker and Mir 22 Commander Valery Korzun share a hug to mark the start of five days of joint operations between the two crews. After an informal welcoming ceremony in the Mir's core module, the STS-81 crewmembers receive a station safety briefing. Linenger becomes the fourth American to occupy a position on the Russian Space Station following the docking of Atlantis to the outpost. During the docked phase of the mission, the two crews transfer nearly three tons of food, water and supplies to Mir. Released Jan. 1997.	Transcript Link
2013 03 04	NASA STI Program	https://youtu.be/CiKZ6Rqcjs4	STS-81 Flight Day 2	On this second day of the STS-81 mission, the flight crew, Cmdr. Michael A. Baker, Pilot Brent W. Jett, Mission Specialists, John M. Grunsfeld, Marsha S. Ivins, Peter J.K. Wisoff, and Jerry M. Linenger, continue to close in on The Mir Space Station. Payload work involves activating a radiation monitor in addition to the Biorack multipurpose facility which is designed to investigate the effects of microgravity and radiation on plant, tissue, cell and fungus growth. Mission Specialists Jeff Wisoff and John Grunsfeld spend much of their work day setting up and performing initial work in the experiment's glove box. Released Jan. 1997.	Transcript Link

2013 03 04	NASA STI Program	https://youtu.be/o2j-rf69Y8g	STS-81 Flight Day 1	This first day of the STS-81 mission begins with the flight crew, Cmdr. Michael A. Baker, Pilot Brent W. Jett, Mission Specialists, John M. Grunsfeld, Marsha S. Ivins, Peter J.K. Wisoff, and Jerry M. Linenger, performing pre-launch activities such as eating the traditional breakfast, being suited-up, and riding out to the launch pad. Also, included are various panoramic views of the shuttle on the pad. The crew is readied in the 'white room' for their mission. After the closing of the hatch and arm retraction, launch activities are shown including the countdown, engine ignition, and launch. The film ends with the separation of the Solid Rocket Boosters (SRB) from the shuttle. Released Jan. 1997,	Transcript Link
2013 02 28	NASA STI Program	https://youtu.be/3RQKAc1Alu4	STS-80 Flight Day 15	On this fifteenth day of the STS-80 mission, the flight crew, Cmdr. Kenneth D. Cockrell, Pilot Kent V. Rominger, Mission Specialists, Tamara E. Jernigan, Thomas D. Jones, and F. Story Musgrave, are seen performing routine mission operations including monitoring experiments and discussing their mission during a news conference. The crewmembers again conduct small engine firings to maintain that distance prior to the retrieval of the satellite.	Transcript Link
2013 02 28	NASA STI Program	https://youtu.be/JpfsvVZIDJw	STS-80 Flight Day 14	On this fourteenth day of the STS-80 mission, the flight crew, Cmdr. Kenneth D. Cockrell, Pilot Kent V. Rominger, Mission Specialists, Tamara E. Jernigan, Thomas D. Jones, and F. Story Musgrave, spend this day working with tools inside the crew cabin. The astronauts answer questions on the status of their mission from reporters at the Johnson Space Center in Houston and the Kennedy Space Center in Florida during a news conference. Released Dec. 1996.	Transcript Link
2013 02 28	NASA STI Program	https://youtu.be/-DkSFVi-Zdo	STS-80 Flight Day 13	On this thirteenth day of the STS-80 mission, the flight crew, Cmdr. Kenneth D. Cockrell, Pilot Kent V. Rominger, Mission Specialists, Tamara E. Jernigan, Thomas D. Jones, and F. Story Musgrave, are notified that the remaining spacewalks for the mission are to be canceled following extensive ground analysis and testing of the airlock hatch. Mission managers could not conclusively identify the problem that was causing the hatch to jam, and decided not to risk unnecessary damage to the hatch or seals. Released Dec. 1996.	Transcript Link
2013 02 28	NASA STI Program	https://youtu.be/FVS-yRbem3U	STS-80 Flight Day 12	On this twelfth day of the STS-80 mission, the flight crew, Cmdr. Kenneth D. Cockrell, Pilot Kent V. Rominger, Mission Specialists, Tamara E. Jernigan, Thomas D. Jones, and F. Story Musgrave, spend the day discussing the failed hatch with ground controllers. The failure of the hatch to properly open causes the cancellation of the second planned spacewalk by Jernigan and Jones. NASA engineers and managers continue to collect and analyze data on what may be causing the failure. The leading candidate is a misalignment of the hatch against the airlock seal. Released Dec. 1996.	Transcript Link

2013 02 28	NASA STI Program	https://youtu.be/g2v2Kd7jzbs	STS-80 Flight Day 11	On this eleventh day of the STS-80 mission, the flight crew, Cmdr. Kenneth D. Cockrell, Pilot Kent V. Rominger, Mission Specialists, Tamara E. Jernigan, Thomas D. Jones, and F. Story Musgrave, attempt the first of three planned spacewalks. Jernigan and Jones can be seen in the airlock attempting to open a stuck hatch. After several attempts at trying to open the hatch, the mission management team cancels the spacewalk. Released Nov. 1996.	Transcript Link
2013 02 28	NASA STI Program	https://youtu.be/K715pmaNLZU	STS-80 Flight Day 9	On this ninth day of the STS-80 mission, the flight crew, Cmdr. Kenneth D. Cockrell, Pilot Kent V. Rominger, Mission Specialists, Tamara E. Jernigan, Thomas D. Jones, and F. Story Musgrave, begin preparations for two planned spacewalks with the depressurization of the shuttle's cabin from 14.7 pounds per square inch to 10.2 pounds per square inch. This reduces the amount of time Jernigan and Jones will have to prebreath pure oxygen before beginning the spacewalk. The first spacewalk will allow the astronauts to evaluate assembly and maintenance techniques that will be used for construction of the International Space Station. Released Nov. 1996.	Transcript Link
2013 02 28	NASA STI Program	https://youtu.be/p-BtqNLOqLw	STS-80 Flight Day 8	On this eighth day of the STS-80 mission, the flight crew, Cmdr. Kenneth D. Cockrell, Pilot Kent V. Rominger, Mission Specialists, Tamara E. Jernigan, Thomas D. Jones, and F. Story Musgrave, focus on additional science investigations with the Wake Shield Facility while it is attached to the shuttle's robot arm. Jones unberths the Wake Shield, and returns it to its resting place in the payload bay after using its instruments to characterize the environment around the shuttle. Released Nov. 1996.	Transcript Link
2013 02 28	NASA STI Program	https://youtu.be/kdwjaTaXiuo	STS-80 Flight Day 7	On this seventh day of the STS-80 mission, the flight crew, Cmdr. Kenneth D. Cockrell, Pilot Kent V. Rominger, Mission Specialists, Tamara E. Jernigan, Thomas D. Jones, and F. Story Musgrave, retrieve the Wake Shield Facility, completing a successful mission by the free-flying satellite, which was able to grow all seven of its planned thin semi-conductor films over a period of three days. Cockrell flawlessly takes the shuttle to within 35 feet of the satellite and Jones latches the mechanical arm onto the Wake Shield, as the shuttle flies 220 miles above South America. Released Nov. 1996.	Transcript Link

2013 02 28	NASA STI Program	https://youtu.be/Zp_xKmYnnLc	STS-80 Flight Day 6	On this sixth day of the STS-80 mission, the flight crew, Cmdr. Kenneth D. Cockrell, Pilot Kent V. Rominger, Mission Specialists, Tamara E. Jernigan, Thomas D. Jones, and F. Story Musgrave, are awakened to news from Mission Control that the ORFEUS-SPAS astronomy satellite may be closing in on the Wake Shield Facility satellite slightly faster than originally predicted. The Orbiting and Retrievable Far and Extreme Ultraviolet Spectrometer, or ORFEUS-SPAS satellite, has conducted 77 different astronomical observations since being deployed on launch day. Jernigan reports that the VIEW-CAPL experiment, designed by students at the University of Maryland, is working well. The experiment tests capillary pumped loop technology that one day may be used for more reliable spacecraft cooling systems. The crew also sends down television pictures of the flight deck and address half a dozen questions posed via the NASA Shuttle Web on the Internet. Released Nov. 1996.	Transcript Link
2013 02 28	NASA STI Program	https://youtu.be/fwFD3hQ3CV4	STS-80 Flight Day 4	On this fourth day of the STS-80 mission, the flight crew, Cmdr. Kenneth D. Cockrell, Pilot Kent V. Rominger, Mission Specialists, Tamara E. Jernigan, Thomas D. Jones, and F. Story Musgrave, busily begin final preparations for the release of Wake Shield. Jones powers up the shuttle's Canadian-built robot arm and grapples the satellite, while Jernigan powers up the Orbiter Space Vision System, which will be used to track precisely the Wake Shield's location. Cockrell places Columbia in a gravity gradient attitude to minimize disturbances during the release. Jones uses the robot arm to hold Wake Shield in position for a two-and-a-half hour cleansing by atomic oxygen molecules before moving the arm to the deploy position. Released Nov. 1996.	Transcript Link
2013 02 28	NASA STI Program	https://youtu.be/j4on4zKNzIk	STS-80 Flight Day 3	On this third day of the STS-80 mission, the flight crew, Cmdr. Kenneth D. Cockrell, Pilot Kent V. Rominger, Mission Specialists, Tamara E. Jernigan, Thomas D. Jones, and F. Story Musgrave, are seen preparing for two spacewalks which are to be performed by Jernigan and Jones. Jernigan, Jones and Musgrave inspect the suits, finding everything in excellent condition for the upcoming spacewalks, which will test techniques and equipment that may be used for future construction of the International Space Station. Released Nov. 1996.	Transcript Link
2013 02 28	NASA STI Program	https://youtu.be/04jgiDsdJPc	STS-80 Flight Day 2	On this second day of the STS-80 mission, the flight crew, Cmdr. Kenneth D. Cockrell, Pilot Kent V. Rominger, Mission Specialists, Tamara E. Jernigan, Thomas D. Jones, and F. Story Musgrave, complete the first major objective of the mission with the deployment of the Orbiting Retrievable Far and Extreme Ultraviolet Spectrometer (ORFEUS) on the reusable Shuttle Pallet Satellite. Release of ORFEUS from Columbia's robot arm came at 8 hours 15 minutes mission elapsed time. Three hours after the release, ground controllers inform the crew that the instrument package appears to be working properly. This begins two weeks of gathering data on the origin and makeup of stars. Released Nov. 1996.	Transcript Link

2013 02 28	NASA STI Program	https://youtu.be/ogtjcZFPt2E	STS-80 Flight Day 1	This first day of the STS-80 mission, begins with the flight crew, Cmdr. Kenneth D. Cockrell, Pilot Kent V. Rominger, Mission Specialists, Tamara E. Jernigan, Thomas D. Jones, and F. Story Musgrave, performing pre-launch activities such as eating the traditional breakfast, being suited-up, and riding out to the launch pad. Also, included are various panoramic views of the shuttle on the pad. The crew is readied in the 'white room' for their mission. After the closing of the hatch and arm retraction, launch activities are shown including the countdown, engine ignition, and launch. The film ends with the separation of the Solid Rocket Boosters (SRB) from the shuttle. Released Nov. 1996.	Transcript Link
2013 02 28	NASA STI Program	https://youtu.be/YZ5iq3lO6vM	STS-74 Flight Day 8	On this the eighth day of the STS-74 mission, the flight crew Cmdr. Kenneth Cameron, Pilot James Halsell, and Mission Specialists William McArthur, Jerry Ross, and Chris Hadfield, using the remote manipulator system (RMS), took exterior views of the shuttle in space. Additionally, the crew answered several questions posted on one of NASA's websites on the Internet. Released Nov. 1995.	Transcript Link
2013 02 27	NASA STI Program	https://youtu.be/sk9Fzf1c6F0	STS-74 Flight Day 7	On this the seventh day of the STS-74 mission, the flight crew Cmdr. Kenneth Cameron, Pilot James Halsell, and Mission Specialists William McArthur, Jerry Ross, and Chris Hadfield, filmed the Mir-shuttle separation maneuver. After separation, the shuttle performed a fly-around of the Mir space station, during which, a variety of views of the Mir station were taken. Earth views include cloud cover. Released Nov. 1995.	Transcript Link
2013 02 27	NASA STI Program	https://youtu.be/KDh44FUPouU	STS-74 Flight Day 6	On this sixth day of the STS-74 mission, the flight crew, Cmdr. Kenneth Cameron, Pilot James Halsell, and Mission Specialists William McArthur, Jerry Ross, and Chris Hadfield and the Mir 20 cosmonauts, Cmdr. Yuri Gidzenko, Flight Engineer Sergei Avdeyev, and Cosmonaut-Researcher (ESA) Thomas Reiter, were greeted and briefly interviewed by the Secretary General of the United Nations, Boutros Boutros-Ghali, on the 50th anniversary of the United Nations via a radio satellite hookup. An additional interview with other journalists from different areas of the United States and Canada was also presented. Released Nov. 1995.	Transcript Link

2013 02 27	NASA STI Program	https://youtu.be/G81UCoFfX3A	STS-74 Flight Day 5	On this fifth day of the STS-74 mission, the flight crew, Cmdr. Kenneth Cameron, Pilot James Halsell, and Mission Specialists William McArthur, Jerry Ross, and Chris Hadfield, were awakened to the theme from the movie '2001: A Space Odyssey.' The Mir 20 cosmonauts, Cmdr. Yuri Gidzenko, Flight Engineer Sergei Avdeyev, and Cosmonaut-Researcher (ESA) Thomas Reiter, and shuttle astronauts are shown giving each other plaques and presents to commemorate their historic docking event and the start towards the development of the International Space Station. There is a press conference from Moscow by a one of the officers of the Russian Space Agency with both flight crews and an additional separate press interview of the crews by Canadian reporters. There is video footage of the two docked spacecraft taken from various angles. Released Nov. 1995.	Transcript Link
2013 02 27	NASA STI Program	https://youtu.be/OoSIhDomRmo	STS-74 Flight Day 4	On this fourth day of the STS-74 mission, the flight crew, Cmdr. Kenneth Cameron, Pilot James Halsell, and Mission Specialists William McArthur, Jerry Ross, and Chris Hadfield, perform a successful docking between the space shuttle and the Mir space station using the Russian-made docking module that had been previously installed on the third day of the mission. The astronauts and the Mir 20 cosmonauts, Cmdr. Yuri Gidzenko, Flight Engineer Gergei Avdeyev, and Cosmonaut-Researcher (ESA) Thomas Reiter, are shown greeting each other from inside the docking module and an in-orbit interview between the crews and NASA is conducted in both English and Russian. Released Nov. 1995.	Transcript Link
2013 02 27	NASA STI Program	https://youtu.be/hRP8GM5QoYQ	STS-74 Flight Day 3	On this third day of the STS-74 mission, the flight crew, Cmdr. Kenneth Cameron, Pilot James Halsell, and Mission Specialists William McArthur, Jerry Ross, and Chris Hadfield successfully connect the Russian-made docking module to the Space Shuttle using the shuttle's robot arm. There is a live, in-orbit press interview with the astronauts from inside the Russian docking module regarding the status of the mission thus far. The docking module will remain with Mir after the two spacecraft have undocked. Released Nov. 1995.	Transcript Link
2013 02 27	NASA STI Program	https://youtu.be/LoLCvcytC0Y	STS-74 Flight Day 2	On the second day of the STS-74 mission, the flight crew, Cmdr. Kenneth Cameron, Pilot James Halsell, and Mission Specialists William McArthur, Jerry Ross, and Chris Hadfield, were awakened to music from the play 'The Nutcracker'. The astronauts hosted an in-orbit interview with Canadian reporters and journalists from Toronto, answering general questions about living in space and space flight, and explaining the delicate maneuvers that the shuttle will have to perform for the Mir docking procedures scheduled for the next day. Due to the awkward angle that the shuttle will use to approach the Mir, the docking procedure will be done in an almost blind state. Released Nov. 1995.	Transcript Link

2013 02 27	NASA STI Program	https://youtu.be/Xk0tdqxjGq8	STS-74 Flight Day 1	On this first day of the STS-74 mission, the flight crew, Cmdr. Kenneth Cameron, Pilot James Halsell, and Mission Specialists William McArthur, Jerry Ross, and Chris Hadfield, are shown in prelaunch and launch activities. This mission is the second of seven Mir-Space Shuttle hook-ups. Major objectives of this mission are to include a docking between Mir and the Space Shuttle and the transfer of a Russian docking module, water, supplies, and two solar arrays to the Mir space station. This mission highlights the first time that astronauts from Canada, Russia, the U.S. and the European Space Agency (ESA) will be onboard a single spacecraft in space at the same time. Additional experimental payloads onboard the shuttle are the GLO-4 PASDE Payload (GPP) experiment and the Photogrammetric Appendage Structural Dynamics Experiment (PASDE). Released Nov. 1995.	Transcript Link
2013 02 26	NASA STI Program	https://youtu.be/YTp9AY339h0	STS-73 Flight Day 16	On this last day of the STS-73 sixteen day mission, the crew Cmdr. Kenneth Bowersox, Pilot Kent Rominger, Payload Specialists Albert Sacco and Fred Leslie, and Mission Specialists Kathryn Thornton, Catherine 'Cady' Coleman, and Michael Lopez-Alegria are shown preparing the United States Microgravity Lab-2 (USML-2) and the shuttle for return to Earth. There is footage of the shuttle from the robot arm cameras and of Earth. Earth views include cloud cover, various land masses, mountain ranges, and oceans. (Note: Flight day is displayed incorrectly at 00:32) Released Nov. 1995.	Transcript Link
2013 02 26	NASA STI Program	https://youtu.be/D6B8HnX-gfg	STS-73 Flight Day 15	On this fifteenth day of the STS-73 sixteen day mission, the crew Cmdr. Kenneth Bowersox, Pilot Kent Rominger, Payload Specialists Albert Sacco and Fred Leslie, and Mission Specialists Kathryn Thornton, Catherine 'Cady' Coleman, and Michael Lopez-Alegria are shown hosting an in-orbit interview with various newspaper reporters from Johnson Space Center, Kennedy Space Center, and Marshall Space Flight Center via satellite hookup. The astronauts were asked questions regarding the status of the United States Microgravity Lab-2 (USML-2) experiments, their personal goals regarding their involvement in the mission, their future in the space program, and general questions about living in space. Earth views included cloud cover and a tropical storm. Released Nov. 1995.	Transcript Link
2013 02 26	NASA STI Program	https://youtu.be/B8u3sITiNTU	STS-73 Flight Day 14	On this fourteenth day of the STS-73 sixteen day mission, the crew Cmdr. Kenneth Bowersox, Pilot Kent Rominger, Payload Specialists Albert Sacco and Fred Leslie, and Mission Specialists Kathryn Thornton, Catherine 'Cady' Coleman, and Michael Lopez-Alegria are shown performing several of the spaceborne experiments onboard the United States Microgravity Lab-2 (USML-2). The experiments shown include the Drop Physics Module (DPM) experiment, the Surface Tension Driven Convection Experiment (STDCE), the Geophysical Fluid Flow Cell (GFFC) experiment, and an experiment on fuel combustion and combustion products. Bowersox, Sacco, Thornton, and Rominger (the red team) were interviewed by high school students from Worcester, Massachusetts, who asked questions regarding the mission's experiments and general questions about living in space. Earth views included a black and white image of the Earth's atmospheric boundary layers. Released Nov. 1995.	Transcript Link

2013 02 26	NASA STI Program	https://youtu.be/PaBUm53_Kuw	STS-73 Flight Day 13	On this thirteenth day of the STS-73 sixteen day mission, the crew Cmdr. Kenneth Bowersox, Pilot Kent Rominger, Payload Specialists Albert Sacco and Fred Leslie, and Mission Specialists Kathryn Thornton, Catherine 'Cady' Coleman, and Michael Lopez-Alegria are shown performing several of the spaceborne experiments onboard the United States Microgravity Lab-2 (USML-2). The experiments shown included the Drop Physics Module (DPM) experiment, human physiological experiments, and a Crystal Gel experiment. Released Nov. 1995.	Transcript Link
2013 02 26	NASA STI Program	https://youtu.be/1bTmLQXYgo4	STS-73 Flight Day 12	On this twelfth day of the STS-73 sixteen day mission, the crew Cmdr. Kenneth Bowersox, Pilot Kent Rominger, Payload Specialists Albert Sacco and Fred Leslie, and Mission Specialists Kathryn Thornton, Catherine 'Cady' Coleman, and Michael Lopez-Alegria are shown performing several of the spaceborne experiments onboard the United States Microgravity Lab-2 (USML-2). The experiments shown included the Drop Physics Module (DPM) experiment, the Surface Tension Driven Convection Experiment (STDCE), and the Astroculture (tm)(ASC) demonstration. Rominger was interviewed by a Colorado radio news show and asked questions about the mission and living in space. Earth views included cloud cover. Released Oct. 1995.	Transcript Link
2013 02 26	NASA STI Program	https://youtu.be/tkXE4O_M3nk	STS-73 Flight Day 11	On this eleventh day of the STS-73 sixteen day mission, the crew Cmdr. Kenneth Bowersox, Pilot Kent Rominger, Payload Specialists Albert Sacco and Fred Leslie, and Mission Specialists Kathryn Thornton, Catherine 'Cady' Coleman, and Michael Lopez-Alegria are shown performing several of the spaceborne experiments onboard the United States Microgravity Lab-2 (USML-2). The experiments shown included the Drop Physics Module (DPM) and the Surface Tension Driven Convection Experiment (STDCE). Thermistors are used in the STDCE to study the fluid dynamics behind particle motion. Released Oct. 1995.	Transcript Link
2013 02 26	NASA STI Program	https://youtu.be/r6C0o8eMbcI	STS-73 Flight Day 10	On this tenth day of the STS-73 sixteen day mission, the crew Cmdr. Kenneth Bowersox, Pilot Kent Rominger, Payload Specialists Albert Sacco and Fred Leslie, and Mission Specialists Kathryn Thornton, Catherine 'Cady' Coleman, and Michael Lopez-Alegria are shown performing several of the spaceborne experiments onboard the United States Microgravity Lab-2 (USML-2). The experiments shown include the Surface Tension Driven Convection Experiment (STDCE), the Drop Physics Module (DPM) experiment, and the Geophysical Fluid Flow Cell Experiment (GFFC). All experiment imagery was downlinked from the shuttle to Mission Control using the High-Packed Digital Television (HI-PAC) system. Released Oct. 1995.	Transcript Link

2013 02 26	NASA STI Program	https://youtu.be/9Cu28dw7DkQ	STS-73 Flight Day 9	On this ninth day of the STS-73 sixteen day mission, the crew Cmdr. Kenneth Bowersox, Pilot Kent Rominger, Payload Specialists Albert Sacco and Fred Leslie, and Mission Specialists Kathryn Thornton, Catherine 'Cady' Coleman, and Michael Lopez-Alegria are shown performing several of the spaceborne experiments onboard the United States Microgravity Lab-2 (USML-2). The experiments shown include the Surface Tension Driven Convection Experiment (STDCE) and the Protein Crystal Growth (PCG) experiment with different types of solution mixtures used. The imagery of the experiments inside the Spacelab were downlinked to Mission Control with the High-Packed Digital Television (HI-PAC) system. Released Oct. 1995.	Transcript Link
2013 02 26	NASA STI Program	https://youtu.be/pDZIgeZzyKc	STS-73 Flight Day 8	On this eighth day of the STS-73 sixteen day mission, the crew Cmdr. Kenneth Bowersox, Pilot Kent Rominger, Payload Specialists Albert Sacco and Fred Leslie, and Mission Specialists Kathryn Thornton, Catherine 'Cady' Coleman, and Michael Lopez-Alegria are shown performing several of the spaceborne experiments onboard the United States Microgravity Lab-2 (USML-2). The experiments shown include the Astroculture(tm)(ASC) experiment, the Protein Crystal Growth (PCG) experiment, the Surface Tension Driven Convection Experiment (STDCE), the Commercial Generic Bioprocessing Apparatus (CGBA),and further testing of the High-Packed Digital Television (HI-PAC) system. An interview with Bowersox and Thornton regarding the mission's status was conducted by radio World News Now in Houston. Released Oct. 1995.	Transcript Link
2013 02 26	NASA STI Program	https://youtu.be/TGJyPwldaLs	STS-73 Flight Day 7	On this seventh day of the STS-73 sixteen day mission, the crew Cmdr. Kenneth Bowersox, Pilot Kent Rominger, Payload Specialists Albert Sacco and Fred Leslie, and Mission Specialists Kathryn Thornton, Catherine 'Cady' Coleman, and Michael Lopez-Alegria are shown performing several of the spaceborne experiments onboard the United States Microgravity Lab-2 (USML-2). The experiments shown included the Surface Tension Driven Convection Experiment (STDCE), the Drop Physics Module (DPM), the Protein Crystal Growth (PCG) experiment, and the Glovebox (GBX) demonstration. All the experiments were monitored by the High-Packed Digital Television (HI-PAC) system onboard the shuttle. Released Oct. 1995.	Transcript Link
2013 02 25	NASA STI Program	https://youtu.be/bdQ1ymL9kWs	STS-73 Flight Day 6	On this sixth day of the STS-73 sixteen day mission, the crew Cmdr. Kenneth Bowersox, Pilot Kent Rominger, Payload Specialists Albert Sacco and Fred Leslie, and Mission Specialists Kathryn Thornton, Catherine 'Cady' Coleman, and Michael Lopez-Alegria are shown performing several of the spaceborne experiments onboard the United States Microgravity Lab-2 (USML-2). The experiments shown include the Protein Crystal Growth (PCG) experiment, the Astroculture(tm)(ASC) experiment, the Drop Physics Module (DPM) experiment, and the Surface Tension Driven Convection Experiment (STDCE). The High-Packed Digital Television (HI-PAC) system is further tested and an in-orbit interview with Lopez-Alegria by NBC Nightside is conducted. The entire flightcrew salutes the 5th game of the World Series between the Atlanta Braves and Cleveland Indians by pretending to throw out the first ball of the game through a downlink to the stadium. Earth views taken from the payload bay cameras include some cloud cover, oceans, land masses, and the Nile River and the Red Sea. Released Oct. 1995.	Transcript Link

2013 02 25	NASA STI Program	https://youtu.be/cFiF5OHRmAM	STS-73 Flight Day 5	On this fifth day of the STS-73 sixteen day mission, the crew Cmdr. Kenneth Bowersox, Pilot Kent Rominger, Payload Specialists Albert Sacco and Fred Leslie, and Mission Specialists Kathryn Thornton, Catherine 'Cady' Coleman, and Michael Lopez-Alegria are shown performing several of the spaceborne experiments onboard the United States Microgravity Lab-2 (USML-2). These experiments are downlinked to Mission Control from the Spacelab using the High-Packed Digital Television (HI-PAC) systems onboard the Shuttle. The experiments shown include the Drop Physics Module (DPM) experiment, the Surface Tension Driven Convection Experiment (STDCE), the Protein Crystal Growth (PCG) experiment, and a Hand-Held Diffusion Test Cell experiment. Lopez-Alegria is interviewed in Spanish by two Spanish radio show hosts. Earth views include cloud cover, the Earth's horizon and atmospheric boundary layers, and several oceans. Released Oct. 1995.	Transcript Link
2013 02 25	NASA STI Program	https://youtu.be/fgsswwJ_fEI	STS-73 Flight Day 4	On this fourth day of the STS-73 sixteen day mission, the crew Cmdr. Kenneth Bowersox, Pilot Kent Rominger, Payload Specialists Albert Sacco and Fred Leslie, and Mission Specialists Kathryn Thornton, Catherine 'Cady' Coleman, and Michael Lopez-Alegria are shown performing several of the spaceborne experiments onboard the United States Microgravity Lab-2 (USML-2). The experiments shown include the High-Packed Digital Television (HI-PAC) demonstration, the Surface Tension Driven Convection Experiment (STDCE), and the Drop Physics Module (DPM) experiment. Video footage is shown of the crew working in the Spacelab along with a split screen Shuttle downlink/Ground-Air Television (GATV) uplink from Mission Control. Several of the astronauts are interviewed by Mission Control regarding the status of the experiments. Released Oct. 1995.	Transcript Link
2013 02 25	NASA STI Program	https://youtu.be/4qHC9Lp18fs	STS-73 Flight Day 3	On this third day of the STS-73 sixteen day mission, the crew, Cmdr. Kenneth Bowersox, Pilot Kent Rominger, Payload Specialists Albert Sacco and Fred Leslie, and Mission Specialists Kathryn Thornton, Catherine 'Cady' Coleman, and Michael Lopez-Alegria are shown performing several of the spaceborne experiments onboard the United States Microgravity Lab-2 (USML-2). The experiments shown include the Surface Tension Driven Convection Experiment (STDCE), the Drop Physics Module (DPM) experiment, and the High-Packed Digital Television (HI-PAC) demonstration. The HI-PAC allows the digitization of up to six video downlink signals from the Spacelab experiments and other cameras onboard the Shuttle, where previously only one downlink was allowed. Released Oct. 1995.	Transcript Link

2013 02 25	NASA STI Program	https://youtu.be/sHxQw-EVyBA	STS-73 Flight Day 2	On this second day of the STS-73 sixteen day mission, the crew Cmdr. Kenneth Bowersox, Pilot Kent Rominger, Payload Specialists Albert Sacco and Fred Leslie, and Mission Specialists Kathryn Thornton, Catherine 'Cady' Coleman, and Michael Lopez-Alegria are shown performing several of the spaceborne experiments on the United States Microgravity Lab-2 (USML-2). These experiments included the Astroculture (tm)(ASC) experiment, the Protein Crystal Growth (PCG) experiment using liquid/liquid diffusion methods, and the Drop Physics Module (DPM) experiment. A High-Packed Digital Television (HI-PAC) system is used to downlink video images of the various experiments from the Shuttle to Mission Control. Video from Mission Control is uplinked to the shuttle using a Ground-Air Television (GATV) system. Released Oct. 1995.	Transcript Link
2013 02 25	NASA STI Program	https://youtu.be/qvrN76emm9w	STS-73 Flight Day 1	On this first day of the STS-73 sixteen day mission, the crew Cmdr. Kenneth Bowersox, Pilot Kent Rominger, Payload Specialists Albert Sacco and Fred Leslie, and Mission Specialists Kathryn Thornton, Catherine 'Cady' Coleman, and Michael Lopez-Alegria are shown in various stages of prelaunch and launch activities. This mission carries the United States Microgravity Lab-2 (USML-2) payload, in which a variety of spaceborne microgravity experiments will be performed. These experiments include the Advanced Protein Crystallization Facility (APCF), The Astroculture (tm)(ASC) hardware and experiment, the Commercial Generic Bioprocessing Apparatus (CGBA), the Crystal Growth Furnace (CGF), the Drop Physics Module (DPM), the Geophysical Fluid Flow Cell (GFFC), the Glovebox (GBX), the Zeolite Crystal Growth (ZCG) experiment, the Surface Tension Driven Convection Experiment (STDCE), the Protein Crystal Growth (PCG) experiment, three Measuring Microgravity experiments (the Space Acceleration Measurement System (SAMS), the Three Dimensional Microgravity Accelerometer (3DMA), and the Orbital Acceleration Research Experiment (OARE)), and the High-Packed Digital Television (HI-PAC) demonstration system. Earth views include some cloud cover and various Earth land masses. Released Oct. 1995.	Transcript Link
2013 02 22	NASA STI Program	https://youtu.be/-AOIGNBTFsc	STS-78 Post Flight Presentation	The flight crew of the STS-78 mission, Cmdr. Terence T. Henricks, Pilot Kevin R. Kregel, Payload Cmdr. Susan J. Helms, Mission Specialists Richard M. Linnehan, Charles E. Brady, Jr., and Payload Specialists Jean-Jacques Favier, Ph.D. and Robert B. Thirsk, M.D., back from their seventeen day mission, offer a video and still photo presentation of their journey. Included in the presentation are pre-launch, launch, and post-launch activities; experiments performed in the Spacelab; and re-entry; and the landing at KSC. Each of the STS-78 crew members discuss particular aspects of the mission including the 22 LMS life science and microgravity experiments. The experiments address human physiology, metallic alloys and protein crystal growth, and the study of the behavior of fluids and materials processing in the near-weightless environment of space. Released July 1996.	Transcript Link

2013 02 22	NASA STI Program	https://youtu.be/TU936A21BYo	STS-78 Flight Day 17	On this seventeenth day of the STS-78 mission, the flight crew, Cmdr. Terence T. Henricks, Pilot Kevin R. Kregel, Payload Cmdr. Susan J. Helms, Mission Specialists Richard M. Linnehan, Charles E. Brady, Jr., and Payload Specialists Jean-Jacques Favier, Ph.D. and Robert B. Thirsk, M.D., are shown conducting routine firings of the orbiter's reaction control system jets and checking out its flight control systems and aero surfaces in anticipation of the planned landing at the Kennedy Space Center. Commander Tom Henricks and Pilot Kevin Kregel successfully fire Columbia's 44 reaction control system jets and then test the aero surfaces that will be used during Columbia's high speed re-entry. This firings procedure is part of a test to prove a concept that may be used on Space Shuttle Discovery's next mission -- STS-82 -- to service the Hubble Space Telescope. The vernier jet firings should raise the orbit without disturbing any payloads on board, or in the case of the Hubble Space Telescope, without placing any force on the telescope's fragile solar arrays. Released July 1996.	Transcript Link
2013 02 22	NASA STI Program	https://youtu.be/wbeIP7RVMMU	STS-78 Flight Day 16	On this sixteenth day of the STS-78 mission, the flight crew, Cmdr. Terence T. Henricks, Pilot Kevin R. Kregel, Payload Cmdr. Susan J. Helms, Mission Specialists Richard M. Linnehan, Charles E. Brady, Jr., and Payload Specialists Jean-Jacques Favier, Ph.D. and Robert B. Thirsk, M.D., are shown continuing their scientific investigations in the Spacelab module. Today's work focuses on how the astronauts' bodies are responding to the microgravity environment after more than two weeks in orbit. The payload crew will continue studies in the adaptation of the neurovestibular system and the musculoskeletal system during spaceflight. Released July 1996.	Transcript Link
2013 02 22	NASA STI Program	https://youtu.be/07kWO4l9FSo	STS-78 Flight Day 15	On this fifteenth day of the STS-78 mission, the 4th of July, Cmdr. Terence T. Henricks, Pilot Kevin R. Kregel, Payload Cmdr. Susan J. Helms, Mission Specialists Richard M. Linnehan, Charles E. Brady, Jr., and Payload Specialists Jean-Jacques Favier, Ph.D. and Robert B. Thirsk, M.D., are awakened with Bruce Springsteen's 'Born in the USA' and Lee Greenwood's 'I'm Proud to be an American' to begin another a day on orbit. Mission Commander Tom Henricks responded to Mission Control's wake up call by saying that the five US-born crew members were very proud to be Americans, particularly on the day America celebrates its 220th anniversary. Work in the Spacelab module will continue with investigations into the effects of microgravity on muscle strength and endurance, lung function, and adaptation of the neurovestibular system to a microgravity environment. Henricks and Pilot Kevin Kregel will complete work with a laptop computer designed to test the crew's critical thinking skills and reaction time. They also will test a voice control system that allows them to reposition Columbia's closed-circuit television cameras with verbal cues, keeping their hands free to perform other tasks. Released July 1996.	Transcript Link

2013 02 22	NASA STI Program	https://youtu.be/Ib2r_I7ivs	STS-78 Flight Day 14	On this fourteenth day of the STS-78 mission, the flight crew, Cmdr. Terence T. Henricks, Pilot Kevin R. Kregel, Payload Cmdr. Susan J. Helms, Mission Specialists Richard M. Linnehan, Charles E. Brady, Jr., and Payload Specialists Jean-Jacques Favier, Ph.D. and Robert B. Thirsk, M.D., are shown communicating with two cosmonauts and fellow astronaut Shannon Lucid on Russia's Space Station Mir. During this communication link the two crews participate in a special event surrounding the celebration of the Olympics, including a conversation with Billy Payne, a member of the Atlanta Olympic Organizing Committee. Payne congratulated the crews of Mir and Columbia. Released July 1996.	Transcript Link
2013 02 22	NASA STI Program	https://youtu.be/RALHxOyvo1w	STS-78 Flight Day 13	On this thirteenth day of the STS-78 mission, the flight crew, Cmdr. Terence T. Henricks, Pilot Kevin R. Kregel, Payload Cmdr. Susan J. Helms, Mission Specialists Richard M. Linnehan, Charles E. Brady, Jr., and Payload Specialists Jean-Jacques Favier, Ph.D. and Robert B. Thirsk, M.D., begin another day of scientific investigations on board Columbia as the Life and Microgravity Spacelab mission continues its endurance record. The seven crew members continue supporting a variety of experiments investigating the effects of microgravity on the human body. Studies looking at muscle strength and energy expenditure and pulmonary function continue throughout the day, as well as the processing of advanced semiconductor materials and alloys in the Advanced Gradient Heating Facility. In an interview with the NBC News, Mission Commander Tom Henricks is shown discussing Columbia's flight and the varied experiments that are being conducted on board. Crew members are shown participating in tests that measure their performance. Released July 1996.	Transcript Link
2013 02 22	NASA STI Program	https://youtu.be/QTkQvU1MWFw	STS-78 Flight Day 12	On this twelfth day of the STS-78 mission, the flight crew, Cmdr. Terence T. Henricks, Pilot Kevin R. Kregel, Payload Cmdr. Susan J. Helms, Mission Specialists Richard M. Linnehan, Charles E. Brady, Jr., and Payload Specialists Jean-Jacques Favier, Ph.D. and Robert B. Thirsk, M.D., are awakened by the Canadian national anthem, 'Oh Canada.' This morning, Thirsk is shown delivering a holiday message to Prime Minister Jean Chretien and other dignitaries gathered at Parliament Hill in Ottawa. The crew is then shown celebrating Canada Day aboard the Space Shuttle. Also this morning, Mission Specialist Susan Helms discusses the progress of Columbia's flight with WBBM Radio in Chicago. Released July 1996.	Transcript Link

2013 02 22	NASA STI Program	https://youtu.be/3ulq8nZDTJw	STS-78 Flight Day 11	On this eleventh day of the STS-78 mission, the flight crew, Cmdr. Terence T. Henricks, Pilot Kevin R. Kregel, Payload Cmdr. Susan J. Helms, Mission Specialists Richard M. Linnehan, Charles E. Brady, Jr., and Payload Specialists Jean-Jacques Favier, Ph.D. and Robert B. Thirsk, M.D., are shown conducting a news conference to discuss the progress of the international mission with media from the United States, Canada and Europe. During the press conference, the crew explained the relevance of the experiments conducted aboard the Life Sciences and Microgravity mission, and praised support crews and researchers on Earth who are involved in the mission. Payload Specialist Dr. Robert Thirsk told Canadian journalists of how the research will not only benefit astronauts as they conduct long-term space missions, but also people on Earth. Some of the research will aid studies on osteoporosis and the effects steroids have on bones, and also may help doctors on Earth develop treatments for muscle diseases like muscular dystrophy, Thirsk told reporters in Toronto. Released June 1996.	Transcript Link
2013 02 22	NASA STI Program	https://youtu.be/SN-jWz8W4Oc	STS-78 Flight Day 10	On this tenth day of the STS-78 mission, the flight crew, Cmdr. Terence T. Henricks, Pilot Kevin R. Kregel, Payload Cmdr. Susan J. Helms, Mission Specialists Richard M. Linnehan, Charles E. Brady, Jr., and Payload Specialists Jean-Jacques Favier, Ph.D. and Robert B. Thirsk, M.D., continue to perform in a nearly flawless fashion. The crew is shown completing another of four tests focusing on the effects of microgravity on the vestibular system in the inner ear. In space, the vestibular system sometimes becomes confused as to which way is up and down, leading to nausea and disorientation. Using specially designed head gear to monitor head movement and eye coordination, Linnehan, Brady, Favier, Thirsk and Helms performed tests throughout their shifts to determine how the head and eyes track visual and motion targets in microgravity. The study is providing scientists with important information about the crews' ability to adapt to microgravity. Released June 1996.	Transcript Link
2013 02 06	NASA STI Program	https://youtu.be/BB5ZlpthQc8	The Astronauts. The Flight of Friendship 7, Part 2	A review of John Glenn's flight into space. It is a re-release of 'The Flight of Friendship 7.' Contains copyrighted material. Distribution as joint owner in the copyright. Released Sep. 1988.	Transcript Link
2013 02 01	NASA STI Program	https://youtu.be/kfE6iir2s0g	STS-78 Flight Day 9	On this ninth day of the STS-78 mission, the flight crew, Cmdr. Terence T. Henricks, Pilot Kevin R. Kregel, Payload Cmdr. Susan J. Helms, Mission Specialists Richard M. Linnehan, Charles E. Brady, Jr., and Payload Specialists Jean-Jacques Favier, Ph.D. and Robert B. Thirsk, M.D., continue to serve as test subjects for a host of human health and microgravity investigations. The tests concentrate on measurements of lung capacity and muscle strength. In addition, the crew is shown continuing to operate and maintain the experiment equipment. June 1996	Transcript Link

2013 02 01	NASA STI Program	https://youtu.be/K3rblMELIcg	STS-78 Flight Day 8	On this eighth day of the STS-78 mission, the flight crew, Cmdr. Terence T. Henricks, Pilot Kevin R. Kregel, Payload Cmdr. Susan J. Helms, Mission Specialists Richard M. Linnehan, Charles E. Brady, Jr., and Payload Specialists Jean-Jacques Favier, Ph.D. and Robert B. Thirsk, M.D., continue to conduct experiments primarily focusing on the effects of weightlessness on human physiology. Results from the studies of muscle activity, task performance, and sleep will help future mission planners organize crew schedules for greater efficiency and productivity. For a second consecutive day, Henricks, Kregel, Thirsk, and Favier continue to enter responses to a battery of problem-solving tasks on the Performance Assessment Work Station, a laptop computer. June 1996	Transcript Link
2013 02 01	NASA STI Program	https://youtu.be/jmK2erRgOg0	STS-78 Flight Day 7	On this seventh day of the STS-78 mission, the flight crew, Cmdr. Terence T. Henricks, Pilot Kevin R. Kregel, Payload Cmdr. Susan J. Helms, Mission Specialists Richard M. Linnehan, Charles E. Brady, Jr., and Payload Specialists Jean-Jacques Favier, Ph.D. and Robert B. Thirsk, M.D., continue as test subjects in a series of investigations that seek to understand the effects of microgravity on the human musculoskeletal system. As they approach the half-way mark of a possible record-setting Space Shuttle mission, the crew of Columbia continues its full schedule of life science and microgravity experiments. June 1996	Transcript Link
2013 02 01	NASA STI Program	https://youtu.be/u-74YCNYJks	STS-78 Flight Day 6	On this sixth day of the STS-78 mission, the flight crew, Cmdr. Terence T. Henricks, Pilot Kevin R. Kregel, Payload Cmdr. Susan J. Helms, Mission Specialists Richard M. Linnehan, Charles E. Brady, Jr., and Payload Specialists Jean-Jacques Favier, Ph.D. and Robert B. Thirsk, M.D., are shown performing status checks on the life and microgravity experiments and conducting a brief maintenance procedure to correct an electrical circuit problem in the Bubble Drop Particle Unit. On this day, the crew is given four hours off to relax after five days of work with the life and microgravity science investigation being conducted on board. June 1996	Transcript Link
2013 02 01	NASA STI Program	https://youtu.be/tk7pdTeuoek	STS-78 Flight Day 5	On this fifth day of the STS-78 mission, the flight crew, Cmdr. Terence T. Henricks, Pilot Kevin R. Kregel, Payload Cmdr. Susan J. Helms, Mission Specialists Richard M. Linnehan, Charles E. Brady, Jr., and Payload Specialists Jean-Jacques Favier, Ph.D. and Robert B. Thirsk, M.D., are shown in the Spacelab conducting microgravity research. They concentrate on the use of the gradient furnace and the Bubble Drop Particle Unit to study process of manufacturing materials in microgravity, and on studies of human muscles and balance mechanisms. Also, Brady, Thirsk, Linnehan, and Favier conduct musculoskeletal tests that measure arm and hand-grip strength. June 1996	Transcript Link

2013 02 01	NASA STI Program	https://youtu.be/5Tqnt838H3Q	STS-78 Flight Day 4	On this fourth day of the STS-78 mission, the flight crew, Cmdr. Terence T. Henricks, Pilot Kevin R. Kregel, Payload Cmdr. Susan J. Helms, Mission Specialists Richard M. Linnehan, Charles E. Brady, Jr., and Payload Specialists Jean-Jacques Favier, Ph.D. and Robert B. Thirsk, M.D., discuss the flight during an interview with the Cable News Network (CNN). The crew then continues research concentrated on the Torque Velocity Dynamometer measurements of leg and arm muscle power, the Astronaut Lung Function Experiment, and effects of microgravity exercise with the bicycle ergometer and its associated instruments. June 1996	Transcript Link
2013 02 01	NASA STI Program	https://youtu.be/8f62VgmXEbo	STS-78 Flight Day 3	On this third day of the STS-78 mission, the flight crew, Cmdr. Terence T. Henricks, Pilot Kevin R. Kregel, Payload Cmdr. Susan J. Helms, Mission Specialists Richard M. Linnehan, Charles E. Brady, Jr., and Payload Specialists Jean-Jacques Favier, Ph.D. and Robert B. Thirsk, M.D., are shown performing human physiology tests that include the Direct Measurement of the Initial Bone Response to Space Flight. Various members of the crew can be seen exercising on the bicycle ergometer cardiovascular system. June 1996	Transcript Link
2013 02 01	NASA STI Program	https://youtu.be/ZmrMFqqR3LQ	STS-78 Flight Day 2	On this second day of the STS-78 flight, mission controllers wake the flight crew, Cmdr. Terence T. Henricks, Pilot Kevin R. Kregel, Payload Cmdr. Susan J. Helms, Mission Specialists Richard M. Linnehan, Charles E. Brady, Jr., and Payload Specialists Jean-Jacques Favier, Ph.D. and Robert B. Thirsk, M.D., with 'Free Falling,' a song by Tom Petty. Crew members are then shown working with various neurological and cardiovascular experiments inside the Spacelab. June 1996	Transcript Link
2013 02 01	NASA STI Program	https://youtu.be/DABvyTfaHZM	STS-78 Flight Day 1	On this first day of the STS-78 mission, the flight crew, Cmdr. Terence T. Henricks, Pilot Kevin R. Kregel, Payload Cmdr. Susan J. Helms, Mission Specialists Richard M. Linnehan, Charles E. Brady, Jr., and Payload Specialists Jean-Jacques Favier, Ph.D. and Robert B. Thirsk, M.D., can be seen preforming pre-launch activities such as eating the traditional breakfast, crew suit-up, and the ride out to the launch pad. Also included are various panoramic views of the shuttle on the pad. The crew can be seen being readied in the white room for their mission. After the closing of the hatch and arm retraction, launch activities are shown including countdown, engine ignition, launch, and the separation of the Solid Rocket Boosters. Henricks shares a unique view of Columbia's climb to orbit with flight controllers from a small camera that was mounted on the flight deck. The video follows Columbia's flight from just before main engine start through main engine cutoff, showing the force of main engine and solid booster ignition as experienced by the astronauts. June 1996	Transcript Link

2013 01 31	NASA STI Program	https://youtu.be/i-coJg_vgxI	LaRC's Unitary Tunnel, Supersonic Retropropulsion Test, Mach 4.6 Schlieren Video	Compilation of high-speed schlieren video showing supersonic retropropulsion in the Langley Unitary Plan Wind Tunnel - Entry, Descent, and Landing Project, Mach 4.6. Test conducted July 2010. No sound. Released Oct. 2012	Transcript Link
2013 01 31	NASA STI Program	https://youtu.be/fTmPc1olhiU	LaRC's Unitary Tunnel, Supersonic Retropropulsion at Mach 3.5 Schlieren Video	Compilation of high-speed schlieren video showing supersonic retropropulsion in the Langley Unitary Plan Wind Tunnel - Entry, Descent, and Landing Project, Mach 3.5. Test conducted July 2010. No sound. Released Oct. 2012	Transcript Link
2013 01 31	NASA STI Program	https://youtu.be/-ezb03W6KCc	LaRC's Unitary Tunnel, Supersonic Retropropulsion at Mach 2.4 Schlieren Video	Compilation of high-speed schlieren video showing supersonic retropropulsion in the Langley Unitary Plan Wind Tunnel - Entry, Descent, and Landing Project, Mach 2.4. Test conducted July 2010. No sound. Released Oct. 2012.	Transcript Link
2013 01 29	NASA STI Program	https://youtu.be/bD9UQ2Q8A_o	STS-77 Flight Day 10	On this tenth day of the STS-77 mission, the flight crew, Cmdr. John H. Casper, Pilot Curtis L. Brown, Jr., and Mission Specialists Andrew S.W. Thomas, Ph.D., Daniel W. Bursch, Mario Runco, Jr., and Marc Garneau, Ph.D., perform a routine check of the shuttle's flight control surfaces and reaction control system jets, wrap up work with a number of scientific investigations, and begin securing the cabin for the trip back to Earth. Most experiments aboard the shuttle have been completed and stowed away, although a few will operate throughout the night and be deactivated once the crew wakes. Crew members Andy Thomas, a native of Australia, and Marc Garneau, a Canadian, each receive special greetings today as STS-77 nears its end. South Australia Premier Dean Brown called Thomas with congratulations early this morning as the shuttle passed above Brown's office in Adelaide, Australia, Thomas' hometown. Later, Canadian Prime Minister Jean Chretien called Garneau to congratulate him on the mission and the joint Canadian Space Agency and NASA experiments that were conducted. May 1996	Transcript Link

2013 01 29	NASA STI Program	https://youtu.be/O79fLGFLu_c	STS-77 Flight Day 9	On this ninth day of the STS-77 mission, the flight crew, Cmdr. John H. Casper, Pilot Curtis L. Brown, Jr., and Mission Specialists Andrew S.W. Thomas, Ph.D., Daniel W. Bursch, Mario Runco, Jr., and Marc Garneau, Ph.D., make the third rendezvous with the small aerodynamically stabilized satellite. Commander John Casper and Pilot Curt Brown guided Endeavour to just under 2,000 feet from the cylindrically shaped Passive Aerodynamically Stabilized Magnetically Damped Satellite Satellite Test Unit (PMS-STU). It was deployed from a small canister in Endeavour's payload bay earlier in the mission in an unstable, slightly tumbling attitude to observe how or whether it could stabilize itself without using satellite lifetime-limiting propellants. Casper was scheduled to take time out during the final phase of the rendezvous to talk to fellow astronaut Shannon Lucid and her two cosmonaut crewmates aboard the Russian Space Station Mir. Various views of the Earth can be seen. May 1996	Transcript Link
2013 01 29	NASA STI Program	https://youtu.be/NdcCCAYmQ50	STS-77 Flight Day 8	On this eighth day of the STS-77 mission, the flight crew, Cmdr. John H. Casper, Pilot Curtis L. Brown, Jr., and Mission Specialists Andrew S.W. Thomas, Ph.D., Daniel W. Bursch, Mario Runco, Jr., and Marc Garneau, Ph.D., take time out from their schedule to discuss the progress of the mission with reporters. Casper said the flight has been highly successful so far, having accomplished all of the goals. Mission Specialists Dan Bursch and Andy Thomas described protein crystal growth and plant growth experiments being conducted throughout the flight in the SPACEHAB-4 module. And Mario Runco discussed testing soft drink samples in the Fluids Generic Bioprocessing Apparatus. May 1996	Transcript Link
2013 01 29	NASA STI Program	https://youtu.be/Tvkzhp0CmoE	STS-77 Flight Day 7	On this seventh day of the STS-77 mission, the flight crew, Cmdr. John H. Casper, Pilot Curtis L. Brown, Jr., and Mission Specialists Andrew S.W. Thomas, Ph.D., Daniel W. Bursch, Mario Runco, Jr., and Marc Garneau, Ph.D., return to the small, cylindrical PAMS-STU satellite and begin eight hours of station-keeping about 1,800 feet away. The second rendezvous with the Passive Aerodynamically Stabilized Magnetically Damped Satellite (PAMS) begins shortly after the crew is awakened by the song 'Down Under' performed by Men At Work, in honor of Australian-born Mission Specialist Andy Thomas. For several hours Commander John Casper and Pilot Curt Brown perform a series of thruster firings which allow Endeavour to close in on the 2 foot by 3 foot satellite. The rendezvous takes place as other crewmembers monitor ongoing science experiments in the SPACEHAB-4 module and on the middeck of the orbiter. May 1996	Transcript Link

2013 01 29	NASA STI Program	https://youtu.be/0kYagggVg1E	STS-77 Flight Day 6	On this sixth day of the STS-77 mission, the flight crew, Cmdr. John H. Casper, Pilot Curtis L. Brown, Jr., and Mission Specialists Andrew S.W. Thomas, Ph.D., Daniel W. Bursch, Mario Runco, Jr., and Marc Garneau, Ph.D., spend some time relaxing, then go back to working in the SPACEHAB-4 module and preparing to revisit a small cylindrical satellite that they deployed on the mission's third day. Commander John Casper and Pilot Curt Brown monitor Endeavour's systems. Mission Specialist Mario Runco tests an attitude determination system using the GPS attitude and navigation experiment called GANE. The remaining crew members, Mission Specialists Andy Thomas, Dan Bursch and Marc Garneau monitor the health of experiments ongoing in the SPACEHAB-4 and on the middeck of the orbiter. The crew also conduct a health check of the Aquatic Research Facility (ARF) which contains starfish, mussels and sea urchins. May 1996	Transcript Link
2013 01 29	NASA STI Program	https://youtu.be/yFszebtyTLw	STS-77 Flight Day 5	On this fifth day of the STS-77 mission, the flight crew, Cmdr. John H. Casper, Pilot Curtis L. Brown, Jr., and Mission Specialists Andrew S.W. Thomas, Ph.D., Daniel W. Bursch, Mario Runco, Jr., and Marc Garneau, Ph.D., spend the first half of their workday assisting payload controllers with investigations into materials processing of samples and the growth of crystals. The progress of starfish and mussel development in a spaceborne aquarium in the SPACEHAB-4 module in the Shuttle's cargo bay is seen. The crew then move off in different directions to support work with many of the experiments that make up the fourth mission of the SPACEHAB-4 pressurized module. Endeavour is about 64 miles away from the Passive Aerodynamically Stabilized Magnetically Damped Satellite-Satellite Test Unit, or PAMS-STU, which was deployed from a canister in the payload bay on day four. Since mission day five coincided with Memorial Day, the crew started the 'Indy 500' from earth orbit. May 1996	Transcript Link
2013 01 29	NASA STI Program	https://youtu.be/epK-hNKiyH4	STS-77 Flight Day 4	On this fourth day of the STS-77 mission, the flight crew, Cmdr. John H. Casper, Pilot Curtis L. Brown, Jr., and Mission Specialists Andrew S.W. Thomas, Ph.D., Daniel W. Bursch, Mario Runco, Jr., and Marc Garneau, Ph.D., turned their attention to the deployment of a small technology demonstration satellite known as PAMS. The Passive Aerodynamically Stabilized Magnetically-damped Satellite uses aerodynamic stabilization to orient itself properly and demonstrates a technique that could prolong the lifetime of a satellite by reducing or eliminating the requirement for attitude control propellants. After Mission Specialist Mario Runco deploys the satellite from a canister in the rear of Endeavour's payload bay, it drifts away from the orbiter in a rotating, unstable attitude by design to evaluate how quickly and effectively the spacecraft can stabilize itself using the aerodynamic stabilization method rather than by thrusters. Later in the day, the crew is seen being interviewed by Canadian Television. May 1996	Transcript Link

2013 01 29	NASA STI Program	https://youtu.be/uZF-OHqAnlk	STS-77 Flight Day 3	On this third day of the STS-77 mission, the flight crew, Cmdr. John H. Casper, Pilot Curtis L. Brown, Jr., and Mission Specialists Andrew S.W. Thomas, Ph.D., Daniel W. Bursch, Mario Runco, Jr., and Marc Garneau, Ph.D., can be seen focusing their attention on retrieving the Spartan satellite and returning it to the Shuttle's payload bay. Commander John Casper, Pilot Curt Brown and Mission Specialist Dan Bursch prepared for the rendezvous while Mission Specialists Andy Thomas, Mario Runco and Marc Garneau continued work on the orbiter's middeck and in the SPACEHAB-4 module. The Inflatable Antenna Experiment (I.A.E) was jettisoned later in the morning and is expected to enter the Earth's atmosphere. This morning's rendezvous is the first of four planned during the mission. Following a series of jet firings, Endeavour approaches within a distance of about 30 feet from Spartan, where Garneau can be seen extending the ship's robot arm to grapple the satellite for its berthing back on its payload bay platform. May 1996	Transcript Link
2013 01 29	NASA STI Program	https://youtu.be/jSP7WGupX8o	STS-77 Flight Day 2	On this second day of the STS-77 mission, the flight crew, Cmdr. John H. Casper, Pilot Curtis L. Brown, Jr., and Mission Specialists Andrew S.W. Thomas, Ph.D., Daniel W. Bursch, Mario Runco, Jr., and Marc Garneau, Ph.D., are seen deploying the Spartan satellite for its 24 hour free flight away from Endeavour to test new inflatable antenna technology. The inflation procedure begins as the shuttle and antenna pass over New Mexico, Southern California, the Grand Canyon, Appalachian Mountains, and coast of Virginia. The inflation takes about 5 minutes, bringing the antenna to its full size of 90 feet by 50 feet. After an hour and a half, the antenna was to be jettisoned from the Spartan. May 1996	Transcript Link
2013 01 29	NASA STI Program	https://youtu.be/dgswKXhO0Wo	STS-77 Flight Day 1	On this first day of the STS-77 mission, the flight crew, Cmdr. John H. Casper, Pilot Curtis L. Brown, Jr., and Mission Specialists Andrew S.W. Thomas, Ph.D., Daniel W. Bursch, Mario Runco, Jr., and Marc Garneau, Ph.D., can be seen preforming pre-launch activities such as eating the traditional breakfast, crew suit-up, and the ride out to the launch pad. Also, included are various panoramic views of the shuttle on the pad. The crew can be seen being readied in the 'white room' for their mission. After the closing of the hatch and arm retraction, launch activities are shown including countdown, engine ignition, launch, and the separation of the Solid Rocket Boosters. Following an on-time launch, the crew of Endeavor are shown setting up a variety of experiments that will operate for much of the mission. May 1996	Transcript Link
2013 01 28	NASA STI Program	https://youtu.be/bVf49dl-dmw	STS-76 Flight Day 8	On this eighth day of the STS-76 mission, the flight crew, Cmdr. Kevin P. Chilton, Pilot Richard A. Searfoss, and Mission Specialists Linda M. Godwin, Michael R. Clifford, and Ronald M. Sega are shown undocking from the Mir Space Station. With Mir some 60 nautical miles behind them, the Atlantis astronauts prepared for the return to Earth. Chilton, Searfoss and Clifford perform a routine checkout of Atlantis' flight control surfaces and a hotfire test of the orbiter's reaction control system jets. Views include the undocking maneuver; Atlantis as seen from the Mir Space Station; Atlantis' fly-round of Mir; and the firing of the Reaction Control System (RCS) primary thrusters. Apr. 1996	Transcript Link

2013 01 28	NASA STI Program	https://youtu.be/ihqAO75AK_A	STS-76 Flight Day 7	On this seventh day of the STS-76 mission, the flight crew, Cmdr. Kevin P. Chilton, Pilot Richard A Searfoss, and Mission Specialists Linda M. Godwin, Michael R. Clifford, and Ronald M. Sega are shown bidding the Mir crew and Shannon W. Lucid an emotional farewell, Chilton calling it 'a bittersweet moment.' The Atlantis and Mir commanders, Chilton and Onufrienko, along with spacewalkers Godwin and Clifford took time out to talk with CBS' 'Up to the Minute.' The space flyers discussed the success of their joint mission and the 6-hour spacewalk. The astronauts and cosmonauts exchanged handshakes and hugs in the Mir core module, and then praised both mission control centers, Houston and Kaliningrad for their support throughout the joint phase of the mission.Mar. 1996	Transcript Link
2013 01 28	NASA STI Program	https://youtu.be/IRoOc13MEds	STS-76 Flight Day 6	On this sixth day of the STS-76 mission, the flight crew, Cmdr. Kevin P. Chilton, Pilot Richard A. Searfoss, and Mission Specialists Shannon W. Lucid, Linda M. Godwin, Michael R. Clifford, and Ronald M. Sega are shown preparing for Godwin and Clifford's extra vehicular activity (EVA). The two astronauts are shown egressing from the Shuttle and performing activities during the EVA with the Earth in the background. Godwin and Clifford spent six hours spacewalking in Atlantis' cargo bay and on the exterior of the Mir's docking module. They are shown completing all of the objectives planned for the spacewalk, the most important of which was to install on the exterior of Mir four experiments to monitor the space environment for the next year and a half. This marks the first time that a spacewalk was conducted from a docked Space Shuttle. A variety of new tools capable of being used on both US and Russian spacecraft were evaluated during the spacewalk. Mar. 1996	Transcript Link
2013 01 28	NASA STI Program	https://youtu.be/zeyP7fM3EE4	STS-76 Flight Day 5	On this fifth day of the STS-76 mission, the flight crew, Cmdr. Kevin P. Chilton, Pilot Richard A. Searfoss, and Mission Specialists Shannon W. Lucid, Linda M. Godwin, Michael R. Clifford, and Ronald M. Sega, pay tribute to the late astronaut Bob Overmeyer with views from the Atlantis/Mir configuration with the Earth in the background. Atlantis astronauts, interviewed by reporters from NASA Centers and Russia during an in-orbit press conference, describe their observations of Comet Hyakutake as it continues its close pass by Earth, remarking on the comet's brilliance and visibility. The astronauts and cosmonauts also took time out from their transfer and resupply activities to talk with Charlie Gibson of 'Good Morning America.' Mar. 1996	Transcript Link
2013 01 28	NASA STI Program	https://youtu.be/t1c-lenmeK0	STS-76 Flight Day 4	On this fourth day of the STS-76 mission, the flight crew, Cmdr. Kevin P. Chilton, Pilot Richard A. Searfoss, and Mission Specialists Shannon W. Lucid, Linda M. Godwin, Michael R. Clifford, and Ronald M. Sega, are shown performing various experiments on the Middeck and transferring supplies to the Mir Space Station. Godwin explains the European Space Agency (ESA) Biorack investigations. Chilton, Lucid and Mir Cmdr. Yuri Onufrienko talk with NASA Administrator Dan Goldin via satellite link. Lucid will be joining the cosmonauts, Onufrienko and Flight Engineer Yuri Usachev, for a 140-day mission on Mir. Mar. 1996	Transcript Link

2013 01 28	NASA STI Program	https://youtu.be/O1Gl4huXUCo	STS-76 Flight Day 3	On this third day of the STS-76 mission, the flight crew, Cmdr Kevin P. Chilton, Pilot Richard A. Searfoss, and Mission Specialists Shannon W. Lucid, Linda M. Godwin, and Ronald M. Sega, are shown performing the docking maneuvers for the Mir Space Station and the Atlantis in-orbit rendezvous. The Atlantis crew is shown greeting the Mir cosmonaut crew, Cmdr. Yuri Onufrienko and Flight Engineer Yuri Usachev. The docking procedure is shown from both outside and inside the Atlantis. An interview with Mission Control is shown from inside Mir with both crews present. There is footage of the Mir, both docked with Atlantis and free flying. Not shown is the EVA by Clifford and Godwin to attach several experimental packages to the exterior of the Mir docking module, although their packing preparation is shown. Mar. 1996	Transcript Link
2013 01 28	NASA STI Program	https://youtu.be/Z0O5e9LhLlQ	STS-76 Flight Day 2	On this second day of the STS-76 mission, the flight crew, Cmdr. Kevin P. Chilton, Pilot Richard A Searfoss, and Mission Specialists Shannon W. Lucid, Linda M. Godwin, Michael R. Clifford, and Ronald M. Sega, are shown checking out one of the leaking hydraulic systems onboard the Space Shuttle Atlantis. There was an in-orbit interview with the astronauts by the host of the NBC show, 'Nightside'. The construction of the SPACEHAB unit also was started. Mar. 1996	Transcript Link
2013 01 28	NASA STI Program	https://youtu.be/4EVpBbxF7tI	STS-76 Flight Day 1	On this first day of the STS-76 mission, the flight crew, Cmdr. Kevin P. Chilton, Pilot Richard A Searfoss, and Mission Specialists Shannon W. Lucid, Linda M. Godwin, Michael R. Clifford, and Ronald M. Sega, are shown performing prelaunch and launch activities for the night launch of the Space Shuttle Atlantis. The primary objective of this mission is the third docking between the Mir Space Station and Atlantis and a crew transfer. Lucid will remain onboard the Mir for about four months. Other activities include an EVA by Godwin and Clifford, logistics operations, and scientific research with a SPACEHAB module, some middeck experiments, and a Get Away Special (GAS) canister. Also, almost a ton of equipment and supplies will be transferred to the Mir. Experiments include the Mir Electric Field Characterization (MEFC), European Space Agency (ESA) Biorack life sciences experiment, Queens University Experiment in Liquid Diffusion (QUELD), Optizone Liquid Phase Sintering Experiment (OLIPSE), and a Naval Research Laboratory (NRL) GAS payload Trapped Ions in Space (TRIS), which will measure low-energy particle radiation in the inner magnetosphere. This mission also will include a KidSat, a prototype of Earth viewing cameras and instruments, that allow students in grades K-12 to see and direct the capture of pictures from space. Footage from Mission control is also included. Mar. 1996	Transcript Link

2013 01 25	NASA STI Program	https://youtu.be/Q_e7BQuOHk0	STS-75 Flight Day 15	On this fifteenth day of the STS-75 mission, the flight crew, Cmdr. Andrew Allen, Pilot Scott Horowitz, Payload Cmdr. Franklin Chang-Diaz, Payload Specialist Umberto Guidoni (Italy), and Mission Specialists Jeffrey Hoffman, Maurizio Cheli (ESA) and Claude Nicollier (ESA), are shown performing various experiments. Chang-Diaz gives a short presentation about the importance of protein crystals and their use in research. A water vapor exhaust test is performed with the shuttle's exhaust jets. Earth views include land and water masses, the horizon, and there are views of the shuttle's cargo bay. March 1996	Transcript Link
2013 01 25	NASA STI Program	https://youtu.be/62-rDnRT9xg	STS-75 Flight Day 14	On this fourteenth day of the STS-75 mission, the flight crew, Cmdr. Andrew Allen, Pilot Scott Horowitz, Payload Cmdr. Franklin Chang-Diaz, Payload Specialist Umberto Guidoni (Italy), and Mission Specialists Jeffrey Hoffman, Maurizio Cheli (ESA) and Claude Nicollier (ESA), are shown conducting material burn tests and physiological experiments. Earth views include cloud cover, sunrise, atmospheric boundary layer, Florida, Amazon River, Brazil coast line, and the Pacific Ocean. March 1996	Transcript Link
2013 01 25	NASA STI Program	https://youtu.be/WYkhaw97GTo	STS-75 Flight Day 13	On this thirteenth day of the STS-75 mission, the flight crew, Cmdr. Andrew Allen, Pilot Scott Horowitz, Payload Cmdr. Franklin Chang-Diaz, Payload Specialist Umberto Guidoni (Italy), and Mission Specialists Jeffrey Hoffman, Maurizio Cheli (ESA) and Claude Nicollier (ESA), are shown conducting combustion and burn experiments. The flight crew is interviewed by news reporters from United States and Europe via a satellite hookup. Earth views include clouds and storm systems. A view of the lost, free-flying tethered satellite is shown. March 1996	Transcript Link
2013 01 25	NASA STI Program	https://youtu.be/mDhubCbm8n0	STS-75 Flight Day 12	On this twelfth day of the STS-75 mission, the flight crew, Cmdr. Andrew Allen, Pilot Scott Horowitz, Payload Cmdr. Franklin Chang-Diaz, Payload Specialist Umberto Guidoni (Italy), and Mission Specialists Jeffrey Hoffman, Maurizio Cheli (ESA) and Claude Nicollier (ESA), are shown being interviewed via satellite hookup by reporters. Cheli, through the demonstration of a simple experiment, explains a simple acceleration physics concept. Middeck Glovebox burn and combustion experiments are also shown. Earth views include Italy, other land masses, some cloud cover, a sunrise, and horizon shots. March 1996	Transcript Link
2013 01 25	NASA STI Program	https://youtu.be/ZmNWgZMSI0Q	STS-75 Flight Day 11	On this eleventh day of the STS-75 mission, the flight crew, Cmdr. Andrew Allen, Pilot Scott Horowitz, Payload Cmdr. Franklin Chang-Diaz, Payload Specialist Umberto Guidoni (Italy), and Mission Specialists Jeffrey Hoffman, Maurizio Cheli (ESA) and Claude Nicollier (ESA), are shown conducting combustion experiments in the Middeck Glovebox station, conducting physiological tests, and performing a variety of daily activities (eating, exercising, etc.). Horowitz, Cheli, and Guidoni are interviewed by Voice of America via satellite hookup and they answered general questions regarding the mission, experiments, and the lost tethered satellite. Earth views include a sunrise and some cloud cover. March 1996	Transcript Link

2013 01 25	NASA STI Program	https://youtu.be/HyacFgfRGN0	STS-75 Flight Day 10	On this tenth day of the STS-75 mission, the flight crew, Cmdr. Andrew Allen, Pilot Scott Horowitz, Payload Cmdr. Franklin Chang-Diaz, Payload Specialist Umberto Guidoni (Italy), and Missions Specialists Jeffrey Hoffman, Maurizio Cheli (ESA), and Claude Nicollier (ESA), are shown performing middeck and Microgravity lab experiments, including the Material pour l'Etude des Phenomenes Interessant la Solidification sur Terre et en Orbite (MEPHISTO) experiment, as well as some material burn tests. Earth views include cloud cover and horizon shots. March 1996	Transcript Link
2013 01 25	NASA STI Program	https://youtu.be/dlIF0P9j0cM	STS-75 Flight Day 9	On this ninth day of the STS-75 mission, the flight crew, Cmdr. Andrew Allen, Pilot Scott Horowitz, Payload Cmdr. Franklin Chang-Diaz, Payload Specialist Umberto Guidoni (Italy), and Mission Specialists Jeffrey Hoffman, Maurizio Cheli (ESA) and Claude Nicollier (ESA), are shown tracking the free-orbiting tethered satellite and performing various experiments from the United States Microgravity Payload-3 (USMP-3). An in-orbit interview with Allen, Cheli, and Guidoni by the Italian news media is shown. The astronauts answer a variety of questions concerning the loss of the tethered satellite, and the progress of the other mission experiments. Earth views include a sunset and horizon shots. March 1996	Transcript Link
2013 01 25	NASA STI Program	https://youtu.be/ajqCrYDgmqI	STS-75 Flight Day 8	On this eighth day of the STS-75 mission, the flight crew, Cmdr. Andrew Allen, Pilot Scott Horowitz, Payload Cmdr. Franklin Chang-Diaz, Payload Specialist Umberto Guidoni (Italy), and Mission Specialists Jeffrey Hoffman, Maurizio Cheli (ESA) and Claude Nicollier (ESA), are shown performing the Advanced Automated Directional Solidification Furnace (AADSF) experiment which is one part of the United States Microgravity Payload-3 (USMP-3) experiments. Earth views include cloud cover. Feb. 1996	Transcript Link
2013 01 25	NASA STI Program	https://youtu.be/h9U1jqIvBuE	STS-75 Flight Day 6	On this sixth day of the STS-75 mission, the flight crew, Cmdr. Andrew Allen, Pilot Scott Horowitz, Payload Cmdr. Franklin Chang-Diaz, Payload Specialist Umberto Guidoni (Italy), and Mission Specialists Jeffrey Hoffman, Maurizio Cheli (ESA) and Claude Nicollier (ESA), are shown performing experiments from the United States Microgravity Payload-3 (USMP-3). Mission Control continues to update the flight crew regarding the status of the free orbiting tethered satellite and the few experiments that they were able to start-up onboard the satellite. There is an in-orbit question and answer interview with the astronauts by a group of sixth graders from a West Virginia school. Earth views include water masses and horizon shots. Feb. 1996.	Transcript Link

2013 01 25	NASA STI Program	https://youtu.be/SU9q1N9B-MM	STS-75 Flight Day 5	On this fifth day of the STS-75 mission, the flight crew, Cmdr. Andrew Allen, Pilot Scott Horowitz, Payload Cmdr. Franklin Chang-Diaz, Payload Specialist Umberto Guidoni (Italy), and Mission Specialists Jeffrey Hoffman, Maurizio Cheli (ESA) and Claude Nicollier (ESA), are shown viewing the tethered satellite and performing experiments, both onboard the shuttle and with the TSS. An accident occurs in which the tether breaks and the satellite is shown floating away from the shuttle. There is an in-orbit interview with reporters from Johnson Space Center after the accident occurred, in which they discuss the reasons for the accident and how the experiment can be salvaged. Feb, 1996	Transcript Link
2013 01 25	NASA STI Program	https://youtu.be/PWU9SGJV4ZA	STS-75 Flight Day 4	On this fourth day of the STS-75 mission, the flight crew, Cmdr. Andrew Allen, Pilot Scott Horowitz, Payload Cmdr. Franklin Chang-Diaz, Payload Specialist Umberto Guidoni (Italy), and Mission Specialists Jeffrey Hoffman, Maurizio Cheli (ESA) and Claude Nicollier (ESA), are shown unlatching and deploying the Tethered Satellite System Reflight (TSS-1R) and activating several of the middeck experiments from the United States Microgravity Payload-3 (USMP-3). There is more imaging of the Space Shuttle's exhaust system using vented water vapor and Earth views, which include horizon shots. Feb. 1996.	Transcript Link
2013 01 25	NASA STI Program	https://youtu.be/yJEUqp6050Y	STS-75 Flight Day 3	On this third day of the STS-75 mission, the flight crew, Cmdr. Andrew Allen, Pilot Scott Horowitz, Payload Cmdr. Franklin Chang-Diaz, Payload Specialist Umberto Guidoni (Italy), and Mission Specialists Jeffrey Hoffman, Maurizio Cheli (ESA) and Claude Nicollier (ESA), are shown, with Mission Control's help, still trying to correct the problems with the 'Smart Flex' computer system which is delaying the deployment of the Tethered Satellite System Reflight (TSS-1R). There is imaging shown of the shuttle's exhaust system using water vapor. Feb. 1996.	Transcript Link

2013 01 25	NASA STI Program	https://youtu.be/kaGo92Kwjhg	STS-75 Flight Day 1	On this first day of the STS-75 mission, the flight crew, Cmdr. Andrew Allen, Pilot Scott Horowitz, Payload Cmdr. Franklin Chang-Diaz, Payload Specialist Umberto Guidoni (Italy), and Mission Specialists Jeffrey Hoffman, Maurizio Cheli (ESA) and Claude Nicollier (ESA), were shown performing pre-launch and launching activities. This international space mission's primary objective is the deployment of the Tethered Satellite System Reflight (TSS-1R) to a 12 mile length from the shuttle, a variety of experiments, and the satellite retrieval. These experiments include: Research on Orbital Plasma Electrodynamics (ROPE); TSS Deployer Core Equipment and Satellite Core Equipment (DCORE/SCORE); Research on Electrodynamic Tether Effects (RETE); Magnetic Field Experiments for TSS Missions (TEMAG); Shuttle Electrodynamic Tether Systems (SETS); Shuttle Potential and Return Electron Experiment (SPREE); Tether Optical Phenomena Experiment (TOP); and Observations at the Earth's Surface of Electromagnetic Emissions by TSS (OESSE). The mission's secondary objectives were those experiments found in the United States Microgravity Payload-3 (USMP-3), which include: Advanced Automated Directional Solidification Furnace (AADSF); Material pour l'Etude des Phenomenes Interessant la Solidification sur Terre et en Orbite (MEPHISTO); Space Acceleration Measurement System (SAMS); Orbital Acceleration Research Experiment (OARE); Critical Fluid Scattering Experiment (ZENO); and Isothermal Dendritic Growth Experiment (IDGE). Feb. 1996.	Transcript Link
2013 01 25	NASA STI Program	https://youtu.be/5dBoL9FZr0g	STS-75 Flight Day 2	On this second day of the STS-75 mission, the flight crew, Cmdr. Andrew Allen, Pilot Scott Horowitz, Payload Cmdr. Franklin Chang-Diaz, Payload Specialist Umberto Guidoni (Italy), and Mission Specialists Jeffrey Hoffman, Maurizio Cheli (ESA) and Claude Nicollier (ESA), are shown, via satellite-downlinking, online with Dan Golden, the Director of NASA, discussing the mission and performing system set-ups. A problem with the 'Smart Flex' computer system develops and the crew spends most of the day trying to fix the problem with the help of Mission Control. Earth views include cloud cover, various land and water masses, and Earth's Arctic regions. Feb. 1996.	Transcript Link
2013 01 22	NASA STI Program	https://youtu.be/pZ71TJp7XGY	STS-72 Post Flight Presentation	In this post flight presentation video for the STS-72 mission, the flight crew, Cmdr. Brian Duffy, Pilot Brent Jett, and Mission Specialists Daniel T. Barry, Winston E. Scott, Leroy Chiao, and Koichi Wakata (NASDA), discuss their mission using flight footage and slides. The pre-launch and launching activities are shown. Using the robot arm inside the space shuttle's cargo bay, the Japanese Space Flyer Unit (SFU) is retrieved and berthed and the Office of Aeronautics and Space Technology (OAST) Flyer satellite is deployed, retrieved, and reberthed. Chiao and Barry performed the first of the two 6 1/2 hour EVAs and Chiao and Scott performed the second. In both EVAs, the thermal properties of the new space suits were tested, along with new tools and equipment that will eventually be used to build the International Space Station. Space shuttle landing activities are also shown. Earth views include cloud shadows, Africa, Brazil, Australia, and Mt. Kilimanjaro. Feb. 1996	Transcript Link

2013 01 22	NASA STI Program	https://youtu.be/DQqZlF7RTP0	STS-72 Flight Day 9	On this ninth day of the STS-72 mission, the flight crew, Cmdr. Brian Duffy, Pilot Brent W. Jett, and Mission Specialists Leroy Chiao, Daniel T. Barry, Winston E. Scott, and Koichi Wakata (NASDA), awakened to music from the movie Star Wars. The astronauts conducted a news conference via satellite and answered questions from both Japanese and U.S. reporters at the Kennedy Space Center and the Johnson Space Center. The preparation for the scheduled night landing continues from the previous day's activities. Jan. 1996	Transcript Link
2013 01 22	NASA STI Program	https://youtu.be/JZwbrX36PW0	STS-72 Flight Day 8	On this eighth day of the STS-72 mission, the flight crew, Cmdr. Brian Duffy, Pilot Brent W. Jett, and Mission Specialists Leroy Chiao, Daniel T. Barry, Winston E. Scott, and Koichi Wakata (NASDA), awakened to the Alanis Morissette song, 'All I Really Want.' Secondary middeck experiments were completed along with the crew having some free personal time. Duffy, Scott, and Wakata were interviewed via satellite by students from Johannesburg, South Africa as part of the U.S. Information Agency's 'Worldnet' program. They answered general questions from the students regarding their mission, the spacewalks, and the International Space Station. Earth views included cloud cover, land masses, a close-up of a storm system over Houston, Texas, and various other night time shots of the Earth. Jan. 1996	Transcript Link
2013 01 22	NASA STI Program	https://youtu.be/fKCfSk6NVtM	STS-72 Flight Day 7	On this seventh day of the STS-72 mission, the flight crew, Cmdr. Brian Duffy, Pilot Brent W. Jett, and Mission Specialists Leroy Chiao, Daniel T. Barry, Winston E. Scott, and Koichi Wakata (NASDA), awakened to music from the Walt Disney movie, 'Snow White and the Seven Dwarfs.' Chiao and Scott performed the second spacewalk of the mission where they tested equipment and work platforms that will be used in building the planned International Space Station. This spacewalk was almost seven hours long. Wakata conducted an interview with and answered questions from six graders from a Japanese school in Houston, Texas. Jan. 1996	Transcript Link
2013 01 22	NASA STI Program	https://youtu.be/kvwBz2NwF34	STS-72 Flight Day 6	On this sixth day of the STS-72 mission, the flight crew, Cmdr. Brian Duffy, Pilot Brent W. Jett, and Mission Specialists Leroy Chiao, Daniel T. Barry, Winston E. Scott, and Koichi Wakata (NASDA), successfully retrieved the OAST-Flyer satellite and berthed it in the shuttle's cargo bay with Wakata using the shuttle's robot arm. Dr. Barry conducted an interview with a radio station in Houston via satellite link. He answered general questions concerning the spacewalks, the equipment, and the planned International Space Station. Earth views include cloud cover, water masses, and land masses. Jan. 1996	Transcript Link

2013 01 22	NASA STI Program	https://youtu.be/Ksa5NWHxREk	STS-72 Flight Day 5	On this fifth day of the STS-72 mission, the flight crew, Cmdr. Brian Duffy, Pilot Brent W. Jett, and Mission Specialists Leroy Chiao, Daniel T. Barry, Winston E. Scott, and Koichi Wakata (NASDA), awakened to music from the television show, 'Star Trek: The Next Generation'. Chiao and Barry are shown suiting up for the first of the two scheduled 6 1/2 hour spacewalks and, later, conducting tests with various tools and materials from the shuttle's cargo bay during the spacewalk. The new heating and cooling units in the spacesuits will be tested during these EVAs. Jan. 1996	Transcript Link
2013 01 22	NASA STI Program	https://youtu.be/jBvuJBiumak	STS-72 Flight Day 4	On this fourth day of the STS-72 mission, the flight crew, Cmdr. Brian Duffy, Pilot Brent W. Jett, and Mission Specialists Leroy Chiao, Daniel T. Barry, Winston E. Scott, and Koichi Wakata (NASDA), deployed the OAST-Flyer satellite which will perform two days of scientific investigations, checked out the space tools that they will be testing during their two planned spacewalks, and conducted the secondary middeck experiments. The host, Tom Miller, from NBC's 'Nightside' show, interviewed the astronauts from Charlotte, NC, via satellite link. Views include the Japanese Space Flyer Unit (SFU) satellite in its berth in the shuttle's cargo bay with the Earth in the background, Earth cloud cover, and various shots of the shuttle's cargo bay. Jan. 1996	Transcript Link
2013 01 22	NASA STI Program	https://youtu.be/VvG6RCr1BYw	STS-72 Flight Day 3	On this third day of the STS-72 mission, the flight crew, Cmdr. Brian Duffy, Pilot Brent W. Jett, and Mission Specialists Leroy Chiao, Daniel T. Barry, Winston E. Scott, and Koichi Wakata (NASDA), awakened to a traditional Japanese song, 'Sea in Springtime.' Wakata, using the shuttle's robot arm, successfully retrieved the Japanese Space Flyer Unit (SFU) satellite and berthed it in the shuttle's cargo bay. Duffy and Wakata were interviewed, via satellite, by Japanese journalists and reporters in Houston, Texas. Earth views include cloud cover, storm systems, Africa and several other land masses. Jan. 1996	Transcript Link
2013 01 22	NASA STI Program	https://youtu.be/Szh2FjL7eQI	STS-72 Flight Day 2	On this second day of the STS-72 mission, the flight crew, Cmdr. Brian Duffy, Pilot Brent W. Jett, and Mission Specialists Leroy Chiao, Daniel T. Barry, Winston E. Scott, and Koichi Wakata (NASDA), awakened to music from the motion picture 'Star Wars.' The crew performed a systems checkout, prepared for the retrieval of the Japanese Space Flyer Unit (SFU), tested the spacesuits for the EVA, and activated some of the secondary experiments. An in-orbit news interview was conducted with the crew via satellite downlinking. Questions asked ranged from the logistics of the mission to the avoidance procedures the Endeavour Orbiter performed to miss hitting the inactive Air Force satellite, nicknamed 'Misty' (MSTI). Earth views included cloud cover, several storm systems, and various land masses with several views of the shuttle's open cargo bay in the foreground. Jan. 1996	Transcript Link

2013 01 22	NASA STI Program	https://youtu.be/tI99rD_nWhg	STS-72 Flight Day 1	On this first day of the STS-72 mission, the flight crew, Cmdr. Brian Duffy, Pilot Brent W. Jett, and Mission Specialists Leroy Chiao, Daniel T. Barry, Winston E. Scott, and Koichi Wakata (NASDA), were shown in prelaunch and launch activities. This was the tenth flight of the Space Shuttle Orbiter Endeavour. The primary objectives of this mission were the retrieval of the Japanese Space Flyer Unit (SFU) spacecraft, the deployment and retrieval of the NASA Office of Aeronautics and Space Technology Flyer (OAST-FLYER) spacecraft, and two 6 1/2 hour spacewalks to test hardware and tools that will be used to assemble the International Space Station. Secondary objectives included the Shuttle Solar Backscatter Ultraviolet (SSBUV-8), the Shuttle Laser Altimeter GAS(5) (SLA-01/GAS(5)), the National Institutes of Health-R3 (NIH-R3), the Space Tissue Loss (STL/NIH-C), and Thermal Energy Storage (TES-2) experiments. Get-Away-Specials (GAS) included the USAF Academy G-342 Flexible Beam Experiment (FLEXBEAM-2), the Society of Japanese Aerospace Companies G-459 Protein Crystal Growth Experiments, and the Jet Propulsion Laboratory (JPL) GAS Ballast Can with Sample Return Experiment. This night launch was shown at various angles and distances from the launching pad. Jan. 1996	Transcript Link
2013 01 22	NASA STI Program	https://youtu.be/gXdSXwQMBUI	Shuttle Earth Views, 1994, Part 4	In this fourth part of a four-part video compilation of Space Shuttle Earth views, various geographical areas are shown, including both land and water masses. The views covered the Middle East (Saudi Arabia, Sinai, Jordan , Egypt, Iran, Iraq, Kuwait, Bahrain, Qatar, and the United Arab Emirates), northeastern Africa (Yemen, Oman, Ethiopia, Somalia, and Djibouti), Russia, Siberia, India, Sri Lanka, Tibet, Bhutan, western China, and Mongolia. Various lakes, seas, rivers, and islands are shown, along with several pieces of film footage of sunsets, moon sets, clouds, and tropical storms. Each film clip has a heading that names the shuttle and the geographical location of the footage. No sound. Apr. 1995.	Transcript Link
2013 01 22	NASA STI Program	https://youtu.be/BSEusYY1HU4	Shuttle Earth Views, 1994, Part 3	In this third part of a four-part video compilation of Space Shuttle Earth views, various geographical areas are shown, including both land and water masses. The views cover South America, Asia (North Vietnam, Laos, Cambodia, China, Malaysia, Thailand, Java, various islands, Burma, Philippines, Taiwan, Guam), New Guinea, Australia, Morocco, Southern Europe (Spain, Portugal, Algeria, Italy, Sicily, Greece, Former Republic of Yugoslavia, Tunisia), and parts of the Middle East (Libya, Saudi Arabia, Egypt, Israel, Jordan, Sinai, Cyprus, Lebanon, Iraq), the Pacific Ocean, the Atlantic Ocean, the Indian Ocean, and the Mediterranean, Dead, Coral, Tyrrhenian, Adriatic, Ionian, Red, South China, Mindanao, Arafura, Sulu, Java, and China Seas. Each film clip has a heading that names the shuttle and the geographical location of the footage. No sound. Apr. 1995.	Transcript Link

2013 01 22	NASA STI Program	https://youtu.be/j3E_sch4ztk	Shuttle Earth Views, 1994, Part 2	In this second part of a four-part video compilation of Space Shuttle Earth views, various geographical areas are shown, including both land and water masses. The views cover the southwestern, south central, and eastern United States, and the Caribbean area, Mexico, Gulf of Mexico, and South America (Ecuador, Peru, Brazil, Bolivia, Argentina, Chile, and Paraguay). Each film clip has a heading that names the shuttle and the geographical location of the footage. No sound. Apr. 1995.	Transcript Link
2013 01 22	NASA STI Program	https://youtu.be/ceKZ9lV5-PY	Shuttle Earth Views, 1994, Part 1	In this first part of a four-part video compilation of Space Shuttle Earth views, Canada, the western coastal states of the United States (from Oregon to southern California), and the southwestern and lower south central United States (from Texas to the Gulf of Mexico) geographical areas are presented from space observations. Each film clip has a heading that names the shuttle and the geographical location of the footage. No sound. Apr. 1995.	Transcript Link
2013 01 11	NASA STI Program	https://youtu.be/s9V-3T5GZnk	SSME F1 Engine Tests	No description available. No sound. Contains copyrighted material. Distributed under U.S. Government purpose rights, under NASA contract NAS8-01140. Released Jan. 2012.	Transcript Link
2012 10 24	NASA STI Program	https://youtu.be/3TFXJusvI5M	Faces of the SSME (Group 11)	Members of the Space Shuttle Main Engine (SSME) team review some of their memories of working on the final shuttle launch and the importance of the SSME to the success of the Shuttle program. Distributed under U.S. Government purpose rights under NASA contract NAS8-01140. Released 2011.	Transcript Link
2012 10 24	NASA STI Program	https://youtu.be/elKBIPL7f-o	Faces of the SSME (Group 2)	Members of the Space Shuttle Main Engine (SSME) team review some of their memories of working on the SSME and the importance of the SSME to the success of the Shuttle program. There are many views of shuttle launches. Distributed under U.S. Government purpose rights under NASA contract NAS8-01140. Released 2010.	Transcript Link

2012 10 19	NASA STI Program	https://youtu.be/34Tjb8GWJ9U	STS-70 Flight Day 1	The first day of the STS-70 flight of the Space Shuttle Discovery is contained on this video. This mission highlights the deploy of NASA's communications satellite, the sixth and last such satellite to be deployed from a space shuttle. The STS-70 crew consists of Commander Tom Henricks, Pilot Kevin Kregel, and Mission Specialists Don Thomas, Nancy Currie, and Mary Ellen Weber. Flight footage contains prelaunch and launch activities. July 1995	Transcript Link
2012 10 19	NASA STI Program	https://youtu.be/KBnk-p-ASBY	STS-70 Flight Day 2	The second day of STS-70 Space Shuttle Discovery mission is contained on this video. The crew is shown onboard the Shuttle working on a variety of secondary experiments. These range from the Hercules camera, which imprints the latitude and longitude of areas photographed on Earth, to the WINDEX, which studies of the glow created as the Shuttle's surfaces interact with atomic oxygen in low Earth orbits. Also featured are astronauts Henricks, Kregel, and Weber answering questions from the general public via use of The New York Times On-Line Services. July 1995	Transcript Link
2012 10 19	NASA STI Program	https://youtu.be/KwcVGt3nGPQ	STS-70 Flight Day 3	The third day of the STS-70 mission of Space Shuttle Discovery is contained on this video. Astronauts Kregel and Thomas begin the day by working with the Hercules camera, which will record pinpoint data on the surface location of Earth observation imagery. Other work includes operations with an experiment that gauges astronauts' reflexes and hand-eye coordination. During the day, the crew spoke with World War 2 veteran, Harland Claussen, and ABC's Mike and Maty Show and the Toledo Blade newspaper (Toledo, Ohio) interviewed the astronauts via satellite link. July 1995	Transcript Link
2012 10 19	NASA STI Program	https://youtu.be/TcQDmdfqE5Y	STS-70 Flight Day 4	The fourth day of STS-70 mission of Space Shuttle Discovery is contained on this video. With the spacecraft continuing to perform flawlessly, Discovery's crew begins work with various experiments, ranging from biological studies to use of earth-observing cameras. The crew held a press conference via satellite link and answered questions from reporters in Florida and Ohio.	Transcript Link
2012 10 19	NASA STI Program	https://youtu.be/R9AiTsHXk5w	STS-70 Flight Day 5	The fifth day of the STS-70 Space Shuttle Discovery mission is contained on this video. The crew continues working on experiments, such as the Space Tissue Loss Analysis and the Bioreactor Development System. CNN reporter, John Holliman, interviewed the flight crew and the crew also answered questions posed by Internet users while on NASA's Shuttle Web. There are brief views of Earth's surface included. July 1995	Transcript Link

2012 10 19	NASA STI Program	https://youtu.be/FjBpMB6X7hw	STS-70 Flight Day 6	The sixth day of the STS-70 Space Shuttle Discovery mission is featured on this video. During another trouble-free day, the crew again performed a variety of experiments ranging from optical studies to biological investigations. One such biological experiment showed orange colon cancer cells coalescing into globules. Using the Hercules Camera, the crew shot film footage of the Earth's surface and during the Windex experiment, several views of the Shuttle were shown. July 1995	Transcript Link
2012 10 19	NASA STI Program	https://youtu.be/_UWn_MIZzIs	STS-70 Flight Day 7	The seventh day of the STS-70 Space Shuttle Discovery mission is featured on this video. The astronauts obtained a successful alignment of the Hercules geo-locating camera and evaluated the manual setup procedures for the rotating wall Bioreactor. Specialist Don Thomas activated and deactivated the Microencapsulation in Space experiment, using a device that produces a timed-release of an antibiotic medication in a weightlessness environment. The Discovery crew begins to wrap up their experiments after a week of gathering data, ranging from observations of Earth's surface and atmosphere to biological studies. There are several minutes of Shuttle observations of Earth included. July 1995	Transcript Link
2012 10 19	NASA STI Program	https://youtu.be/Ab0FyDVvOuA	STS-70 Flight Day 8	The eighth day of the STS-70 Space Shuttle Discovery mission is featured on this video. The crew is interviewed in orbit via satellite regarding their personal opinions about their mission before they return to Earth. July 1995	Transcript Link
2012 10 19	NASA STI Program	https://youtu.be/1EWQ9jb7lgc	Lunar Mars Exploration	Computer animation of future expeditions, research projects, and equipment (satellites, telescopes, etc.,) are contained on this video. President George Bush, in a Presidential Address, speaks on future plans for NASA emphasizing Space Station Freedom and a manned mission to Mars. Sound for 1 min 32 sec only. Aug. 1992	Transcript Link
2012 10 19	NASA STI Program	https://youtu.be/REonlasB15g	Space Exploration Initiative	Future Mars exploration missions and operations are discussed using computer animation along with proposed vehicles and equipment, for example, a Mars surface land rover. There is a Presidential Address by President George Bush where he discusses future goals for space exploration. This video also outlines the Outreach Program, which offers the public the chance to suggest new ideas for space research and exploration. July 1990	Transcript Link

2012 10 18	NASA STI Program	https://youtu.be/oeLrw3nt60Q	STS-71 Shuttle Mir Flight Day 8	Day 8 of the STS-71 mission is featured in this video, a continuation from days 1-7, this video includes live footage onboard the STS-71 Space Shuttle Atlantis and the Mir Space Station. Live interviews are conducted with the crew of Atlantis. Views are shown of the Mir Space Station from various angles. July 1995	Transcript Link
2012 10 18	NASA STI Program	https://youtu.be/oN4rSoD9mUQ	STS-71 Shuttle Mir Flight Day 9	Day 9 of the STS-71 mission is featured in this video, a continuation from days 1-8, this video includes live footage onboard the STS-71 Space Shuttle Atlantis and the Mir Space Station. Views are shown of the Mir Space Station from various angles and its earth orbit after disconnection from Atlantis. July 1995	Transcript Link
2012 10 18	NASA STI Program	https://youtu.be/nzt_jt133eY	STS-71 Shuttle Mir Flight Day 7	Day 7 of the STS-71 mission is featured in this video, a continuation from days 1-6, this video includes live footage onboard the STS-71 Space Station Atlantis and the Mir Space Station. Astronaut, Dr. Norman Thagard, after living in space for 3 months onboard the Mir Space Station, joins the crew of Atlantis for his trip back to earth. Live interviews are conducted with the crew of Atlantis. July 1995	Transcript Link
2012 10 18	NASA STI Program	https://youtu.be/u0JHKRIlams	STS-71 Shuttle Mir Flight Day 10	Day 10, the last day of the STS-71 Space Shuttle mission, is featured in this video. There is live footage from onboard the shuttle and interviews with the Shuttle's astronauts. Also, some earth view footage from the Shuttle is included. July 1995	Transcript Link
2012 10 18	NASA STI Program	https://youtu.be/mW_9b-PzLBA	STS-71 Shuttle Mir Flight Day 6	Day 6 of the STS-71 flight Space Shuttle Atlantis mission is highlighted in this video. During this segment of the mission the Space Station is docked with the Mir Space Station and they are orbiting the earth together. Also contained are views of the orbiter docking system and brief views of earth. June 1995	Transcript Link

2012 10 18	NASA STI Program	https://youtu.be/H0xZCswxXJk	NASA Investing in Our Future	A short explanation of NASA's accomplishments and goals are discussed in this video. Space Station Freedom, lunar bases, manned Mars mission, and robotic spacecrafts to explore other worlds are briefly described. Apr. 1992	Transcript Link
2012 10 18	NASA STI Program	https://youtu.be/yAtFc2zMAmg	Ulysses A Solar Odyssey	This is a film to film transfer of a Media Four production by Charles Finance about the Ulysses Mission to the Sun. The prelaunch production uses graphics, animation, and live footage to describe how Ulysses will use the gravity of Jupiter to lift it out of the ecliptic plane into polar orbit around the Sun. Jan. 1991	Transcript Link
2012 10 17	NASA STI Program	https://youtu.be/Xgn6pT1On0Y	STS-71 Shuttle Mir Flight Day 5	Day 5 of the STS-71 flight Space Shuttle Atlantis mission is highlighted in this video. During this segment of the mission the Space Station is docked with the Mir Space Station and they are orbiting the earth together. There is footage of the astronauts performing physiological tests inside the Shuttle. June 1995	Transcript Link
2012 10 17	NASA STI Program	https://youtu.be/BngdHCe5tUY	STS-71 Shuttle Mir Flight Day 4	Day 4 of the STS-71 flight Space Shuttle Atlantis mission is highlighted in this video. During this segment of the mission the Space Station is docked with the Mir Space Station. There are interviews with the astronauts by Vice President Al Gore. June 1995	Transcript Link
2012 10 17	NASA STI Program	https://youtu.be/vT3d-aJZNCw	STS-71 Shuttle Mir Flight Day 3	The third day of the STS-71 flight of the Space Shuttle Atlantis is contained in this video. Flight footage contains earth views from space, and views of Mir Space Station taken from various angles. June 1995	Transcript Link

2012 10 17	NASA STI Program	https://youtu.be/Kk04ziDWMkA	STS-71 Shuttle Mir Flight Day 2	The second day of the STS-71 flight of the Space Shuttle Atlantis is contained in this video. Flight footage contains launch, and orbital activities. June 1995	Transcript Link
2012 10 17	NASA STI Program	https://youtu.be/KHWMji6s54w	STS-71 Shuttle Mir Flight Day 1	The first day of the STS-71 flight of the Space Shuttle Atlantis is contained in this video. This mission highlights the first U.S. docking with the Mir Space Station. The scope of this part of the STS-71 mission is to drop off and pickup two cosmonauts, and to pickup one American astronaut who has been living aboard the Mir Station for several months. The STS-71 flight crew consists of: Atlantis Mission Specialists Gregory Harbaugh, Ellen Baker, and Bonnie Dunbar; Flight Commander Robert Gibson; Russian cosmonauts Anatoly Solovyev, Vladimir Dezhurov; and Gannady Strekalov; and Dr. Norman Thagard. Flight footage contains prelaunch activities. June 1995	Transcript Link
2012 10 17	NASA STI Program	https://youtu.be/hDa-njRloIc	Lockheed Stabilizer System for Space Exercise Equipment	Through the use of computer animation, the Lockheed Stabilizer System for spaceborne exercise equipment is shown. A bicycle mounted onto a shuttle floor demonstrates the range of vibrations that occur without the Lockheed Stabilizer. There is animation of the stabilizer system's tests and normal protein crystal growth in microgravity environments. Actual short clips of astronauts exercising in space are also presented. No sound. Feb. 1992	Transcript Link
2012 10 17	NASA STI Program	https://youtu.be/3xrMu3jq6P8	Collection of Magellan Venus Radar Mapping Results	Through computer animation several geological features of Venus are presented in this video. The Sif Mons, a 1.2 mile high volcano and the Gula Mons, a 1.8 mile high volcano are shown. Also, radar images of a rift valley, several impact craters, and a corona can be seen. The video ends with a northeast view of Eistla Regio. Mar. 1991	Transcript Link
2012 10 17	NASA STI Program	https://youtu.be/xN9rkDBVRm4	High Resolution Microwave Survey	Research information on radar tracking systems, computer animation of star formation, footage of solar systems, and desert radar equipment and research facilities are contained in this video. Frank Drake, President of SETI (Search for Extraterrestrial Intelligence) Institute is interviewed along with Jill Tarter, NASA's High Resolution Microwave Survey Project Scientist. Sep. 1992	Transcript Link

2012 10 17	NASA STI Program	https://youtu.be/5vqhvUcSl84	Yohkoh Soft X-Ray Telescope	This video describes the Soft X-Ray Telescope (SXT), Yohkoh. This is a cooperative program between NASA and the Institute for Space and Astronautical Science of Japan. Images of the Sun's rotation were obtained with the SXT. No sound. May 1992	Transcript Link
2012 10 17	NASA STI Program	https://youtu.be/RyxhnqEPmnY	An Announcement by Dan Goldin	Daniel S. Goldin (NASA Administrator) announces the reconstruction of several NASA programs and management structural changes. The upcoming developments for Space Station Freedom, the Office of Space Science Applications (OSSA), and the field of Aeronautics are discussed. Oct. 1992	Transcript Link
2012 10 17	NASA STI Program	https://youtu.be/eCgEsWtj8zg	NASA The State of the Agency	NASA's challenges, accomplishments, and goals are described in this video. Historical footage of man's first lunar walk are shown and there are brief descriptions covering several of NASA's major projects, such as: Skylab; Viking Voyager; COBE; and the 1990 Hubble Space Telescope. Oct. 1992	Transcript Link
2012 10 17	NASA STI Program	https://youtu.be/ea-JRDiWHlg	STEP A Futurevision, Today	STEP (STandard for the Exchange of Product Model Data) is an innovative software tool that allows the exchange of data between different programming systems to occur and helps speed up the designing in various process industries. This exchange occurs easily between those companies that have STEP, and many industries and government agencies are requiring that their vendors utilize STEP in their computer aided design projects, such as in the areas of mechanical, aeronautical, and electrical engineering. STEP allows the process of concurrent engineering to occur and increases the quality of the design product. One example of the STEP program is the Boeing 777, the first paperless airplane. Jan. 1994	Transcript Link
2012 10 17	NASA STI Program	https://youtu.be/RMQjmXsrwnY	NIST Information Management in the AMRF	The information management strategies developed for the NIST Automated Manufacturing Research Facility (AMRF) - a prototype small batch manufacturing facility used for integration and measurement related standards research are outlined in this video. The five major manufacturing functions - design, process planning, off-line programming, shop floor control, and materials processing are explained and their applications demonstrated. Nov. 1991	Transcript Link

2012 10 11	NASA STI Program	https://youtu.be/SOnk6XFedGM	Hey! What's Space Station Freedom	This video, 'Hey! What's Space Station Freedom?', has been produced as a classroom tool geared toward middle school children. There are three segments to this video. Segment One is a message to teachers presented by Dr. Jeannine Duane, New Jersey, 'Teacher in Space'. Segment Two is a brief Social Studies section and features a series of Presidential Announcements by President John F. Kennedy (May 1961), President Ronald Reagan (July 1982), and President George Bush (July 1989). These historical announcements are speeches concerning the present and future objectives of the United States' space programs. In the last segment, Charlie Walker, former Space Shuttle astronaut, teaches a group of middle school children, through models, computer animation, and actual footage, what Space Station Freedom is, who is involved in its construction, how it is to be built, what each of the modules on the station is for, and how long and in what sequence this construction will occur. There is a brief animation segment where, through the use of cartoons, the children fly up to Space Station Freedom as astronauts, perform several experiments and are given a tour of the station, and fly back to Earth. Space Station Freedom will take four years to build and will have three lab modules, one from ESA and another from Japan, and one habitation module for the astronauts to live in. Jan. 1992	Transcript Link
2012 10 11	NASA STI Program	https://youtu.be/DDP7gwe7xg4	Revitalizing General Aviation	This video contains a short feature of NASA and the FAA joint effort to incorporate new technology into the design of general aviation aircraft. July 1994	Transcript Link
2012 10 11	NASA STI Program	https://youtu.be/0XXfLk0INPE	The White Sands Test Facility	This is an overview of the White Sands Test Facility's role in ensuring the safety and reliability of materials and hardware slated for launch aboard the Space Shuttle. Engine firings, orbital flights debris impact tests, and propulsion tests are featured as well as illustrating how they provide flight safety testing for the Johnson Space Center, other NASA centers, and various government agencies. It also contains a historical perspective and highlights of major programs that have been participated in as part of NASA. Aug. 1994	Transcript Link
2012 10 11	NASA STI Program	https://youtu.be/FvjVKAAvIn8	From Undersea to Outer Space The STS-40 Jellyfish Experiment	This is an educational production featuring 'Ari', animated jellyfish who recounts his journey into space. Jellyfish were flown aboard the shuttle to study the effects of microgravity on living organisms. Topics Ari explores are: microgravity, life sciences, similarities between jellyfish and humans, and the life cycle and anatomy of a jellyfish. Video Resource Guide is not available. Oct. 1994	Transcript Link

2012 10 11	NASA STI Program	https://youtu.be/GensUL50z7Q	Mars Pathfinder Landing Site Computer Animation; Rocky IV	This video uses computer graphic models of the heat shield, lander, and parachute to present an artist's concept of the Mars Pathfinder descent. Viking image mosaics are used to create a rotating globe of Mars. A separate segment presents a simulated flight over the Mars Pathfinder landing site. The second part of the film describes the development of Rocky IV, the latest in a series of planetary rovers developed in preparation for the Mars Pathfinder mission. The first part of the video is silent; the second part has sound. Sep. 1994	Transcript Link
2012 10 06	NASA STI Program	https://youtu.be/nIDKC7dN4YE	STI Managing a Universe of Information	This video highlights the NASA STI Program, its mission and key elements and how the program manages the ever growing universe of scientific and technical information. The mission of the program is to provide world-wide access to aerospace-related scientific and technical information. A key element of the program is a massive online database of more than four million citations to technical reports and journal literature, acquired, processed and disseminated by the NASA STI Program through the NASA Center for AeroSpace Information (CASI). Jan. 1992. Contact CASI for additional information at their website, http://www.sti.nasa.gov, by email at help@sti.nasa.gov, or by telephone at 443-757-5802.	Transcript Link
2012 10 06	NASA STI Program	https://youtu.be/i9Fmq7akcAg	Simulated Shuttle	Review of the simulated shuttle program including the building of their buses into the shuttle and their trips. This is a cooperative school/community effort. May 1990	Transcript Link
2012 10 06	NASA STI Program	https://youtu.be/4ivdq1i9npA	SHARP Summer High School Apprenticeship Research Program. Opportunities that Shape the Future	Version 1 explains the Summer High School Apprenticeship Research Program (SHARP). Version 2 is a tool to interest students in applying for the program. Dec. 1990	Transcript Link
2012 10 06	NASA STI Program	https://youtu.be/Vob13kD_sHU	IDGE Isothermal Dendritic Growth Experiment	The Isothermal Dendritic Growth Experiment (IDGE) flew on STS-62 to study the microscopic, tree-like structures (dendrites) that form within metals as they solidify from molten materials. The size, shape, and orientation of these dendrites affect the strength and usefulness of metals. Data from this experiment will be used to test and improve the mathematical models that support the industrial production of metals. Feb. 1994	Transcript Link

2012 10 06	NASA STI Program	https://youtu.be/ciHm1grPOQQ	Advanced Microsensors	This video looks at a spinoff application of the technology from advanced microsensors -- those that monitor and determine conditions of spacecraft like the Space Shuttle. The application featured is concerned with the monitoring of the health of premature babies. Aug. 1991	Transcript Link
2012 10 06	NASA STI Program	https://youtu.be/b73h65UBO9w	Red Sprites & Blue Jets Observations of High Altitude Atmospheric Flashes above Thunderstorms	This video presentation provides the initial observations of high altitude atmospheric flashes above thunderstorms from the SPRITE upper atmospheric optical emissions campaign. Some sound. July 1994	Transcript Link
2012 10 06	NASA STI Program	https://youtu.be/8YQWvBAYLnw	Scientific Balloons	This video discusses how NASA uses large helium-filled balloons to take payloads up 25 miles to the edge of space to gather data. Balloons provide a cost effective approach to reach these heights. Dec. 1991	Transcript Link
2012 10 06	NASA STI Program	https://youtu.be/F8dcIVQ9uUw	Virtual Reality	This video presentation discusses how virtual reality enables scientists to 'explore' other worlds without leaving the laboratory. The applicability of virtual reality for scientific visualization is also discussed. Dec. 1991	Transcript Link
2012 10 06	NASA STI Program	https://youtu.be/kZoadXniieQ	Goldstone	Goldstone is a complex of deep space communications antennas that command and receive information from satellites or receive information from satellites or about distant stars and galaxies. The video feature discusses the Goldstone complex and its 30 plus years of service to NASA. Aug. 1991	Transcript Link

2012 10 06	NASA STI Program	https://youtu.be/7dsJwwzGiYY	The Model Builders	This video explores the world of modeling at the NASA Johnson Space Center. Artisans create models, large and small, to help scientists and engineers make final design modifications before building more costly prototypes. Dec. 1991	Transcript Link
2012 10 04	NASA STI Program	https://youtu.be/_GTxl765Ddw	Aircraft to Medicine	This video discusses how the technology of computer modeling can improve the design and durability of artificial joints for human joint replacement surgery. Also, ultrasound, originally used to detect structural flaws in aircraft, can also be used to quickly assess the severity of a burn patient's injuries, thus aiding the healing process. Dec. 1991	Transcript Link
2012 10 04	NASA STI Program	https://youtu.be/QVf0RAIgDcQ	Spacelab Life Sciences-1	STS-40, carrying Spacelab Life Sciences-1, was the first dedicated to study the human body in microgravity. Experiments regarding adaptation to space and readaptation to the world of gravity are discussed in this video. Spacelab is another precursor to long-term science aboard the space station. April 1991	Transcript Link
2012 10 04	NASA STI Program	https://youtu.be/Lm6eOQ0oj0c	Langley Overview	This video presents a brief history of the Langley Research Center. Feb. 1993	Transcript Link
2012 10 04	NASA STI Program	https://youtu.be/OcZ3iCANKcI	The High Speed Research Program	This video highlights the endeavors of NASA and the United States manufacturers to provide technology that will make air travel to Pacific countries more efficient. This video was shown at the 1993 Paris Airshow. June 1993	Transcript Link

2012 10 04	NASA STI Program	https://youtu.be/qvzHS9LLVYE	Low Thrust Propulsion	This video presents an overview of low thrust rocket engine propulsion concepts for space missions. Chemical and electrical rocket engines are shown. Animation illustrates various propulsion applications. May 1990	Transcript Link
2012 10 04	NASA STI Program	https://youtu.be/b9AREHETGSs	KSC Technology Automated Orbiter Window Inspection System	This video is a demonstration of the procedures for visual inspection of the six orbiter windows at the end of each flight. Mar. 1990	Transcript Link
2012 10 02	NASA STI Program	https://youtu.be/b48e8JvLNx0	Anton Grdina Primary Achievement Program	The Anton project presents a partnership between NASA Lewis, CMHA, and the Cleveland Public Schools. The intent of this project is to empower parents to work with their children in science and math activities. Nov. 1993	Transcript Link
2012 10 02	NASA STI Program	https://youtu.be/5Nh3yAAw_Ko	SAMPIE (Solar Array Module Plasma Interaction Experiment)	SAMPIE is an in-space technology experiment that flew on STS-62. Its intent is to investigate the potentially damaging effects of space plasma (gases) on different types, sizes, and shapes of solar cells, solar modules, and spacecraft materials. Feb. 1994	Transcript Link
2012 10 02	NASA STI Program	https://youtu.be/G1OlDzd14EU	NEWEST 1990	Twenty-two teachers go through the NASA Educational Workshops for Elementary School Teachers Program at the Lewis Research Center. Aug. 1990	Transcript Link

2012 10 02	NASA STI Program	https://youtu.be/jp_o4hZ1Rng	Challenger Center Return to the Moon No. 4005	This presentation introduces the Challenger Center and the 'return to Moon' scenario. Dec. 1989	Transcript Link
2012 10 02	NASA STI Program	https://youtu.be/NtOVuBDsxJY	Challenger Center Rendezvous with Comet Halley No. 3072	This presentation introduces the Challenger Center and the rendezvous with Comet Halley in the 2061 scenario. Dec. 1989	Transcript Link
2012 10 02	NASA STI Program	https://youtu.be/0D4jqnhzqjw	In-Situ Monitoring of Crystal Growth Using MEPHISTO	This experiment flew on STS-62 and is the continuation of a collaborative US-French study of the process of crystal formation. Knowledge from this experiment will support the development of techniques to grow higher quality semiconductor crystals on Earth. Feb. 1994	Transcript Link
2012 10 02	NASA STI Program	https://youtu.be/7HnZgM542Go	ZENO A Critical Fluid Light Scattering Experiment	The ZENO experiment flew on the STS-62, it is designed to verify intriguing, but previously untested, theories in fluid physics. These theories attempt to describe dramatic changes in the properties of fluids near the critical temperature at which the vapor and liquid forms co-exist. Feb. 1994	Transcript Link
2012 10 02	NASA STI Program	https://youtu.be/QaOUbdX8DDw	The Western Aeronautical Test Range	An overview of the Western Aeronautical Test Range (WATR) and its connection to NASA Dryden is presented. Aug. 1988.	Transcript Link

2012 09 30	NASA STI Program	https://youtu.be/abDzvnMSBA0	Teleoperation and Supervised Autonomy for ORU Exchange	This video presents scenes demonstrating current telerobotics technology, specifically teleoperation with the aid of a computer for the Orbital Replacement Unit. Released Aug. 1990.	Transcript Link
2012 09 30	NASA STI Program	https://youtu.be/MrPIOukPEB0	Planetary Rover Program	This video presentation explains the Planetary Rover Program and shows testing in the Arroyo near JPL. Released July 1990.	Transcript Link
2012 09 30	NASA STI Program	https://youtu.be/W8HcqUULcms	Magellan Collection of Radar Calibration Results	This video presents three sequences acquired by Magellan, Aug.-Oct 1990 and includes the globe of Venus in black and white, the Golubkina crater, and 12 short scenes of different pan moves. Released Nov. 1990.	Transcript Link
2012 09 30	NASA STI Program	https://youtu.be/Jyfv1yMGd2M	Insight to Global Change EOS SAR Mission	This video presentation describes the methods and instrumentation used to help in determining future climate changes on Earth and explains the benefits of experimentation with synthetic aperture radar (SAR). It also gives a better understanding of the burning of fossil fuels, deterioration of the biosphere and deforestation of the rain forest which causes the greenhouse effect. Released June 1990.	Transcript Link
2012 09 30	NASA STI Program	https://youtu.be/8AR5c9w0T3k	Galileo Earth Moon 1 Encounter	This video presents sequences of Galileo images showing the dynamics of the Earth-Moon system. Released Dec. 1990.	Transcript Link

2012 09 30	NASA STI Program	https://youtu.be/6HUeqkuGs7g	Astronauts Part 5 Astronaut Collins	This video is an interview with Michael Collins about his accomplishments, NASA's accomplishments, and the future. Released Jan. 1989.	Transcript Link
2012 09 30	NASA STI Program	https://youtu.be/_DfIvJlUAz8	Exobiology and Solar System Exploration	The exploration of the solar system through video animation is shown. Actual footage of the Earth's water and land surface is included. No sound. Released Aug. 1988.	Transcript Link
2012 09 30	NASA STI Program	https://youtu.be/xWfl9pMkpMY	STOVL	This video examines research and applications of the STOVL aircraft. Released Jan. 1990.	Transcript Link
2012 09 30	NASA STI Program	https://youtu.be/kmikCdiK3Do	Way Station to Space The History of Stennis Space Center	The video traces the history of the Stennis Space Center from its origins as a test facility for President Kennedy's initiative to put a man on the moon to its present day tasks as a leading center for propulsion research and its contributions towards the development of Space Station Freedom. Released Jan. 1994.	Transcript Link
2012 09 30	NASA STI Program	https://youtu.be/_jWVmItPu_s	Icing Research Tunnel	This video gives the history of the Icing Research Tunnel at LeRC and how it is used today to understand and protect against icing. Released Jan. 1990.	Transcript Link

2012 09 30	NASA STI Program	https://youtu.be/MNBgp9pKz3o	Crash Impact Survival in Light Planes	This video explains the effects on aircraft and passengers of light plane crashes. The explanation is provided through the use of simulated light planes and dummies. Released Jan. 1994. Also see the following National Advisory Committee for Aeronautics (NACA) technical document, "Accelerations and Passenger Harness Loads Measured in Full-Scale Light-Airplane Crashes" at http://hdl.handle.net/2060/19930083730.	Transcript Link
2012 09 30	NASA STI Program	https://youtu.be/NQRoZyDBKuM	EOCAP Commercial Earth Observations Program	The Earth Observations Commercial Applications Program (EOCAP) is described. This video explains how EOCAP has aided in the development of new and commercial products. Released Jan. 1994.	Transcript Link
2012 09 30	NASA STI Program	https://youtu.be/AP0o0DKS7gM	Aeronautics and Space Reports Number 267 Comet Impacts Jupiter	This video contains three different segments of computer generated simulations of the impact of comet Shoemaker-Levy 9 with Jupiter that will take place in July 1994. It includes interviews with Shoemaker and Levy, discussing pictures taken at Palomar Observatory, the comet's approach to Jupiter, fragment size, and the affects of the comet's impact on Jupiter and its atmosphere. The impact will be viewed by the Galileo spacecraft. Released June 1994.	Transcript Link
2012 09 30	NASA STI Program	https://youtu.be/hkibjj9jfuQ	A Collection of The Movies	This video contains computer-generated animation made from still data sets processed by computer to give the illusion of flying around the objects. 'Earth - The Movie' uses cloud data from satellites and geographical data from maps. 'L.A. - The Movie' was taken from Landsat data of the Los Angeles area. This was the first experimental demonstration of the technology. 'Mars - The Movie' was taken from Viking orbiter data. 'Miranda - The Movie' was made from a mosaic of 9 frames taken by Voyager of the Uranium moon, Miranda. The last movie is 'Monterey - The Bay.' Released Mar. 1991.	Transcript Link
2012 09 30	NASA STI Program	https://youtu.be/KbnGlcQiL1c	The Stirling Engine A Wave of the Future	This video describes the Stirling engine, an external combustion engine which creates heat energy to power the motor, and can use many types of fuel. It can be used for both stationary and propulsion purposes and has advantages of better fuel economy and cleaner exhaust than internal combustion engines. The engine is shown being road tested at Langley Air Force Base. Released Jan. 1992.	Transcript Link

2012 09 30	NASA STI Program	https://youtu.be/gaV-4ULkseE	The Space Electronics Division Research for Today and Tomorrow	This video gives an overview of work being done by the different branches of the Space Electronics Division at LeRC. The video highlights electron beam, solid state, high speed circuit design, and high frequency communication research. Released Jan. 1991.	Transcript Link
2012 09 30	NASA STI Program	https://youtu.be/WKQhIErI5jY	One Fantastic Ride	This video gives an overview of work being done by the Space Propulsion Technology Division at LeRC. This division conducts research on chemical, nuclear-thermal, and solar propulsion systems and propellants. Two ongoing projects highlighted are a low-thrust rocket for moving around in Earth orbit and large unmanned cargo rockets, both for use with the Space Station. Released Jan. 1991.	Transcript Link
2012 09 30	NASA STI Program	https://youtu.be/3MRsS9IZjf0	The Second Giant Leap	This video describes the purpose and activities of the Office of Space Commercialization at LeRC. The office promotes interactions between industry and NASA researchers, and promotes the benefits of microgravity research. Examples of knowledge transfer in the production of airplanes and farm equipment are shown. Released Jan. 1991.	Transcript Link
2012 09 28	NASA STI Program	https://youtu.be/6kVUtsExLeU	Synthesis for Lunar Simulants Glass, Agglutinate, Plagioclase, Breccia	The video describes a process for making glass for lunar regolith simulants that was developed from a patented glass-producing technology. Glass composition can be matched to simulant design and specification. Production of glass, pseudo agglutinates, plagioclase, and breccias is demonstrated. The system is capable of producing hundreds of kilograms of high quality glass and simulants per day. Mostly silent, with some intermittent simulant production sounds. Released August 2012.	Transcript Link

2012 09 25	NASA STI Program	https://youtu.be/9T0tE3xv-6I	NACA Crash Fire Research	This video provides a better understanding of the important factors involved in the start and spread of crash fires, as a necessary first step leading to significant reduction in the crash fire hazards. Released 1952. Also see the following National Advisory Committee for Aeronautics (NACA) technical documents referred to in the video: 1. "Analysis of Multiengine Transport Airplane Fire Records" (NACA-RM-E9J19) at http://hdl.handle.net/2060/19930086114 2. "Facilities and Methods Used in Full-Scale Airplane Crash-Fire Investigation" (NACA-RM-E51L06) at http://hdl.handle.net/2060/19930087934 3. "Mechanism of Start and Development of Aircraft Crash Fires" (NACA-TR-1133) at http://hdl.handle.net/2060/19930091103, which supersedes the following Research Memorandum. 4. "Mechanism of Start and Development of Aircraft Crash Fires" (NACA-RM-E52F06) at http://hdl.handle.net/2060/19930087103	Transcript Link
2012 09 24	NASA STI Program	https://youtu.be/ILs_AEF_Zvg	NASA Report to Education, Volume 6	Segments include NASA Spacelink, STS-28 Mission, Voyager encounters Neptune, robotics development at GSFC, and the National Boy Scout Jamboree. Released Sep. 1989.	Transcript Link
2012 09 24	NASA STI Program	https://youtu.be/xW9TiPXqlGI	Refocusing Space Technology	This video presents two examples of NASA Technology Transfer. The first is a Downhole Video Logger, which uses remote sensing technology to help in mining. The second example is the use of satellite image processing technology to enhance ultrasound images taken during pregnancy. Released May 1994.	Transcript Link
2012 09 24	NASA STI Program	https://youtu.be/q4d9rTRdQZA	John C. Stennis Space Center Overview	An overview of research being conducted at the John C. Stennis Space Center is given. The Space Center is not only a NASA Space Flight Center, but also houses facilities for 22 other governmental agencies. The programs described are Stennis' High Heat Flux Facility, the Component Test Facility (used to test propulsion rockets and for the development of the National Aerospace Plane), oceanographic and remote sensing research, and contributions to the development of Space Station Freedom. Released May 1994.	Transcript Link

2012 09 24	NASA STI Program	https://youtu.be/zIm4d4BluM0	Assisting Wine Growers	This video documents efforts at NASA Ames Research Center to assist wine growers in the Napa valley in their fight against a root parasite which is destroying millions of dollars worth of grape crops. NASA researchers are using airborne scanners and remote sensing equipment to detect the parasite before it becomes entrenched, so that growers can treat the harvest to resist infestation. Released Jan. 1993.	Transcript Link
2012 09 24	NASA STI Program	https://youtu.be/SY_ZtBmJ3eY	Airline Safety and Economy	This video documents efforts at NASA Langley Research Center to improve safety and economy in aircraft. Featured are the cockpit weather information needs computer system, which relays real time weather information to the pilot, and efforts to improve techniques to detect structural flaws and corrosion, such as the thermal bond inspection system. Released Jan. 1993.	Transcript Link
2012 09 24	NASA STI Program	https://youtu.be/ZKlffyRf0FM	The Making of the Time Capsule	This video highlights the celebration of NASA Lewis Research Center's 50th anniversary celebrations. To commemorate this event, employees designed and manufactured a statue that contains a time capsule. The design process is shown, as well as the unveiling ceremony which features speeches by the center director and local dignitaries. Released Jan. 1991.	Transcript Link
2012 09 24	NASA STI Program	https://youtu.be/2eohjr8uwNY	Stennis Space Center 1992	The history and a description of the John C. Stennis Space Center is presented. Released Jan. 1992.	Transcript Link
2012 09 24	NASA STI Program	https://youtu.be/jA1UWRpFU7I	Thermocapillary Convection in Liquid Droplets	The purpose of this video is to understand the effects of surface tension on fluid convection. The fluid system chosen is the liquid sessile droplet to show the importance in single crystal growth, the spray drying and cooling of metal, and the advance droplet radiators of the space stations radiators. A cross sectional representation of a hemispherical liquid droplet under ideal conditions is used to show internal fluid motion. A direct simulation of buoyancy-dominant convection and surface tension-dominant convection is graphically displayed. The clear differences between two mechanisms of fluid transport, thermocapillary convection, and bouncy dominant convection is illustrated. Released Jan. 1986.	Transcript Link

2012 09 24	NASA STI Program	https://youtu.be/fAY9_gt4O1A	Marsville the Cosmic Village	This video describes an educational student activity sponsored by the Challenger Center for Space Science Education and the Educational Information and Resource Center, which was held at the Lewis Research Center. Marsville was held in May 1992, involving students from schools in three counties around Cleveland. In commemoration of the International Space Year, students worked together to plan a simulated colony on Mars, which culminated in the erection of a balloon tent 'city' at the Lewis Research Center. Released May 1993.	Transcript Link
2012 09 24	NASA STI Program	https://youtu.be/DHJH_ax_xAs	WHIPICE	This video documents efforts by NASA Lewis Research Center researchers to improve ice protection for aircraft. A new system of deicing aircraft by allowing a thin sheet of ice to develop, then breaking it into particles, is being examined, particularly to determine the extent of shed ice ingestion by jet engines that results. The process is documented by a high speed imaging system that scans the breakup and flow of the ice particles at 1000 frames per second. This data is then digitized and analyzed using a computer program called WHIPICE, which analyzes grey scale images of the ice particles. Detailed description of the operation of this computer program is provided. No sound. Released Jan. 1992.	Transcript Link
2012 09 24	NASA STI Program	https://youtu.be/gJ6JDX9JeDQ	Hubble Space Telescope	An overview of the mission of the Hubble Space Telescope, a joint project between NASA and the European Space Agency which will be used to study deep space, as well as our solar system is presented. The video contains animations depicting the Hubble Space Telescope in orbit, as well as footage of scientists at the Space Telescope Science Institute making real time observations. The images Hubble acquires will be downloaded into a database that contains images of over 19,000,000 celestial objects called the Star Catalog. Released Feb. 1990.	Transcript Link
2012 09 24	NASA STI Program	https://youtu.be/CFmRAr_3_cQ	Airflow Research	This is an overview of research being done in laminar flow at Ames Dryden Flight Research Center and Langley Research Center. Airflow research at Ames Dryden has resulted in a special wing covering that will artificially induce laminar flow on the wing surface; this specially adapted wing is shown being tested in different flying conditions. This video also features research done at Langley in producing a chemical covering for wings that will make visible natural laminar flow and turbulent airflow patterns as they occur. Langley researchers explain possible use of this technology in supersonic flight. Released Dec. 1985.	Transcript Link
2012 09 24	NASA STI Program	https://youtu.be/WM55pcAL4bA	World's Largest Wind Tunnel	NASA's National Full Scale Aerodynamics Complex, which houses two of the world's largest wind tunnels and has been used for testing experimental aircraft since 1944, is presented. This video highlights the structure and instrumentation of the 40 x 80 foot and 80 x 120 foot wind tunnels and documents their use in testing full scale aircraft, NASA's Space Shuttle and the XV-15 Tiltrotor aircraft. Released Oct. 1987.	Transcript Link

2012 09 24	NASA STI Program	https://youtu.be/yNx3Unb0zsI	World's Most Powerful Computer	The use of the Cray 2 supercomputer, the fastest computer in the world, at ARC is detailed. The Cray 2 can perform 250 million calculations per second and has 10 times the memory of any other computer. Ames researchers are shown creating computer simulations of aircraft airflow, waterflow around a submarine, and fuel flow inside of the Space Shuttle's engines. The video also details the Cray 2's use in calculating airflow around the Shuttle and its external rockets during liftoff for the first time and in the development of the National Aero Space Plane. Released Oct. 1986.	Transcript Link
2012 09 24	NASA STI Program	https://youtu.be/cfuwKhS2PjA	Future Energy Source	This video describes the efforts of the Center for the Commercial Development of Space in Wisconsin to develop a strategy for mining Helium-3, an efficient, environmentally safe alternative to fossil fuels that exists on the moon. Animated sequences depict the equipment that could mine the lunar surface, boil away Helium-3 to be transported back to earth, and return the soil to the moon without destroying the lunar surface. Released Oct. 1990.	Transcript Link
2012 09 24	NASA STI Program	https://youtu.be/UqVuDhfh9W8	Voyager's Last Encounter	This video describes Voyager 2's encounter with Neptune. Computer animation and actual data convey Voyager's discoveries such as turbulent storms and dark spots in Neptune's atmosphere, six new moons, Neptune's three rings, and the presence of frozen methane on Triton, as researchers at NASA's Jet Propulsion Laboratory describe Voyager's achievements. Released Nov. 1989.	Transcript Link
2012 09 24	NASA STI Program	https://youtu.be/xGG_FXFOsHY	LDEF Update	This video explores the research being done on the Long Duration Exposure Facility (LDEF), a satellite carrying 57 experiments designed to study the effects of the space environment, which had been in orbit for almost 6 years, and was retrieved and brought back to Earth by the Space Shuttle astronauts. The video shows scenes of the retrieval of LDEF, as well as scenes of ongoing research into the data returned with the satellite from experiments on external coating, contamination of optical materials by thermal control paint, the effects of cosmic rays on different materials, and the effect of the space environment on 12 million tomato seeds that have since been planted. Released Oct. 1990.	Transcript Link
2012 09 24	NASA STI Program	https://youtu.be/W0Lcq_mLUWw	Robotics	An overview of research being done into the use of robotic devices in space by MSFC is discussed. The video includes footage and explanations of robots being used to blast layers of thermal coating from the Space Shuttle's external tanks, the Shuttle's Remote Manipulator Arm, and animations of an Orbiting Maneuvering Vehicle to retrieve and repair satellites. Released Aug. 1985.	Transcript Link

2012 09 21	NASA STI Program	https://youtu.be/KZNoTprrpak	Flying on the Ground	This video details research being conducted at LeRC on aircraft acoustics and the impact of aircraft noise on communities and passengers. The video describes LeRC researchers' utilization of a laser Doppler velocimeter to study aircraft and the development of the Advanced Ducted Propeller. Released Apr. 1992.	Transcript Link
2012 09 21	NASA STI Program	https://youtu.be/RftTnnjXRp8	Indianapolis CIP Review	This video presents the community involvement program at the Indianapolis Children's Museum and Indianapolis Art League. Released 1990.	Transcript Link
2012 09 21	NASA STI Program	https://youtu.be/7yxOIyaEAHg	High Heat Flux Facility	This video gives an overview of the High Heat Flux Facility being built at Stennis Space Center in conjunction with Wright-Patterson Air Force Base. This facility will simulate flight heat conditions and will be used to test engine and materials for the National Aerospace Plane. Released Jan. 1993.	Transcript Link
2012 09 21	NASA STI Program	https://youtu.be/JBoGqAznTXs	Perseus Global Watcher	This video documents efforts of NASA Dryden Flight Research Center to develop and utilize ultra-light, remotely piloted gliders to study Earth's atmosphere. The advantage of these vehicles is that they are inexpensive, and can fly at altitudes twice that of commercial airlines. Released Jan, 1993.	Transcript Link
2012 09 21	NASA STI Program	https://youtu.be/KMiUrzILdEo	Comet Impact 1994 Animation Reel	This video contains computer generated simulations of the impact of comet Shoemaker-Levy 9 with Jupiter that will take place in July 1994. The simulations display the event from a number of vantage points including earth view, views from orbit, and views from the surface of Jupiter's moons. Released May 1994.	Transcript Link

2012 09 21	NASA STI Program	https://youtu.be/ipT_GNypwpM	Ozone Hole Airborne Arctic Stratospheric Expedition (Pre-Flight)	The first segment of this video gives an overview of the Ozone Hole Airborne Arctic Stratospheric Expedition, an international effort using balloon payloads, ground based instruments, and airborne instruments to study ozone depletion and the hole in the ozone over Antarctica which occurs every spring. False color imagery taken from NASA's Nimbus 7 satellite which documents daily changes in ozone is also shown. The second segment of this video shows actual take-off and flight footage of the two aircraft used in the experiment: the DC-8 Flying Laboratory and the high flying ER-2. Released Feb. 1989.	Transcript Link
2012 09 21	NASA STI Program	https://youtu.be/PkivOysIxzQ	Hurricane Andrew Mission	This video explains how NASA used their information on space development technology to assist in hurricane relief efforts. Released Sep. 1992.	Transcript Link
2012 09 21	NASA STI Program	https://youtu.be/RHKDrXcBhEQ	The Solar Connection	This video explains the Work package 4, an electrical power system being developed by NASA Lewis Research Center, for use on the Space Station Freedom. It shows footage and explains steps in building and testing of actual flight hardware for Space Station Freedom. Details are given of the threat that plasma poses on cells. Released Jan. 1992.	Transcript Link
2012 09 21	NASA STI Program	https://youtu.be/5xQgeu39YCE	NASA Report to Education, Volume 9	This is an edition of 'NASA Report to Education' covering NASA's Educational Workshop, Lewis Research Center's T-34 and the Space Exploration Initiative. The first segment shows NASA Education Workshop program (NEWEST - NASA Educational Workshops for Elementary School Teachers). Highlights of the 14 days of intense training, lectures, fieldtrips and simple projects that the educators went through to teach the program are included. Participants are shown working on various projects such as the electromagnetic spectrum, living in Space Station Freedom, experience in T-34, tour of tower at the Federal Aviation Administrative Facilities, conducting an egg survival system and an interactive video conference with astronaut Story Musgrave. Participants share impressions of the workshop. The second segment tells how Lewis Research Center's T-34 aircraft is used to promote aerospace education in several Cleveland schools and excite students. Released Mar. 1991.	Transcript Link

2012 09 21	NASA STI Program	https://youtu.be/n6o8BPQxfI0	The Vision Machines	The thoughts of computer scientists at LeRC on the direction that computer development is taking and future implications are explored. Experts discuss the coming information superhighway and technologies such as fiber optics and neural networks. The impact of future computers on education, laboratory research, telecommunications, and science visualization. Released Apr. 1993.	Transcript Link
2012 09 21	NASA STI Program	https://youtu.be/AR9KZN8bdQY	Welcome to the Ohio Aerospace Institute	The mission and various programs administered by the Ohio Aerospace Institute, a consortium made up of 9 Ohio Universities, LeRC, and members of the Aerospace Industry are described. The video highlights the following: programs to bring aerospace research to K-12 classrooms; programs to allow graduate students access to laboratory equipment at LeRC; the creation of a statewide television network to link researchers in industry and academia; and focus groups to encourage collaboration between companies in aerospace research. Released Nov. 1992.	Transcript Link
2012 09 21	NASA STI Program	https://youtu.be/KoNVQvngRoA	Aerospace Test Facilities at NASA LeRC Plumbrook	An overview of the facilities and research being conducted at LeRC's Plumbrook field station is given. The video highlights four main structures and explains their uses. The Space Power Facility is the world's largest space environment simulation chamber, where spacebound hardware is tested in simulations of the vacuum and extreme heat and cold of the space plasma environment. This facility was used to prepare Atlas 1 rockets to ferry CRRES into orbit; it will also be used to test space nuclear electric power generation systems. The Spacecraft Propulsion Research Facility allows rocket vehicles to be hot fired in a simulated space environment. In the Cryogenic Propellant Tank Facility, researchers are developing technology for storing and transferring liquid hydrogen in space. There is also a Hypersonic Wind Tunnel which can perform flow tests with winds up to Mach 7. Released Oct. 1992.	Transcript Link
2012 09 21	NASA STI Program	https://youtu.be/f4FkalfwwuM	Space Acceleration Measurement System	This training video, presented by the Lewis Research Center's Space Experiments Division, gives a background and detailed instructions for preparing the space acceleration measurement system (SAMS) for use. The SAMS measures, conditions, and records forces of low gravity accelerations, and is used to determine the effect of these forces on various experiments performed in microgravity. Inertial sensors are used to measure positive and negative acceleration over a specified frequency range. The video documents the SAMS' uses in different configurations during shuttle missions. Released May 1993.	Transcript Link

2012 09 21	NASA STI Program	https://youtu.be/yg3zt-PMubo	Ozone Hole	Ozone hole airborne Arctic stratospheric expedition (pre-flight). Released Feb. 1988.	Transcript Link
2012 09 13	NASA STI Program	https://youtu.be/FZZ9ykH4UJw	STS-31 Crew Linhof, Arriflex, and IMAX Camera Training	The crew is shown on the roof of Bldg. 1 at the NASA Johnson Space Center learning about the Linhof camera system. The crew is shown taking pictures with the Linhof camera from the roof. Released Mar. 1990.	Transcript Link
2012 09 13	NASA STI Program	https://youtu.be/9olyvfRtJEc	Galileo Probe Spacecraft Mission to Jupiter	This video contains Galileo probe animation, mission diagrams, and testing and manufacturing footage. No sound. Released Oct. 1989.	Transcript Link
2012 09 13	NASA STI Program	https://youtu.be/ES4gj7BrJ2g	Coast Encounters A Space Age Adventure in Science Literacy	This video recaps the NASA Community Involvement Program for education held on the Mississippi Gulf Coast, April 1989. Released Apr. 1989.	Transcript Link
2012 09 13	NASA STI Program	https://youtu.be/vFq1zZDLAzY	C 141 KAO Solar Eclipse Mission	This video presents the C 141 Kuiper Airborne Observatory Solar Eclipse Mission. No sound. Released Apr. 1988.	Transcript Link

2012 09 13	NASA STI Program	https://youtu.be/Pdj-4HiGotQ	STS-41 Crew Training Bailout, Camera Class EVA Prep, Habitation Equipment, and Food Tasting	This video shows the crew during several training exercises including work in the CCT, photography class, and food tasting. Released Sep. 1990.	Transcript Link
2012 09 13	NASA STI Program	https://youtu.be/Brk5NnWU4gg	Medical Imaging	This video shows how satellite data processing techniques (multispectral scanning) can improve disease detection and treatment. Released June 1986.	Transcript Link
2012 09 13	NASA STI Program	https://youtu.be/CtV2V3k-mJk	Building a Lunar Base	This video looks at the testing of lunar materials as a possible building material for lunar bases. Released June 1986.	Transcript Link
2012 09 13	NASA STI Program	https://youtu.be/RdF3HlVkrEg	Programmable Remapper Project	This video shows how the Remapper Project helps with many problems including vision problems. It shows the Remapper in action as it tracks several objects around the moon. The video is narrated by Dr. Richard Juday, Robotic Vision Manager at the Johnson Space Center. Released July 1990.	Transcript Link
2012 09 13	NASA STI Program	https://youtu.be/DY8tBAui2ug	Mark 111 Suit Test Evaluation in WETF with Jerry Ross	Astronaut Jerry Ross tests the new Mark 111 spacesuit in the WETF. The Mark 111 could be used as the main spacesuit on the Space Station Freedom. Released Oct. 1989.	Transcript Link

2012 09 13	NASA STI Program	https://youtu.be/06aYzCnfCSU	NASA Images 13	Clips on Voyager 2 at Uranus and Venus are presented. Released Apr. 1988.	Transcript Link
2012 09 13	NASA STI Program	https://youtu.be/xZkEAkxUUoU	Life and the Solar System the CRAF and Cassini Missions	Animation and interviews describe the proposed missions to study comets and Saturn. Released Mar. 1993.	Transcript Link
2012 09 13	NASA STI Program	https://youtu.be/wCaAE-pt0GQ	NASA Images 12	Voyager's encounters with Jupiter, Saturn, Uranus, and pre-Neptune are reviewed. Released Apr. 1988.	Transcript Link
2012 09 13	NASA STI Program	https://youtu.be/G4pHXz0dUBE	Space Suit Design	This video shows how space suits evolved to those being designed for the Space Station Freedom. Released June 1987.	Transcript Link
2012 09 13	NASA STI Program	https://youtu.be/kxRt_ABF4pw	Challenger Center Orientation	This is a video orientation to the Challenger Center for Space Science Education in Prince Georges County, Maryland. Released July 1989.	Transcript Link

2012 09 13	NASA STI Program	https://youtu.be/tirD1PoDxeI	Challenger Center	This video explains the objectives of the Challenger Center for Space Education and how it got started. Released Nov. 1989.	Transcript Link
2012 09 13	NASA STI Program	https://youtu.be/wZA1nNh90GM	Voyager 2 Neptune Encounter	Computer graphics, actual images, and stock footage of the Voyager 2's Neptune encounter are narrated with music. Released Aug. 1989.	Transcript Link
2012 09 12	NASA STI Program	https://youtu.be/mZf6upJtdxk	Commitment to Challenge	This video gives a brief overview of the NASA JSC including the following: mission control, mission operations, and mission planning; new scientific and technologies developments; and educational programs. Released May 1988.	Transcript Link
2012 09 12	NASA STI Program	https://youtu.be/JvCbQgaCMT0	Johnson Space Center and Downtown Houston, Texas Aerials	This video shows various aerial shots of the NASA JSC. Views of downtown Houston, TX, are also provided. No sound. Released Aug. 1988.	Transcript Link
2012 09 12	NASA STI Program	https://youtu.be/EE4ThgABoMo	Mars Rover Sample Return Mission	This video was created by NASA JSC's Missions Planning Division to depict a future unmanned Mars mission. Released Sep. 1988.	Transcript Link

2012 09 12	NASA STI Program	https://youtu.be/YjtIoEqpjzs	STS-26 Crew Clothing, Glove Molding, and Personal Hygiene	This video shows the crew during various phases of flight clothing fit checks, space suit glove molding, and selection of personal hygiene articles for use onboard the Shuttle. Released July 1988.	Transcript Link
2012 09 12	NASA STI Program	https://youtu.be/rwO6CaiZEfg	STS-26 Crew Participation in Meetings	This video shows the crew attending and participating in a Payloads Operation Working Group (POWG) meeting, a Flight Rules meeting, and a Flight Operation Review (FOR) meeting. Released Aug. 1988.	Transcript Link
2012 09 11	NASA STI Program	https://youtu.be/G-IBuJWjgFk	STS-27 Crew Deorbit Prep in SMS with Gibson, Shepherd, Mullane, Ross, and G. Gardner	This video shows the crew training. Forward and aft flight deck views are provided. Released May 1988.	Transcript Link
2012 09 11	NASA STI Program	https://youtu.be/pj_jOPwIiPQ	Richards, Dick Training Clip	Astronaut Richards is shown during his ASCAN training, including weightless environment training facility (WETF) training and various simulations. Released July 1989.	Transcript Link
2012 09 11	NASA STI Program	https://youtu.be/Y3P81JZKLRA	Science Operation in Space Lessons	This program (conceived by a group of veteran Shuttle astronauts) shows prospective experimenters how they can better design their experiments for operation onboard Shuttle flights. Shuttle astronauts Dunbar, Seddon, Hoffman, Cleave, Ross, and ChangDiaz also show how crews live and work in space. Released Jan. 1988.	Transcript Link

2012 09 11	NASA STI Program	https://youtu.be/0L9R-_55mks	STS-35 Payload Specialists Durrance and Parise 70mm Photo Training and Cabin Familiarization	This video shows astronauts Durrance and Parise being trained with photography equipment. Released Apr. 1990.	Transcript Link
2012 09 11	NASA STI Program	https://youtu.be/KXkgLjBF_RQ	Inertial Oscillation of a Vertical Rotating Draft with Application to a Supercell Storm	In this video supplement to NASA-TP-3230, animation depicts the inertial oscillation of a new mathematical model ('vertical rotating draft') for spinning up a single supercell storm. The oscillation consists of a long quiescent phase when the draft is large in diameter and rotates anticyclonically and a short intense phase when the draft is small and cyclonic. During the intense phase, the rotating draft resembles a supercell. The physical basis for the oscillation is depicted by tracking air parcels in the draft as they move along inertial circles (projected on a horizontal plane), where the horizontal pressure gradient is zero and the Coriolis force balances the centrifugal force. A side view of the oscillation shows that contraction and expansion are linked, respectively, to buoyantly driven compressible downdraft and updraft. An aerial view tracks the draft as it moves above the surface of the Earth and turns to the right during the intense phase. Radar echoes from a supercell storm are superimposed for comparison. The data appear to support only the intense phase. A critical experiment would measure the predominantly downward flow that theoretically occurs before the right turn in a supercell track and causes contraction and spin-up. Released Sep. 1992. See the corresponding NASA document at http://hdl.handle.net/2060/19920024238.	Transcript Link
2012 08 28	NASA STI Program	https://youtu.be/r225xtecBkw	STS-36 Crew EVA Prep and Post-Training, Bailout Exercises, Final Bench Review	The crew is shown in the CCT airlock checking out EVA equipment and practicing bailout exercises. They are also shown looking over equipment they will carry into space including medical equipment, clothing, and cameras. Released Feb. 1990.	Transcript Link
2012 08 28	NASA STI Program	https://youtu.be/IYmIXr9QL7c	STS-41 VCS Training with Mission Specialist Bruce Melnick and Bill Shepherd	Astronaut Bill Shepherd is shown using the Voice Command System (VCS) in the Manipulative Development Facility (MDF) under the eye of project engineers and crew trainers. The video shows VCS in action moving cameras around the MDF payload bay mockup. Released Sep. 1990.	Transcript Link

2012 08 27	NASA STI Program	https://youtu.be/0e5cX8RSGv4	EVA Retriever Demonstration	The EVA retriever is demonstrated in the Manipulator Development Facility (MDF). The retriever moves on the air bearing table 'searching' for its target, in this case tools 'dropped' by astronauts on orbit. Released April 1988.	Transcript Link
2012 08 27	NASA STI Program	https://youtu.be/FSv8uMHiMcw	Adamson, Jim -- ASCAN Training Programs	Jim Adamson is shown during ASCAN training programs including T-38 training, parachute and liferaft training, and classroom instruction. No sound. Released July 1989.	Transcript Link
2012 08 27	NASA STI Program	https://youtu.be/CvX8gtl76mg	Freedom System Text and Graphics System (TAGS)	The Text and Graphics System (TAGS) is a high-resolution facsimile system that scans text or graphics material and converts the analog SCAN data into serial digital data. This video shows the TAGS in operation. Released April 1989.	Transcript Link
2012 08 27	NASA STI Program	https://youtu.be/8DZWKaWEB6o	STS-31 Crew Training Firefighting, Food Tasting, EVA Prep and Post	The Space Shuttle crew is shown lighting a pond of gasoline and then performing firefighting tasks. The crew is also shown tasting food including lemonade, chicken casserole, and tortillas, and performing extravehicular activity (EVA) equipment checkouts in the CCT middeck and airlock. Released Mar. 1990.	Transcript Link
2012 08 27	NASA STI Program	https://youtu.be/bJq4w1ZEWlk	STS-40 Crew During Spacelab Sim	Crew members working in the SLS-1 simulator are shown. Activities in the module mockup include work with the cardiovascular equipment, Body Mass Measurement Device, and Jellyfish experiment. Released Aug. 1990.	Transcript Link

2012 08 27	NASA STI Program	https://youtu.be/xnxxJpSNjEk	STS-31 Crew Training Inflight Maintenance and Bailout Exercises in CCT and WETF	The crew is shown in the CCT practicing on orbit maintenance tasks, along with bailout procedures. The crew is also shown practicing water survival techniques in the Weightless Environment Training Facility (WETF). Released Mar. 1990.	Transcript Link
2012 08 27	NASA STI Program	https://youtu.be/p_woDrRitZ4	STS-31 HST Deploy Sim in SMS and MOCR	This video shows the crew on a simulated middeck during the Hubble Space Telescope (HST) deploy simulation. Intercut from the MOCR is included. Released April 1990.	Transcript Link
2012 08 27	NASA STI Program	https://youtu.be/sBV5W3i9-n8	STS-31 Hubble Space Telescope Deploy Training at MDF with Hawley	Astronaut Steve Hawley is shown working with the Hubble Space Telescope mockup on the Remote Manipulator System mockup above the Manipulator Development Facility (MDF). Released April 1990.	Transcript Link
2012 08 27	NASA STI Program	https://youtu.be/oIWYCSmWMVs	STS-31 Hubble Space Telescope Contingency Training in WETF with McCandless and Sullivan	Astronauts McCandless and Sullivan are shown suiting up for training with a telescope mockup in the Weightless Environment Training Facility (WETF). Released Feb. 1989.	Transcript Link
2012 08 27	NASA STI Program	https://youtu.be/QTGeryOV1AM	Unitary Plan Wind Tunnel Landmark Dedication and Revitalization	This video shows construction scenes of unitary plan wind tunnel, aerials, and views of various models, including an MD-II in the 11 ft, an Apollo in the 8x7, Dynasoar in the 8x7, a one inch scale shuttle in the 8x7, and an artist's concept of a 12 ft test section. No sound. Released Sep. 1990.	Transcript Link

2012 08 27	NASA STI Program	https://youtu.be/MIRDc-QUV0g	Food for Space	This video explores the food preparation and selection over the years of space flight. Released Jan. 1985.	Transcript Link
2012 08 27	NASA STI Program	https://youtu.be/1I1zw6y9h3g	Venus Lightning	This video presents scenes of earth lightning with dramatic sound, views of Venus clouds rotating, and diagrams of Venusian weather. Released July 1990.	Transcript Link
2012 08 27	NASA STI Program	https://youtu.be/MDNawOf-jRI	Life Saving Satellites	Details of COSPAS/SARSAT, the international search and rescue project, are covered. Released Aug. 1985.	Transcript Link
2012 08 24	NASA STI Program	https://youtu.be/MTyMgqOgjkY	Improved Mapping System	This video explains the system of mapping terrain made more accurate with NASA technology. Released Jan. 1991.	Transcript Link
2012 08 24	NASA STI Program	https://youtu.be/f0au-W6ulH4	Forest Fire Study	The impact of natural fires on our environment is examined, especially regarding greenhouse gases. Released Mar. 1987.	Transcript Link

2012 08 24	NASA STI Program	https://youtu.be/dwcxGrQaeac	Sights and Sounds of Space	This video details the progress of the first musician's work, based on the STS-26 mission, in the NASA Fine Arts Program. Released Nov. 1989.	Transcript Link
2012 08 24	NASA STI Program	https://youtu.be/ybde9utvThI	Spacework 16	This video consists of the Simulated Space Shuttle Program for schools and also has clips on wind tunnel research and on JPL's 'Miranda the Movie.' Released Jan. 1988.	Transcript Link
2012 08 24	NASA STI Program	https://youtu.be/A9CoTN43d24	CORE TRC	This video looks at the Central Operations for Educators in Ohio, and the LeRC Teacher Resource Center. Released Feb. 1990.	Transcript Link
2012 08 24	NASA STI Program	https://youtu.be/9SGHpmOuojY	Testing the Waters from Space	It is explained how an infrared radiometer can accurately measure ocean surface temperature. Released Dec. 1986.	Transcript Link
2012 08 24	NASA STI Program	https://youtu.be/KPoQuxzyVpk	Louisiana Delta Study	The project studies the causes of land erosion and sediment transport in order to protect the Delta's resources. Released Feb. 1990.	Transcript Link

2012 08 24	NASA STI Program	https://youtu.be/1KyVR1CDt3k	STS-27 Crew Fire Training and Glove Molding	The crew is shown during fire training exercises and space suit glove molding. Released Nov. 1988.	Transcript Link
2012 08 24	NASA STI Program	https://youtu.be/rl5SsOisEcs	STS-27 Crew Photo Training and Habitation Procedures	The crew is shown studying photography equipment they will carry into orbit, and how to take the best shots possible. Released Nov. 1988.	Transcript Link
2012 08 24	NASA STI Program	https://youtu.be/Du6flO4xKj4	STS-27 Crew Post-Insertion Deorbit-Prep in CCT	The crew is shown donning harness backpacks and suits for post-insertion activities in the CCT. Once on the CCT middeck, astronauts take off suits and practice stowing seats. Released Nov. 1988.	Transcript Link
2012 08 24	NASA STI Program	https://youtu.be/YpzW96O4lcs	STS-33 Carter and Thornton During WETF Activities	Astronauts Carter and Thornton are shown suiting up for work in the WETF (Weightless Environment Training Facility). (The payload mockup shown is not related to the STS-33 mission. It is a mockup of the Upper Atmosphere Research Satellite (UARS), which is scheduled to fly in the early 1990's.) Released Nov. 1989.	Transcript Link
2012 08 17	NASA STI Program	https://youtu.be/nh0FvK-Kc8E	Moonwalk Series Program 4 - The Moon on Earth	This episode (4th and last in the series) opens with Michael Collins in the Command Module, Columbia. It then shows the flight of the Lunar Excursion Module (LEM) and the rendezvous with Columbia. The reentry into the Earth's atmosphere, the parachutes deployment, followed by the splashdown is shown. Next we see shots of various parades welcoming the three astronauts home. Following these celebrations, we see the Lunar Receiving Lab, where the Lunar rocks are processed, and the various questions that science hopes to begin to answer about the moon, the development of the solar system and the evolution of life on earth, with the close examination of the rocks are asked. Released 1970.	Transcript Link

2012 08 17	NASA STI Program	https://youtu.be/8Ob5q-3Uxc8	Moonwalk Series Program 3 - One Small Step	This episode (third in a four-part series), opens with various shots of the natural environment of the earth, after which we hear communications with the astronauts on board the Apollo 11 spacecraft, including the news of the day. Views of the approach to the moon, the descent to the lunar surface, and the landing, including the statement, "Houston, Tranquility Base here. The Eagle has Landed." are included. This is followed by the descent down the ladder to the surface of the moon by Neil Armstrong and the now famous words, "That's one small step for man, one giant leap for mankind." Various shots of crowds watching around the world are shown, followed by the descent down the ladder by Buzz Aldrin, and the planting of the American Flag. There are views of the astronauts moving around the lunar surface which are followed by a series of still shots of this historic occasion. Released 1970.	Transcript Link
2012 08 17	NASA STI Program	https://youtu.be/CC_c9UJrzdU	Moonwalk Series Program 2 - Adapting to a Space Environment	This episode (second in a four-part series) shows the procedures Apollo operators used in order to make sure the astronauts would be able to survive in outer space, namely testing man's limitations and preferences (atmospheric pressure, temperature range, breathing gas, acceleration protection) and adapting the Columbia Module to account for these limitations. This show explains the function of the different stages of the moon rocket, i.e., how the stages separate and what becomes of them. We pick up the moonwalk story by looking back at some of the old classic space films that were a Hollywood perspective on future space travel. Released 1970.	Transcript Link
2012 08 17	NASA STI Program	https://youtu.be/e2v-c_I145w	Moonwalk Series Program 1 - The Day Before	This episode (first in a four-part series introduced by NASA Lewis Research Center's Lynn Bondurant), shows the preparation on the night before and the day of the launch of Apollo 11. Shots of the crowds waiting to view the launch help convey the excitement that accompanied the launch. The launch and ascent are shown, followed by views of the congratulations in the control room and a brief salute to Robert Goddard, the father of modern rocketry. Released 1970.	Transcript Link
2012 08 17	NASA STI Program	https://youtu.be/5j2szxWC_J8	STS-27 EMU and RMS Contingency Training	This video shows astronauts donning their EMU suits and Astronauts Shepherd and Ross training in the WETF on the RMS, which will not come down. Released Dec. 1988.	Transcript Link

2012 08 17	NASA STI Program	https://youtu.be/VlhJEmfHdQ8	STS-34 Arriflex and IMAX Camera Training	The STS-34 crew is shown being taught how to use the 16mm Arriflex camera. Released Aug. 1989.	Transcript Link
2012 08 17	NASA STI Program	https://youtu.be/TzFoXrt02b8	STS-26 Protein Growth (PCG) Experiment	Astronauts Nelson and Lounge are shown working on the Protein Crystal Growth experiment aboard the Space Shuttle. No sound. Released Jun. 1989.	Transcript Link
2012 08 17	NASA STI Program	https://youtu.be/t-PMmhKiFMY	Better Way to Fly	This video shows the advanced cockpit making piloting more efficient and flying safer. Released Feb. 1988.	Transcript Link
2012 08 16	NASA STI Program	https://youtu.be/yCKRu1qR5ok	1990 ASCAN Land Survival Training	This video shows astronaut candidates training at Fairchild AFB with signal flares, setting up tents, making fires, fishing, and signaling a helicopter with mirrors and radios. Released Jan 1991.	Transcript Link
2012 08 16	NASA STI Program	https://youtu.be/IyFsXsekqEw	STS-33 Emergency Egress Training	The STS-33 crew is shown donning flight survival gear, then entering the CCT for bailout exercises. After completion of the exercises in the CCT, the bailout procedures are practiced in the FFT. Released Nov. 1989.	Transcript Link

2012 08 16	NASA STI Program	https://youtu.be/sxKR0Ozeq08	Movement in Microgravity	This video takes a serious and humorous look at life in the low gravity environment of space flight. The video also includes onboard activities from Skylab to Space Shuttle missions. Released May 1988.	Transcript Link
2012 08 16	NASA STI Program	https://youtu.be/PJtW-MNU7w0	STS-28 Adamson and Brown EMU Walk Through	Astronauts Adamson and Brown are shown working on EMU suit, donning EVA gear, and entering vacuum chamber. Released Jul. 1989.	Transcript Link
2012 08 16	NASA STI Program	https://youtu.be/5DGyc-WWE0g	STS-29 Crew Bailout in WETF	The crew is donning life vests and being dropped into the WETF. Once in the water, the crew is trained on water survival techniques. Released Feb. 1989.	Transcript Link
2012 08 16	NASA STI Program	https://youtu.be/GGloGAqdc-Y	STS-32 Bailout Training in WETF	The crew is shown practicing water survival techniques in the Weightless Environment Training Facility in case of a bailout during the launch or landing. Released Dec. 1989.	Transcript Link
2012 08 16	NASA STI Program	https://youtu.be/5_hKBhR_duk	STS-29 Crew Food Tasting in Building 45	The crew is shown tasting food that will be served on the Space Shuttle. Released Jan. 1989.	Transcript Link

2012 08 16	NASA STI Program	https://youtu.be/j0XHi9Lz7SY	STS-29 EVA Prep in FFT	Astronauts Blaha, Springer, and Bagian are shown donning suits in the FFT. Blaha runs through checklists while the other two suit up in the airlock. Released Jan. 1989.	Transcript Link
2012 08 16	NASA STI Program	https://youtu.be/Z5nprDTfhvg	STS-29 IMAX Camera Audio Class FFT	The astronauts are shown how to work the audio portion of the IMAX camera system. Released Mar. 1989.	Transcript Link
2012 08 10	NASA STI Program	https://youtu.be/9X6Qu5Gdn4U	Manned Spacecraft Access at the Pad Design Factors that Drive Crew Safety and Lower Costs	No description available. Released Dec 2010.	Transcript Link
2012 08 08	NASA STI Program	https://youtu.be/ahSbLguDOsg	TES (Thermal Energy Storage) Video News Release	TES is an in-space technology experiment that flew on STS-62. Its intent is to investigate the behavior of two different thermal energy storage materials as they undergo repeated melting and freezing in the microgravity environment. Released Feb 1994.	Transcript Link
2012 08 04	NASA STI Program	https://youtu.be/TqHPsbmZjSg	Program and Project Management Initiative Management Issues in Manned Space Flight Programs	Dr. Aaron Cohen, Director of NASA Johnson Space Center, discusses management issues as they have appeared in the manned space flight programs. Released Dec 1989.	Transcript Link

2012 08 03	NASA STI Program	https://youtu.be/cttV9m5D3o8	Apollo Presentation for Astrodome	This video features a condensed look at Apollo milestones. It was created for presentation at the Houston Astrodome during 20th anniversary celebrations of Apollo 11. Released Aug 1989.	Transcript Link
2012 08 03	NASA STI Program	https://youtu.be/hT_QnSlXkAE	A Short Walk to Everywhere Space Earth Ocean Center Camp (SEOC)	This video details the activities of the Space, Earth, Ocean Center (SEOC), an environmental residential camp held in the summer for elementary school children. Students are shown participating in hands-on activities designed to encourage environmental awareness and interests in the environmental sciences. Released July 1988.	Transcript Link
2012 08 03	NASA STI Program	https://youtu.be/KlgPaUoyiPQ	International Food Research Project	Dr. Selina Ahmed, an associate professor of Human Nutrition, explains the purpose of the international Food Research Project to food tasters. Released Oct 1989.	Transcript Link
2012 08 03	NASA STI Program	https://youtu.be/7gwRj4ZrJbY	Arctic Ozone Expedition	Recent research on ozone done in the Arctic region is detailed and an update on information is gained from the previous Antarctic research. Released Apr 1989.	Transcript Link
2012 08 03	NASA STI Program	https://youtu.be/QB9sDygYp7E	Global Greenhouse Expedition	This video covers an airborne study of greenhouse gases in the atmosphere. Released Oct 1990.	Transcript Link

2012 07 31	NASA STI Program	https://youtu.be/E9RDlIjgftI	Toys in Space, 2	In this educational video from the 'Liftoff to Learning' series, astronauts from the STS-54 Mission (Mario Runco, John Casper, Don McMonagle, Susan Helms, and Greg Harbaugh) explain how microgravity and weightlessness in space affects motion by using both mechanical and nonmechanical toys (gravitrons, slinkys, dart boards, magnetic marbles, and others). The gravitational effects on rotation, force, acceleration, magnetism, magnetic fields, center of axis, and velocity are actively demonstrated using these toys through experiments onboard the STS-54 Mission flight as a part of their spaceborne experiment payload. [Resource Guide referenced in the video is not available.] Released Jun 1993.	Transcript Link
2012 07 26	NASA STI Program	https://youtu.be/ZmGVUOiRqaY	STS-72 Mission Update Flight Day 8	The NASA Television show, Mission Update,' hosted by Pat Ryan, provides a synopsis of the eighth day of the STS-72 Space Shuttle mission in this video clip. The scheduled activities, their times, and who will be conducting them are highlighted along with various film clips from the beginning of the mission to date. Released Jan 1996.	Transcript Link
2012 07 26	NASA STI Program	https://youtu.be/H6j7-Vqb5Zs	STS-72 Mission Update Flight Day 9	In this video clip, the NASA Television show, Mission Update,' hosted by Pat Ryan, provides a synopsis of the ninth day of the STS-72 Space Shuttle mission. The scheduled activities, their times, and who will be conducting them are highlighted along with various film clips showing different aspects of the mission. Released Jan 1996.	Transcript Link
2012 07 26	NASA STI Program	https://youtu.be/jtAAS7OigiQ	Go for EVA!	In this educational video series, 'Liftoff to Learning', astronauts from the STS-37 Space Shuttle Mission (Jay Apt, Jerry Ross, Ken Cameron, Steve Nagel, and Linda Godwin) show what EVA (extravehicular activity) means, talk about the history and design of the space suits and why they are designed the way they are, describe different ways they are used (payload work, testing and maintenance of equipment, space environment experiments) in EVA work, and briefly discuss the future applications of the space suits. Computer graphics and animation is included. Released Apr. 1995.	Transcript Link
2012 07 26	NASA STI Program	https://youtu.be/1V8g-j4VIrc	Telepresence Media Resource Tape	Dr. Michael McGreevey (NASA's Ames Research Center) explains what virtual reality is and how NASA uses this concept. Computer animation of different planets using virtual reality is shown. One Ames research tool, the Virtual Wind Tunnel allows air flow to be studied inside the tunnel from any conceivable location. Dr. Carol Stoker (NASA's Ames Research Center) comments on Telepresence, one form of virtual reality. Released Jan. 1996.	Transcript Link

2012 07 26	NASA STI Program	https://youtu.be/aS6_MDfczDk	All Systems Go!	In this educational 'Liftoff to Learning' video series, astronauts from STS-40 Space Shuttle Mission (F. Drew Gaffney, Millie Hughes-Fulford, Rhea Seddon, James Bagian, Bryan O'Connor, Tamara Jernigan, and Sidney Gutierrez) show, using footage and highlights from their mission, how microgravity causes changes in the human body. The STS-40 was a mission of spaceborne experiments concerned with the physiological, biological, and chemical changes that occur in the human body as a result of microgravity. Different experiments are shown and their significance are explained. Released Sep. 1992.	Transcript Link
2012 07 26	NASA STI Program	https://youtu.be/1eezts1hImY	Endeavor Now and Then	In this educational 'Liftoff to Learning' video series, astronauts from STS-49 Space Shuttle Mission (Thomas Akers, Bruce Melnick, Pierre Thuot, Kathy Thornton, Kevin Chilton, and Richard Hieb) compare their mission aboard the Space Shuttle Endeavor and their shuttle with its namesake, the ship 'Endeavor', commanded by Captain James Cook of England in the late 1700s. Using historical paintings, drawings, and computer graphics, Cook's Endeavor is brought to life. Its voyage path, problems, biological experiments, and discoveries are shown and compared to the modern-day Endeavor, its mission and experiments. The Space Shuttle Endeavor was named in 1988, through a nationwide school contest. It is the fifth Space Shuttle to be built and employs new technology in its design, for example, its drag shoot for shuttle landings. One part of the STS-49 Mission was the retrieval of the Intel satellite. Released Sep. 1992.	Transcript Link
2012 07 26	NASA STI Program	https://youtu.be/EZTUnabg4yk	Living in Space	In this educational video from the 'Liftoff to Learning' series, astronauts from the STS-56 Mission (Ken Cockrell, Mike Foale, Ellen Ochoa, Steve Oswald, and Ken Cameron) explain and show through demonstrations how microgravity affects the way astronauts live onboard the Space Shuttle, and how these same daily habits or processes differ on Earth. A tour of the Space Shuttle is given, including the sleeping compartments, the kitchen area, the storage compartments, and the Waste Collection System (or WCS, as they call it). Daily habits (brushing teeth, shampooing hair and bathing, eating,...) are explained and actively illustrated, along with reasons of how these applications differ from their employment on Earth. Released Jan. 1993.	Transcript Link
2012 07 24	NASA STI Program	https://youtu.be/B-tUP8afEIo	Comet Impact Tape 3	Continued press coverage of the comet Shoemaker-Levy 9 impact on the surface of Jupiter is presented. This tape covers 17 Jul. 1994. Released July 1994.	Transcript Link

2012 07 24	NASA STI Program	https://youtu.be/XYE4m1IJORg	Comet Impact Tape 9	Continued press coverage of the comet Shoemaker-Levy 9 impact on the surface of Jupiter is presented. This tape covers 23 Jul. 1994. Released July 1994.	Transcript Link
2012 07 24	NASA STI Program	https://youtu.be/mp7Bf2qIEuc	Comet Impact Tape 8	Continued press coverage of the comet Shoemaker-Levy 9 impact on the surface of Jupiter is presented. This tape covers 22 Jul. 1994. Released July 1994.	Transcript Link
2012 07 23	NASA STI Program	https://youtu.be/VYesN8cp950	Comet Impact Tape 7	Continued press coverage of the comet Shoemaker-Levy 9 impact on the surface of Jupiter is presented. This tape covers 21 Jul. 1994. Released July 1994.	Transcript Link
2012 07 23	NASA STI Program	https://youtu.be/PmSrMFiWNy8	Comet Impact Tape 6	Continued press coverage of the comet Shoemaker-Levy 9 impact on the surface of Jupiter is presented. This tape covers 20 Jul. 1994. Released July 1994.	Transcript Link
2012 07 23	NASA STI Program	https://youtu.be/5Iff8WN_sgQ	Comet Impact Tape 4	Continued press coverage of the comet Shoemaker-Levy 9 impact on the surface of Jupiter is presented. This tape covers 18 Jul. 1994. Released July 1994.	Transcript Link

2012 07 23	NASA STI Program	https://youtu.be/NFapLzEC59Y	Comet Impact Tape 2	Continued press coverage of the comet Shoemaker-Levy 9 impact on the surface of Jupiter is presented. This tape covers 16 Jul. 1994. Released July 1994.	Transcript Link
2012 07 23	NASA STI Program	https://youtu.be/ViY5PCx5qVc	Comet Impact Tape 1	Continued press coverage of the comet Shoemaker-Levy 9 impact on the surface of Jupiter is presented. This tape covers 16 Jul. 1994. Released July 1994.	Transcript Link
2012 07 23	NASA STI Program	https://youtu.be/fqKwYzIyl0Q	Voyager Science Summary Tape	A summary of Voyager science is presented by Dr. Edward Stone (originally part of a press conference on June 6, 1990). Released June 1990.	Transcript Link
2012 07 20	NASA STI Program	https://youtu.be/nzanUipCmlg	1990 ASCAN Ground Egress Parasail	This video shows astronaut candidates practicing ground egress and parachute landing procedures. Released Feb 1991.	Transcript Link
2012 07 20	NASA STI Program	https://youtu.be/7SgjPiVHwRE	Voyager National Air and Space Museum	A recap of the travels of the Voyager spacecraft to the outer planets is presented. (This video was originally made for a talk at the National Air and Space Museum.) Released Oct 1989.	Transcript Link

2012 07 20	NASA STI Program	https://youtu.be/KqX8QX5YbHA	Defying Gravity	This video examines microgravity research that is ongoing at LeRC. The video details the development of the Multiple Axis Space Test and its use in training the Mercury 7 astronauts. The LeRC drop tower is discussed, and a comparison is made between research being done at LeRC and rides anyone can experience at the nearby Cedar Point Amusement Park. Released Jan 1993.	Transcript Link
2012 07 20	NASA STI Program	https://youtu.be/Ij0YBills8Q	Solid Surface Combustion Experiment	This video describes the development of the Solid Surface Combustion Experiment (SSCE) by researchers at NASA LeRC. The experiment studies fire spreading over a small solid fuel sample subjected to microgravity conditions in Earth orbit. Buoyant convection, which determines the heat transfer in fires on Earth, disappears in microgravity; hence, this experiment will help researchers understand how fires act on Earth. Released Dec 1992.	Transcript Link
2012 07 20	NASA STI Program	https://youtu.be/rtvGjrASCC0	STS-33 EVA Prep and Post with Gregory, Blaha, Carter, Thorton, and Musgrave in FFT	This video shows the crew in the airlock of the FFT, talking with technicians about the extravehicular activity (EVA) equipment. Thornton and Carter put on EVA suits and enter the airlock as the other crew members help with checklists. Released Oct 1989.	Transcript Link
2012 07 20	NASA STI Program	https://youtu.be/Y--1-lepmaM	Lunar Curatorial Facility Resource	This video shows daily activities in the Lunar Curatorial Facility. The video covers the various studies being conducted on lunar dust, rock, and core samples brought back by Apollo crews. Released July 1989.	Transcript Link
2012 07 20	NASA STI Program	https://youtu.be/KZHrxJMzbe0	Johnson Space Center Building 46 Construction	This video uses time-lapse photography to show the construction of Building 46 Central Computer Facility at the NASA Johnson Space Center. Released Feb 1989.	Transcript Link

2012 07 19	NASA STI Program	https://youtu.be/CCG-Anetkas	STS-27 Post-Landing Undertemp Video	Released 2011.	Transcript Link
2012 07 18	NASA STI Program	https://youtu.be/c6bUCI6rOqU	Video 3 of 4. Tank Pressure Control Experiment Thermal Phenomena in Microgravity	The report presents the results of the flight experiment Tank Pressure Control Experiment/Thermal Phenomena (TPCE/TP) performed in the microgravity environment of the space shuttle. TPCE/TP, flown on the Space Transportation System STS-52, was a second flight of the Tank Pressure Control Experiment (TPCE). The experiment used Freon 113 at near saturation conditions. The test tank was filled with liquid to about 83 percent by volume. The experiment consisted of 21 tests. Each test generally started with a heating phase to increase the tank pressure and to develop temperature stratification in the fluid, followed by a fluid mixing phase for the tank pressure reduction and fluid temperature equilibration. The heating phase provided pool boiling data from large (relative to bubble sizes) heating surfaces (0.1046 m by 0.0742 m) at low heat fluxes (0.23 to 1.16 kW/m(exp 2)). The system pressure and the bulk liquid subcooling varied from 39 to 78 kPa and 1 to 3 deg C, respectively. The boiling process during the entire heating period, as well a jet-induced mixing process for the first 2 min. of the mixing period, was also recorded on video. Analyses of data from the two flight experiments (TPCE and TPCE/TP) and their comparison with the results obtained in drop tower experiments suggest that as Bond number approaches zero the flow pattern produced by an axial jet and the mixing time can be predicted by the Weber number. This is video 2 of 4. Released Feb. 1996.	Transcript Link

2012 07 18	NASA STI Program	https://youtu.be/fCW8O8IWUPg	Video 4 of 4. Tank Pressure Control Experiment Thermal Phenomena in Microgravity	The report presents the results of the flight experiment Tank Pressure Control Experiment/Thermal Phenomena (TPCE/TP) performed in the microgravity environment of the space shuttle. TPCE/TP, flown on the Space Transportation System STS-52, was a second flight of the Tank Pressure Control Experiment (TPCE). The experiment used Freon 113 at near saturation conditions. The test tank was filled with liquid to about 83 percent by volume. The experiment consisted of 21 tests. Each test generally started with a heating phase to increase the tank pressure and to develop temperature stratification in the fluid, followed by a fluid mixing phase for the tank pressure reduction and fluid temperature equilibration. The heating phase provided pool boiling data from large (relative to bubble sizes) heating surfaces (0.1046 m by 0.0742 m) at low heat fluxes (0.23 to 1.16 kW/m(exp 2)). The system pressure and the bulk liquid subcooling varied from 39 to 78 kPa and 1 to 3 deg C, respectively. The boiling process during the entire heating period, as well a jet-induced mixing process for the first 2 min. of the mixing period, was also recorded on video. Analyses of data from the two flight experiments (TPCE and TPCE/TP) and their comparison with the results obtained in drop tower experiments suggest that as Bond number approaches zero the flow pattern produced by an axial jet and the mixing time can be predicted by the Weber number. This is video 2 of 4. Released Feb. 1996.	Transcript Link
2012 07 18	NASA STI Program	https://youtu.be/fSXNe2eXBvc	Video 1 of 4. Tank Pressure Control Experiment Thermal Phenomena in Microgravity	The report presents the results of the flight experiment Tank Pressure Control Experiment/Thermal Phenomena (TPCE/TP) performed in the microgravity environment of the space shuttle. TPCE/TP, flown on the Space Transportation System STS-52, was a second flight of the Tank Pressure Control Experiment (TPCE). The experiment used Freon 113 at near saturation conditions. The test tank was filled with liquid to about 83 percent by volume. The experiment consisted of 21 tests. Each test generally started with a heating phase to increase the tank pressure and to develop temperature stratification in the fluid, followed by a fluid mixing phase for the tank pressure reduction and fluid temperature equilibration. The heating phase provided pool boiling data from large (relative to bubble sizes) heating surfaces (0.1046 m by 0.0742 m) at low heat fluxes (0.23 to 1.16 kW/m(exp 2)). The system pressure and the bulk liquid subcooling varied from 39 to 78 kPa and 1 to 3 deg C, respectively. The boiling process during the entire heating period, as well a jet-induced mixing process for the first 2 min. of the mixing period, was also recorded on video. Analyses of data from the two flight experiments (TPCE and TPCE/TP) and their comparison with the results obtained in drop tower experiments suggest that as Bond number approaches zero the flow pattern produced by an axial jet and the mixing time can be predicted by the Weber number. This is video 1 of 4. Released Feb. 1996.	Transcript Link

2012 07 18	NASA STI Program	https://youtu.be/8vrVeay3CTo	Video 2 of 4. Tank Pressure Control Experiment Thermal Phenomena in Microgravity	The report presents the results of the flight experiment Tank Pressure Control Experiment/Thermal Phenomena (TPCE/TP) performed in the microgravity environment of the space shuttle. TPCE/TP, flown on the Space Transportation System STS-52, was a second flight of the Tank Pressure Control Experiment (TPCE). The experiment used Freon 113 at near saturation conditions. The test tank was filled with liquid to about 83 percent by volume. The experiment consisted of 21 tests. Each test generally started with a heating phase to increase the tank pressure and to develop temperature stratification in the fluid, followed by a fluid mixing phase for the tank pressure reduction and fluid temperature equilibration. The heating phase provided pool boiling data from large (relative to bubble sizes) heating surfaces (0.1046 m by 0.0742 m) at low heat fluxes (0.23 to 1.16 kW/m(exp 2)). The system pressure and the bulk liquid subcooling varied from 39 to 78 kPa and 1 to 3 deg C, respectively. The boiling process during the entire heating period, as well a jet-induced mixing process for the first 2 min. of the mixing period, was also recorded on video. Analyses of data from the two flight experiments (TPCE and TPCE/TP) and their comparison with the results obtained in drop tower experiments suggest that as Bond number approaches zero the flow pattern produced by an axial jet and the mixing time can be predicted by the Weber number. This is video 2 of 4. Released Feb. 1996.	Transcript Link
2012 06 27	NASA STI Program	https://youtu.be/1DaFQsvhLTw	NASA Experiences in Prog. & Proj. Mgmt The Goddard Multimission Module Spacecraft Mgmt Experience	The GSFC connection in the multi-mission spacecraft management field is explored. Released January 1989.	Transcript Link
2012 06 27	NASA STI Program	https://youtu.be/4pcXdtTfiy8	Robotics in Space Station Era	Produced for the AIAA symposium, this fast paced video shows robotics and telerobotics in the exploration of space. Released November 1988.	Transcript Link

2012 06 27	NASA STI Program	https://youtu.be/euN2Nmb364k	Global Climate Study	The Global Surface Radiation Budget Experiment, which determines if current climate models are accurate, is explained. Released July 1989.	Transcript Link
2012 06 27	NASA STI Program	https://youtu.be/N2JwfuxaRkA	STS-34 Crew Bailout Exercise in CCT	This video shows crews practicing bailout procedures in the CCT. Released August 1989.	Transcript Link
2012 06 27	NASA STI Program	https://youtu.be/kiM8MmsA-IQ	Firefighters' Breathing System	The improvement of protective gear for firefighters is presented, including the breathing system. Released April 1989.	Transcript Link
2012 06 27	NASA STI Program	https://youtu.be/zRDhubvpAlg	STS-34 Galileo Integrated Deploy Sim	The Space Shuttle crew practices Galileo deploy from the SMS. Intercuts of the MOCR are included. Released September 1989.	Transcript Link
2012 06 27	NASA STI Program	https://youtu.be/n3kJqomIgug	NASA Images 10 NASA at Work	Electric propulsion engine research from the 1960's is reviewed. Also, a 1987 look at exploring Mars. Released March 1988.	Transcript Link

2012 06 27	NASA STI Program	https://youtu.be/x7RIRJTeT24	STS-34 McCully and Baker During IFM Training	Astronauts McCully and Baker are shown learning how to use various tools that will be aboard the Space Shuttle. They are also seen cleaning air filters and checking wires. Released August 1989.	Transcript Link
2012 06 27	NASA STI Program	https://youtu.be/_2rmLig11c4	What's Killing the Trees	The possible causes for forest decline are discussed, including acid rain on Camel's Hump Mountain, Vermont. Released October 1987.	Transcript Link
2012 06 27	NASA STI Program	https://youtu.be/mVCaJp2SbAw	Ocean Wave Study	An international study of waves in the Atlantic Ocean is explained. The study is to determine the effect of the waves on the transfer of energy between sea and air. Released May 1991.	Transcript Link
2012 06 27	NASA STI Program	https://youtu.be/vLM30GXhSsI	Voyager Encounters Uranus	Early results from Voyager's pass of Uranus and its moon, Miranda, are shown. Released June 1986.	Transcript Link
2012 06 27	NASA STI Program	https://youtu.be/2iALINSufuc	Unistik(TM) Vehicle Controller	A single stick control system, like the lunar rover, is presented as a control to enable disadvantaged individuals to drive with only one hand. Released October 1986.	Transcript Link

2012 06 27	NASA STI Program	https://youtu.be/eRe6NN8nCTs	NASA Images 16 NASA at Work	The video describes NASA technology that is in everyday use. Released May 1988.	Transcript Link
2012 06 27	NASA STI Program	https://youtu.be/se_Lt8fM1co	Gearing up for 1988	This video explains all engineering efforts to ensure safety and reliability for the next Shuttle mission, STS-26. Released December 1986.	Transcript Link
2012 06 27	NASA STI Program	https://youtu.be/0QqQ1j1vBgw	Back to Propellers	The video shows the unique propfan design. The propfan is designed to achieve the speeds and altitudes of jets while only using half the normal amount of fuel. Released June 1987.	Transcript Link
2012 06 27	NASA STI Program	https://youtu.be/XCb3z6-RSvc	Student Researchers	The video shows students and their NASA-related research at Lewis Research Center. Released July 1990.	Transcript Link
2012 06 27	NASA STI Program	https://youtu.be/LeKJsbXCq9U	NASA Images 7 NASA at Work	This video shows how space-derived technology is being used to benefit people on Earth. Released March 1988.	Transcript Link

2012 06 15	NASA STI Program	https://youtu.be/t99EZ6jH9gc	Hubble Images from 1996	Primarily composed of animation, movies, and stills, this video is divided into 12 segments or slugs as the video refers to them. They are: Global Map of Pluto, Images of Pluto, Surface Map of Pluto, Helix Nebula- NGC 7293, Gaseous Knots, Animation of the Formation of the Helix Nebula, Crab Nebula, Jupiter Aurora Movie, Birth of a Quasar, Merging Galaxies, and Spiral Galaxies. Released January 1997.	Transcript Link
2012 06 15	NASA STI Program	https://youtu.be/eZxi52q2u8k	STS-38 Crew Training Habitation Equip. Procedures, CCT Bailout, 70MM Photos, EVA Prep, Firefighting	Several aspects of crew training are shown, including habitation equipment procedures and bailout procedures (both in CCT), 70mm photo class, EVA prep and post, and firefighting. Released July 1990.	0
2012 06 13	NASA STI Program	https://youtu.be/F_tc8RKCxRw	Ares First Stage History Video	This video contains information about the Ares-1 Launch vehicle history. This is a supplement to "Ares First Stage Element Status" found at http://ntrs.nasa.gov/search.jsp?R=20090037677. Released February 2010.	Transcript Link
2012 06 13	NASA STI Program	https://youtu.be/9MGaTjvqYPE	Faces of SSME	Several employees who contributed to the Space Shuttle Main Engine (SSME) program describe their most memorable experiences relating to the launching of the Space Shuttle. Some describe the emotional aspects they experienced while watching and filming the launch from Kennedy Space Center. Distributed under U.S. Government purpose rights under NASA contract NAS8-01140. Released 2009.	Transcript Link
2012 06 08	NASA STI Program	https://youtu.be/Lo4X6pIooX0	Orbiting Solar Laboratory Flight Operations	A short video presentation about the capabilities, accomplishments, and limitations of the Orbiting Solar Operations is presented.	Transcript Link

2012 06 08	NASA STI Program	https://youtu.be/59s_mEOnXyk	Man-Vehicle Systems Research Facility	This video presents a guided tour of the Manned Vehicle Systems Research Facility (MVSRF) at ARC.	Transcript Link
2012 06 07	NASA STI Program	https://youtu.be/feydh_mHcYM	Futurepath The Story of R&T at NASA LeRC. Space Station Power Systems, Advanced Turbo Prop Program	This video looks at the photovoltaic and solar dynamic power systems being developed for Freedom and the Advanced Turbo Prop Program.	Transcript Link
2012 06 07	NASA STI Program	https://youtu.be/uevY0EzNSOM	NASA Images 6 NASA at Work	The video is comprised of clips regarding aircraft safety and development through NASA research at its various centers.	Transcript Link
2012 06 07	NASA STI Program	https://youtu.be/tnFalrrm4S4	STS-26 EVA Rescue Training	This video shows astronauts Covey, Hilmers, and Hauck training in SES. It involves a simulated EVA rescue using the RMS. Training demonstrates the movement of a free-floating astronaut for grapple with the arm.	Transcript Link
2012 06 07	NASA STI Program	https://youtu.be/9QHcb5Jj7VA	STS-26 Generic Integrated IUS Deploy Simulation	The crew is shown in the SMS during TDRS deploy training. It includes intercuts of the MOCR.	Transcript Link

2012 06 07	NASA STI Program	https://youtu.be/xH5t9qEYqbo	STS-26 IUS and Latch Contingency Training	Astronauts Nelson and Lounge are shown in the WETF while astronauts Covey and Hilmer observe topside.	Transcript Link
2012 06 07	NASA STI Program	https://youtu.be/SA_QLq5hlrk	Heavy Rain and Wind Shear	This video looks at research on countering the effects of wind shear and heavy rain situations on flight stability.	Transcript Link
2012 06 07	NASA STI Program	https://youtu.be/fpCH0ApoLlI	Six Degree of Freedom System	This animated clip shows operations of the Six Degree of Freedom (DOF) computer during a simulated mission. The clip is intercut with live video of a shuttle crew 'docking' with Space Station Freedom.	Transcript Link
2012 06 07	NASA STI Program	https://youtu.be/RZcwmx_ncSo	GFSC-TV Demo Video	This demonstration video produced by and for the Goddard Space Flight Center Television facility shows some of the capabilities of this state-of-the-art facility that are available to projects at Goddard.	Transcript Link
2012 06 07	NASA STI Program	https://youtu.be/3LZhiTvUJE4	Rotorcraft Research	This video shows wind tunnel testing and computer modeling done on the rotorcraft prior to building the final aircraft.	Transcript Link

2012 06 07	NASA STI Program	https://youtu.be/tXlZ6ngfoBo	Dynamic Analysis for Space Station Freedom	This video utilizes computer animations to identify the structure, functions, and design of the Space Station Freedom.	Transcript Link
2012 05 31	NASA STI Program	https://youtu.be/XDEzQ_n-9yA	Variable Pitch Propfan [Futurepath The Story of Research and Technology at NASA LeRC]	The video presents material concerning Advanced Turboprop programs. Additionally, material covering the development of power systems for Freedom is shown.	Transcript Link
2012 05 24	NASA STI Program	https://youtu.be/iiAn22qLcLw	Shuttle to Space Station. Heart Assist Implant. Hubble Update. X-30 Mock-Up	Shuttle to Space Station, Heart Assist Implant, Hubble Update, and X-30 Mockup are the four parts that are discussed in this video. The first part, Shuttle to Space Station, is focussed on the construction and function of the Space Station Freedom. While part two, Heart Assist Implant, discusses a newly developed electromechanical device that helps to reduce heart attack by using electric shocks. Interviews with the co-inventor and patients are also included. Brief introduction to Hubble Telescope, problem behind its poor image quality (mirror aberration), and the plan to correct this problem are the three issues that are discussed in part three, Hubble Update. The last part, part four, reviews the X-30 Mockup designed by the staff and students of Mississippi State University.	Transcript Link
2012 05 24	NASA STI Program	https://youtu.be/vBQk6a2aPoQ	Aero-Space Plane Flexible Access to Space	The most recently designed X-30 (National Aerospace Plane) is described. The video feature also chronicles the development of the X-plane series, beginning with the X-1.	Transcript Link

2012 05 24	NASA STI Program	https://youtu.be/sMpN1XXAF6U	Futurepath Story of R&T at NASA LeRC; Structures for Flight Propulsion, ARC Sprayed Monotape, NASP	The story of research and technology at NASA Lewis Research Center's Structures Division is presented. The job and designs of the Structures Division needed for flight propulsion is described including structural mechanics, structural dynamics, fatigue, and fracture. The video briefly explains why properties of metals used in structural mechanics need to be tested. Examples of tests and simulations used in structural dynamics (bodies in motion) are briefly described. Destructive and non-destructive fatigue/fracture analysis is also described. The arc sprayed monotape (a composite material) is explained, as are the programs in which monotape plays a roll. Finally, the National Aero-Space Plane (NASP or x-30) is introduced, including the material development and metal matrix as well as how NASP will reduce costs for NASA.	Transcript Link
2012 05 24	NASA STI Program	https://youtu.be/nfpHEu4T0E0	National Aero-Space Plane (NASP) Segment for Futurepath 3	This video concentrates on materials being developed and tested at LeRC for possible use in NASP.	Transcript Link
2012 05 24	NASA STI Program	https://youtu.be/vfb62it75cg	Space Exploration Initiative	An overview of President Bush's Space Exploration Initiative (SEI) and it's three main components, Space Station Freedom, a Permanent Lunar Base, and a Manned Mission to Mars is provided. Computer simulations of the Space Station Freedom and Permanent Lunar Base are shown, and an animated sequence describes a Mars mission where heavy lift vehicle will bring components of a Mars Spacecraft into orbit, where it will be put together by astronauts using a robotic arm. The Mars spacecraft is shown orbiting Mars and discharging a lander to the surface, carrying human explorers. The video also details the SEI's Outreach Program, designed to garner interest in and ideas for Space Exploration.	Transcript Link
2012 04 05	NASA STI Program	https://youtu.be/Dg2b67HTK8s	Orion Nebula Movie	Footage shows the following simulations derived from Hubble Space Telescope images: (1) the tiling of the Orion mosaic; (2) Orion mosaic fly-through; and (3) a close-up of the Orion mosaic. No sound.	Transcript Link

2012 04 05	NASA STI Program	https://youtu.be/rSvwQIKaSpg	Spinning Stardust into Planets	A computerized animation simulates the formation of a stellar disk and planets. Ten images from the Hubble Space Telescope (HST) show young stellar disks (taken with the Near-Infrared Camera Multi-Object Spectrometer (NICMOS)) and stellar disks around young stars (taken with the Wide-Field Planetary Camera 2 (WFPC2)). Dr. Deborah Padgett describes what astronomers see in the images of young stellar disks and Dr. Karl Stapelfeldt explains HST's role in helping astronomers to examine young stars in order to understand how solar systems like our own may form. Sound is towards the end of the video.	Transcript Link
2012 04 05	NASA STI Program	https://youtu.be/AjxE2cmONGU	Astronomers Ponder Lack of Planets in Globular Cluster	This videotape has seven segments, discussing and showing the evidence for the proposition that the galactic clusters do not have many planets. Specifically the segments show: (1) Dr. Ron Gilliland discussing the process of looking for "Hot Jupiters" (i.e., planets about the size of Jupiter, which are hotter than Jupiter) in the globular clusters, (2) a zoom into 47 Tucanae globular cluster, (3) an animation of a planet passing between the host star and the earth with a brightness graph, (4) the same animation as before without the graph, (5) Ron Gilliland of the Space Telescope Science Institute (STScI) discussing possible interpretations of his findings in the 47 Tucanae globular cluster, (6) Ron Gilliland examining the images of 47 Tucanae, and (7) images of 47 Tucanae watching for variations in brightness.	Transcript Link
2012 04 05	NASA STI Program	https://youtu.be/wQuNDD-QcXs	The Trifid Nebula Stellar Sibling Rivalry	A zoom into the Trifid Nebula starts with ground-based observations and ends with a Hubble Space Telescope (HST) image. Another HST image shows star formation in the nebula and the video concludes with a ground-based image of the Trifid Nebula. No sound.	Transcript Link
2012 04 05	NASA STI Program	https://youtu.be/WHjQAlh21II	Worlds Smaller than Saturn	Computerized animations show the following: (1) an artist's conception of a Saturn-like extrasolar planet; (2) star and planet motion; and (3) young stellar disk and planet formation. Footage shows the outside of the Mauna Kea Observatories in Hawaii and Geoff Marcy and Paul Butler inside while they are processing information. Then a press conference,'Worlds Smaller than Saturn', is seen. Anne Kinney, Origins Science Director, NASA Headquarters, introduces Geoff Marcy, Paul Butler, Alan Boss, and Heidi Hammel. They discuss the discovery of the two new Saturn-sized extrasolar planets that are orbiting the stars HD46375 and 79 Seti, giving details on the search technique and size distribution. They then answer questions from the press.	Transcript Link

2012 04 05	NASA STI Program	https://youtu.be/5uIg9URM4j0	Black Holes Shed Light on Galaxy Formation	This videotape is comprised of several segments of animations on black holes and galaxy formation, and several segments of an interview with Dr. John Kormendy. The animation segments are: (1) a super massive black hole, (2) Centarus A active black hole found in a collision, (3) galaxy NGC-4261 (active black hole and jet model), (4) galaxy M-32 (orbits of stars are effected by the gravity of the black hole), (5) galaxy M-37 (motion of stars increases as mass of black hole increases), (6) Birth of active galactic nuclei, (7) the collision of two galaxy leads to merger of the black holes, (8) Centarus A and simulation of the collision of 2 galaxies. There are also several segments of an interview with John Kormendy. In these segments he discusses the two most important aspects of his recent black hole work: (1) the correlations between galaxies speed and the mass of the black holes, and (2) the existence of black holes and galactic formation. He also discusses the importance of the Hubble Space Telescope and the Space Telescope Imaging Spectrograph to the study of black holes. He also shows the methodology of processing images from the spectrograph in his office.	Transcript Link
2012 04 04	NASA STI Program	https://youtu.be/k_s9KVXeerk	Hubble Identifies Source of Ultraviolet Light in an Old Galaxy	This videotape is comprised of four segments: (1) a Video zoom in on galaxy M32 using ground images, (2) Hubble images of galaxy M32, (3) Ground base color image of galaxies M31 and M32, and (4) Black and white ground based images of galaxy M32. No sound.	Transcript Link
2012 04 04	NASA STI Program	https://youtu.be/LOvCHclCgf4	The Secret Lives of Galaxies	The ground-based image in visible light locates the hub imaged with the Hubble Space Telescope. This barred galaxy feeds material into its hub, igniting star birth. The Hubble NICMOS instrument penetrates beneath the dust to reveal clusters of young stars. Footage shows ground-based, WFPC2, and NICMOS images of NGS 1365. An animation of a large spiral galaxy zooms from the edge to the galactic bulge. No sound.	Transcript Link
2012 04 04	NASA STI Program	https://youtu.be/GD2ckTun6EY	Giant Star Clusters Near Galactic Core	A video sequence of still images goes deep into the Milky Way galaxy to the Arches Cluster. Hubble, penetrating through dust and clouds, peers into the core where two giant clusters shine more brightly than any other clusters in the galaxy. Footage shows the following still images: (1) wide view of Sagittarius constellation; (2) the Palomar Observatory's 2 micron all-sky survey; and (3) an image of the Arches Cluster taken with the Hubble Space Telescope NICMOS instrument. Dr. Don Figer of the Space Telescope Science Institute discusses the significance of the observations and relates his first reaction to the images. No sound.	Transcript Link

2012 04 04	NASA STI Program	https://youtu.be/x7Iltq6neeM	Hyper-X Model Testing with Animation	Live footage shows the Hyper-X program modeling at NASA Langley Research Center. The Hyper-X craft is shown on top of a Pegasus booster in a 20" Mach 6 Wind Tunnel. Visualization data runs are performed in the wind tunnel. Also seen is a brief interview with Vincent Rausch the Hyper-X Program Manager. Animation includes the flight model of the Hyper-X vehicle. Partial sound.	Transcript Link
2012 04 04	NASA STI Program	https://youtu.be/x-YA02lMGm8	International Space University	The International Space University (ISU) is described in this video, hosted by Marina Sirtis from the 'Star Trek' television show's Starship Enterprise. A complete explanation of what ISU is, how the university functions, and the benefits that the university provides are described. Included are brief comments from former ISU graduates.	Transcript Link
2012 04 03	NASA STI Program	https://youtu.be/JBvHqdnOc58	PMMW Camera TRP; Phase 1	Passive millimeter wave (PMMW) sensors have the ability to see through fog, clouds, dust and sandstorms and thus have the potential to support all-weather operations, both military and commercial. Many of the applications, such as military transport or commercial aircraft landing, are technologically stressing in that they require imaging of a scene with a large field of view in real time and with high spatial resolution. The development of a low cost PMMW focal plane array camera is essential to obtain real-time video images to fulfill the above needs. The overall objective of this multi-year project (Phase 1) was to develop and demonstrate the capabilities of a W-band PMMW camera with a microwave/millimeter wave monolithic integrated circuit (MMIC) focal plane array (FPA) that can be manufactured at low cost for both military and commercial applications. This overall objective was met in July 1997 when the first video images from the camera were generated of an outdoor scene. In addition, our consortium partner McDonnell Douglas was to develop a real-time passive millimeter wave flight simulator to permit pilot evaluation of a PMMW-equipped aircraft in a landing scenario. A working version of this simulator was completed. This work was carried out under the DARPA-funded PMMW Camera Technology Reinvestment Project (TRP), also known as the PMMW Camera DARPA Joint Dual-Use Project. In this final report for the Phase 1 activities, a year by year description of what the specific objectives were, the approaches taken, and the progress made is presented, followed by a description of the validation and imaging test results obtained in 1997. No sound.	Transcript Link

2012 04 03	NASA STI Program	https://youtu.be/BcWZ38uDsho	Acoustic Climb to Cruise Test	Flight test film footage of three different aircraft testing the acoustical noise levels during take-off, climb, maneuvers, and touch and go landings are described. These sound tests were conducted on two fighter aircraft and one cargo aircraft. Results from mobile test vehicle are shown.	Transcript Link
2012 04 03	NASA STI Program	https://youtu.be/aSfY-v8yOB8	F-15 Resource Tape	An F-15 fighter aircraft is portrayed in resource video. A flight test is shown with take-off, touch and go landings, some flight maneuvers, and pilot to control tower communication with references to drag vectors.	Transcript Link
2012 04 03	NASA STI Program	https://youtu.be/AaIrjID6oU4	Meteor 3 TOMS launch of 15 August 1991 in Plesetsk, USSR	The TOMS launch of August 15, 1991, was a joint effort between the U.S.S.R. and the United States. The pre-launch briefing, a tour of the TOMS storage site, it's delivery and setup at the launch site, and the actual launch were viewed in this video, along with a post-launch conference and a dinner. The launch occurred in Plesetsk, U.S.S.R., with the TOMS payload being launched on a Soviet Meteor. Officials from NASA were present for the launch.	Transcript Link
2012 04 03	NASA STI Program	https://youtu.be/L6O2tfDYDj8	Evolution of the Southern Hemisphere ozone hole as seen by TOMS from August 1979 to December 1991	The computerized color images of the Total Ozone Mapping Spectrometer (TOMS) showed the ozone distribution and levels in the Earth's southern hemisphere from August 1979 to December 1991 in this video. The annual variations were presented in a monthly format and the ozone levels were measured in Dobson units. No sound.	Transcript Link
2012 04 03	NASA STI Program	https://youtu.be/n24lhxZEtJU	Glacier Bay, Alaska, from the Ground, Air, and Space	This tape uses a combination of video, three-dimensional computer imaging, and still photographs to provide a descriptive overview of the life-cycle and environmental effects of glaciers. An historical prospective of researchers and the contribution that they have made to the understanding of glaciers and Glacier Bay is presented. The data collected from these scientists have been documented and used by means of scientific visualization in the hope of learning how glacial activity relates to climate changes.	Transcript Link

2012 04 03	NASA STI Program	https://youtu.be/dEPaAVHZ1D0	What is the Value of Space Exploration - A Prairie Perspective	The symposium addresses different topics within Space Exploration. The symposium was fed, using satellite downlinks, to several communities in North Dakota, the first such symposium of its type ever held. The specific topics presented by different community members within the state of North Dakota were: the economic, cultural, scientific and technical, political, educational and social value of Space Exploration. Included is a 22 minute VHS video cassette highlighting the symposium.	Transcript Link
2012 04 03	NASA STI Program	https://youtu.be/O9-SQ0Ikk8k	F-16XL interview with Marta Bohn-Meyer	Marta Bohn-Meyer discusses the cooperative research between Rockwell Industries and NASA research facilities in their effort to optimize and maintain the supersonic laminar flow on the F-16XL aircraft. Research on the airfoil design, chord optimization, introduction of a suction feature to maintain pressure distribution, and CFD, both theoretical and actual phenomena, are discussed. Bohn-Meyer discusses the difference between supersonic and subsonic laminar flow, cross flow, reasons behind using this particular F-16 aircraft for this research, and the future of this ongoing research, including the data base that investigators are building from wind tunnel data and in-flight validation.	Transcript Link
2012 03 30	NASA STI Program	https://youtu.be/2bkZ2Sbsjp0	National Aero-Space Plane	This video presents updated model photography of 'old' NASP design.	Transcript Link
2012 03 30	NASA STI Program	https://youtu.be/0uSiBSoe44E	Restoring Miss Liberty	This videotape shows how a NASA inorganic coating for metal was used on the Statue of Liberty during it recent refurbishment.	Transcript Link
2012 03 30	NASA STI Program	https://youtu.be/GaaoNIC-0iA	Laser Artery Repair	This videotape demonstrates the capabilities of the excimer laser and the angioscope for treating heart disease.	Transcript Link

2012 03 30	NASA STI Program	https://youtu.be/RMLGkrpxaSQ	Lunar Ranging	This videotape describes the work at the Lure observatory (Hawaii) in the area of Lunar rangefinding. This work uses laser technology to range the moon with an accuracy of one inch.	Transcript Link
2012 03 30	NASA STI Program	https://youtu.be/BiOwrsQbSoY	Finding Fish from Above	This videotape shows how the use of satellites can help locate fish. The demonstration is intended for the fishing industry.	Transcript Link
2012 03 30	NASA STI Program	https://youtu.be/C6GDo7UGfuU	Space Adaptation	This videotape discusses space adaptation syndrome and a training simulator that may help astronauts adjust to microgravity before space flight.	Transcript Link
2012 03 30	NASA STI Program	https://youtu.be/POKL-TScXSw	Exploring Mars	This presentation shows what researchers are designing (solar balloon and rover) to better explore Mars geography before sending a manned mission.	Transcript Link
2012 03 30	NASA STI Program	https://youtu.be/GDx_wG3JrtM	Airborne Arctic Stratospheric Expedition Preparation Ozone	This video shows the rollout of the ER-2 and DC-8 at Ames, takeoffs and landings, and operations aboard the DC-8 and ER-2 in Puntas Arenas, Chile. Animation of the north polar regions showing the ozone hole is also included. No sound.	Transcript Link

2012 03 30	NASA STI Program	https://youtu.be/tPDfv5jRzJg	STS-32 IMAX Camera Training	The crew is shown learning how to load the IMAX camera and use it. This training takes place on the middeck of the CCT.	Transcript Link
2012 03 30	NASA STI Program	https://youtu.be/2rCBEYu7ABE	The 1988 Computational Fluid Dynamics Highlights	This video highlights the 1988 CFD graphics which show zero gravity phenomena, boundary layers, aeroelasticity, rotor blades, stators, jet ground effects, the F-18, flow about the shuttle, hypersonic flow, and flow in an artificial heart. Released Jan. 1988.	Transcript Link
2012 03 30	NASA STI Program	https://youtu.be/QmoSesGDakw	Taecannautics Sharing the Dream	A week-long teacher workshop is described. Highlights include underwater simulation training, model rocket building and launching, map reading, and survival training.	Transcript Link
2012 03 30	NASA STI Program	https://youtu.be/hDiwosjbyLQ	STS-28 Crew Presentation Clip	This Department of Defense space shuttle mission is shown during launch and landing. The video tape also includes scenes of the following: the crew working on the otolith Tilt Translation Reinterpretation Experiment, various views of the Earth, the crew during mealtime, and preparations for reentry. No sound.	Transcript Link
2012 03 28	NASA STI Program	https://youtu.be/Uy8sAqILfKQ	STS-30 Crew Photo in Building 4	This video shows the Space Shuttle crew learning how to use the photography equipment they will have on board the Space Shuttle.	Transcript Link

2012 03 28	NASA STI Program	https://youtu.be/gOZILpKV7Ck	STS-30 EVA Prep in CCT Grabe, Lee, and Thagard	Astronauts Grabe, Thagard, and Lee practice donning extravehicular activity (EVA) suits while in the CCT.	Transcript Link
2012 03 28	NASA STI Program	https://youtu.be/CVIo1c1JfXg	STS-30 Magellan Deploy Sim in SMS and MOCR	The Space Shuttle crew is shown in SMS training for the Magellan spacecraft deploy. Intercuts of the MOCR are included.	Transcript Link
2012 03 28	NASA STI Program	https://youtu.be/JoIf3y73j6g	TAGS Text and Graphics Systems	This video shows Text and Graphics Systems (TAGS) in action and describes how the system will be used on Space Shuttle missions.	Transcript Link
2012 03 28	NASA STI Program	https://youtu.be/Q4tmn_iMz14	Combating Malaria	This videotape shows the use of remote sensing to better target mosquito larvae for more effective control.	Transcript Link
2012 03 28	NASA STI Program	https://youtu.be/YaWi3DtsnEE	Comet Halley Returns. Voyager Uranus Flyby	This videotape shows the five exploratory spacecraft, representing several countries, that will study Comet Halley: Giotto, Vega 1 and 2, Planet A, and Sakigaki.	Transcript Link

2012 03 28	NASA STI Program	https://youtu.be/e2S1GpYovJU	Lunar Base Concepts	This videotape discusses NASA's plans for a lunar base. Additionally, the videotape features interviews with George Keyworth, James Beggs, and Harrison Schmidt.	Transcript Link
2012 03 28	NASA STI Program	https://youtu.be/xKNC6T_Y5jI	Saving Yellowstone	This videotape explains how NASA participated in controlling the devastating forest fires that consumed parts of Yellowstone National Park.	Transcript Link
2012 03 28	NASA STI Program	https://youtu.be/4xSR2KFj9yY	Unmasking the Sun	This videotape describes solar-related research at the Mt. Palomar Observatory.	Transcript Link
2012 03 28	NASA STI Program	https://youtu.be/F2gfsAlt4uA	Ancient Skills Modern Use	This videotape shows how Navajo Indians are involved in making the spacesuits of the future.	Transcript Link
2012 03 28	NASA STI Program	https://youtu.be/ujoPOXJ4IFA	Supporting Life in Space	This videotape examines NASA research regarding the growing of plants for food during long-duration space travel. The primary focus is on the Controlled Ecological Life Support System (CELLS).	Transcript Link

2012 03 28	NASA STI Program	https://youtu.be/TXtUaB5hveU	Future of Robotics for Space Station	This videotape describes robotic research such as the EVA retriever and virtual reality.	Transcript Link
2012 03 28	NASA STI Program	https://youtu.be/BVVzkThVMg4	STS-26 SSIP Briefing	Lloyd Bruce, student experimenter, explains his Titanium Grain Formation Experiment. Dr. Charles Scaife demonstrates Richard Cavoli's Crystal Membrane Experiment.	Transcript Link
2012 03 28	NASA STI Program	https://youtu.be/okAxdMqfkI0	STS-26 STA Training (Hauck)	This video shows astronaut Rick Hauck at the Shuttle Training Aircraft (STA), CU's of the heads-up display, and air-to-air exercises.	Transcript Link
2012 03 28	NASA STI Program	https://youtu.be/j6nlWTHIme4	STS-29 Pre-Launch and Post-Landing Egress	This video shows crew emergency egress training. It includes practice after being hoisted to the ceiling and descending a rope.	Transcript Link
2012 03 28	NASA STI Program	https://youtu.be/UGB7sXztLgE	The 61-M(T) Long Duration Simulation Video Highlights. April 28, 29, 30, 1987	This video shows the crew on the middeck mockup during the long duration sim. The video also shows the FCR during the sim.	Transcript Link

2012 03 28	NASA STI Program	https://youtu.be/9olqVSua0r8	STS-30 Suited Ascent Training in Fixed Base SMS	The Space Shuttle crew is shown training for the ascent portion of the mission in the fixed base/SMS.	Transcript Link
2012 03 28	NASA STI Program	https://youtu.be/x9A67zvOXs4	New Insulin Pump	This video details the Programmable Implant Medicine Monitoring System.	Transcript Link
2012 03 28	NASA STI Program	https://youtu.be/DH6NXXqgKq4	Monitoring History	Deep space technology is applied to help monitor the aging process of the treasured documents in the National Archives.	Transcript Link
2012 03 28	NASA STI Program	https://youtu.be/56Qbw0iVlqo	Cool Suit	This video explains how a boy born with no sweat glands now lives a relatively normal life.	Transcript Link
2012 03 28	NASA STI Program	https://youtu.be/SXUW1OFtFSc	Enhancing Sight	This video describes a new reading program for people with limited sight.	Transcript Link

2012 03 26	NASA STI Program	https://youtu.be/zlI4H68oZmc	Voyager Neptune Encounter Highlights	Voyager encounter data are presented in computer animation (CA) and real (R) animation. The highlights include a view of 2 full rotations of Neptune. It shows spacecraft trajectory 'diving' over Neptune and intercepting Triton's orbit, depicting radiation and occulation zones. Also shown are a renegade orbit of Triton and Voyager's encounter with Neptune's Magnetopause. A model of the spacecraft's complex maneuvers during close encounters of Neptune and Triton is presented. A view from Earth of Neptune's occulation experiment is is shown as well as a recreation of Voyager's final pass. There is detail of Voyager's Image Compensation technique which produces Voyager images. Eighteen images were produced on June 22 - 23, 1989, from 57 million miles away. A 68 day sequence which provides a stroboscopic view - colorization approximates what is seen by the human eye. Real time images recorded live from Voyager on 8/24/89 are presented. Photoclinometry produced the topography of Triton. Three images are used to create a sequence of Neptune's rings. The globe of Neptune and 2 views of the south pole are shown as well as Neptune rotating. The rotation of a scooter is frozen in images showing differential motion. There is a view of rotation of the Great Dark Spot about its own axis. Photoclinometry provides a 3-dimensional perspective using a color mosaic of Triton images. The globe is used to indicate the orientation of Neptune's crescent. The east and west plumes on Triton are shown.	Transcript Link
2012 03 26	NASA STI Program	https://youtu.be/KWtXE51gtU	1989 Computational Fluid Dynamics Highlights	This video presents highlights of 1989's CFD graphics, which show shuttle flight problems, F-18 flows, artificial heart, and rotorstrator with more complex blades.	Transcript Link
2012 03 26	NASA STI Program	https://youtu.be/mN01rxfkzK4	Views from Space	This video shows how views from the shuttle provide valuable information as to the condition of earth.	Transcript Link

2012 03 26	NASA STI Program	https://youtu.be/lUdDtChDlj8	Mars Look-Alike	This video presentation describes a research trek to western Antarctica to study it's ecosystem as a first step in the future exploration of Mars.	Transcript Link
2012 03 26	NASA STI Program	https://youtu.be/0XqlOxvkB2o	Teacher in Space	This video presentation covers the Teacher in Space program from the competition and selection process to the training of Christa McAuliffe and Barbara Morgan.	Transcript Link
2012 03 26	NASA STI Program	https://youtu.be/_g5N-occSFk	STS-35 Crew Training Bailout in CCT, Firefighting, TAGS Class and Bailout in WETF	Several aspects of crew training are shown including bailout exercises from the CCT and in the Weightless Environment Training Facility.	Transcript Link
2012 03 26	NASA STI Program	https://youtu.be/9zZZKqsT-Dk	Human Factor Studies	This video tape looks at research done in the Manned Vehicle Systems Research Facility at ARC to investigate issues related to aircraft pilot and crew performance.	Transcript Link
2012 03 26	NASA STI Program	https://youtu.be/BP49xCGOZU0	Brown, Mark [ASCAN Training Programs Including Parachute and Classrom Instruction]	Mark Brown is shown during ASCAN training programs including parachute and classroom instruction. No sound.	Transcript Link

2012 03 26	NASA STI Program	https://youtu.be/BkIilpZTK_Q	STS-35 Crew Training Extravehicular Mobility Unit (EMU) Walk Through and EVA Prep and Post	This video tape shows astronauts Hoffman, Gardner, and Lounge donning the Extravehicular Mobility Unit (EMU) and performing checks on the system.	Transcript Link
2012 03 26	NASA STI Program	https://youtu.be/jziqVEJ2MbU	STS-35 EVA Payload Training in WET-F	Footage showing astronauts Lounge and Hoffman donning EVA suits while astronaut Durrance watches is presented. The footage also shows Lounge and Hoffman working on an ASTRO-1 mockup in the WETF.	Transcript Link
2012 03 26	NASA STI Program	https://youtu.be/FKz4_HQutqM	STS-35 Crew Trash Compactor Briefing	Parker, Brand, and Gardner are shown in the CCT learning how to work the trash compactor on the middeck.	Transcript Link
2012 03 26	NASA STI Program	https://youtu.be/Z0X_jEHQd7c	STS-29 Post-Insertion Deorbit Prep and Crew Bailout	Crew enters CCT after donning vests where they practice post insertion deorbit prepared for bailout procedure. Entire crew takes turns bailing out through the side hatch of the CCT.	Transcript Link
2012 03 26	NASA STI Program	https://youtu.be/k_kmCUoIfhk	High Velocity Gas Gun	A video tape related to orbital debris research is presented. The video tape covers the process of loading a High Velocity Gas Gun and firing it into a mounted metal plate. The process is then repeated in slow motion.	Transcript Link

2012 03 26	NASA STI Program	https://youtu.be/7zBZpj2Mezg	Futurepath 2 The Story of Research and Technology at NASA Lewis Research Center	This covers advanced turboprop tests, the diesel engine as an aircraft propulsion system in helicopters, and the development of the Stirling engine as a space power system.	Transcript Link
2012 03 26	NASA STI Program	https://youtu.be/0Wq2u-MdQVE	A Future View of Computational Science in Aircraft Engine Design	The accomplishments of LeRC in the field of computational fluid dynamics are presented.	Transcript Link
2012 03 26	NASA STI Program	https://youtu.be/6fORgpgSPnY	Recycling in Space	NASA's effort to provide a completely enclosed life support system that offers food and recycled air, water, and waste for long-duration space travel or settlements is explained.	Transcript Link
2012 03 26	NASA STI Program	https://youtu.be/CaLVWlPshls	New Prosthetic Devices	Using robotic techniques, NASA researchers have developed end-effectors designed to meet individual needs of hand and below the elbow amputees that are more efficient than the traditional hook.	Transcript Link
2012 03 26	NASA STI Program	https://youtu.be/_mIKLX5_Cbg	Cray Y-MP	This video shows the installation of the Cray Y-MP, a computer four times faster than any other computer at Ames. Computer room scenes, aeronautical and space applications, and other non-aerospace applications are also included. No sound.	Transcript Link

2012 03 26	NASA STI Program	https://youtu.be/q3kjc7lQcok	STS-30 Magellan IUS EVA Training in WETF	Astronauts Thagard and Lee suit up and enter the WETF to practice working the Magellan mockup in a zero-g environment.	Transcript Link
2012 03 14	NASA STI Program	https://youtu.be/SYko-pbGbMc	Forecasting Earthquakes	In this video there are scenes of damage from the Northridge Earthquake and interviews with Dr. Andrea Donnelan, Geophysics at JPL, and Dr. Jim Dolan, earthquake geologist from Cal. Tech. The interviews discuss earthquake forecasting by tracking changes in the earth's crust using antenna receiving signals from a series of satellites called the Global Positioning System (GPS).	Transcript Link
2012 03 14	NASA STI Program	https://youtu.be/EHpiLtmPXt0	F-15 Propulsion Controlled Aircraft (PCA)	This video presentation is a news release highlighting the F-15 Highly Integrated Digital Electronic Controls (HIDEC) Propulsion Controlled Aircraft (PCA) software through June 1993 at Dryden.	Transcript Link
2012 03 14	NASA STI Program	https://youtu.be/UTQ05_1wG98	Dryden Overview for Schools	This video presentation gives a narrated, quick look at the Dryden Flight Research Center and the Center's various projects. The presentation is directed toward a 6th-grade audience and emphasizes staying in school to learn the vital skills needed to succeed today.	Transcript Link
2012 03 14	NASA STI Program	https://youtu.be/5pH_X1r6k_I	Building the Integrated Test Facility A Foundation for the Future	A look at the construction and resources of Dryden's Integrated Test Facility is given.	Transcript Link

2012 03 13	NASA STI Program	https://youtu.be/_3_tBysVTxs	Radio Controlled for Research	This video presents how Dryden engineers use radio-controlled aircraft such as the 1/8-scale model F-18 High Alpha Research Vehicle (HARV) featured to conduct flight research.	Transcript Link
2012 03 13	NASA STI Program	https://youtu.be/RsoxG1cQP0Y	NASA and the SR-71 Back to the Future	Presented is a musical video salute to NASA's delivery of three SR-71 aircraft for use in flight research.	Transcript Link
2012 03 13	NASA STI Program	https://youtu.be/Lxst5mRbnx0	Research Excitation System Flight Testing	Excitation system research at Dryden with an F-16XL aircraft is presented.	Transcript Link
2012 03 06	NASA STI Program	https://youtu.be/qr1Dr6v0g9k	Leading-Edge Vortex-System Details Obtained on F-106B Aircraft Using a Rotating Vapor Screen	Full title: Leading-Edge Vortex-System Details Obtained on F-106B Aircraft Using a Rotating Vapor Screen and Surface Techniques: Video Supplement to NASA Technical Paper 3374. In this video (16 min., color, sound) the following sequences are presented: flight-test operational procedures; animation of post-processing key elements; digitization process of flight video tape; extractor procedure demonstration; reconstructor procedure demonstration; reconstructor used to compare flight results from 1985 with those in 1991; enhancer procedure demonstration; and mapping of oil-flow photograph onto surface geometry for comparison with vapor-screen-determined vortex characteristics. Also see the related PDF at http://hdl.handle.net/2060/19940019039.	Transcript Link

2012 03 02	NASA STI Program	https://youtu.be/3xVJUbEM6Eg	Dryden Tour Tape, 1994	This video provides an overview of NASA's Dryden Flight Research Center. This is the program shown to visitors during the tour at Dryden.	Transcript Link
2012 03 02	NASA STI Program	https://youtu.be/rhgy58PN5gY	Dryden Year in Review 1992	This video reviews the research work done at Dryden for the year 1992.	Transcript Link
2012 03 02	NASA STI Program	https://youtu.be/beGuNH55mh8	Dryden Overview for Schools	This video provides educators an overview of Dryden for students from late elementary through high school.	Transcript Link
2012 03 01	NASA STI Program	https://youtu.be/yXbfqaqZEL0	Dryden and Transonic Research	This video on transonic research is given by Dryden engineer Ed Saltzman as part of the 20th Anniversary F-8 Digital Fly-By-Wire (DFBW) and Supercritical Wing (SCW) Symposium.	Transcript Link
2012 03 01	NASA STI Program	https://youtu.be/hihncHI9pvg	BBXRT Clip The Broad Band X-Ray Telescope	This video recording explains the science mission of the Broad Band X ray Telescope on board the Space Shuttle Columbia, December 1990. This tape was produced before launch.	Transcript Link

2012 03 01	NASA STI Program	https://youtu.be/i5jTWOI4Ax4	Robotics Demo Peer Group Review	This animated color video shows the Shuttle robot arm performing construction on the Spacelab.	Transcript Link
2012 03 01	NASA STI Program	https://youtu.be/Ibh0_9_Qe-o	The Unwritten Contract	Hosted by former STS-1 Astronaut Bob Crippen, this video highlights the Space Shuttle program team's commitment to quality assurance as being the unwritten contract all workers in the shuttle program have with the flight crews: To keep them and the whole Space Transportation System safe. The video is presented by the Marshall Space Flight Center's Safety, Reliability, Maintainability, and Quality Assurance Office (SRM&QA).	Transcript Link
2012 02 29	NASA STI Program	https://youtu.be/3Wc5ts7m9iE	Apollo 11 The Goddard Connection	The history of NASA Goddard Space Flight Center's involvement in the Apollo 11 Mission to the Moon is recounted. Goddard maintained the Manned Space Flight Network, composed of ground tracking stations, and tracking stations aboard ships and airplanes, which maintained communications between the orbiter and Earth.	Transcript Link
2012 02 29	NASA STI Program	https://youtu.be/fc3OALtIsO8	Cosmic Background Radiation Explorer (COBE)	This video explains the mission of the Cosmic Background Radiation Explorer (COBE) prior to its November 1989 launch. It also includes animated footage on the Big Bang theory.	Transcript Link
2012 02 29	NASA STI Program	https://youtu.be/6dbxazoUthE	Pathfinder Shuttle Exhibit	This video introduces the Pathfinder Shuttle Exhibit, a joint project between the Marshall Space Flight Center and the State of Alabama's Space and Rocket Center in Huntsville. The exhibit features a never flown Shuttle vehicle, Pathfinder, that was used in early ground tests in the Shuttle Program, as well as an actual external fuel tank and set of booster rockets. The video includes footage of actual launches, the Pathfinder Shuttle Exhibit, and shots of the Space Camp at Alabama's Space and Rocket Center.	Transcript Link

2012 02 28	NASA STI Program	https://youtu.be/oqgwGkp7U_c	National Boy Scout Jamboree	This video looks at a NASA sponsored exhibit at the National Boy Scout Jamboree in Fredricksburg, VA. Boy Scouts are shown interacting with NASA researchers and astronauts and touring mockups of Space Station Freedom and Apollo 11. NASA's program to encourage the researchers of tomorrow is detailed.	Transcript Link
2012 02 28	NASA STI Program	https://youtu.be/bYUhi6ADYAs	October 1979-1989 Southern Hemisphere Total Ozone as Seen by TOMS	This is raw video from space taken by the Total Ozone Mapping Satellite (TOMS).). No sound.	Transcript Link
2012 02 28	NASA STI Program	https://youtu.be/4nb5DMcjgA8	TDRS Press Release	This material is released to both local and national broadcast media showing the Tracking and Data Relay Satellite (TDRS). The tape has split audio to facilitate ease of customizing for individual broadcast formats.	Transcript Link
2012 02 28	NASA STI Program	https://youtu.be/6KljZIcbk9o	Technology Test Bed	This video details the renewed use of the massive rocket propulsion test stand at Marshall Space Flight Center, first used to test Saturn 5 rockets during the Apollo Program. The test stand can incorporate over 600 sensors during test firings of the Space Shuttle's main engines, which will result in increased safety and reliability, and reduced production costs.	Transcript Link
2012 02 28	NASA STI Program	https://youtu.be/0OCj0AiJwDI	NASA's Hubble Space Telescope The Challenge and Complexity of Operations	This video presentation touches on the truly fast complexity of the first of NASA's great observatories, the Hubble Space Telescope.	Transcript Link

2012 02 16	NASA STI Program	https://youtu.be/ImUAArXw8zE	Return to Flight 3, The Journey Continues	This videotape presents a dynamic overview of the hard work and tireless efforts of NASA employees and contractors.	Transcript Link
2012 02 15	NASA STI Program	https://youtu.be/5KLayID8ZBw	Apollo 11 20th Anniversary	The Apollo 11 Mission which culminated in the first manned lunar landing on July 20, 1969 is recounted. Historical footage of preparation, takeoff, stage separation, the Eagle Lunar Lander, and the moon walk accompany astronauts Michael Collins, Buzz Aldrin, and Neil Armstrong giving their recollections of the mission are shown.	Transcript Link
2012 02 15	NASA STI Program	https://youtu.be/1LMdy8EYCco	History of the Manned Space Flight Program	Astronaut Marsha Ivins tracks the history of America's space program, from Alan Shepard's Mercury flight to Space Shuttle flight STS-26.	Transcript Link
2012 02 15	NASA STI Program	https://youtu.be/3kLoH431MDc	NACA-NASA 75 Years of Flight	This document presents historical footage used to recollect the last 75 years of aeronautical and space-related research.	Transcript Link
2012 02 14	NASA STI Program	https://youtu.be/592TkIhVrjk	PET Team	This videotape shows the Productivity Enhancement Team's (PET) presentation to management regarding ways to make the workforce more responsive to overall corporate goals.	Transcript Link

2012 02 14	NASA STI Program	https://youtu.be/RTJkiSrQG4k	COBE Video News	This videotape was produced for hand-out to both local and national broadcast media as a prelude to the launch of the Cosmic Background Explorer. The tape consists of short clips with multi-channel sound to facilitate news media editing. No sound.	Transcript Link
2012 02 14	NASA STI Program	https://youtu.be/iOS6kYwCMDc	TOMS Computer Graphics	This videotape explains how NASA participated in controlling the devastating forest fires that consumed parts of Yellowstone National Park. No sound.	Transcript Link
2012 02 14	NASA STI Program	https://youtu.be/s73PSusNM_I	Southern and Northern Hemisphere Total Ozone as Seen by TOMS	This videotape contains raw footage of this planet's upper atmosphere for use in the preparation of environmental and Earth monitoring presentation. No sound.	Transcript Link
2012 02 14	NASA STI Program	https://youtu.be/ne919YLooI8	Coastal Zone Color Scanner Nimbus 7	This videotape is a soundless presentation showing the global ocean color for scientific purposes. The tape makes excellent B-roll for use in editing. No sound.	Transcript Link
2012 02 10	NASA STI Program	https://youtu.be/khZcrN4iP3c	GSFC Fun Run	This video shows Goddard's commitment to it's employees physical well-being by highlighting the Spring 1988 Goddard Fun Run.	Transcript Link

2012 02 10	NASA STI Program	https://youtu.be/u9vCCNKAV-w	Return to Flight 1	This video tape presents a dynamic overview of the hard work and tireless efforts of NASA employees and contractors.	Transcript Link
2012 02 10	NASA STI Program	https://youtu.be/KFAa6rNVsMQ	Automated Directional Solidification Furnace	This video presentation addresses space research supporting the development of longer lasting, lighter weight, and more powerful magnets.	Transcript Link
2012 02 10	NASA STI Program	https://youtu.be/fDGfpu91Flo	Space Classroom	This video presentation provides information on the first classroom taught from space to encourage student interest in astronomy and space exploration.	Transcript Link
2012 02 09	NASA STI Program	https://youtu.be/RpAsgecojxI	University Joint Venture JOVE	This video presentation explains how NASA shares its several trillion bits of raw science and engineering data with universities who help NASA analyze and distribute that data.	Transcript Link
2012 02 09	NASA STI Program	https://youtu.be/ixpcIaVPRCk	SHARP	This video tape describes the benefits of NASA's Summer High School Apprenticeship Research Program to participating students.	Transcript Link

2012 02 09	NASA STI Program	https://youtu.be/RP9j8H8Jfkk	NASA Spacelink Computer	This video tape introduces Spacelink, a computer resource that educators and students can access. The purpose of Spacelink is to stimulate interest in math and science	Transcript Link
2012 02 09	NASA STI Program	https://youtu.be/KNmz1kruxzs	Long Duration Exposure Facility is Coming Home	This video tape describes how the Long Duration Exposure Facility will provide knowledge of the effects of space on various materials over a long period of time.	Transcript Link
2012 02 09	NASA STI Program	https://youtu.be/XH_MaHMzjAI	Mesoscale Lightning	This video tape addresses ongoing lightning research and how data is valuable to upcoming projects.	Transcript Link
2012 02 08	NASA STI Program	https://youtu.be/liYQ3v5NpU0	Astro Smile	This is a humorous look at life aboard the Space Shuttle.	Transcript Link
2012 01 25	NASA STI Program	https://youtu.be/QInrfnrE83c	CRRES to Blaze New Trails in Orbit	The purpose of the Combined Release Radiation Effects Satellite in re-mapping and planning protection for future spacecraft is described.	Transcript Link

2012 01 25	NASA STI Program	https://youtu.be/Kz7IjMtC6Lo	Mid-Deck Experiments, STS-26	Phase partitioning, ISO electric focusing, automated directional solidification furnace, mesoscale experiment, and others are explained.	Transcript Link
2012 01 25	NASA STI Program	https://youtu.be/Ee5YqOZ2Q5A	Goddard Space Flight Center Robotics Demo	Documentary footage of a fascinating look at Goddard Space Flight Center's Robotic Capability during a demonstration by Goddard robotics engineers is presented. No sound.	Transcript Link
2012 01 25	NASA STI Program	https://youtu.be/Uu0dRTuBzyM	Arctic Ozone Expedition	Documenting the expedition of scientists to the uppermost reaches of the North Pole, this video shows what is involved in collecting this valuable climatic data.	Transcript Link
2012 01 14	NASA STI Program	https://youtu.be/zQdsa04pS_k	STS-34 Chang-Diaz and E. Baker During Galileo Contingency Training in WETF	Chang-Diaz and Baker are shown donning suits for submersion in the Weightless Environment Training Facility (WETF). Once in the water, they work on the Galileo mockup.	Transcript Link
2011 12 30	NASA STI Program	https://youtu.be/wMf39brRKmw	STS-31 Onboard 16mm Photography Quick Release	This video features scenes shot by the crew of onboard activities including Hubble Space Telescope deploy, remote manipulator system (RMS) checkout, flight deck and middeck experiments, and Earth and payload bay views. NOTE: No sound.	Transcript Link

2011 12 30	NASA STI Program	https://youtu.be/8SayEXDA6VY	STS-51C Launch and Landing	This NASA KSC video release is comprised of live shots covering the day launch and landing of STS-51C/Discovery. The flight crew members were: Thomas K. Mattingly II, Commander; Loren J. Shriver, Pilot; Ellison S. Onizuka, Mission Specialist; James F. Buchli, Mission Specialist; and Gary E. Payton, Payload Specialist. The launch video is presented from several different vantage points and covers the countdown from the launch pad, main engine ignition, liftoff, and solid rocket booster separation. The landing footage contains final descent and approach, landing gear deployment, and touchdown, which was also captured from different locations including a helicopter. STS-51C carried the DoD 85-1 payload and was the first mission dedicated to the Department of Defense.	Transcript Link
2011 12 30	NASA STI Program	https://youtu.be/onUSg_owrmg	STS-43 Post Flight Press Conference	The flight crew (Blaha, Baker, Low, Adamson, and Lucid) present and discuss their STS-43 Space Shuttle Mission in this press conference video. This mission was the first flight to deploy the Tracking Data and Relay Satellite (TDRS), the primary payload. A large number of secondary payload experiments were performed. The included: several cell tissue growth and enzyme analysis experiments; a Lower Body Negative Pressure Experiment; optic coupling and flame front propagation/combustion physics experiments; The Space Station Heat Pipe Advanced Radiator Experiment (SHARE) for the Space Station; a crystal control device evaluation; a software and hardware systems checkout for the Shuttle; some flight tests of the new orbiter auto-pilot system; some materials tests on polymer membranes; the Zero Gravity physics experiments; and the Space Shuttle Backscatter Ultraviolet Experiment. Earth views included: the Kuwait oil fires; cloud cover; and B/W lightning footage.	Transcript Link
2011 12 30	NASA STI Program	https://youtu.be/QG9XuTxCOTw	STS-48 Post Flight Press Conference	The flight crew of the STS-48 Space Shuttle Discovery's 13th Flight (Cmdr. J. O. Creighton, Pilot Ken Reightler, MS Charles Gemar, MS James Buchli, and MS Mark Brown) review their mission and discuss their in-flight activities and experiments in this video. The primary goal of this mission was the deployment of the Upper Atmosphere Research Satellite (UARS). Secondary payloads included: the Mid-Deck Zero Gravity Experiment (MODE) that showed how fluids in microgravity and in in-orbit conditions respond to different influences (dynamics and harmonic analysis) and the Extended Duration Orbiter physiological tests of astronaut heat and lung functions. Through these experiments, information useful in the construction and design of the proposed Space Station is hoped to be gained. Earth views included: the Aurora Borealis (B/W); polar region ice packs and caps; the Nile River (at night); the Galapagos Islands, and Earth lightning shots. A night landing is shown.	Transcript Link
2011 12 29	NASA STI Program	https://youtu.be/IQTDHxQrOqs	STS-35 Onboard Photography Quick Release	This video features scenes shot by the crew of onboard activities including ASTRO-1 operation, middeck experiments, flight deck views, and earth and payload bay views. NOTE: No sound.	Transcript Link

2011 12 29	NASA STI Program	https://youtu.be/qp6ygbpungA	X-38 Phase 3 Drops V-132 FF%233	Live footage shows the drop of the X-38 vehicle. Also shown are parachute deployments from various cameras.	Transcript Link
2011 12 29	NASA STI Program	https://youtu.be/00D9klZHYLE	X-29 Research Aircraft	A preliminary look at the Ames Dryden Flight Research Center in the context of the X-29 aircraft is provided. The uses of the X-29's 30 deg forward swept wing are examined. The video highlights the historical development of the forward swept wing, and its unique blend of speed, agility, and slow flight potential. The central optimization of the wing, the forward canard, and the rear flaps by an onboard flight computer is also described.	Transcript Link
2011 12 29	NASA STI Program	https://youtu.be/5tmkIfrZ7s8	STS-26 Onboard 16mm Photography Quick Release	This video features scenes shot by the crew of onboard activities including the TDRS (Tracking and Data Relay Satellite) deploy, Earth views, and middeck experiments. NOTE: No sound.	Transcript Link
2011 12 29	NASA STI Program	https://youtu.be/jRajnmGk66o	STS-48 Mission Highlights Resource Tape. Part 1 of 2	In this first part of a two-part video mission-highlights set, the flight of the STS-48 Space Shuttle Orbiter Discovery is reviewed. The flight crew consisted of: J. O. Creighton (Commander); Ken Reightler (Pilot); Charles 'Sam' Gemar (Mission Specialist); James 'Jim' Buchli (MS); and Mark Brown (MS). Step-by-step pre-launch and sunset launch sequences are shown with accompanying shots inside the Mission Control Center. The primary goal of this mission was the deployment of Upper Atmosphere Research Satellite (UARS). Other (secondary) payloads included: the MidDeck Zero Gravity Experiment (MODE); the Sam/Cream device; the Shuttle Activation Monitor/Cosmic Ray Effects and Activation Monitor Experiment; and the Physiology and Anatomical Rodent Experiment (PARE). Crew activities were shown, along with Earth views (Aurora Borealis (B/W), light from the Kuwait oil fires, lightning over Italy and other areas, polar regions and ice caps, and the United States at night (B/W)). This was the thirteenth flight of the Space Shuttle Discovery. A night landing is shown.	Transcript Link

2011 12 29	NASA STI Program	https://youtu.be/FZADlzIoOCc	X-31 Resource Tape	This video presents raw, unedited material of Dryden's X-31 aircraft.	Transcript Link
2011 12 29	NASA STI Program	https://youtu.be/OOS3L7w5yVI	STS-44 Onboard 16mm Photography	This silent video was filmed by the crew of the STS-44 Space Shuttle using a 16mm camera. Astronauts, Frederick D. Gregory, Terence T. Henricks, F. Story Musgrave, Mario Runco, Jr., James S. Voss, and Thomas J. Hennen, filmed various crew activities inside the shuttle, the deployment of the Defense Support Program satellite (DSP), and several Earth view-footage of arid land masses and cloud cover.	Transcript Link
2011 12 28	NASA STI Program	https://youtu.be/_Wgj9ZcH45U	STS-41 Onboard 16mm Photography Quick Release	This video features scenes of onboard activities. The video was shot by the crew. The scenes include the following: Ulysses deployment, middeck experiments, computer workstations, and Earth payload bay views. NOTE: No sound.	Transcript Link
2011 12 28	NASA STI Program	https://youtu.be/Vq8PAH0giKI	STS-7 Launch and Land	The prelaunch, launch, and landing activities of the STS-7 Space Shuttle mission are highlighted in this video, with brief footage of the deployment of the Shuttle Pallet Satellite (SPAS). The flight crew consisted of Cmdr. Bob Crippen, Pilot Rich Hauck, and Mission Specialists John Fabian, Dr. Sally Ride, and Norm Thaggart. With this mission, Cmdr. Crippen became the first astronaut to fly twice in a Space Shuttle Mission and Dr. Sally Ride was the first American woman to fly in space. There is a large amount of footage of the Space Shuttle by the aircraft that accompanies the Shuttle launchings and landings.	Transcript Link

2011 12 28	NASA STI Program	https://youtu.be/h24ZqDL-D0I	To Boldly Go America's Next Era in Space. The Plasma Universe	Dr. France Cordova, NASA's Chief Scientist, chaired this, the eighth seminar in the Administrator's Seminar Series. She introduced the NASA Administrator, Daniel S. Goldin, who, in turn, introduced the subject of plasma. Plasma, an ionized gas, is a function of temperature and density. We ve learned that, at Jupiter, the radiation is dense. But, Goldin asked, what else do we know? Dr. Cordova then introduced Dr. James Van Allen, for whom the Van Allen radiation belt was named. Dr. Van Allen, a member of the University of Iowa faculty, discussed the growing interest in practical applications of space physics, including radiation fields and particles, plasmas and ionospheres. He listed a hierarchy of magnetic fields, beginning at the top, as pulsars, the Sun, planets, interplanetary medium, and interstellar medium. He pointed out that we have investigated eight of the nine known planets,. He listed three basic energy sources as 1) kinetic energy from flowing plasma such as constitutional solar wind or interstellar wind; 2) rotational energy of the planet, and 3) orbital energy of satellites. He believes there are seven sources of energetic particles and five potential places where particles may go. The next speaker, Dr. Ian Axford of New Zealand, has been associated with the Max Planck Institut fuer Aeronomie and plasma physics. He has studied solar and galactic winds and clusters of galaxies of which there are several thousand. He believes that the solar wind temperature is in the millions of degrees. The final speaker was Dr. Roger Blanford of the California Institute of Technology. He classified extreme plasmas as lab plasmas and cosmic plasmas. Cosmic plasmas are from supernovae remnants. These have supplied us with heavy elements and may come via a shock front of 10(sup 15) electron volts. To understand the physics	Transcript Link
2011 12 28	NASA STI Program	https://youtu.be/eh3VO-ekwQw	To Boldly Go. America's Next Era in Space New Frontiers in Climate Research	Dr. France Cordova, NASA's Chief Scientist, chaired this, the fourth seminar in the NASA Administrator's Seminar Series. She introduced NASA Administrator, Daniel S. Goldin, who greeted the attendees, and in his opening remarks said that human beings have a need to understand the what and why of the forces of nature and of people, and the stresses on the planet Earth. The first speaker, Dr. Ellen Mosley-Thompson of Ohio State University discussed the many things that scientists have learned from ice cores obtained in Peru and the Antarctic. The next speaker, Dr. Michael McElroy of Harvard University, is active in environmental research. He noted that insurance companies need to know more about the physics and chemistry of weather in order to avoid bankruptcy; that the greenhouse effect, which is good because it reflects heat, is being changed, and we don't know the rules. In the discussion that followed, Goldin asked if the present technology for measuring circulation of air and water and contents of the atmosphere is worth the cost. Drs. McElroy and Mosley-Thompson noted that the historic record in an ice core is endangered by ice melts; that in the last 10 years we've learned that tropics change; that the water vapor in the tropics is critical right now; that clouds absorb short-wave radiation; and that there is a need to improve measurements of atmospheric contents, the development of models, and the understanding of basic physics. We also need to understand parameters for detecting climate change, water, water temperature, and be able to provide fundamental information.	Transcript Link

2011 12 23	NASA STI Program	https://youtu.be/DXZ_7c75_u8	To Boldly Go America's Next Era in Space. Sustaining Life on the Earth	Dr. France Cordova, NASA's Chief Scientist, opened this, the sixth seminar in the Administrator's Seminar Series, by introducing NASA Administrator Daniel S. Goldin. Mr Goldin welcomed the attendees and set the stage for Dr. Cordova's introduction of the first speaker, Dr. Robert Kates of Brown University. Dr. Kates primary concerns are global environmental changes, world hunger, and the size of the population. Human changes, he said, rival the changes of nature. Changes in the size of world population affect the need for more agricultural products, therefore more land for growing food, which leads to deforestation, which affects rainfall, and therefore the water supply which is in increased demand. Human ingenuity can reduce some shortages but generally doesn't keep up with increased demand for life-sustaining essentials. These problems require the concern of intergovernmental organizations, treaties and activities, as well as transnational corporations, and non-governmental and private, volunteer organizations. Next Dr. Diana Liverman of Pennsylvania State University spoke on human interactions regarding climate and society. She considered the effect of changes in land use on climate, using Mexico as an example. Mexicans changed from raising much wheat to raising more fruits and vegetables. This was in response to the demands of the market. The results were more industry, population growth, greater income, drought (because the new crops required more water), and conflicts over water supplies. Dr. Charles Kennel of the Office of Mission to Planet Earth joined Dr.s Cordova, Kates, and Liverman for the question and answer session that followed.	Transcript Link
2011 12 23	NASA STI Program	https://youtu.be/rPL4ThXYOJ4	Twenty-Five Years of Progress. Part 1 Birth of NASA. Part 2 The Moon -- A Goal	Historical footage (1958 - 1983) concerning NASA's Space Program, is reviewed in this two-part video. Host, Lynn Bondurant describes the birth of NASA and its accomplishments through the years. Part one contains: the launch of Russian satellite Sputnik on October 4,1957; the first dog (Soviet) in space; NACA Space Research, Explorer-6; and still photographs of various Space projects. Tiros 1 experimental weather satellite, Microgravity simulators, Echo 1 passive communications satellite, and the first U.S. manned spaceflight Mercury are included in part two. The seven Mercury astronauts are: Captain Donald Slayton, Lt. Commander Alan Shepard, Lt. Commander Walter Schirra, Captain Virgil Grissom, Lt. Col. John Glenn Jr., Captain Leroy Cooper Jr, and Lt. Malcolm Scott Carpenter. Also included are an ongoing interview (throughout the video) with NASA's first Administrator Keith Glennan, the first flight in 1961 with Enos, a chimpanzee, President Kennedy's speech in Washington about the Space Program, Project Gemini - the 2-manned space flights, and the recovery of Virgil Grissom from splash down. Jan. 1984	Transcript Link

2011 12 23	NASA STI Program	https://youtu.be/bRtS2_ooEZc	The Atmosphere Below	In this educational 'Liftoff to Learning' video series, astronauts from the STS-45 Space Shuttle Mission (Kathy Sullivan, Byron Lichtenberg, Brian Duffy, Mike Foale, David Leestma, Charlie Bolden, and Dirk Frimont) explain and discuss the Earths atmosphere, its needs, the changes occurring within it, the importance of ozone, and some of the reasons behind the ozone depletion in the Earths atmosphere. The questions of: (1) what is ozone; (2) what has happened to the ozone layer in the atmosphere; and (3) what exactly does ozone do in the atmosphere, are answered. Different chemicals and their reactions with ozone are discussed. Computer animation and graphics show how these chemical reactions affect the atmosphere and how the ozone hole looks and develops at the south pole during its winter season appearance.	Transcript Link
2011 12 21	NASA STI Program	https://youtu.be/9TsVLdKvtbs	Time of Apollo	In the year 1961, President John F. Kennedy set forth the task that...'This nation should commit itself to achieving the goal, before this decade is out, of landing a man on the Moon and returning him safely tio Earth'. The decade is over and the task has been accomplished. Project Apollo has been achieved. This video documentary is a tribute to the historical accomplishments of the Apollo program.	Transcript Link
2011 12 21	NASA STI Program	https://youtu.be/Q7yluGIJqDE	The Desert Tortoise A Delicate Balance	This award winning program looks at the efforts to preserve the desert tortoise in and around the Edwards Air Force Base, CA area. It also explains what people should do if they come in contact with a tortoise. This video was produced in cooperation with Edwards Air Force Base.	Transcript Link
2011 12 21	NASA STI Program	https://youtu.be/kUFRn9hj1Dg	Telemedicine Spacebridge	This video is an overview on NASA's Telemedicine Spacebridge Project, which lets US doctors consult with Russian clinicians thousands of miles away by demonstration of the feasibility of live, two-way, full-bandwidth video as a medical tool.	Transcript Link

2011 12 21	NASA STI Program	https://youtu.be/5j3QLegl5bw	United States Russia Space Cooperation Documentary	This video documents the initiative to develop a multinational, permanent space research laboratory. Historical background on the U.S. and Soviet manned space flight program as well as joint efforts such as the Apollo-Soyuz link up is shown. The current initiative will begin with collaborative missions involving NASA's space shuttle and Russia's Mir space station, and culminate in a permanently manned space station involving the U.S., Russia, Japan, Canada, and ESA. Shown are computer simulations of the proposed space station. Commentary is provided by the NASA administrator, former astronauts, cosmonauts, and Russian and American space experts.	Transcript Link
2011 12 19	NASA STI Program	https://youtu.be/j9-lOSQx--Y	The Quest for Contact NASA's Search for Extraterrestrial Intelligence	This video details the history and current efforts of NASA's Search for Extraterrestrial Intelligence program. The video explains the use of radiotelescopes to monitor electromagnetic frequencies reaching the Earth, and the analysis of this data for patterns or signals that have no natural origin. The video presents an overview of Frank Drake's 1960 'Ozma' experiment, the current META experiment, and planned efforts incorporating an international Deep Space Network of radiotelescopes that will be trained on over 800 stars	Transcript Link
2011 12 19	NASA STI Program	https://youtu.be/b8VxP3Hruig	The Sky Is Your Classroom	An overview of NASA's 11th annual Aerospace Education Workshop Program is presented. A portion of activities that are performed during the workshop sessions, which are used to familiarize teachers with up-to-date information are shown. An overview of aerospace concepts and terms is provided. Activities shown include: how model rockets are used to teach about the principles of rocketry; how eggs are packaged to represent an astronaut landing on another planet; a trip to the Cleveland Museum of Natural History was used to introduce a telescope and planetarium; and a visit to LeRC. How lectures and discussion material are presented on such topics as the history of aircraft and the space shuttle is demonstrated.	Transcript Link
2011 12 19	NASA STI Program	https://youtu.be/PzNBF0x420s	The 1982 Aeronautics and Space Highlights	This video includes STS 3 & 4, Challenger completed, unmanned launches, the Hubble Space Telescope, Pioneers 8 & 9 encounter, Mars Pictures, Landsat 4, wind energy, ion-electric engines, solar powered medical system, medical image analysis, rotor systems research aircraft, XV-15, propfan research, aircraft icing studies, and Oshkosh Sirshow.	Transcript Link

2011 12 19	NASA STI Program	https://youtu.be/X5wP5FSwTPo	Voyager Encounter Highlights	The following are presented: computer animation of trajectories for both Voyagers 1 and 2; view of Jupiter during one orbit of Ganymede; computer animation of Voyager 2's encounter with Jupiter and its satellites; time lapse of the planet's rotation and its satellites; stroboscopic sequence of selected frames; cloud motion; Jupiter's Great Red Spot (4/25 - 5/24, 1979) through a violet filter; and the Great Red Spot through a blue filter by Voyager 1. The dynamics of Jupiter's clouds are shown - the whole planet is shown first, then two closer looks are repeated several times. Also included are pans of stills of Jupiter's satellites and a computer simulation tour of Saturn system from POV just behind Voyager, made of 116 images of Saturn through a green filter and of 516 images taken by Voyager 1 (9/12 - 9/14, 1980). Frames are enhanced to show the motion of features in Saturn's rings. Pans of stills of Saturn's satellites are shown. There is computer animation of the planet's system, rings, and Sigma Sagittari. Images on January 14, 1986 are through an orange filter. Uranus's satellites are shown as is computer animation of an August 1989 encounter. Silent and with sound.	Transcript Link
2011 12 15	NASA STI Program	https://youtu.be/xfUlJW1HJcw	TDRS Video Clip	This video, without sound, presents Tracking and Data Relay Satellite and Goddard Space Flight Center involvement.	Transcript Link
2011 12 15	NASA STI Program	https://youtu.be/OwNdZvn7htI	STS-44 Mission Highlights Resource Tape. Part 1 of 2	The STS-44 mission is highlighted in this first part of a two part video set. The flight crew consisted of: Cmdr. Fred Gregory; Pilot Tom Hendricks; Payload Specialist Tom Hennen; and Mission Specialists Story Musgrave, Jim Voss, and Mario Runco. The primary space shuttle mission objective was the deployment of the Defense Support Program (DSP) satellite. Secondary payload and spaceborne experiments consisted of a microbial air sampler, the Terra Scout PADVOS system, an M88-1 camera demonstration, a lower body negative pressure test, the Visual Function Tester, and a bioreactor demonstration. A tour of the flight deck, mid-deck, bathroom, and flight compartments with explanations of the equipment found in each area was conducted, a trash compactor was demonstrated, and footage of the crew together for their Thanksgiving dinner was shown. Earth views include several oceans, cloud cover, typhoon Yuri, northeast Australia, and the Barrier Reef Islands. The actor John Patrick Stewart (Commander Pickard of the show 'Star Trek: The Next Generation') performed the wake-up call for the astronauts. This flight was shortened due to an inertial measurement unit failure on the sixth day of the mission.	Transcript Link

2011 12 14	NASA STI Program	https://youtu.be/hsNhtPdTtOo	STS-44 Mission Highlights Resource Tape. Part 2 of 2	In this second part of a two part video set of the mission of STS-44, an in-orbit press conference was held. The astronauts (Cmdr. Fred Gregory, Pilot Tom Hendricks, Payload Specialist Tom Hennen, and Mission Specialists Jim Voss, Story Musgrave, and Mario Runco) conversed via satellite with the Johnson Press Center at the Johnson Space Center, Houston, Texas. Journalists asked questions regarding the mission, the status of the mission's experiments, the problems with living in a microgravity environment, upcoming NASA space programs, and future objectives of the Space Shuttle missions.	Transcript Link
2011 12 13	NASA STI Program	https://youtu.be/neN45zsEruM	STS-51G Mission Highlights Resource Tape	The STS-51G flight crew, Commander Daniel C. Brandenstein, Pilot John O. Creighton, Mission Specialists Shannon W. Lucid, John M. Fabian, and Steven R Nagel, and Payload Specialists Patrick, Baudry, and Sultan Salman Al-Saud are seen performing pre-launch activities such as eating of the traditional breakfast, ride out to the launch pad, and crew suit-up for an early morning launch. Also, included are various panoramic views of Discovery on the pad. The main objective of this mission is to deploy three communication satellites. The satellites being deployed are MORE LOS-A, for Mexico; ARABSAT-A, for the Arab Satellite Communications Organization; and TELSTAR-3D, for AT&T. The crew also retrieve the SPARTAN-1 satellite. Scenes include the crew in the mess deck via video link with Mission Control Center in celebration of the 100th American in space. Al-Saud also spoke with his father in Saudi Arabia via video link. Views of certain experiments are also seen. Al-Saud is seen conducting the postural experiment, and Baudry is seen conducting the equilibrium experiments. Panoramic views of the Hawaiian Island Archipelago, and Wadi Habawnah, Saudi Arabia are also visible from the shuttle. Live footage ends with the re-entry of the vehicle into the Earth's Atmosphere, an early morning touchdown at Edwards Air Force Base and crew departure from the craft.	Transcript Link
2011 12 12	NASA STI Program	https://youtu.be/nQJjyiTGkGA	STS-68 Post Flight Presentation	This contains mission footage selected by the STS-68 crew of pre-launch, launch, onboard activities and experiments, Space Radar Laboratory-2 (SRL-2), Get Away Special canisters (GAS cans), Earth views, and landing. Crew members provide descriptive voice-over narration of the scenes.	Transcript Link
2011 12 09	NASA STI Program	https://youtu.be/JUaSwvbvpU4	STS-51B Challenger - Isolated Launch View	Live footage of various isolated launch views is seen. Views of the Space Shuttle Challenger are shown from different camera sites such as the VAB (Vehicle Assembly Building) Roof, Pad Perimeter, Helicopter, Convoy, and Midfield. Also shown from different cameras is the re-entry and landing of the shuttle at Kennedy Space Center (KSC). Footage also includes the ground recovery crew as they travel to the spacecraft. Challengers crew, Commander Robert F. Overmyer, Pilot Frederick D. Gregory, Mission Specialists Don L. Lind, Norman E. Thagard, and William E. Thornton, and Payload Specialists Lodewijk van den Berg, and Taylor G. Wang are also seen leaving the craft.	Transcript Link

2011 12 08	NASA STI Program	https://youtu.be/eCcVm06CoTQ	STS-80 Flight Day 5	On this fifth day of the STS-80 mission, the flight crew, Cmdr. Kenneth D. Cockrell, Pilot Kent V. Rominger, Mission Specialists, Tamara E. Jernigan, Thomas D. Jones, and F. Story Musgrave, focus on maintaining formation and working with in-cabin microgravity experiments. Jernigan and Rominger work with the Visualization in an Experimental Water Capillary Pumped Loop (VIEW-CAPL) experiment. Later in the day Musgrave is interviewed by CBS News. Released Nov. 1996.	Transcript Link
2011 12 05	NASA STI Program	https://youtu.be/ibLlN33F3eE	STS-48 Mission Highlights Resource Tape. Part 2 of 2	In this second part of a two part mission highlights tape for the STS-48 Mission, television interviewer, Larry King, hosts a live, satellite-link interview with the flight crew of the STS-48 Mission. Listeners called in and the astronauts answered questions about their flight and space travel in general. The flight crew consisted of: Cmdr. J. O. Creighton; Pilot Rick Hauck, and Mission Specialists Sam Gemar, Jim Buchli, and Mark Brown.	Transcript Link
2011 12 05	NASA STI Program	https://youtu.be/oBdrJoZ1kIM	Riblets New Speed Technology	This document discusses a new drag reduction technology called riblets, which may have helped win yachting's America's Cup.	Transcript Link
2011 12 05	NASA STI Program	https://youtu.be/RZtP-1D7-cE	STS-80 Flight Day 10	On this tenth day of the STS-80 mission, the flight crew, Cmdr. Kenneth D. Cockrell, Pilot Kent V. Rominger, Mission Specialists, Tamara E. Jernigan, Thomas D. Jones, and F. Story Musgrave, conduct a thorough check of the tools that Jernigan and Jones will be using for their spacewalk. The astronauts also prepare the middeck for the first spacewalk. The first extravehicular activity will test a telescoping crane which will be used during the assembly of the International Space Station to move large components from module to module. The two astronauts will use the crane to move a simulated space station battery back and forth around the cargo bay. Released Nov. 1996.	Transcript Link
2011 12 02	NASA STI Program	https://youtu.be/CPDkR0fqqDI	Fastener Design Course Part 9	Richard T. Barrett, Senior Aerospace Engineer of NASA Lewis Research Center presents a comprehensive course on fastener design. A recognized expert in the field of fastener technology Mr. Barrett combines lecture, charts, illustrations with real-world experiences. Topics covered include: materials, plantings and coatings, locking methods threads, joint stiffness, rivets, inserts, nut plates, thread lubricants, design criteria, etc. A workbook, http://hdl.handle.net/2060/20110016427, accompanies the DVD.	Transcript Link

2011 12 02	NASA STI Program	https://youtu.be/okrTqWMSxo8	Fastener Design Course Part 8	Richard T. Barrett, Senior Aerospace Engineer of NASA Lewis Research Center presents a comprehensive course on fastener design. A recognized expert in the field of fastener technology Mr. Barrett combines lecture, charts, illustrations with real-world experiences. Topics covered include: materials, plantings and coatings, locking methods threads, joint stiffness, rivets, inserts, nut plates, thread lubricants, design criteria, etc. A workbook, http://hdl.handle.net/2060/20110016427, accompanies the DVD.	Transcript Link
2011 11 29	NASA STI Program	https://youtu.be/_c1-2xnzyS4	Fastener Design Course Part 7	Richard T. Barrett, Senior Aerospace Engineer of NASA Lewis Research Center presents a comprehensive course on fastener design. A recognized expert in the field of fastener technology Mr. Barrett combines lecture, charts, illustrations with real-world experiences. Topics covered include: materials, plantings and coatings, locking methods threads, joint stiffness, rivets, inserts, nut plates, thread lubricants, design criteria, etc. A workbook, http://hdl.handle.net/2060/20110016427, accompanies the DVD.	Transcript Link
2011 11 28	NASA STI Program	https://youtu.be/FxzUewd_uRk	Improved Optical Techniques for Studying Sonic and Supersonic Injection into MACH-3 Flow	This video supplements a report examining optical techniques for studying sonic and supersonic injection into MACH-3 flow The study used an injection-seeded, frequency doubled ND:YAG pulsed laser to illuminate a transverse section of the injectant plume. Rayleigh scattered light was passed through an iodine absorption cell to suppress stray laser light and was imaged onto a cooled CCD camera. The scattering was based on condensation of water vapor in the injectant flow. High speed shadowgraph flow visualization images were obtained with several video camera systems. Roof and floor static pressure data are presented several ways for the three configurations of injection designs with and without helium and/or air injection into Mach 3 flow. NOTE: No audio. See related report at http://hdl.handle.net/2060/19970035033.	Transcript Link
2011 11 28	NASA STI Program	https://youtu.be/w7adFzZ_ZVA	Fastener Design Course Part 6	Richard T. Barrett, Senior Aerospace Engineer of NASA Lewis Research Center presents a comprehensive course on fastener design. A recognized expert in the field of fastener technology Mr. Barrett combines lecture, charts, illustrations with real-world experiences. Topics covered include: materials, plantings and coatings, locking methods threads, joint stiffness, rivets, inserts, nut plates, thread lubricants, design criteria, etc. A workbook, http://hdl.handle.net/2060/20110016427, accompanies the DVD.	Transcript Link

2011 11 22	NASA STI Program	https://youtu.be/eKcXn1lnN5A	Fastener Design Course Part 5	Richard T. Barrett, Senior Aerospace Engineer of NASA Lewis Research Center presents a comprehensive course on fastener design. A recognized expert in the field of fastener technology Mr. Barrett combines lecture, charts, illustrations with real-world experiences. Topics covered include: materials, plantings and coatings, locking methods threads, joint stiffness, rivets, inserts, nut plates, thread lubricants, design criteria, etc. A workbook, http://hdl.handle.net/2060/20110016427, accompanies the DVD.	Transcript Link
2011 11 22	NASA STI Program	https://youtu.be/747Du-nqjX8	STS-94 Flight Day 7 Highlights	On this seventh day of the STS-94 mission, the flight crew, Cmdr. James D. Halsell, Jr., Pilot Susan L. Still, Payload Cmdr. Janice E. Voss, Mission Specialists Micheal L. Gernhardt and Donald A. Thomas, and Payload Specialists Gregory T. Linteris and Roger K. Crouch continue their around-the-clock scientific effort to examine how various materials and liquids change and behave in the weightless environment of space. With Columbia providing a stable platform for scientific activity, the seven-member crew has been able to devote its full attention to the more than 30 Microgravity Science Laboratory (MSL) experiments on board.	Transcript Link
2011 11 22	NASA STI Program	https://youtu.be/FYjBJz61bXg	Fastener Design Course Part 4	Richard T. Barrett, Senior Aerospace Engineer of NASA Lewis Research Center presents a comprehensive course on fastener design. A recognized expert in the field of fastener technology Mr. Barrett combines lecture, charts, illustrations with real-world experiences. Topics covered include: materials, plantings and coatings, locking methods threads, joint stiffness, rivets, inserts, nut plates, thread lubricants, design criteria, etc. A workbook, http://hdl.handle.net/2060/20110016427, accompanies the DVD.	Transcript Link
2011 11 17	NASA STI Program	https://youtu.be/0BOzXjfu6ww	Fastener Design Course Part 3	Richard T. Barrett, Senior Aerospace Engineer of NASA Lewis Research Center presents a comprehensive course on fastener design. A recognized expert in the field of fastener technology Mr. Barrett combines lecture, charts, illustrations with real-world experiences. Topics covered include: materials, plantings and coatings, locking methods threads, joint stiffness, rivets, inserts, nut plates, thread lubricants, design criteria, etc. A workbook, http://hdl.handle.net/2060/20110016427, accompanies the DVD.	Transcript Link
2011 11 16	NASA STI Program	https://youtu.be/HDIo3f3WyuI	STS-65 Mission Highlights Resource Tape	The important visual events of each mission including launch, onboard crew activities, and landing are depicted.	Transcript Link

2011 11 16	NASA STI Program	https://youtu.be/vkbBpAOM4kM	Fastener Design Course Part 2	Richard T. Barrett, Senior Aerospace Engineer of NASA Lewis Research Center presents a comprehensive course on fastener design. A recognized expert in the field of fastener technology Mr. Barrett combines lecture, charts, illustrations with real-world experiences. Topics covered include: materials, plantings and coatings, locking methods threads, joint stiffness, rivets, inserts, nut plates, thread lubricants, design criteria, etc. A workbook, http://hdl.handle.net/2060/20110016427, accompanies the DVD.	Transcript Link
2011 11 14	NASA STI Program	https://youtu.be/z3SUhwNhMqs	STS-32 LDEF Approach in SES	Astronauts Wetherbee, Dunbar, and Low are shown in the Shuttle Engineering Simulator (SES) practicing techniques for approaching the Long Duration Exposure Facility on orbit.	Transcript Link
2011 11 14	NASA STI Program	https://youtu.be/DZPAzO05gjE	STS-32 LDEF EVA training in WETF with Low and Dunbar	Astronauts Low and Dunbar are shown entering the Weightless Environment Training Facility to perform tasks they might be called on to do if extravehicular activity were required during their mission to retrieve the Long Duration Exposure Facility.	Transcript Link
2011 11 14	NASA STI Program	https://youtu.be/D6zaVhQkwnY	Fastener Design Course Part 1	Richard T. Barrett, Senior Aerospace Engineer of NASA Lewis Research Center presents a comprehensive course on fastener design. A recognized expert in the field of fastener technology Mr. Barrett combines lecture, charts, illustrations with real-world experiences. Topics covered include: materials, plantings and coatings, locking methods threads, joint stiffness, rivets, inserts, nut plates, thread lubricants, design criteria, etc. A workbook, http://hdl.handle.net/2060/20110016427, accompanies the DVD.	Transcript Link
2011 11 09	NASA STI Program	https://youtu.be/838uxqeiSDc	STS-35 Mission Highlights Resource Tape	This document contains video on launch, ASTRO-1 operations, onboard operations, crew activities, and landing. It also includes air-to-ground transmission between crew and Mission Control.	Transcript Link

2011 11 01	NASA STI Program	https://youtu.be/IHeE1b2pjnM	STS-42 Mission Highlights Resource Tape. Pt. 2 of 2	This second part of the STS-42 mission highlights resource tape presents the special events that happened during the 8 days, 1 hour, 14 minutes, and 45 seconds mission duration. These special events include: phone calls from President Bush, German Officials, and Canadian Officials; special appearance in Super Bowl pre-game events; and in-flight press conference.	Transcript Link
2011 11 01	NASA STI Program	https://youtu.be/ctiIQQx5cnA	STS-42 Mission Highlights Resource Tape. Pt. 1 of 2	The mission of STS-42, the first International Microgravity Laboratory (IML-1), is highlighted. The main purpose of this seven-member crew (including Payload specialist Raborto Bondar from Canada and Payload specialist Ulf D. Merbold from Germany) space shuttle was to perform different experiments at microgravity environment. The experiments were focussed on the following two major study areas: (1) life sciences (biorack, biostack, space physiology, mental workload and performance, Microgravity vestibular investigations, etc.); and (2) material sciences (critical point facility, cryostat, fluid experiment system, mercury lodide crystal growth and vapor crystal growth systems). Cargo bay and middeck experiments; earth views (Quebec, Manicougan Reservoir, St. Lawrence River, and Mountain ranges); and orbiter activities are also included.	Transcript Link
2011 10 28	NASA STI Program	https://youtu.be/URPJNgXiGig	STS-34 Onboard 16mm Photography Quick Release	This video features scenes shot by the crew of onboard activities including Galileo deploy, Shuttle Solar Backscatter Ultraviolet (SSBUV) student experiments, other activities on the flight deck and middeck, and Earth and payload bay views. No sound.	Transcript Link
2011 10 28	NASA STI Program	https://youtu.be/FEgjFdVhIIw	STS-32 Post-Flight Crew Press Conference	Video footage of the post-flight press conference of STS-32 is presented. The footage is narrated by the crew, and it covers the following topics: launch, deployment of Syncom IV-5, retrieval of the Long Duration Exposure Facility, in-orbit activities, and the landing.	Transcript Link

2011 10 28	NASA STI Program	https://youtu.be/b8REZ1KflbE	STS-33 Crew Post Flight Film	This video contains footage selected by the Commander and crew of the STS-33 DoD mission, including launch, limited onboard activities, and landing.	Transcript Link
2011 10 28	NASA STI Program	https://youtu.be/RtDDl1x9mqc	STS-35 Post-Flight Press Conference	This video footage was selected by and is narrated by the crew. The following activities are covered: launch, work with the ASTRO-1 payload, onboard activities, and landing.	Transcript Link
2011 10 28	NASA STI Program	https://youtu.be/ur64SrpMFkA	STS-41 Mission Highlights Resource Tape	This video contains important visual events including launch, Ulysses' deployment, onboard crew activities, and landing. The videotape also includes air-to-ground transmission between the crew and Mission Control.	Transcript Link
2011 10 28	NASA STI Program	https://youtu.be/Uo6QjXEQ5Fk	STS-34 Mission Highlights Resource Tape	This video contains important visual events including launch Galileo/IUS deployment, onboard crew activities, and landing. Also included is air-to-ground transmission between the crew and Mission Control.	Transcript Link
2011 10 27	NASA STI Program	https://youtu.be/svEggJmaW6Y	STS-34 Post-Flight Press Conference	This video contains footage selected and narrated by crew including launch, Galileo/IUS deployment, onboard crew activities, and landing.	Transcript Link

2011 10 27	NASA STI Program	https://youtu.be/Pa5K5tMWSd8	STS-33 Launch and Landing	Launch (from engine gimbal to loss of sight) and landing of the Shuttle at Edwards AFB, California, from ground-based cameras is shown.	Transcript Link
2011 10 27	NASA STI Program	https://youtu.be/2L7xXzbi6d0	STS-38 Rollback from Pad A to VAB	Footage is shown of the slow rollback of Atlantis, travelling from pad A to the Vehicle Assembly Building (VAB).	Transcript Link
2011 10 27	NASA STI Program	https://youtu.be/9WT3iCLf5As	STS-31 Post-Flight Conference	This video contains footage selected and narrated by the STS-31 Commander and crew including launch, Hubble Space Telescope deployment, onboard activities, and landing.	Transcript Link
2011 10 27	NASA STI Program	https://youtu.be/5M7fkR-L2KU	STS-31 Mission Highlights Resource Tape	This video contains important visual events including launch, Hubble Space Telescope deployment, onboard crew activities, and landing. Air-to-ground transmission between crew and Mission Control is also included.	Transcript Link
2011 10 27	NASA STI Program	https://youtu.be/PzUxuoywEoY	STS-32 Onboard 16mm Photography Quick Release	This video features scenes, shot by the crew, of onboard activities including Syncom deploy, Long Duration Exposure Facility retrieval, various middeck experiments, and Earth and payload bay views. No sound.	Transcript Link

2011 10 27	NASA STI Program	https://youtu.be/7yyj6Cs08D8	STS-29 Onboard Film Quick Release CL-1227	This video features scenes shot by the crew of onboard activities including Earth shots, middeck experiments, TDRS deploy, and other mission objectives. No sound.	Transcript Link
2011 10 26	NASA STI Program	https://youtu.be/dS3E_Ce9R1U	STS-30 Onboard 16mm Photography Quick Release	This video features scenes shot by the Space Shuttle crew of onboard activities including Magellan deploy, Earth views, payload bay views, and middeck views. NOTE: No sound.	Transcript Link
2011 10 26	NASA STI Program	https://youtu.be/01OrnHLwgvM	STS-32 Mission Highlights Resource Tape	Important visual events including launch, Syncom 4 deployment, LDEF retrieval, onboard crew activities, and landing are presented. Air-to-ground transmission between the crew and Mission Control is also included.	Transcript Link
2011 10 26	NASA STI Program	https://youtu.be/seZJRLjsrjM	STS-30 Mission Highlights Resource Reel, May 4-8, 1989	This video contains important visual events including launch, Magellan/IUS onboard crew activities, and landing. Air-to-ground transmission between the crew and Mission Control is also included. NOTE: This is a digital reproduction from the best available source material. Much of this soundtrack is inaudible; however, it is being released in the interest of making available as much information as possible.	Transcript Link
2011 10 26	NASA STI Program	https://youtu.be/U87ZIy79wGg	STS-29 Mission Highlights Resource Tape	This video contains important visual events including launch, TDRS-D/IUS deployment, onboard crew activities, and landing. Also included are air-to-ground transmission between the crew and Mission Control.	Transcript Link

2011 10 25	NASA STI Program	https://youtu.be/fdo1NJhxfUI	STS-26 The Return to Flight [Mission Highlights Resource Tape]	This video contains important visual events including launch, TDRS-C/IUS onboard crew activities and landing. Also includes air-to-ground transmission.	Transcript Link
2011 10 25	NASA STI Program	https://youtu.be/mY22VLpmObY	STS 41-G Mission Highlights	The crew (Commander Robert L. Crippen, Pilot Jon A. McBride, Mission Specialists Kathryn D. Sullivan, Sally K. Ride, and David C. Leestma, Payload Specialists Marc Garneau, and Paul D. Scully-Power) prepares for the 13th Shuttle Mission. Earth Radiation Budget Satellite (ERBS) is deployed less than nine hours into flight. Components of the Orbital Refueling System are connected, demonstrating that it is possible to refuel satellites in orbit.	Transcript Link
2011 10 25	NASA STI Program	https://youtu.be/nXUg3BPUrVs	STS-29 Post-Flight Crew Press Conference	This video contains footage selected and narrated by the Commander and the Space Shuttle crew including launch, TDRS-D/IUS deployment, onboard crew activities, and landing.	Transcript Link
2011 10 24	NASA STI Program	https://youtu.be/RiuUdF0ToQ8	STS-30 Post-Flight Press Conference	This video contains footage selected and narrated by the Commander and Space Shuttle crew including launch, Magellan/IUS deployment, onboard crew activities, and landing.	Transcript Link
2011 10 24	NASA STI Program	https://youtu.be/FQq7Vhc4j-c	STS-29 Crew with Student Experiment	John Vellinger, student experimenter, and Mark Deuser, Kentucky Fried Chicken Sponsor, are shown explaining the Chicken Embryo experiment to the crew.	Transcript Link

2011 10 24	NASA STI Program	https://youtu.be/bXrD2qe8VT4	STS-29 Crew IMAX Camera Training	The crew is shown learning to use the IMAX camera system.	Transcript Link
2011 10 21	NASA STI Program	https://youtu.be/agMm4hYztEo	STS-32 Crew Training for Lower Body Negative Pressure Unit and AFE	Astronauts Dunbar, Ivins, and Low are shown preparing for the checkouts of the Lower Body Negative Pressure (LBNP) and American Flight Echocardiograph (AFE) tests. Dunbar gets into the LBNP suit, while technicians look on. Experiments on Dunbar are conducted while other crew members and technicians record data.	Transcript Link
2011 10 20	NASA STI Program	https://youtu.be/DiVYkFzmPbQ	Two-Dimensional Scramjet Inlet Unstart Model Wind-Tunnel Blockage and Actuation Systems Test	This supplement to NASA TM 109152 shows the Schlieren video (10 min. 52 sec., color, Beta and VHS) of the external flow field and a portion of the internal flow field of a two-dimensional scramjet inlet model in the NASA Langley 20-Inch Mach 6 Tunnel. The intent of the overall test program is to study (both experimentally and computationally) the dynamics of the inlet unstart; this (phase I) effort examines potential wind-tunnel blockage issues related to model sizing and the adequacy of the actuation systems in accomplishing the start and unstart. The model is equipped with both a moveable cowl and aft plug. Windows in the inlet sidewalls allow limited optical access to the internal shock structure. In the video, flow is from right to left, and the inlet is oriented inverted with respect to flight, i.e., with the cowl on top. The plug motion is obvious because the plug is visible in the aft window. The cowl motion, however, is not as obvious because the cowl is hidden from view by the inlet sidewall. The end of the cowl actuator arm, however, becomes visible above the inlet sidewalls between the windows when the cowl is up (see figure 1b of the primary document). The model is injected into the tunnel and observed though several actuation sequences with two plug configurations over a range of unit freestream Reynolds number at a nominal freestream Mach number of 6. The framing rate and shutter speed of the camera were too slow to fully capture the dynamics of the unstart but did prove sufficient to identify inlet start and unstart. This series of tests indicated that the model was appropriately sized for this facility and identified operability limits required first to allow the inlet to start and second to force the unstart.	Transcript Link

2011 10 05	NASA STI Program	https://youtu.be/2zIvoouLFXI	Mir 18 Post Flight Presentation	The post flight presentation for the Mir 18 Mission is featured on this video, with both the American astronauts and Russian Cosmonauts present for the press conference. They included: Gibson; Precourt; Baker; Harbough; Dunbar; Strekalov; Dezhurov; and Thagard. Film footage and photographic slides of the various activities performed aboard the Mir Space Station and the spaceborne experiments accomplished during the flight mission are presented. Each of the operations are explained by the cosmonauts, with brief views of the Atlantis-Mir Earth orbital rendezvous over the Red Sea included.	Transcript Link
2011 09 22	NASA STI Program	https://youtu.be/l9-rZ51cxxo	STS-27 Crew Presentation Clip	This video features scenes from this Department of Defense Space Shuttle Mission. Included are launch, landing, the crew playing weightless football and exercising, and food preparation on middeck.	Transcript Link
2011 09 22	NASA STI Program	https://youtu.be/Qfi0dfTVFK4	STS-26 Post-Flight Crew Press Conference	This video contains footage selected and narrated by the STS-26 crew including launch, TDRS-C/IUS (Tracking and Data Relay Satellite C / Inertial Upper Stage) deployment, onboard activities, and landing.	Transcript Link
2011 09 22	NASA STI Program	https://youtu.be/eJhyZJYJVDY	Stock Footage of Goddard Space Flight Center and Headquarters	Produced for Century Teleproductions in Boston, MA, this video is a camera master showing various views, with natural sound, of the space flight center during the late spring. This finished footage is used in an interactive laser disc presentation that is used at Kennedy Space Center Visitor Center.	Transcript Link
2011 09 22	NASA STI Program	https://youtu.be/UkwRY3KcLN0	STS-26 Shuttle Earth Views, April 1990, Part 1 and Part 2	This video features Earth views compiled from a variety of footage shot during shuttle missions. Included are parts of North America, Africa, Europe, the Orient, and the Middle East. No sound.	Transcript Link

2011 09 21	NASA STI Program	https://youtu.be/ZhsS5xactuM	Space Station The Link to America's Future	This video documents the planned design and development of the Space Station.	Transcript Link
2011 09 21	NASA STI Program	https://youtu.be/sDFYiv0CA5Y	Space Shuttle Main Engine (SSME) Testing at Stennis Space Center	Different views of Space Shuttle Main Engine test firings on all three test stands including closeup of engine, day, and night firings are presented.	Transcript Link
2011 09 21	NASA STI Program	https://youtu.be/yXpgtje7DqQ	Space Shuttle Highlights	This video recaps the space shuttle successes of 1984: STS 41-B, STS 41-C, STS 41-G, and 51-A.	Transcript Link
2011 09 21	NASA STI Program	https://youtu.be/Am7EwmxBAW8	Space Flight The Application of Orbital Mechanics	This is a primer on orbital mechanics originally intended for college-level physics students. Released 1989.	Transcript Link

2011 09 21	NASA STI Program	https://youtu.be/1GxsvKP9szs	Space Basics	In this education video series, 'Liftoff to Learning', astronauts (Bruce Melnick, Thomas Akers, William Shepherd, Robert Cabana, and Richard Richards) describe the historical beginnings of space exploration from the time of Robert H. Goddard (considered the Father of Rocketry), who, in 1929, invented the first propellant rocket, the prototype of modern liquid propellant rockets, up to the modern Space Shuttles. The questions - where is space, what is space, and how do astronauts get to, stay in, and come back from space are answered through historical footage, computer graphics, and animation. The space environment effects, temperature effects, and gravitational effects on the launching, orbiting, and descent of the Shuttles are discussed. Included are historical still photos and film footage of past space programs and space vehicles.	Transcript Link
2011 09 21	NASA STI Program	https://youtu.be/N5DmC3PNCbY	Space Astronomy Update Stars Under Construction	A discussion of the images obtained by NASA's Hubble Space Telescope (HST) is featured on this video. The discussion panel consists of Dr. Jeff Hester (Arizona State Univ.), Dr. Jon Morse (Space Telescope Science Inst.), Dr. Chris Burrows (European Space Agency), Dr. Bruce Margon (Univ. of Washington), and host Don Savage (Goddard Space Flight Center). A variety of graphics and explanations are provided for the images of star formations and other astronomical features that were viewed by the HST.	Transcript Link
2011 09 19	NASA STI Program	https://youtu.be/wbKbVTllSd4	Skylab The Second Manned Mission. A Scientific Harvest	This black and white video presentation covers the Skylab launch activities and docking with unmanned SL-1 workshop. Included are observations of student experiments (the Minchmog minnows and Arabella, the spider), observations of student experiments, exercise routines, and the enabling of the Earth Resources Experiments Package. Also shown is planet Earth documentation, manned operation of the Apollo Telescope Mount for observations of the Sun and beyond, outside EVA activity, testing of the Astronaut Maneuvering Unit, experiments to explore industrial uses of space, and the Skylab living routine.	Transcript Link
2011 09 19	NASA STI Program	https://youtu.be/K3uPuTvFIus	Skylab The First 40 Days	This video records the launch of unmanned Skylab-1 on May 14, 1973 and the major problems resulting from the loss of the meteoroid heat shield. Also shown is the fabrication of materials and the equipment used in the repair operation, followed by the installation of the parasol after the launch and docking of the manned SL-2 with the SL-1 workshop. The onboard sequences of daily work routines and some of the experiments are included.	Transcript Link

2011 09 19	NASA STI Program	https://youtu.be/t9DEWKwozY8	Shuttle 51L Challenger	This video follows the pre-launch and launch of the Space Shuttle Challenger preceding the accident. It then details the accident investigation report.	Transcript Link
2011 09 19	NASA STI Program	https://youtu.be/TC6AXnwEvLo	SAMS (Space Acceleration Measurement System)	The SAMS unit flew on STS-62 to monitor onboard accelerations that could disrupt shuttle experiments. This highly sensitive instrument can measure, condition, and record low-gravity accelerations at as many as three experiment sites simultaneously.	Transcript Link
2011 09 13	NASA STI Program	https://youtu.be/btRk6AhoOmI	Scout The Unsung Hero of Space	A history of the Scout program, managed by LaRC for 30 years, is presented.	Transcript Link
2011 09 13	NASA STI Program	https://youtu.be/vtk8BOmlx1c	Return to Space Mission The STS-26 Crew Report	This video features footage from NASA's return to space flight after the 51-L accident. The video is narrated by the crew, and it includes the following: launch, landing, and the TDRS/IUS deployment.	Transcript Link
2011 09 13	NASA STI Program	https://youtu.be/Au_AOtA7PQA	Return to Space	This video documents the preparations for Shuttle Flight STS-26 with Shuttle Discovery, NASA's return to manned space flight after the Challenger disaster. Footage and descriptions document such changes to the new Shuttle as new joints, improved insulation, and added O-rings to the solid rocket boosters; new safety hardware and procedures such as parachute and sidewire evacuations during liftoff, and new pressure suits; modified landing gear, brakes, and nose wheel steering, as well as a modified landing runway. Also profiled are the 5 member crew of all veteran Shuttle astronauts, the TDRS 3 Satellite to be released from the cargo bay in orbit, and 11 commercial and student experiments to be performed during the mission.	Transcript Link

2011 09 13	NASA STI Program	https://youtu.be/VaFTVR-hZqg	President Kennedy's Speech at Rice University	This video presents unedited film footage of President John F. Kennedy's speech at Rice University, Houston, Texas, September 12, 1962. The speech expresses the commitment of the United States to landing an astronaut on the Moon.	Transcript Link
2011 09 13	NASA STI Program	https://youtu.be/4RwLCyqrX8k	Quasar Host Galaxies Neptune Rotation Galaxy Building Blocks Hubble Deep Field Saturn Storm	Computerized animations simulate a quasar erupting in the core of a normal spiral galaxy, the collision of two interacting galaxies, and the evolution of the universe. Hubble Space Telescope (HST) images show six quasars' host galaxies (including spirals, ellipticals, and colliding galaxies) and six clumps of galaxies approximately 11 billion light years away. A false color time lapse movie of Neptune displays the planet's 16-hour rotation, and the evolution of a storm on Saturn is seen though a video of the planet's rotation. A zoom sequence starts with a ground-based image of the constellation Ursa major and ends with the Hubble Deep Field through progressively narrower and deeper views. No sound.	Transcript Link
2011 09 09	NASA STI Program	https://youtu.be/TdasRx4lc_A	NASA The 25th Year	This video chronicles NASA's research and development programs, especially regarding space travel from 1958 to 1983.	Transcript Link
2011 09 09	NASA STI Program	https://youtu.be/fwnfsDDs17k	NASA Images 8	How various NASA satellites are used is illustrated. Satellites included are TIROS, ECHO, RELAY, HEAO, ERTS, LANDSAT, and ATS.	Transcript Link
2011 09 09	NASA STI Program	https://youtu.be/azgddKfbvkQ	NASA Life Sciences Program	This Life Science Program video examines the variety of projects that study both the physiological and psychological impacts on astronauts due to extended space missions. The hazards of space radiation and microgravity effects on the human body are described, along with these effects on plant growth, and the performance of medical procedures in space. One research technique, which is hoped to provide help for future space travel, is the study of aquanauts and their life habits underwater.	Transcript Link

2011 09 09	NASA STI Program	https://youtu.be/sujBQnMnrRU	Newton in Space	In this 'Liftoff to Learning' series video, astronauts (Charles Veach, Gregory Harbaugh, Donald McMonagle, Michael Coats, L. Blaine Hammond, Guion Bluford, Richard Hieb) from the STS-39 Mission use physical experiments and computer animation to explain how weightlessness and gravity affects everything and everyone onboard the Space Shuttle. The physics behind the differences between weight and mass, and the concepts of 'free fall', are demonstrated along with explanations and experiments of Sir Issac Newton's three laws of motion.	Transcript Link
2011 09 09	NASA STI Program	https://youtu.be/qjtKZ8gBvFg	Plant Research	This video presentation addresses Stennis research on the use of plants for the purification of water and air for living in space and on Earth.	Transcript Link
2011 09 09	NASA STI Program	https://youtu.be/ggtUhK3ja-A	Mars Five Views on What Is Known	This video gives a historical survey of philosophy and scientific study of the nature of the surface of Mars and discussion of whether life existed or exists on Mars. Several Lewis researchers recount early telescope observations of Mars including the identification of 'channels' or possible ancient waterways on the surface. An overview of the accomplishments of the Mariner spacecraft in mapping the surface of Mars as well as a detailed description of the Viking missions to Mars are presented. The results of the Viking Biology Experiment, conducted by the Viking Lander, are highlighted. There is also a discussion of the possible presence of monuments and a huge 'face' on the Martian surface. The video includes several computer simulations of flight over the Martian surface. Released Feb. 1993.	Transcript Link
2011 09 09	NASA STI Program	https://youtu.be/bJfoJFFQvyA	Memorial Service for the Mission 51-L Crew (Edited)	The original memorial service held at NASA JSC for the STS-51L Challenger crew who died onboard the Shuttle is presented. President Ronald Reagan conducts this briefing.	Transcript Link

2011 09 09	NASA STI Program	https://youtu.be/VThGXcmGRaU	Light Airplane Crash Test at Three Pitch Angles	Three similar twin-engine general-aviation airplane specimens were crash tested at the Langley Impact Dynamics Research Facility at 27 m/sec, a flight-path angle of -15deg, and pithch angles of -15deg, 0deg, and 15deg. Other crash parameters were held constant. See http://hdl.handle.net/2060/19800003257 for associated PDF, where the test facility, instrumentation, test specimens, and test method are briefly described. Structural damage and accelerometer data for each of the three impact conditions are also presented and discussed. Video has no sound.	Transcript Link
2011 09 08	NASA STI Program	https://youtu.be/KH8o8Mmp3cM	Magellan, Galileo, and Ulysses	A combination of sophisticated computer animation and shuttle footage describe the missions of Ulysses, Galileo, and Magellan satellites to the solar system. Ulysses, launched in October 1990 by the European Space Agency, studied the Sun. Galileo, launched in October 1989, probed the Jovian system by releasing a probe that descended into Jupiter's atmosphere and by using 12 instruments which studied Jupiter's 16 moons, its atmosphere, and its radiation and magnetic fields. Magellan, released from Space Shuttle Atlantis in May 1989, used a synthetic aperture radar to probe through Venus' dense atmosphere to map its planetary surface. A computer animation simulates flying over the surface of Venus.	Transcript Link
2011 09 08	NASA STI Program	https://youtu.be/CMSViwXQmqw	Low Thrust Space Propulsion	An overview of low rocket engine propulsion concepts for space missions is presented. Chemical and electrical rocket engines are shown. Animation illustrates propulsion applications.	Transcript Link
2011 09 08	NASA STI Program	https://youtu.be/Torf3kbUex4	Long Duration Exposure Facility Retrieval Animation	This video is a computer animation of a Long Duration Exposure Facility (LDEF) retrieval.	Transcript Link

2011 08 31	NASA STI Program	https://youtu.be/tRciKLI7U2E	Forces and Motion Dynamics of the Tethered Satellite	In this 'Lift off to Learning' series, Loren Shriver, commander of STS 46, and the other members of the mission (Claude Nicollier, Marsha Ivins, Andrew Allen, Jeffrey Hoffman, Franklin Chiang-Diaz, and Franco Maerba) use computer graphics, and physical experiments to explain how the tethered satellite to be deployed during their mission will be raised, how it works, the influence of the Shuttle on the satellite and the satellite's influence on the Shuttle's orbit, the gravitational effects, and other effects concerning the Theoretical Physics used to plan this mission (gravity gradient force, center of mass, angular momentum, centrifugal force, and coriolis effect). This video ends with a discussion of the technology transfer and utilization of this tethered satellite concept and design.	Transcript Link
2011 08 29	NASA STI Program	https://youtu.be/OpPd9J28QoI	KSC Wildlife Show	This video highlights footage of the many forms of animal and plant life that inhabit the environs surrounding Kennedy Space Center (KSC). Shown are birds, alligators, butterflies, and plants as they react to shuttle launches and other activities eminating from KSC.	Transcript Link
2011 08 28	NASA STI Program	https://youtu.be/Q8cfqtUQIkg	Living Well in Space Clinical Care Challenge	This video describes the Health Maintenance Facility (HMF). The HMF provides inflight medical care including prevention, diagnosis, and care during transport if the patient must be evacuated. A comparison to medical services found in a large hospital is used to describe the HMF's subsystems.	Transcript Link
2011 08 28	NASA STI Program	https://youtu.be/7sZlfwkElf4	Living Well in Space Ensuring Crew Capability	This video describes the Exercise Countermeasure Facility (ECF). The ECF provides a comprehensive exercise program to allow astronauts to remain physically fit during extended stays in space. Featured are the Exercise Development Laboratory, the Exercise Physiology Laboratory, the Anthromorphic and Biomechanical Laboratory, and the Artificial Intelligence Laboratory.	Transcript Link

2011 08 28	NASA STI Program	https://youtu.be/Jljaw-Vgdk8	Living Well in Space Monitoring Environment	This video describes the Environmental Health Systems (EHS). Progress in experiments concerning water quality, toxicology, microbiology, and radiation are addressed.	Transcript Link
2011 08 28	NASA STI Program	https://youtu.be/d9JGJimUAAE	Inertial Upper Stage	This video details the importance of the Inertial Upper Stage in projecting various satellites from the Shuttle's cargo bay.	Transcript Link
2011 08 28	NASA STI Program	https://youtu.be/cTJbZz7lLmk	Launch, Entry, and Landing Resource Clip	Scenes of the shuttle during launch are presented and were shot from various points of view. Included are SRB and ET separation, OMS burn, reentry glow, and landing at Edwards AFB, California. No sound.	Transcript Link
2011 08 28	NASA STI Program	https://youtu.be/ZPmK901VchE	HL-10 Dedication Ceremony	This is the dedication of NASA's HL-10 lifting body, being put on display at NASA Dryden Flight Research Center.	Transcript Link
2011 08 26	NASA STI Program	https://youtu.be/3dxxh0UwjbI	Flight Operations Highlights, Tape 2	Historical film footage of the X-series aircraft (including Yeager's X-1 flight), lifting bodies, and early Apollo landing tests is presented. No sound.	Transcript Link

2011 08 26	NASA STI Program	https://youtu.be/dBta4wo74cc	Flight Operations Highlights, Tape 1	Historical film footage of the X-series aircraft (including Yeager's X-1 flight), lifting bodies, and early Apollo landing tests is presented. No sound.	Transcript Link
2011 08 24	NASA STI Program	https://youtu.be/ffkxHfqJfpY	F-18 High Alpha Research Vehicle Resource Tape	This video presents raw, unedited material of Dryden's F-18 High Alpha Research Vehicle (HARV) aircraft.	Transcript Link
2011 08 23	NASA STI Program	https://youtu.be/lVZMTOf4JZI	F-16XL Resource Tape	This video presents raw, unedited material of Dryden's F-16XL aircraft.	Transcript Link
2011 08 23	NASA STI Program	https://youtu.be/roGxjwy4FDU	Delta, America's Space Ambassador	This video presentation features the major satellites launched by the Delta rocket in a celebration of this dependable launch vehicle's past.	Transcript Link

2011 08 23	NASA STI Program	https://youtu.be/DNtFyMH2T_A	Dino Fest	This video and accompanying PDF (http://hdl.handle.net/2060/20010028790) represent the proceedings of the first Dino Fest conference, which was unprecedented in bringing together exhibits of dinosaurs and other fossils and attracting many of the world's leading paleontologists and science educators, students, and the public. This first Dino Fest consisted of scores of exhibits that included live and fossil plants, invertebrates and vertebrates. Lasting three weeks, the event concluded with a three-day symposium, providing dinosaur experts from around the country a forum to discuss their research and ideas with the public and other scientists. The document presents the talks of many of the scientists. The video is from an interactive television broadcast relayed by a NASA satellite that enabled children at remote locations to ask questions of a panel of dinosaur experts, literally reaching an audience around the world.	Transcript Link
2011 08 22	NASA STI Program	https://youtu.be/Pyctcv9Mvoo	F-15 835 (HIDEC) Resource Tape	This video presents raw, unedited material of Dryden's F-15 Highly Integrated Digital Electronic Control (HIDEC) aircraft.	Transcript Link
2011 08 20	NASA STI Program	https://youtu.be/JaECNgAH0sM	Final Blaze of Glory	This video gives an overview of planetary nebulae through a computerized animation, images from the Hubble Space Telescope (HST), and interviews with Space Telescope Science Institute Theorist Dr. Mario Livio. A computerized animation simulates a giant star as it swallows its smaller companion. HST images display various planetary nebulae, such as M2-9 Twinjet Nebula, NGC 3568, NGC 3918, NGC 5307, NGC 6826, NGC 7009, and Hubble 5. An artist's concept shows what our solar system might look like in a billion years when the Sun has burned out and cast off its outer layers in a shell of glowing gas. Dr. Livio describes the shapes of the planetary nebulae, gives three reasons to study planetary nebulae, and what the observations made by HST have meant to him. A succession of 17 HST images of planetary nebulae are accompanied by music by John Serrie.	Transcript Link
2011 08 20	NASA STI Program	https://youtu.be/Spe9jivtwZA	Dante's Volcano	This video contains two segments: one a 0:01:50 spot and the other a 0:08:21 feature. Dante 2, an eight-legged walking machine, is shown during field trials as it explores the inner depths of an active volcano at Mount Spurr, Alaska. A NASA sponsored team at Carnegie Mellon University built Dante to withstand earth's harshest conditions, to deliver a science payload to the interior of a volcano, and to report on its journey to the floor of a volcano. Remotely controlled from 80-miles away, the robot explored the inner depths of the volcano and information from onboard video cameras and sensors was relayed via satellite to scientists in Anchorage. There, using a computer generated image, controllers tracked the robot's movement. Ultimately the robot team hopes to apply the technology to future planetary missions.	Transcript Link

2011 08 20	NASA STI Program	https://youtu.be/lkT7UkzgobA	Best of Hubble Space Telescope	This video presents a chronological account of the Hubble Space Telescope. Using animation, movies, and stills it documents the design, development, launch, and repair mission to correct its optics. The second part of this video concentrates on the successes of Hubble. Included are the study of Galaxy Clusters, Black Holes, Jupiter animation, and Nebulas.	Transcript Link
2011 08 19	NASA STI Program	https://youtu.be/9YXdaTkViYI	Challenger's Night Flight	STS Mission 8 and its night flight (both launch and landing) are highlighted in this color video. The 5-member crew is introduced and their special assignments for this flight are discussed, along with their continuous weightlessness experiments performed during the flight. The first black astronaut, Guion S. Blufords, Jr., is introduced and file footage of an STS Mission orbiting the earth is shown.	Transcript Link
2011 08 19	NASA STI Program	https://youtu.be/_XHHVbE_TOM	Atmosphere of Venus	This video presents preliminary results as seen through the violet filter of the Galileo Solid State Imaging System.	Transcript Link
2011 08 19	NASA STI Program	https://youtu.be/IviOm71Iml0	Challenger Anniversary Resource Tape	This commemorative video marks the tenth anniversary, January 28, 1986, of the ninth Challenger flight and the seven astronauts onboard who died when the Challenger exploded 73 seconds into flight. The flight crew was comprised of Cmdr. Francis R. Scobee, Pilot Michael J. Smith, and Mission Specialists Judith A. Resnik, Ellison S. Onizuka, Ronald E. McNair, Gregory Jarvis (Hughes Aircraft representative), and S. Christie McAuliffe (teacher). The flight crew is shown performing preflight training, physiological tests, environmental tests, press conferences, prelaunch activities, and launch activities. The Challenger explosion is shown from both the launch site and from the control center. Various rescue operations, news coverage, and shots of the wreckage after salvage are also presented. President Ronald Reagan is shown giving a tribute at the memorial service for the flight crew. The video ends with a flyby salute and pictures of each of the members of the Challenger.	Transcript Link

2011 08 19	NASA STI Program	https://youtu.be/ygfQzf41OIM	Atlas of TOMS Ozone, 1978-1988	This video contains very graphic images of the seasonal accumulation and depletion of the world's ozone layer, as depicted by the Total Ozone Mapping Satellite (TOMS).	Transcript Link
2011 08 19	NASA STI Program	https://youtu.be/1RP2dJ__Fs4	Shaping Tomorrow	The development, history, and opportunities for employment available at the Johnson Space Center (JSC) in Houston, Texas are presented in this video, with special emphasis placed on minorities in the aeronautical engineering fields and at JSC. There are several interviews with black, Hispanic and female engineering and aeronautics professionals and the various projects they work on.	Transcript Link
2011 08 19	NASA STI Program	https://youtu.be/oeYiclRLZkE	Moon Old and New	This video presents the moon as studied by man for more than 20 centuries. It reviews the history of lunar studies before the first moon landing, the major things learned since Apollo 11, and closes with a resume of lunar investigations scientists would like to undertake in the future.	Transcript Link
2011 08 19	NASA STI Program	https://youtu.be/1TI3kEmfZCI	New Look at the Old Moon	The decade of 1969-1979 is seen as the time when lunar science emerged from the dark ages as a result of the geophysical and sample investigations made possible by the Apollo flights to the moon. After a brief summary of the Apollo missions and laboratory investigative techniques, the film treats the major epochs in lunar history uncovered by the investigations. Finally, the moon is depicted as having a practical role in the future of science and technology, as well as serving as the pattern for the future exploration of space.	Transcript Link
2011 08 18	NASA STI Program	https://youtu.be/xhLkDOEPWzA	Apollo 15 In the Mountains of the Moon	This video features the following: (1) extra vehicle activity (EVA); (2) the three traverses of the lunar surface; (3) film taken from the Lunar Rover; (4) hammer and feather tests of Galileo's theory on falling objects in gravity fields; (5) Worden's EVA; (6) subsatellite launching; (7) X-ray pulsar observations; and (8) splash down with one parachute collapsed.	Transcript Link

2011 08 18	NASA STI Program	https://youtu.be/DL8Ql0p2qzo	Apollo 17 On the Shoulders of Giants	A documentary view of the Apollo 17 journey to Taurus-Littrow, the final lunar landing mission in the Apollo program is discussed. The film depicts the highlights of the mission and relates the Apollo program to Skylab, the Apollo-Soyuz linkup and the Space Shuttle.	Transcript Link
2011 08 18	NASA STI Program	https://youtu.be/SgYrj5zJAKQ	Apollo 16 Nothing So Hidden	This film shows the landing and the three lunar traverses in the highland region of the moon, near the crater descartes. It includes an astronaut's eye view from the rover, lunar grand prix, discovery of the house-sized rock, lunar lift-off and eva 173,000 miles above the earth. Microphones and cameras in mission control record the emergency problem solving during the prelanding crisis and the reactions of scientists on earth as the astronauts explore the moon.	Transcript Link
2011 08 18	NASA STI Program	https://youtu.be/R01JzqXBGAs	Apollo 11 Highlights	This video recounts the Apollo 11 Mission which took ten years of preparation and the work of over a half a million people, culminating in the first manned lunar landing on July 20, 1969. Historical footage is accompanied by a narrated account of the mission. The footage includes preparation for launch, takeoff, stage separation, docking in space the Eagle Lunar Lander, shots of the Earth and Moon from space, Michael Collins orbiting the Moon in the Columbia Orbiter, Edwin Aldrin and Neil Armstrong walking on the Moon, setting up a Solar Wind experiment, collecting lunar samples, shots aboard the U.S.S. Hornet, retrieval of the astronauts after splashdown, and the parade given in honor of the astronauts.	Transcript Link
2011 08 18	NASA STI Program	https://youtu.be/c0rZMqfMamE	Answering the Space Medicine Challenge	The development of the Space Station Health Maintenance Facility (HMF) is featured. The HMF will provide necessary inflight medical care, including prevention, diagnosis, treatment, and care during transport if the patient must be evacuated from Space Station.	Transcript Link
2011 08 16	NASA STI Program	https://youtu.be/0Rs5DerakQ8	STS-85 Postflight Presentation	The flight crew of STS-85, Cmdr. Curtis L. Brown, Jr., Pilot Kent V. Rominger, Payload Cmdr. N. Jan Davis (Ph.D.), Mission Specialists Robert L. Curbeam, Jr. and Stephen K. Robinson (Ph.D.), and Payload Specialist Bjarni V. Tryggvason, present an overview of their mission. Events shown include pre-launch preparations, launch activities, on orbit activation of various experiments, and the return and landing of the shuttle at Kennedy Space Center (KSC). In the second part of the presentation the astronauts describe the still pictures that were taken during the mission.	Transcript Link

2011 08 16	NASA STI Program	https://youtu.be/J53_l6N_GJk	STS-82 Mission Highlight Presentation	The STS-82 is the second in a series of planned service missions to the Hubble Space Telescope (HST). The flight crew of STS-82, Cmdr. Kenneth D. Bowersox, Pilot Scott J. Horowitz, Mission specialists, Mark C. Lee, Steven A. Hawley, Gregory J. Harbaugh, Steven L. Smith, and Joseph R. Tanner can be seen performing pre-launch activities preparing for the night launch. The crew meets the press for pre-launch photos before being transported to the launch pad. Several views can be seen of the final inspection team on the O level and the crew being readied in the 'white room.' Launch activities such as the oxygen vent hood retraction, liftoff, SRB separation, and personnel activities in the Houston Integrated Mission Control room are viewed. Subsequent footage is provided of the crew's activities during the HST rendezvous and docking, Extravehicular Activities (EVAs) preparation and EVA numbers 1, 3 and 5. During the first EVA the Earth can be seen clearly in a reflection off of HST's offshroud during its 60th orbit crossing the equator. The HST deployment and views of the Hale-Bopp comet are clearly seen before Discovery's reentry and landing. After reentry a beautiful view of Discovery moving at 10,400 mph can be seen looking east from Mission Control. The ususal twin sonic boom precedes Discovery's touchdown on runway 15 at Kennedy Space Center. This second HST service mission orbited Earth 150 times and traveled 1.4 million miles.	Transcript Link
2011 08 15	NASA STI Program	https://youtu.be/4buL_eFc7lE	STS-83 Postflight Presentation	The flight crew of the STS-83 mission, Cmdr James D. Halsell, Pilot Susan S. Still, Payload Cmdr. Janice E. Voss, Mission Specialists Donald Thomas and Michael Gernhardt, and Payload Specialists Roger Crouch and Greg Linteris, offer a video and still photo presentation of their journey. Included in the presentation are an introduction of the crew and a short briefing by Cmdr. Halsell, the launch and ascent narrated by Still, Spacelab Module narration by Voss, mission control narrated by Cmdr. Halsell, experiment narration by Thomas and Crouch. Also included are video views of the Baja Peninsula, Sinai Peninsula, pivot-point irrigation circles, Comet Hale-Bopp, and the cross-wind landing. The crew poses outside the shuttle for photos. Crew members discuss still photos taken during the mission, including shots of sunsets, the Grand Bahamas Island, Nile River, Baja Peninsula, Indis River of India, and Guadalupe Island.	Transcript Link
2011 08 15	NASA STI Program	https://youtu.be/b8ByMfD7oIw	STS-80 Post Flight Presentation	The flight crew of STS-80, Cmdr. Kenneth D. Cockrell, Pilot Kent V. Rominger, Mission Specialists, Tamara E. Jernigan, Thomas D. Jones, and F. Story Musgrave give a post flight presentation of their mission. This presentation is divided into two parts: first a slide presentation of still shots, and the second is a video presentation. Released Dec. 1996.	Transcript Link

2011 08 15	NASA STI Program	https://youtu.be/V6mp07or2Js	STS-79 Flight Day 8	On this eighth day of the STS-79 mission, the flight crew, Cmdr. William F. Readdy, Pilot Terrence W. Wilcutt, Mission Specialists, Thomas D. Akers, Shannon Lucid, Jay Apt, and Carl E. Walz, are seen bidding the crew of Mir farewell and then closing the hatches between their two spacecraft in preparation for undocking. The nine astronauts and cosmonauts gathered in the Core Module of the Russian space station for a formal goodbye. With the official ceremony complete, the crewmembers shared a final meal together and exchanged private farewells as Shannon Lucid prepared to return home in Atlantis and her replacement on Mir, John Blaha, began a four month stay on the station. Walz and Apt and Mir 22 Commander Valery Korzun with assistance from Flight Engineer 2 John Blaha, swung the hatches between their spacecraft closed concluding five days of joint operations. The vestibule between Atlantis and Mir was depressurized and leak checks were performed in readiness for undocking.	Transcript Link
2011 08 15	NASA STI Program	https://youtu.be/djCuAytDZg4	F-104 Resource Tape	This video presents raw, unedited material of Dryden's F-104 aircraft.	Transcript Link
2011 08 15	NASA STI Program	https://youtu.be/1XQL65W34Mk	Robotics for Space Station, Tape 1	Shot on location at the Goddard Robotics Laboratory, this video uses state of the art Wavefront animation to take the viewer on a tour of the robotics that may, someday, be a part of Space Station Freedom.	Transcript Link
2011 08 15	NASA STI Program	https://youtu.be/QXv_ezQYclE	Robotics for Space Station Tape 2	This video shows robotics for the Space Station.	Transcript Link

2011 08 09	NASA STI Program	https://youtu.be/w4yKyZ7ZfTs	1972 Highlights	This document includes Mariners to Mars, Pioneer to Jupiter, Orbiting Astronomical Observatory, Small Astronomy Satellite, sounding rockets, earth resources, Nimbus weather watcher, communication satellites, aeronautics, wind tunnel research, STOL, noise abatement, lifting bodies, US/Soviet cooperation, preparation for Skylab, and the Apollo 16 and 17 missions.	Transcript Link
2011 08 09	NASA STI Program	https://youtu.be/eF1sjQYzFI8	Highlights 1969	This video includes Mariners to Mars; Orbiting Solar Observatory; Orbiting Geophysical Observatory; sounding rockets; weather satellites - Tiros and Nimbus; applications technology; advanced research; space shuttle research; V/STOL; jet noise abatement; and Apollo 9, 10, 11, and 12 missions.	Transcript Link
2011 08 08	NASA STI Program	https://youtu.be/CkZMCmlpMNQ	Orbiter Umbilical Hinge Door Problem	During processing work on the orbiter Discovery at Pad A, significant cracks were found on all four lug hinges on the two external tank umbilical door drive mechanisms. NASA managers opted to roll back the vehicle to the Vehicle Assembly Building (VAB) on March 7, and then to the Orbiter Processing Facility (OPF) for repair. Hinges were replaced with units taken from orbiter COLUMBIA, and reinforced. Discovery returned to the pad on April 1. Shown are the cracked orbiter umbilical door hinges.	Transcript Link
2011 08 06	NASA STI Program	https://youtu.be/HRDwV-CpBmw	STS-82 Flight Day 03 Highlights	The third day of the STS-82 mission begins with the crew, Commander Kenneth D. Bowersox, Pilot Scott J. Horowitz, Payload Commander Mark C. Lee, and Mission Specialists Gregory J. Harbaugh, Steven L. Smith, Joseph R. Tanner, and Steven A. Hawley successfully retrieving the Hubble Space Telescope. Hawley than lowers the 12-ton observatory onto the Flight Support System berthing platform in Discovery's cargo bay, where it is latched in place for servicing. The astronauts are then seen in the mid-deck preparing for the first of four spacewalks designed to service and upgrade the scientific capabilities of the Hubble Space Telescope.	Transcript Link

2011 08 06	NASA STI Program	https://youtu.be/ufXSe8MNWds	STS-82 Flight Day 04 Highlights	The fourth day of the STS-82 mission begins with the crew, Commander Kenneth D. Bowersox, Pilot Scott J. Horowitz, Payload Commander Mark C. Lee, and Mission Specialists Gregory J. Harbaugh, Steven L. Smith, Joseph R. Tanner, and Steven A. Hawley in preparations for conducting the second servicing mission of the Hubble Space Telescope. The first spacewalk was slightly delayed to enable ground controllers to assess the unexpected movement of one of Hubble's solar arrays, which slewed from a horizontal to a vertical position as Discovery's airlock was depressurized. Astronauts Mark Lee and Steve Smith are seen working in the cargo bay of the Shuttle Discovery. Their spacewalk to upgrade the Hubble Space Telescope lasts six hours and 42 minutes. At the conclusion of their EVA, HST has graded science instruments for an expanded view of the universe.	Transcript Link
2011 08 06	NASA STI Program	https://youtu.be/k6db3SNw5aU	STS-82 Fight Day 10 Highlights	The tenth day of the STS-82 mission begins with the crew, Commander Kenneth D. Bowersox, Pilot Scott J. Horowitz, Payload Commander Mark C. Lee, and Mission Specialists Gregory J. Harbaugh, Steven L. Smith, Joseph R. Tanner, and Steven A. Hawley checking out Discovery's flight control systems in preparations for returning to Earth. The seven astronauts stow equipment and prepare for the planned landing at the Kennedy Space Center. Before wrapping up what is expected to be their final day in orbit, the astronauts held a press conference to discuss the flight, which set a record five spacewalks conducted to service the Hubble Space Telescope for the second time.	Transcript Link
2011 08 06	NASA STI Program	https://youtu.be/KkxdV1cT_D4	STS-80 Mission Highlights Resource Tape	The flight crew of STS-80, Cmdr. Kenneth D. Cockrell, Pilot Kent V. Rominger, Mission Specialists, Tamara E. Jernigan, Thomas D. Jones, and F. Story Musgrave are seen performing pre-launch activities such as eating the traditional breakfast, being suited-up, and riding out to the launch pad. Also, included are various panoramic views of the shuttle on the pad. The crew is readied in the 'white room' for their mission. After the closing of the hatch and arm retraction, launch activities are shown including the countdown, engine ignition, launch, and the separation of the Solid Rocket Boosters (SRB) from the shuttle. The crew completes the first major objective of the mission with the deployment of the Orbiting Retrievable Far and Extreme Ultraviolet Spectrometer (ORFEUS) on the reusable Shuttle Pallet Satellite. The crew then begins final preparations for the release of Wake Shield. Jones powers up the shuttle's Canadian-built robot arm and grapples the satellite, while Jernigan powers up the Orbiter Space Vision System, which will be used to track precisely the Wake Shield's location. Cockrell places Columbia in a gravity gradient attitude to minimize disturbances during the release. Jones uses the robot arm to hold Wake Shield in position for a two-and-a-half hour cleansing by atomic oxygen molecules before moving the arm to the deploy position. The failure of the hatch to properly open causes the cancellation of all EVAs planned for this mission by Jernigan and Jones. The mission ends with the shuttle landing at the Kennedy Space Center. Released Dec. 1996.	Transcript Link

2011 08 06	NASA STI Program	https://youtu.be/_tqNT3YdZi4	NACA NASA X-1 through X-31	This video presents clips (in-flight, ground crew, pilots, etc.) of almost everything from X-1 through X-31. No sound.	Transcript Link
2011 08 06	NASA STI Program	https://youtu.be/dOwE9OEbUfc	Space Station Quarterly, May 1992	This quarterly report discusses the First International Microgravity Laboratory, the building of space station truss structures at the Johnson Space Center, the building of the living and laboratory modules at the Marshall Space Flight Center, and the Lewis Research Center's work on power for the space station. The video includes a segment on the Japanese Experiment Module.	Transcript Link
2011 08 06	NASA STI Program	https://youtu.be/5RpWK6WuIEc	Space Station Freedom	This video presents a series of takes and sequences with model photography of 1990 Space Station design. No sound.	Transcript Link
2011 08 06	NASA STI Program	https://youtu.be/GP7dvV4Xf40	STS-36 Crew Presentation Clip	This video features scenes from this Department of Defense Shuttle mission showing crew onboard activities.	Transcript Link

2011 08 05	NASA STI Program	https://youtu.be/4xWU300XcdA	STS-79 Flight Day 4	On this fourth day of the STS-79 mission, the flight crew, Cmdr. William F. Readdy, Pilot Terrence W. Wilcutt, Mission Specialists, Thomas D. Akers, John Blaha, Jay Apt, and Carl E. Walz, are seen docking with the Mir Space Station. After two hours of pressure and leak checks, the hatches between the two spacecraft is then opened. The two crews are seen greeting one another to begin five days of joint operations. The rendezvous and docking went flawlessly as Readdy flew the orbiter manually through the final 2,000 feet. Docking occurred within seconds of the pre-planned time and flight controllers reported that only slight oscillations were felt through the Orbiter Docking System as the two spacecraft locked together. Within hours of the hatch opening, crew members John Blaha and Shannon Lucid formally swapped places before going to bed with Blaha becoming a member of the Mir-22 crew and Lucid joining the STS-79 crew to wrap up 179 days as a member of the Mir station. Blaha joins Mir 22 Commander Valery Korzun and Flight Engineer Alexander Kaleri on Mir for the next four months. Soon after the crew members completed their welcoming ceremony, they went to work, hauling bags of water and other supplies from the Shuttle's Spacehab module into the Mir. More than 4000 pounds of equipment and logistical supplies will be transferred to the Mir before Atlantis undocks from the space station.	Transcript Link
2011 08 05	NASA STI Program	https://youtu.be/CFZRPZw_Y0U	STS-79 Flight Day 5	On this fifth day of the STS-79 mission, the flight crew, Cmdr. William F. Readdy, Pilot Terrence W. Wilcutt, Mission Specialists, Thomas D. Akers, Shannon Lucid, Jay Apt, and Carl E. Walz, in the first full day of joint Shuttle/Mir operations begin in with the transfer of a biotechnology investigation and logistical supplies from Atlantis to Mir. The Biotechnology System, an investigation that will study the long-term development of cartilage cells in microgravity, was transported to Mir early this morning. During his planned four-month stay on Mir, John Blaha will take weekly samples of the culture which may provide researchers with information on engineering cartilage cells for possible use in transplantation. They also took time out of their schedules to talk with Good Morning America's Elizabeth Vargas in a brief interview. Prior to beginning the day's transfer activities, all nine astronauts and cosmonauts participated in a joint planning session to outline the day's schedule.	Transcript Link

2011 08 05	NASA STI Program	https://youtu.be/QQt0XEV3xDg	STS-79 Flight Day 6	On this sixth day of the STS-79 mission, the flight crew, Cmdr. William F. Readdy, Pilot Terrence W. Wilcutt, Mission Specialists, Thomas D. Akers, Shannon Lucid, Jay Apt, and Carl E. Walz, continue activities aboard Atlantis/Mir as the nine astronauts and cosmonauts work in their second full day of docked operations. The continuing transfer of logistical supplies and scientific hardware can be seen proceeding smoothly. Apt and Walz once again worked with the Active Rack Isolation System experiment to replace a broken pushrod. With that complete, Apt monitors the ARIS experiment as Readdy and Korzun fire small maneuvering jets on their spacecraft to test the ability of ARIS to damp out any disturbances created by the firings. Walz also is continuing his work with the Mechanics of Granular Materials experiment in Atlantis' double Spacehab module. The astronauts used the large format IMAX camera to conduct a photographic survey of Mir from the Shuttle's flight deck windows while Akers shot IMAX movie scenes of Readdy, Wilcutt, and Korzun in the Spektr module.	Transcript Link
2011 08 05	NASA STI Program	https://youtu.be/OarKxfPuirU	STS-79 Flight Day 7	On this seventh day of the STS-79 mission, the flight crew, Cmdr. William F. Readdy, Pilot Terrence W. Wilcutt, Mission Specialists, Thomas D. Akers, Shannon Lucid, Jay Apt, and Carl E. Walz, share a brief video tour of the Mir Space Station with flight controllers, taking a break from the transfer activities that has occupied the astronauts' time during three days of docked operations. Readdy and Apt floated through several of Mir's modules and back into Atlantis' double Spacehab module during the tour pointing out the numerous transfer items stowed on both spacecraft. Readdy, Wilcutt, Lucid and Blaha are seen discussing their mission in an interview with CNN's John Holliman.	Transcript Link
2011 08 05	NASA STI Program	https://youtu.be/STD5-a35-mU	STS-79 Flight Day 9	On this ninth day of the STS-79 mission, the flight crew, Cmdr. William F. Readdy, Pilot Terrence W. Wilcutt, Mission Specialists, Thomas D. Akers, Shannon Lucid, Jay Apt, and Carl E. Walz having completed five days of joint operations between the American astronauts and the Russian cosmonauts are seen flying solo once again after undocking from the Mir Space Station. As Atlantis/Mir flew over the Ural Mountains of central Asia, the docking hooks and latches that joined the vehicles together were commanded open and Atlantis drifted slowly away from Mir. Wilcutt then initiated a tail-forward fly-around of the Russian space station. After one and one-half revolutions around Mir, Atlantis' jets were fired in a separation maneuver to enable Atlantis to break away from Mir. On board Atlantis, the six-member crew is settling back into its normal routine with a fairly light schedule for the remainder of the day. Early in the morning as Atlantis flew over the United States, the crew took time to talk with anchors for the CBS Up to the Minute' network news broadcast.	Transcript Link

2011 08 05	NASA STI Program	https://youtu.be/gAhYFLKBUF0	STS-79 Flight Day 10	On this tenth day of the STS-79 mission, the flight crew, Cmdr. William F. Readdy, Pilot Terrence W. Wilcutt, Mission Specialists, Thomas D. Akers, Shannon Lucid, Jay Apt, and Carl E. Walz spent the day stowing equipment and deactivating experiments in preparation for the planned landing at Kennedy Space Center (KSC) in Florida. All systems aboard the orbiter were checked out overnight in preparation for landing day, including testing the flight control surfaces and thruster jets that will be used to maneuver the spacecraft through the atmosphere.	Transcript Link
2011 08 05	NASA STI Program	https://youtu.be/hGTlCme4gDo	Starfire 1 Consort III Launch	The Consort 3 is a commercial suborbital rocket that carried 12 microgravity experiments. It was launched on a Starfire rocket on May 16, 1990, from the Naval Ordnance Missile Test Station facilities at the U.S. Army's White Sands Missile Range (WSMR), NM. The videotape opens with approximately 2 minutes of a man speaking into a microphone but there is no sound. This is followed by a brief summary of the payload, and the expected trajectory, a view of the launch vehicle, the countdown and the launch. The videotape then shows a film clip from the University of Alabama, with Dr. Francis Wessling, project manager for the Consort 3 project, speaking about the mission goals in the materials sciences experimentation. The video shows footage of the payload being assembled. The next section is a discussion by Dr. Roy Hammustedt, of Pennsylvania State University, who reviews the Penn State Bio Module,and the goal of learning about the effects of gravity on physiology. This is followed by George Maybee, from McDonald Douglas, who spoke about the payload integration process while the video shows some of the construction. The last section of the videotape shows a press conference at the launch site. Ana Villamil answers questions from the press about the flight.	Transcript Link
2011 08 05	NASA STI Program	https://youtu.be/VwMIWOi8G24	STS-79 Flight Day 2	On this second day of the STS-79 mission, the flight crew, Cmdr. William F. Readdy, Pilot Terrence W. Wilcutt, Mission Specialists, Thomas D. Akers, John E. Blaha, Jay Apt, and Carl E. Walz, are seen in activating the double Spacehab module in the shuttle's payload bay, packing materials and supplies and filling the first four containers of water which will be delivered to the Mir Space Station. Apt and Walz set up the Active Rack Isolation System experiment in the Spacehab, a prototype of an International Space Station payload system designed to eliminate vibrations or disturbances caused by crew activity or engine firings. The double-rack which houses ARIS also contains almost 400 pounds of Russian food which is being used to simulate the weight and mass of a scientific investigation for this first test.	Transcript Link

2011 08 05	NASA STI Program	https://youtu.be/iTEhHlu_OXM	STS-79 Flight Day 3	On this third day of the STS-79 mission, the flight crew, Cmdr. William F. Readdy, Pilot Terrence W. Wilcutt, Mission Specialists, Thomas D. Akers, John E. Blaha, Jay Apt, and Carl E. Walz, start another busy day on orbit activating experiments in the Spacehab module. Readdy and Wilcutt are seen conducting two rendezvous burns while other crew members are seen working in the Spacehab module. The Active Rack Isolation System, or ARIS, is tended to by Walz, who performs a minor maintenance procedure on one of ARIS' vibration-damping pushrods while Akers works with an inventory management system using a bar code reader to more effectively keep track of items that will be transferred back and forth between the Shuttle and the Mir. Apt continues work with a furnace which heats to nearly 1,600 degrees centigrade to melt metal samples for study after the flight. Apt also provides a television tour of the Spacehab, which is twice its normal size for this flight to allow extra room for science experiments and logistical items slated for transfer to Mir.	Transcript Link
2011 08 05	NASA STI Program	https://youtu.be/uPseuIeHSLU	STS-79 Mission Highlight Presentation	The flight crew of STS-79, Cmdr. William F. Readdy, Pilot Terrence W. Wilcutt, Mission Specialists, Thomas D. Akers, Shannon Lucid, Jay Apt, and Carl E. Walz can be seen performing pre-launch activities such as eating the traditional breakfast, crew suit-up, and the ride out to the launch pad. Also, included are various panoramic views of the shuttle on the pad. The crew can be seen being readied in the 'white room' for their mission. After the closing of the hatch and arm retraction, launch activities are shown including countdown, engine ignition, launch, and the separation of the Solid Rocket Boosters. STS-79 is the second Shuttle-Mir mission to carry a SPACEHAB module on board, and the first to carry a double module. The forward portion of the double module will house experiments conducted by the crew before, during and after Atlantis is docked to the Russian space station. The aft portion of the double module primarily houses the logistics equipment to be transferred to the Russian space station. Logistics include food, clothing, experiment supplies, and spare equipment for Mir.	Transcript Link
2011 08 04	NASA STI Program	https://youtu.be/DkUJzUExmL0	Designing Space Station	An overview of preparations for the construction of Space Station Freedom (SSF) is presented. The video includes footage of astronauts testing materials for erectable structures in space both in the Shuttle bay while in orbit and in a neutral buoyancy tank at McDonald Douglas' Underwater Test Facility. Also shown are footage of robot systems that will assist the astronauts in building SSF, a computer simulation of an Orbiting Maneuvering Vehicle, solar dynamic mirrors that will power SSF, and mockups of the living quarters of the SSF.	Transcript Link

2011 08 04	NASA STI Program	https://youtu.be/OWzzEUAf9_o	ASTRO-1 to Explore Invisible Universe	This video explains the ASTRO 1 observatory and its ten day mission aboard SpaceLab on NASA's Space Shuttle, which Marshall Space Flight Center (MSFC) and Goddard Space Flight Center (GSFC) astronomers will use to study distant stars, supernovae, and black holes. The observatory contains ultraviolet and x ray telescopes that will capture images earth-bound observatories can't, due to interference from the earth's atmosphere. The video contains footage of the instrument being loaded on the shuttle, animations of anticipated images to be captured, and scenes of the SpaceLab Control Center at MSFC.	Transcript Link
2011 08 04	NASA STI Program	https://youtu.be/VqZ4iYCebJk	STS-84 Mission Highlights Resource Tape	The STS-84 mission flight crew, Cmdr. Charles J. Precourt, Pilot Eileen M. Collions, Payload Cmdr. Jean-Francois Clervoy (ESA), Mission Specialists Edward T. Lu, Carlos I. Noriega, Elena V. Kondakova, and Jerry M. Linenger can be seen performing pre-launch activities such as eating the traditional breakfast, crew suit-up, and the ride out to the launch pad. Also, included are various panoramic views of the shuttle on the pad. The crew can be seen being readied in the white room' for their mission. After the closing of the hatch and arm retraction, launch activities are shown including countdown, engine ignition, launch, and the separation of the Solid Rocket Boosters. The rendezvous with the Mir Space Station, along with onboard activities, and landing are included. Also included are shuttle-to-ground transmission between the crew and Mission Control and various earthviews.	Transcript Link
2011 08 04	NASA STI Program	https://youtu.be/de-igHiozME	STS-78 Mission Highlights Resource Tape	The flight crew of the STS-78 mission, Cmdr. Terence T. Henricks, Pilot Kevin R. Kregel, Payload Cmdr. Susan J. Helms, Mission Specialists Richard M. Linnehan, Charles E. Brady, Jr., and Payload Specialists Jean-Jacques Favier, Pd.D. and Robert B. Thirsk, M.D., present a video mission over-view of their space flight. Images include: pre-launch activities such as eating the traditional breakfast, crew suit-up, and the ride out to the launch pad. Also, included are various panoramic views of the shuttle on the pad. The crew can be seen being readied in the white room' for their mission. After the closing of the hatch and arm retraction, launch activities are shown including countdown, engine ignition, launch, and the separation of the Solid Rocket Boosters. Following an on-time launch, the crew of Endeavor are shown setting up a variety of experiments that will operate for much of the mission.	Transcript Link
2011 08 04	NASA STI Program	https://youtu.be/3V2zFsDkJvg	STS-82 Flight Day 02 Highlights	On the second day of the STS-82 mission, the crew Commander Kenneth D. Bowersox, Pilot Scott J. Horowitz, Payload Commander Mark C. Lee, and Mission Specialists Gregory J. Harbaugh, Steven L. Smith, Joseph R. Tanner, and Steven A. Hawley survey the payload bay with the Shuttle's 50-foot remote manipulator system (RMS). Hawley puts the arm through its paces to verify it's ability to capture the Hubble Space Telescope (HST). To prepare for the up coming spacewalks, the astronauts assemble on the middeck to checkout tools they will use while servicing the telescope.	Transcript Link

2011 08 04	NASA STI Program	https://youtu.be/REWTGcQ1YIo	STS-82 Flight Day 01 Highlights	The first day of the STS-82 mission begins with the crew, Commander Kenneth D. Bowersox, Pilot Scott J. Horowitz, Payload Commander Mark C. Lee, and Mission Specialists Gregory J. Harbaugh, Steven L. Smith, Joseph R. Tanner, and Steven A. Hawley performing pre-launch activities such as eating the traditional breakfast, being suited up, and riding out to the launch pad. Also, included are various panoramic views of the shuttle on the pad. The crew is readied in the 'white room' for their mission. After the closing of the hatch, and arm retraction, launch activities are shown including the countdown, engine ignition, launch, shuttle roll maneuver, and then the separation of the Solid Rocket Boosters (SRB) from the shuttle. Once in orbit the cargo bay doors are seen opening.	Transcript Link
2011 08 04	NASA STI Program	https://youtu.be/bTEw5iDdIVI	STS-79 Flight Day 1	On this first day of the STS-79 mission, the flight crew, Cmdr. William F. Readdy, Pilot Terrence W. Wilcutt, and Mission Specialists, Thomas D. Akers, John E. Blaha, Jay Apt, and Carl E. Walz, can be seen preforming pre-launch activities such as eating the traditional breakfast, crew suit-up, and the ride out to the launch pad. Also, included are various panoramic views of the shuttle on the pad. The crew can be seen being readied in the white room' for their mission. After the closing of the hatch and arm retraction, launch activities are shown including countdown, engine ignition, launch, and the separation of the Solid Rocket Boosters.	Transcript Link
2011 08 04	NASA STI Program	https://youtu.be/v-8MVnPHzio	X-29 Experiment in Flight	This document examines the goals and accomplishments of the forward sweep-winged X-29.	Transcript Link
2011 08 04	NASA STI Program	https://youtu.be/sJv2_f5qDlQ	Better Airplane Wings	The videotape discusses the new composites that will be used to create lighter yet stronger aircraft wings.	Transcript Link

2011 08 04	NASA STI Program	https://youtu.be/0hlLYD5kb6Y	X-31 Tailless Testing	This video addresses the NASA Dryden and X-31 International Test Organization (ITO) testbed provided for the Pentagon's 'tailless' and quasi-tailless vehicle configuration testing.	Transcript Link
2011 08 04	NASA STI Program	https://youtu.be/9GVx8dXbKjs	STS-81 Mission Highlights Resource Tape	The flight crew of the STS-81 Space Shuttle Orbiter Atlantis Commander Michael A. Baker, Pilot Brent W. Jett Jr., and Mission Specialists, John M. Grunsfeld, Marsha S. Ivins, Peter J.K. Wisoff, and John M. Linenger present an overview of their mission. Video footage includes the following: prelaunch and launch activities, the crew eating breakfast, shuttle launch, on orbit activities, rendezvous with Mir, Shuttle/Mir joint activities, undocking, and the shuttle landing.	Transcript Link
2011 08 04	NASA STI Program	https://youtu.be/rq01wVPf2lc	STS-94 Mission Highlights Resource Tape	The flight crew of STS-94, Cmdr. James D. Halsell, Jr., Pilot Susan L. Still, Payload Cmdr. Janice E. Voss, Mission Specialists Micheal L. Gernhardt and Donald A. Thomas, and Payload Specialists Gregory T. Linteris and Roger K. Crouch can be seen preforming pre-launch activities such as eating the traditional breakfast, crew suit-up, and the ride out to the launch pad. Also, included are various panoramic views of the shuttle on the pad. The crew can be seen being readied in the white room' for their mission. After the closing of the hatch and arm retraction, launch activities are shown including countdown, engine ignition, launch, and the separation of the Solid Rocket Boosters. The crew is seen continuing the payload activation process, as the research efforts of the Microgravity Science Laboratory (MSL) mission get into full swing. The crew is sen in the Microgravity Science Laboratory aboard Space Shuttle Columbia activating the final experiment facility and beginning additional experiments, among the more than 30 investigations to be conducted during the 16-day mission. The video concludes with the re-entery and landing of the Shuttle.	Transcript Link

2011 08 04	NASA STI Program	https://youtu.be/g0KX0s9TC4I	STS-70 Mission Highlights	The highlights of the STS-70 mission are presented in this video. The flight crew consisted of Cmdr. Tom Henricks, Pilot Kevin Kregel, Flight Engineer Nancy Currie, and Mission Specialists Dr. Don Thomas and Dr. Mary Ellen Weber. The mission's primary objective was the deployment of the 7th Tracking Data and Relay Satellite (TDRS), which will provide a communication, tracking, telemetry, data acquisition, and command services space-based network system essential to low Earth orbital spacecraft. Secondary mission objectives included activating and studying the Physiological and Anatomical Rodent Experiment/National Institutes of Health-Rodents (PARE/NIH-R), The Bioreactor Demonstration System (BDS), the Commercial Protein Crystal Growth (CPCG) studies, the Space Tissue Loss/National Institutes of Health-Cells (STL/NIH-C) experiment, the Biological Research in Canisters (BRIC) experiment, Shuttle Amateur Radio Experiment-2 (SAREX-2), the Visual Function Tester-4 (VFT-4), the Hand-Held, Earth Oriented, Real-Time, Cooperative, User-Friendly, Location-Targeting and Environmental System (HERCULES), the Microcapsules in Space-B (MIS-B) experiment, the Windows Experiment (WINDEX), the Radiation Monitoring Equipment-3 (RME-3), and the Military Applications of Ship Tracks (MAST) experiment. There was an in-orbit dedication ceremony by the spacecrew and the newly Integrated Mission Control Center to commemorate the Center's integration. The STS-70 mission was the first mission monitored by this new control center. Earth views included the Earth's atmosphere, a sunrise over the Earth's horizon, several views of various land masses, some B/W lightning shots, some cloud cover, and a tropical storm. July 1995	Transcript Link
2011 08 03	NASA STI Program	https://youtu.be/LA_GtCArt5M	STS-89 Mission Highlights Resource Tape	The flight crew of the STS-89 Space Shuttle Orbiter Endeavour, Cmdr. Terrence W. Wilcutt, Pilot Frank Edwards, and Mission Specialists Michael P. Anderson, James F. Reilly, Bonnie J. Dunbar, Salizhan Shakirovich Sharipov, David A. Wolf, and Andrew S.W. Thomas, present an overview of their mission. Images include prelaunch activities such as eating the traditional breakfast, crew suit-up, and the ride out to the launch pad. Also included are various panoramic views of the shuttle on the pad. The crew is readied in the white room' for their mission. After the closing of the hatch and arm retraction, launch activities are shown including countdown, engine ignition, launch, and the separation of the Solid Rocket Boosters (SRBs). Once in orbit, there are various views of the Mir Space Station as the shuttle begins its approach and docks. After the docking the two crews open the entry hatch and greet each other. The astronauts and cosmonauts transfer supplies from the shuttle to Mir. The astronauts prepare for the reentry phase of their mission. Endeavour separates from the Russian Space Station with a gentle push from springs in the docking mechanism that attaches it to the Space Station. The final view shows the crews' preparations for reentry and landing.	Transcript Link

2011 08 03	NASA STI Program	https://youtu.be/4g_5cffnQBg	STS-86 Mission Highlights Resource Tape	The flight crew of the STS-86 mission, Cmdr. James D. Wetherbee, Jr., Pilot Michael J. Bloomfield, Mission Specialists Scott E. Parazynski, Jean-Loup Chretien, Vladmir G. Titov, Wendy B. Lawrence and Mike Foale present an overview of their mission, whose primary objective is the rendezvous and space docking with the Russian Space Station Mir. Video film footage includes: prelaunch and launch activities; shuttle launch; in-orbit rendezvous; docking between Mir and the orbiter; general crew activities; transfer of supplies; undocking maneuvers and a Mir fly-around; and the reentry and landing of the orbiter.	Transcript Link
2011 08 03	NASA STI Program	https://youtu.be/TFECqiyUPOY	STS-63 Mission Highlights Resource Tape	This video (JSC1472) contains important visual events including launch, SPARTAN 204, SPACEHAB-03, CGP/ODERACS, and the rendezvous with the MIR Space Station, along with onboard activities, and landing. Also included are air-to-ground transmission between the crew and Mission, and various earthviews.	Transcript Link
2011 08 03	NASA STI Program	https://youtu.be/v9Nws4VmyhA	Mars Observer Mission Mapping the Martian World	The 1992 Mars Observer Mission is highlighted in this video overview of the mission objectives and planning. Using previous photography and computer graphics and simulation, the main objectives of the 687 day (one Martian year) consecutive orbit by the Mars Observer Satellite around Mars are explained. Dr. Arden Albee, the project scientist, speaks about the pole-to-pole mapping of the Martian surface topography, the planned relief maps, the chemical and mineral composition analysis, the gravity fields analysis, and the proposed search for any Mars magnetic fields.	Transcript Link
2011 08 03	NASA STI Program	https://youtu.be/Nq8vojfkvLg	RTG Safety Tests	The primary objective of STS-34 was to launch Galileo on its trip to Jupiter. The Galileo spacecraft contains two Radioisotope Thermoelectric Generators (RTG), which contains plutonium. This video shows and the accompanying material explains the tests that the RTG containment vessel has been subjected to, and the results of the tests. The video shows the trajectory of the Galileo spacecraft, a cutaway view of an RTG, the Plutonium-238 fuel capsule, and seven of the tests on the RTG.	Transcript Link
2011 08 03	NASA STI Program	https://youtu.be/wcy7OG6lrdY	STS-68 Mission Highlights Resource Tape	The video contains important visual events including Space Radar Laboratory-2, Get Away Special canisters, Commercial Protein Crystal Growth, Biological Research in Canisters, Cosmic Radiation Effects and Activation Monitor, Military Applications of Ship Tracks, other onboard activities, earth views, and landing. Also includes Air-to-ground transmission between the crew and Mission control.	Transcript Link

2011 08 02	NASA STI Program	https://youtu.be/2cJtAFr0K7M	Space Station Freedom	This video presents great model photography along with astronaut activity as practiced in mockup.	Transcript Link
2011 08 02	NASA STI Program	https://youtu.be/P4hPWmaCyD0	STS-82 Flight Day 09 Highlights	The ninth day of the STS-82 mission begins with the crew, Commander Kenneth D. Bowersox, Pilot Scott J. Horowitz, Payload Commander Mark C. Lee, and Mission Specialists Gregory J. Harbaugh, Steven L. Smith, Joseph R. Tanner, and Steven A. Hawley placing the Hubble Space Telescope back into its own orbit to continue its investigation of the far reaches of the universe. At the time of deployment, the Shuttle was at an altitude of 334 nautical miles over the southwest coast of Africa. Hubble is now operating at the highest altitude it has ever flown, a 335 by 321 nautical mile orbit. A few hours after Hubble's deployment, the crew receives a congratulatory phone call from NASA Administrator Daniel Goldin. The four spacewalking crewmembers also answered questions from several news networks regarding their work over the past week to upgrade the telescope.	Transcript Link
2011 08 02	NASA STI Program	https://youtu.be/uZ30qvLCbak	STS-82 Flight Day 08 Highlights	The eighth day of the STS-82 mission begins with the crew, Commander Kenneth D. Bowersox, Pilot Scott J. Horowitz, Payload Commander Mark C. Lee, and Mission Specialists Gregory J. Harbaugh, Steven L. Smith, Joseph R. Tanner, and Steven A. Hawley performing the final spacewalk of the mission. Lee and Smith attach several thermal insulation blankets to three equipment compartments at the top of the Support Systems Module section of Hubble which contain key data processing, electronics and scientific instrument telemetry packages. Following the completion of that work, Lee and Smith briefly return to the airlock while flight controllers evaluated a possible glitch with one of four Reaction Wheel Assembly units in Hubble used to maneuver the telescope for its scientific observations. A spare Reaction Wheel Assembly was available aboard Discovery for a swap out during an additional spacewalk had it been necessary, but a few hours later, after further analysis, payload controllers reported that the Reaction Wheel Assembly was in excellent shape and operating at the proper speed.	Transcript Link

2011 08 02	NASA STI Program	https://youtu.be/a1bD_ILJ7Jg	STS-82 Flight Day 06 Highlights	The sixth day of the STS-82 mission begins with the crew, Commander Kenneth D. Bowersox, Pilot Scott J. Horowitz, Payload Commander Mark C. Lee, and Mission Specialists Gregory J. Harbaugh, Steven L. Smith, Joseph R. Tanner, and Steven A. Hawley conducting the third spacewalk of the mission. Lee and Smith are seen removing and replacing a Data Interface Unit which provides command and data interfaces between Hubble's data management system and other subsystems. They also replace an old reel-to-reel style Engineering and Science Tape Recorder with a new digital Solid State Recorder (SSR) that will allow simultaneous recording and playback of data. The final task for Lee and Smith is the change out of one of four Reaction Wheel Assembly units that use spin momentum to move the telescope toward a target and maintain it in a stable position.	Transcript Link
2011 08 02	NASA STI Program	https://youtu.be/9SDmOFt8jiI	STS-82 Flight Day 07 Highlights	The seventh day of the STS-82 mission begins with the crew, Commander Kenneth D. Bowersox, Pilot Scott J. Horowitz, Payload Commander Mark C. Lee, and Mission Specialists Gregory J. Harbaugh, Steven L. Smith, Joseph R. Tanner, and Steven A. Hawley performing their third spacewalk of the mission by emerging from Discovery's airlock. Their first task is the replacement of a Solar Array Drive Electronics package which is used to control the positioning of Hubble's solar arrays. Harbaugh and Tanner next venture to the top of the telescope where they replaced covers over Hubble's magnetometers, which are used to sense the telescope's position in relation to the Earth through data acquired from the Earth's magnetic field. The spacewalking astronauts then place thermal blankets of multi-layer material over two areas of degraded insulation around the light shield portion of the telescope just below the top of the astronomical observatory.	Transcript Link
2011 08 02	NASA STI Program	https://youtu.be/5H41kgOefjU	STS-82 Flight Day 05 Highlights	The fifth day of the STS-82 mission begins with the crew, Commander Kenneth D. Bowersox, Pilot Scott J. Horowitz, Payload Commander Mark C. Lee, and Mission Specialists Gregory J. Harbaugh, Steven L. Smith, Joseph R. Tanner, and Steven A. Hawley completing the checkout of spacesuits well ahead of schedule, allowing them to start the second spacewalk of the flight. Harbaugh and Tanner went right to work, replacing a degraded Fine Guidance Sensor and a failed Engineering and Science Tape Recorder with new spares. The astronauts also installed a new unit known as the Optical Control Electronics Enhancement Kit, which will further increase the capability of the new Fine Guidance Sensor. During the spacewalk, the astronauts and flight controllers took note of cracking and wear incurred by thermal insulation which protects several areas of the telescope.	Transcript Link

2011 08 02	NASA STI Program	https://youtu.be/om7SZXLTPwU	STS-83 Mission Highlights Resources Tape	The STS-83 mission flight crew, Cmdr. James D. Halsell Jr., Pilot Susan L. Still, Payload Cmdr. Janice E. Voss, Mission Specialists Michael L. Gernhardt and Donald A. Thomas, and Payload Specialist Gregory T. Linteris and Roger K. Crouch present an overview of their mission. The primary payload is the Microgravity Science Laboratory (MSL), which is a collection of microgravity experiments housed inside a European Spacelab Long Module (LM). MSL features 19 materials science investigations in 4 major facilities. These facilities are the Large Isothermal Furnace, the EXpedite the PRocessing of Experiments to the Space Station (EXPRESS) Rack, the Electromagnetic Containerless Processing Facility (TEMPUS), and the Coarsening in Solid-Liquid Mixtures (CSLM) Facility, the Droplet Combustion Experiment (DCE); and the Combustion Module-1 Facility. Additional technology experiments will be performed in the Middeck Glovebox (MGBX) developed by the Marshall Space Flight Center (MSFC) and the High-Packed Digital Television (HI-PAC DTV) system will be used to provide multi-channel real-time analog science video. Pre-flight, launch, and orbital footage is followed a discussion of the spaceborne experiments aboard the MSL. The end footage shows the shuttle's prelanding checkout, reentry, and landing.	Transcript Link
2011 08 02	NASA STI Program	https://youtu.be/RXwy03fKcv4	STS-59 Post Flight Presentation	This video contains footage selected by the astronauts, as well as their comments on their respective flights. It also contains launch, onboard crew activities, and landing.	Transcript Link
2011 08 02	NASA STI Program	https://youtu.be/fz1NjPhEMn8	STS 63 Post Flight Presentation	At a post flight conference, Captain Jim Wetherbee, of STS Flight 63, introduces each of the other members of the STS 63 crew (Eileen Collins, Pilot; Dr. Bernard Harris, Payload Commander; Dr. Michael Foale, Mission Specialist from England; Dr. Janice Voss, Misssion Specialist; and Colonel Vladimir Titor, Misssion Specialist from Russia. A short biography of each member and a brief description of their assignment during this mission is given. A film was shown that included the preflight suit-up, a view of the launch site, the actual night launch, a tour of the Space Shuttle and several of the experiment areas, several views of earth and the MIR Space Station and cosmonauts, the MIR-Space Shuttle rendezvous, the deployment of the Spartan Ultraviolet Telescope, Foale and Harris's EVA and space walk, the retrieval of Spartan, and the night entry home, including the landing. Several spaceborne experiments were introduced: the radiation monitoring experiment, environment monitoring experiment, solid surface combustion experiment, and protein crystal growth and plant growth experiments. This conference ended with still, color pictures, taken by the astronauts during the entire STS 63 flight, being shown.	Transcript Link

2011 08 02	NASA STI Program	https://youtu.be/yclSUQGFJ0w	STS-46 Post Flight Press Conference	At a post flight press conference, the flight crew of the STS-46 mission (Cmdr. Loren Shriver, Pilot Andrew Allen, Mission Specialists Claude Nicollier (European Space Agency (ESA)), Marsha Ivins (Flight Engineer), Jeff Hoffman (Payload Commander), Franklin Chang-Dias, and Payload Specialist Franco Malerba (Italian Space Agency (ISA))) discussed their roles in and presented video footage, slides and still photographs of the different aspects of their mission. The primary objectives of the mission were the deployment of ESA's European Retrievable Carrier (EURECA) satellite and the joint NASA/ISA deployment and testing of the Tethered Satellite System (TSS). Secondary objectives included the IMAX Camera, the Limited Duration Space Environment Candidate Materials Exposure (LDVE), and the Pituitary Growth Hormone Cell Function (PHCF) experiments. Video footage of the EURECA and TSS deployment procedures are shown. Earth views were extensive and included Javanese volcanoes, Amazon basin forest ground fires, southern Mexico, southern Bolivian volcanoes, south-west Sudan and the Sahara Desert, and Melville Island, Australia. Questions from reporters and journalists from Johnson Space Center and Kennedy Space Center were discussed.	Transcript Link
2011 08 02	NASA STI Program	https://youtu.be/zGJkwDbJow	STS-47 Post Flight Press Conference	The flight crew of the STS-47 Space Shuttle Orbiter Endeavour Cmdr. Robert L. Gibson, Pilot Curtis L. Brown, Payload Cmdr. Mark C. Lee, Mission Specialists, N. Jan Davis, Jay Apt, Mae C. Jemison, and Payload Specialist, Mamoru Mohri, present an overview of their mission. This the 50th Shuttle flight marks the first NASA mission devoted primarily to Japan. Endeavour carries into Earth orbit Spacelab-J (SL-J), a 23-foot long pressurized laboratory built by the European Space Agency specifically for conducting experiments in a shirt-sleeve environment. SL-J contains 43 experiments, 34 provided by Japan, 7 from the United States and 2 joint experiments. Jemison becomes the first African American woman to fly in space and Mohri first Japanese to fly in space. Video footage includes the following: prelaunch and launch activities; various experiments including protein crystal growth, electronic materials, fluids, glasses and ceramics, metals and alloys, and the effects of microgravity on plants and animals; earth views of Japan, Tokyo Harbor, and Hurricane Bonnie; and the re-entry and landing of the orbiter.	Transcript Link
2011 08 02	NASA STI Program	https://youtu.be/CEQnWTkHWik	STS-61 Post Flight Press Conference	This video contains footage selected by the astronauts, as well as their comments on their respective flights. It also contains launch, onboard crew activities, and landing.	Transcript Link

2011 08 02	NASA STI Program	https://youtu.be/wALvVRm_-zo	STS-62 Post Flight Press Conference	This video contains footage selected by the astronauts, as well as their comments on their respective flights. It also contains launch, onboard crew activities, and landing.	Transcript Link
2011 08 02	NASA STI Program	https://youtu.be/PdDRY6X5g_w	STS-60 Post Flight Press Conference	This video contains footage selected by the astronauts, as well as their comments on their respective flights. It also contains launch, onboard crew activities, and landing.	Transcript Link
2011 08 02	NASA STI Program	https://youtu.be/m_n1pG7Vg5Y	STS-41 Post-Flight Press Presentation	This videotape contains footage selected and narrated by the crew. The footage covers the launch, the deployment of Ulysses, onboard crew activities, and the landing.	Transcript Link
2011 08 01	NASA STI Program	https://youtu.be/Xs6XYgdJUjM	STS-67 Mission Highlights Resource Tape	The Space Shuttle Mission, STS-67, is highlighted in this video. Flight crew (Stephen S. Oswald (Commander), William G. Gregory (Pilot), Tamara E. Jernigan, Wendy B. Lawrence, John M. Grunfeld (Mission Specialists), Samuel T. Durrance, and Ronald A. Parise (Payload Specialists)) prelaunch and launch activities, EVA activities with payload deployment and retrieval (ASTRO-2 and WUPPE (Wisconsin Ultraviolet Photo Polarimeter Experiment)), spaceborne experiments (astronomical observation and data collection, protein crystal growth, and human physiological processes), and pre-reentry activities are shown. There are astronomical telescopic observation from the two telescopes in the payload, the Hopkins Ultraviolet Telescope and the Ultraviolet Imaging Telescope, of Io and of globular clusters, and their emission spectra is collected via a spectrometer. Earth view film and photography is shown, which includes lightning on terrestrial surfaces, cyclone activity, and cloud cover.	Transcript Link

2011 07 30	NASA STI Program	https://youtu.be/8JtU2mGVqRI	STS-84 Post Flight Presentation	The STS-84 mission flight crew, Cmdr. Charles J. Precourt, Pilot Eileen M. Collions, Payload Cmdr, Jean-Francois Clervoy (ESA), Mission Specialists Edward T. Lu; Carlos I. Noriega; Elena V. Kondakova; Jerry M. Linenger, present a post flight analysis of their mission through the use of color slides and video footage. Prelaunch and launch activities are shown and briefly discussed. The astronauts take turns talking about different aspects of their specific roles during the mission.	Transcript Link
2011 07 30	NASA STI Program	https://youtu.be/tOQWkasNuvI	Mercury Exploration of a Planet	The flight of the Mariner 10 spacecraft to Venus and Mercury is detailed in animation and photography. Views of Mercury are featured. Also included is animation on the origin of the solar system. Dr. Bruce C. Murray, director of the Jet Propulsion Laboratory, comments on the mission.	Transcript Link
2011 07 30	NASA STI Program	https://youtu.be/bv_eJuXlp2k	STS-71 Post Flight Presentation	The post flight presentation for the STS-71 Space Shuttle Atlantis Mission is featured, with astronauts Gibson, Precourt, Baker, Harbough, Dunbar, Strekalov, Dezhurov, and Thagard, present for the press conference. They showed film footage and photographic slides of various pre-launch and launch activities, and onboard Shuttle activities and explained each of the different operations from the footage.	Transcript Link
2011 07 30	NASA STI Program	https://youtu.be/5FCrk7wYE54	STS-69 Flight Day 6 Highlights	After being awakened by the Beatles song, 'A Hard Days Night', the flightcrew of the STS-69 mission, Cmdr. Dave Walker, Pilot Ken Cockrell, and Mission Specialists Jim Voss, Jim Newman, and Mike Gernhardt, began their sixth day in orbit by monitoring the free orbiting Wake Shield Facility (WSF). Later Cmdr. Walker conducted an interview with television reporters from Atlanta and Boston, answering questions about the mission and general questions about NASA's space program. The crew filmed a video for themselves performing daily routines (eating, shaving, exercising), as well as some of the physiological experiments, and shuttle equipment maintenance and checkout. One of the secondary experiments included the Commercial Generic Bioprocessing Apparatus-7 (CGBA-7), which served as an incubator and experiment station for a variety of tests (agricultural, pharmaceutical, biomedical, and environmental). Earth views included some cloud cover, the Gulf of Mexico, Texas, and the Atlantic Ocean.	Transcript Link

2011 07 30	NASA STI Program	https://youtu.be/z3MmRWrIMKw	STS-69 Flight Day 7 Video File	On the seventh day of the STS-69 mission, the astronauts, Cmdr. Dave Walker, Pilot Ken Cockrell, and Mission Specialists Jim Voss, Jim Newman, and Mike Gernhardt, were awakened by the theme song from the movie 'Patten.' Voss and Gernhardt performed a pre-EVA (Extravehicular Activity) checkout of the new thermal spacesuits that they will be wearing in two days. Solving problems with the Wake Shield Facility (WSF) occupied the other astronauts for most of this day. Earth views included tropical storm Marilyn in the Caribbean.	Transcript Link
2011 07 30	NASA STI Program	https://youtu.be/kTFpqwhJ6gA	STS-69 Flight Day 8 Video File	The astronauts, Cmdr. Dave Walker, Pilot Ken Cockrell, and Mission Specialists Jim Voss, Jim Newman, and Mike Gernhardt were awakened by the theme song of the television cartoon show 'Underdog' on this eighth day of the STS-69 mission. The retrieval of the Wake Shield Facility (WSF) occurred without any major problems. The WSF was unable to grow all seven layers of films before its retrieval. Only four were grown due to thermal problems.	Transcript Link
2011 07 30	NASA STI Program	https://youtu.be/qjBvL1Lhweg	STS-69 Flight Day 9 Video File	The song, 'He's A Tramp', from the Walt Disney cartoon movie, 'Lady and the Tramp', awakened the astronauts, Cmdr. Dave Walker, Pilot Ken Cockrell, and Mission Specialists Jim Voss, Jim Newman, and Mike Gernhardt, on the ninth day of the STS-69 mission. The Wake Shield Facility (WSF) was again unberthed from the shuttle cargo bay and , using the shuttle's robot arm, held over the side of the shuttle for five hours where it collected data on the electrical field build-up around the spacecraft as part of the Charging Hazards and Wake Studies Experiment (CHAWS). Voss and Gernhardt rehearsed their Extravehicular Activity (EVA) spacewalk, which was planned for the next day. Earth views included cloud cover, a hurricane, and its eye.	Transcript Link
2011 07 30	NASA STI Program	https://youtu.be/_2Ld3iBUFgM	STS-69 Flight Day 10 Highlights	In honor of the Extravehicular Activity (EVA) spacewalk today, the tenth day of the STS-69 mission, the astronauts, Cmdr. Dave Walker, Pilot Ken Cockrell, and Mission Specialists Jim Voss, Jim Newman, and Mike Gernhardt, were awakened to the Frankie Valle and the Four Seasons tune, 'Walk Like A Man.' Voss and Gernhardt tested the new thermal spacesuits and some new tools in the shuttle's cargo bay for six hours. The EVA was successful. The rest of the astronauts monitored the EVA and packed up the equipment and experiments in preparation for their reentry flight tomorrow.	Transcript Link

2011 07 30	NASA STI Program	https://youtu.be/Ffzt2NGPUNY	STS-79 Post Flight Presentation	The flight crew of the STS-79 mission, Cmdr. William F. Readdy, Pilot Terrence W. Wilcutt, and Mission Specialists, Thomas D. Akers, John E. Blaha, Jay Apt, and Carl E. Walz, present a video mission overview of their space flight. Images include: pre-launch activities such as eating the traditional breakfast, crew suit-up, and the ride out to the launch pad. Also, included are various panoramic views of the shuttle on the pad. The crew can be seen being readied in the white room' for their mission. After the closing of the hatch and arm retraction, launch activities are shown including countdown, engine ignition, launch, and the separation of the Solid Rocket Boosters. Following an on-time launch, the crew of Endeavor are shown setting up a variety of experiments that will operate for much of the mission.	Transcript Link
2011 07 29	NASA STI Program	https://youtu.be/Y51Pvu-T7Lw	STS-82 Post Flight Presentation	The STS-82 crew, Commander Kenneth D. Bowersox, Pilot Scott J. Horowitz, Payload Commander Mark C. Lee, and Mission Specialists Gregory J. Harbaugh, Steven L. Smith, Joseph R. Tanner, and Steven A. Hawley present a video and still picture overview of their mission. Included in the presentation are the following: the pre-launch activities such as eating the traditional breakfast, being suited up, and riding out to the launch pad, various panoramic views of the shuttle on the pad, the countdown, engine ignition, launch, shuttle roll maneuver, separation of the Solid Rocket Boosters (SRB) from the shuttle, survey of the payload bay with the Shuttle's 50-foot remote manipulator system (RMS), the successful retrieve of the Hubble Space Telescope (HST), EVAs to repair HST, release of HST, and the shuttle's landing.	Transcript Link
2011 07 29	NASA STI Program	https://youtu.be/fhin0e2oPYg	GAS highlights, 1988	The video shows highlights of GSFC's involvement in the Get Away Special program during the 1988 calendar year.	Transcript Link
2011 07 29	NASA STI Program	https://youtu.be/uA481VS_AeI	STS-74 Post Flight Presentation	The flight crew of the STS-74 Space Shuttle Orbiter Atlantis (Cmdr. Ken Cameron, Pilot Jim Halsell, and Mission Specialists Chris Hadfield, Jerry Ross, and William McArthur) present an overview of their flight mission, whose primary objective was the rendezvous and space docking with the Russian Mir Space Station. Video film footage includes: prelaunch and launch activities; shuttle launch; installation of the Russian-made docking module to the orbiter; in-orbit rendezvous; in-orbit docking between Mir and the orbiter; general crew activities; transfer of supplies, equipment, and a crystal growth experiment to Mir; data collection of Mir thruster firings; undocking maneuvers and Mir fly around; pre-return checkout of flight systems; and reentry and landing of the orbiter. Earth views include horizon sunsets, atmospheric boundary layers, and a variety of geographical location footage (New Orleans; Atlanta; James Bay, Canada; Poland; Turkey; Mt. Pinatubo, Philippines; Salt Lake City, Utah; and Colorado). Released Dec. 1995.	Transcript Link

2011 07 29	NASA STI Program	https://youtu.be/jx1RywciAVs	STS-73 Post Flight Presentation	The post flight presentation of the STS-73 Space Shuttle's United States Microgravity Lab. (USML) mission was presented by the flight crew, Cmdr. Kenneth Bowersox, Pilot Kent Rominger, Payload Specialists Albert Sacco and Fred Gregory, and Mission Specialists Kathryn Thornton, Catherine 'Cady' Collman, and Michael Lopez-Alegria, using color video and slides. Film footage includes the prelaunch and launch activities, the USML and Middeck experiments (Advanced Protein Crystallization Facility (APCF), the Astroculture(tm) (ASC) hardware and experiment, the Commercial Generic Bioprocessing Apparatus (CGBA), the Crystal Growth Furnace (CGF), the Drop Physics Module (DPM), the Geophysical Fluid Flow Cell (GFFC), the Glovebox (GBX), the Zeolite Crystal Growth (ZCG) experiment, the Surface Tension Driven Convection Experiment (STDCE), the Protein Crystal Growth (PCG) experiment, three Measuring Microgravity experiments (the Space Acceleration Measurement System (SAMS), the Three Dimensional Microgravity Accelerometer (3DMA), and the Orbital Acceleration Research Experiment (OARE)), and the High-Packed Digital Television (HI-PAC) demonstration system), pre-return flight systems checkout, reentry, and space shuttle landing. The USML experiments were monitored via the HI-PAC system downlink. Earth views included mostly geographical locations (Mediterranean Sea; Turkey; Lake Powell, Arizona/Utah area; San Francisco Bay; Baltimore, Maryland; Washington, DC; India; Tibet; China; Bhutan; Philadelphia; and the Himalayas).	Transcript Link
2011 07 29	NASA STI Program	https://youtu.be/-bkYMCQ4qLM	STS-76 Post Flight Press Conference	The flight crew of the STS-76 Space Shuttle Orbiter Atlantis; Cmdr. Kevin P. Chilton, Pilot Richard A. Searfoss, and Mission Specialists Linda M. Godwin, Michael R. Clifford, and Ronald M. Sega present an overview of their mission. Highlights STS-76 include the first spacewalk by U.S. astronauts while the shuttle is attached to the Russian Space Station Mir, and the transfer of Shannon W. Lucid to the Mir-21 crew, the first American woman to serve as a Mir station researcher. She will remain aboard the orbiting station until Atlantis again docks with Mir in early August. Video footage includes the following: prelaunch and launch activities; shuttle launch; in-orbit rendezous; in-orbit docking between Mir and the orbiter; general crew activities; tranfer of supplies; Godwin and Clifford's EVA; undocking maneuvers; and the re-entry and landing of the orbiter.	Transcript Link

2011 07 29	NASA STI Program	https://youtu.be/9gKN3osheuM	STS-69 Postflight Presentation	A postflight conference of the STS-69 mission is presented. The flightcrew ('The Dog Team') consisted of Cmdr. David Walker, Pilot Kenneth Cockrell, Payload Cmdr. James Voss, and Mission Specialists James Newman and Michael Gernhardt. The mission's primary objective was the deployment and retrieval of the SPARTAN-201 satellite, which investigated the interaction between the Sun and it's solar wind. Other secondary experiments and shuttle payloads included the Wake Shield Facility (WSF), which grew several layers of semiconductor films, the International Extreme Ultraviolet Hitchhiker (IEH-1), the Capillary Pumped Loop-2/Gas Bridge Assembly (CAPL-2/GBA), several Get Away Specials (GAS) experiments, the Electrolysis Performance Improvement Concept Study (EPICS), the Thermal Energy Storage (TES-2) experiment, the Commercial Generic Bioprocessing Apparatus-7 (CGBA-7), the National Institutes of Health-Cells 4 (NIH-C4) experiment, and the Biological Research in Canister-6 (BRIC-6) experiment. Earth views consisted of Saudi Arabia water wells, uncommon vortices over Oman, the Amazon River, the Bahamas, Somalia, a sunset over the Earth's horizon, and two hurricanes, Luis and Marilyn.	Transcript Link
2011 07 29	NASA STI Program	https://youtu.be/L5aFwSOyTw0	STS-77 Post Flight Presentation	The flight crew of the STS-77 mission, Cmdr. John H. Casper, Pilot Curtis L. Brown, Jr., and Mission Specialists Andrew S.W. Thomas, Ph.D., Daniel W. Bursch, Mario Runco, Jr., and Marc Garneau, Ph.D., present a video mission overview of their space flight. Images include: pre-launch activities such as eating the traditional breakfast, crew suit-up, and the ride out to the launch pad. Also, included are various panoramic views of the shuttle on the pad. The crew can be seen being readied in the white room' for their mission. After the closing of the hatch and arm retraction, launch activities are shown including countdown, engine ignition, launch, and the separation of the Solid Rocket Boosters. Following an on-time launch, the crew of Endeavor are shown setting up a variety of experiments that will operate for much of the mission. Also seen is the deployment and inflation of the Spartan Satellite, experiments being conducted in the Spacehab module, thruster firing to stabilized the shuttle, and the mission ending re-entry and landing of the shuttle Endeavor. The crew than answers questions from the press.	Transcript Link
2011 07 28	NASA STI Program	https://youtu.be/PVRK_2Ap10U	STS-89 Post Flight Presentation	The flight crew of the STS-89 Space Shuttle Orbiter Endeavour, Cmdr. Terrence W. Wilcutt, Pilot Frank Edwards, and Mission Specialists Michael P. Anderson, James F. Reilly, Bonnie J. Dunbar, Salizhan Shakirovich Sharipov, David A. Wolf, and Andrew S.W. Thomas present an overview of their mission. It's whose primary objective was the rendezvous and space docking with the Mir Space Station. Video film footage includes prelaunch and launch activities; shuttle launch; in-orbit docking between Mir and Endeavour; general crew activities; transfer of supplies, equipment, and microgravity experiments to Mir; undocking maneuvers and Mir fly around; pre-return checkout of flight systems; and reentry and landing of the orbiter.	Transcript Link

2011 07 28	NASA STI Program	https://youtu.be/1FLvjnteZVI	STS-69 Flight Day 1 Video File	The first day of the STS-69 flight is highlighted in this video. Shown are the prelaunch and launch activities and the in-orbit SPARTAN-201 satellite pre-deployment checkout of the robot arm in the shuttle's bay. The flight crew consisted of Cmdr. Dave Walker, Pilot Ken Cockrell, and Mission Specialists Jim Voss, Jim Newman, and Mike Gernhardt. Earth views of cloud cover are included.	Transcript Link
2011 07 28	NASA STI Program	https://youtu.be/P9os295TqGg	NACA NASA History at Dryden, Parts 1 and 2	Two consecutive videos of raw material showing examples of research activity at the center from the 1950's to the 1980's. No sound.	Transcript Link
2011 07 28	NASA STI Program	https://youtu.be/K6jHuf9rB9Q	Galileo Jupiter Probe Ready to Go	This video presents close cloud views of Jupiter, probe deployment, descent, chute opening, trajectories, and views of assembly at Hughes.	Transcript Link
2011 07 28	NASA STI Program	https://youtu.be/dKj2DXfCs-k	Dare to Dream	This video describes the Space Station Freedom and discusses the purpose of this international project.	Transcript Link
2011 07 28	NASA STI Program	https://youtu.be/eSOJdJlqfWw	STS-69 Flight Day 5 Video File	Awakening to the theme song of the television show 'Rin Tin Tin', the astronauts, Cmdr. Dave Walker, Pilot Ken Cockrell, and Mission Specialists Jim Voss, Jim Newman, and Mike Gernhardt, of the STS-69 mission began their fifth day in orbit. The deployment of the Wake Shield Facility (WSF) was accomplished successfully, although it was delayed several hours due to communication problems between the satellite and its carrier platform located in the shuttle's cargo bay. The WSF satellite's main purpose was to grow up to seven layers of semiconductor films in a vacuum-like state while orbiting behind the space shuttle. The shuttle's Global Positioning System and Satellite Tracking System were both given checkout tests.	Transcript Link

2011 07 28	NASA STI Program	https://youtu.be/TX-7A36vwPE	STS-69 Flight Day 4 Highlights	On the fourth day of the STS-69 mission, the astronauts, Cmdr. Dave Walker, Pilot Ken Cockrell, and Mission Specialists Jim Voss, Jim Newman, and Mike Gernhardt, were awakened by 5 year old Madeline Cockrell (Ken Cockrell's daughter) singing the song 'Bingo Was His Name.' The interception and retrieval of the SPARTAN-201 satellite was the first task of the day. The SPARTAN-201's mission was the study of the solar corona and the solar wind. The rest of the day was spent preparing for the deployment of the Wake Shield Facility (WSF), whose purpose during its two day orbit of the Earth, is to grow films for semiconductors in a vacuum-like environment. Earth views included some cloud cover and different areas of South America.	Transcript Link
2011 07 27	NASA STI Program	https://youtu.be/SbZEwF2WIac	Ares I-X Parachute Deployment	This video captures the parachute deployment from initial opening to final touchdown.	Transcript Link
2011 07 27	NASA STI Program	https://youtu.be/CO7B0V7CJJs	STS-69 Flight Day 2 Highlights	In this second day of the STS-69 mission, the SPARTAN-201 satellite is deployed. The SPARTAN satellite is being used for the study of solar physics. An in-orbit interview is conducted with crew member, Mission Specialist Jim Newman, by KABC 7.90 Talk Radio. Newman answers questions from station listeners regarding the mission, future NASA objectives, present NASA objectives, and general questions regarding living in space. The remaining crew members include Cmdr. Dave Walker, Pilot Ken Cockrell, and Mission Specialists Jim Voss and Mike Gernhardt	Transcript Link
2011 07 27	NASA STI Program	https://youtu.be/omnqaukQbSk	STS-69 Flight Day 11 Highlights	On this eleventh day of the STS-69 flight, the astronauts, Cmdr. Dave Walker, Pilot Ken Cockrell, and Mission Specialists Jim Voss, Jim Newman, and Mike Gernhardt were awakened to the theme song for the cartoon 'Charlie Brown. ' The crew spent most of the day preparing the shuttle for reentry and landing. Several reporters interviewed the crew via a satellite link. Questions ranging from the status and problems with the mission to NASA's future were asked. Walker and Cockrell performed a successful landing of the space shuttle at Kennedy Space Center.	Transcript Link

2011 07 26	NASA STI Program	https://youtu.be/J4uDwNzBIA8	STS-61 Mission Highlights Resource Tape, Part 2	This contains important visual events including launch, Hubble Space Telescope (HST) capture, repair and re-deployment, onboard activities, earth views, and landing. Also included is the air-to-ground transmission between the crew and Mission Control.	Transcript Link
2011 07 25	NASA STI Program	https://youtu.be/9ucTdd2EtI4	1980 Aeronautics and Space Highlights	This video includes Voyager 1 to Saturn, Solar Maximum Mission, sounding rockets/balloons, Space Shuttle, GOES 4 weather satellite, Mount St. Helen's Research, wind energy, rotor systems research aircraft, quiet shorthaul aircraft, AD-1 Scissor Wing, and automated pilot advisory system.	Transcript Link
2011 07 25	NASA STI Program	https://youtu.be/dw7CeN1xvIQ	Astronauts Number 1	The story of the selection and training of the seven Mercury astronauts is presented. A re-release of US Project Mercury.	Transcript Link
2011 07 25	NASA STI Program	https://youtu.be/XBmPSeeqD0Q	1971 Aeronautics and Space Highlights	These highlights include Mariner orbit of Mars, Interplanetary Monitoring Platform, Orbiting Solar Observatory, small scientific satellite, sounding rockets, Stratoscope 11, earth resources, aeronautics, jet noise abatement, airport runway safety, Apollo 14 and 15, and Skylab.	Transcript Link
2011 07 25	NASA STI Program	https://youtu.be/wHvyW2pLPNE	Pioneer-Venus Press Clip	This video shows, with high quality animation, the formation of the Solar System: comets, Jupiter, Europa, Saturn, Titan, Mars, the Sun, and early Earth. The focus is on life elsewhere in the Solar System. The recording was prepared for a news conference. Sound track is muted for the first 8.5 minutes.	Transcript Link

2011 07 25	NASA STI Program	https://youtu.be/hDHh_dUZEE4	The 1977 Astronautics and Space Highlights	These highlights include the Space Shuttle, the Voyagers, Landsat, aeronautics, Spacelab, HEAO-1, and energy research.	Transcript Link
2011 07 25	NASA STI Program	https://youtu.be/a0Ggpf_M4p4	ASTP 15th Anniversary Clip-Media Release	This release is comprised of 5 separate clips, including the following: CL 762 Astronauts/Cosmonauts Visit to KSC and Walt Disney World; CL 739 ASTP Joint Crew Activities; CL 748 ASTP Astronauts/Cosmonauts Horlock Ranch Visit; CL 758 T-21 ASTP Training - US/USSR; and CL 743 ASTP Joint Crew Training in the Soviet Union.	Transcript Link
2011 07 25	NASA STI Program	https://youtu.be/QmkIn7Je1cs	STS-47 Mission Highlights Resource Tape	The mission of the STS-47 flight is highlighted in this video. The flight crew consisted of: Cmdr. 'Hoot' Gibson, Pilot Kurt Brown, Payload Cmdr. Jan Davis, Payload Specialist. M. Mohri (Japanese Astronaut), and Mission Specialists Jay Apt and May Jemison. The primary goal of this mission was the set-up and carrying out of experiments in the accompanying Japanese Spacelab (SL-J) in cooperation with the Japanese Space Program. Dr. Mohri is the first professional Japanese astronaut to fly in space. Vice President Dan Quayle and his wife are shown addressing the astronauts of the Space Shuttle Endeavour with a small pre-launch speech. On this flight many different physical, physiological, and biological spaceborne experiments were performed. These experiments included: a gas evaporation in low gravity environment experiment; a brainwave signals from carp experiment; several human eye movement and visual physiological tests; various physiological tests on a variety of insects and frogs; a embryology experiments on tadpoles; several experiments concerned with fluid dynamics; an imaging furnace test with heated glass containing gold particles (flow measurement); a Solid Surface Combustion Experiment; and a protein crystal growth experiment. Launch, in-orbit, and landing footage is shown, along with a variety of crew activities. One feature that astronauts were able to video was the actual in-orbit movement of the side wing flaps of the Space Shuttle.	Transcript Link

2011 07 25	NASA STI Program	https://youtu.be/aIDSMHGPhZU	STS-61 Mission Highlights Resource Tape, Part 1	This contains important visual events including launch, Hubble Space Telescope (HST) capture, repair and re-deployment, onboard activities, earth views, and landing. Also included is the air-to-ground transmission between the crew and Mission Control.	Transcript Link
2011 07 24	NASA STI Program	https://youtu.be/adatQ59j6sc	STS-77 Mission Highlights Resource Tape	The flight crew of the STS-77 mission, Cmdr. John H. Casper, Pilot Curtis L. Brown, Jr., and Mission Specialists Andrew S.W. Thomas, Ph.D., Daniel W. Bursch, Mario Runco, Jr., and Marc Garneau, Ph.D., present a video mission over-view of their space flight. Images include: pre-launch activities such as eating the traditional breakfast, crew suit-up, and the ride out to the launch pad. Also, included are various panoramic views of the shuttle on the pad. The crew can be seen being readied in the white room' for their mission. After the closing of the hatch and arm retraction, launch activities are shown including countdown, engine ignition, launch, and the separation of the Solid Rocket Boosters. Following an on-time launch, the crew of Endeavor are shown setting up a variety of experiments that will operate for much of the mission. Also seen is the deployment and inflation of the Spartan Satellite, experiments being conducted in the Spacehab module, thruster firing to stabilized the shuttle, and the mission ending re-entry and landing of the shuttle Endeavor.	Transcript Link
2011 07 24	NASA STI Program	https://youtu.be/Lf6UI5FW7ig	STS-76 Mission Highlights Resource Tape	The flight crew of the STS-76 mission, Cmdr. Kevin P. Chilton, Pilot Richard A. Searfoss, and Mission Specialists Shannon W. Lucid, Linda M. Godwin, Michael R. Clifford, and Ronald M. Sega, present a video mission over-view of their space flight. Images include: pre-launch activities such as eating the traditional breakfast, crew suit-up, and the ride out to the launch pad. Also, included are various panoramic views of the shuttle on the pad. The crew can be seen being readied in the white room' for their mission. After the closing of the hatch and arm retraction, launch activities are shown including countdown, engine ignition, launch, and the separation of the Solid Rocket Boosters. Once in orbit, various view of the Mir Space Station can be seen as the shuttle begins its approach and docking. There several views of Godwin and Clifford as they spent six hours spacewalking in Atlantis's cargo bay and on the exterior of the Mir's docking module. The mission ending re-entry and landing can also be seen.	Transcript Link

2011 07 23	NASA STI Program	https://youtu.be/TaSBMecjp6M	STS-75 Mission Highlight Resource Tape	The flight crew of the STS-75 mission, Cmdr. Andrew M. Allen, Pilot Scott J. Horowitz, Payload Cmdr. Franklin R. Chang-Diaz, Mission Specialists Maurizio Cheli, Jeffrey A. Hoffman, and Claude Nicollier, and Payload Specialist Umberto Guidoni, present a video over-view of their mission. Images include: pre-launch activities such as eating the traditional breakfast, crew suit-up, and the ride out to the launch pad. Also, included are various panoramic views of the shuttle on the pad. The crew can be seen being readied in the white room' for their mission. After the closing of the hatch and arm retraction, launch activities are shown including countdown, engine ignition, launch, and the separation of the Solid Rocket Boosters (SRB). Also included are views of activities inside the Firing Control Room at KSC.	Transcript Link
2011 07 23	NASA STI Program	https://youtu.be/-AnJVgJrh3Y	STS-73 Mission Highlights Resource Tape	The flight crew of the STS-73 Space Shuttle Orbiter Columbia Cmdr. Kenneth D. Bowersox, Pilot Kent V. Rominger, Payload Commander Kathryn C. Thornton, Mission Specialists Catherine G. Coleman Ph.D, and Michael E. Lopez-Alegria, and Payload Specialists Fred W. Leslie Ph.D, Albert Sacco Jr Ph.D, David H. Matthiesen Ph.D, and R. Glynn Holt Ph.D present an overview of their mission. This, the second United States Microgravity Laboratory (USML) Spacelab mission, is the centerpiece of the STS-73 Space Shuttle mission. Some of the experiments being carried on the USML-2 payload cover a variety of scientific disciplines including fluid physics, materials science, biotechnology and combustion science. Video footage includes the following: prelaunch and launch activities; various Spacelab experiments; and reentry and the landing of the Columbia at KSC.	Transcript Link
2011 07 23	NASA STI Program	https://youtu.be/iPONWizIR5U	Long Duration Exposure Facility (LDEF)	A summary of the Long Duration Exposure Facility from launch through plans for the retrieval is presented.	Transcript Link
2011 07 23	NASA STI Program	https://youtu.be/4bmDm36sfTc	High Temperature NASP Engine Seal Development	This video details research being conducted at the Lewis Research Center on high temperature engine seal design for the National Aerospace Plane. To maximize the speed, the jets on the NASP extract oxygen from the air rather than carry large liquid fuel tanks; this creates temperatures within the jet of over 5000 F. To prevent these potentially explosive gases from escaping, researchers are developing new technologies for use in the engine seals. Two examples explained are the ceramic wafer seal and the braided ceramic rope seal. Computer simulations and laboratory footage are used to illustrate the workings of these seals. Benefits for other aerospace and industrial applications, as well as for the space shuttle, are explored.	Transcript Link

2011 07 23	NASA STI Program	https://youtu.be/ZHx-f4JPH4I	Voyager Last Picture Show	This video presentation blends animation, actual photos, and data of the Voyager-Neptune encounter.	Transcript Link
2011 07 23	NASA STI Program	https://youtu.be/0vzv3lz_PxE	STS-74 Mission Highlights Resource Tape	The flight crew of the STS-74 Space Shuttle Orbiter Atlantis Cmdr. Ken Cameron, Pilot Jim Halsell, and Mission Specialists Chris Hadfield, Jerry Ross, and William McArthur present an overview of their flight mission, whose primary objective is the rendezvous and space docking with the Russian Mir Space Station. Video film footage includes the following: prelaunch and launch activities; shuttle launch; in-orbit rendezvous; installation of the Russian-made docking module; in-orbit docking between Mir and the orbiter; general crew activities; transfer of supplies, equipment, and a crystal growth experiment to Mir; data collection from Mir thruster firings; undocking maneuvers and a Mir fly around; pre-return checkout of flight systems; and the reentry and landing of the orbiter. Earth views include horizon sunsets, atmospheric boundary layers, and a variety of geographical location footage (New Orleans; Atlanta; James Bay, Canada; Poland; Turkey; Mt. Pinatubo, Philippines; Salt Lake City, Utah; and Colorado). Released Mar. 1996.	Transcript Link
2011 07 22	NASA STI Program	https://youtu.be/Z5RNI5gmMrQ	STS-69 Mission Highlights Resource Tape	The STS-69 mission of the Endeavour Space Shuttle and crew are highlighted in this video. The 'Dog Crew', as they called themselves, Cmdr. Dave Walker, Pilot Ken Cockrell, and Mission Specialists Mike Gernhardt, Jim Voss, and Jim Newman, are shown performing pre-launch and launch activities; the SPARTAN-201 and the Wake Shield Facility (WSF) deployments, retrievals, and berthings; physiological and other Middeck experiments; and jet thruster firing tests on the WSF. A 6 1/2 hour EVA was conducted to test the thermal properties of the new space suits and to test the tools and equipment to be used in the construction of the International Space Station. General crew activities are also shown and Earth views include cloud cover and the WSF with the Earth as the background.	Transcript Link
2011 07 22	NASA STI Program	https://youtu.be/dEJ1UjWNYJ0	Mission San Marco	The videotape shows a satellite launch from San Marco, Africa.	Transcript Link

2011 07 22	NASA STI Program	https://youtu.be/yqk7mAwGvkE	STS-75 Post Flight Presentation	The flight crew of the STS-75 Space Shuttle, Cmdr. Andrew Allen, Pilot Scott Horowitz, Payload Cmdr. Franklin Chang-Diaz, Payload Specialist Umberto Guidoni (Italy), and Mission Specialists Jeffrey Hoffman, Maurizio Cheli (ESA) and Claude Nicollier (ESA), present a post flight analysis of their mission through the use of color slides and video footage. Prelaunch and launch activities are shown along with Earth entry and landing footage. Both middeck and payload bay microgravity experiments are shown and briefly discussed. The deployment and loss of the European Tethered Satellite experiment are presented and discussed. Earth views include the Nile Valley, Chad, the Himalayas and Mount Everest, and China. A unique moonset is also shown.	Transcript Link
2011 07 22	NASA STI Program	https://youtu.be/J5i2DS9bzkM	HL-20 Personnel Launch System	An overview of lifting body research to include LaRC's full scale engineering research model is presented.	Transcript Link
2011 07 22	NASA STI Program	https://youtu.be/Tm2YdbbLhYY	Mission Adaptive Wing	This document looks at an aircraft wing that can change shape in flights from a flat to curved surface according to the necessary flight mode.	Transcript Link
2011 07 22	NASA STI Program	https://youtu.be/6HrqiB3qaJg	STS 63 Flight Day 4 Highlights MIR-Shuttle Rendezvous	STS 63 Flight, day 4, the MIR-Shuttle rendezvous is highlighted in this video. The six-member team in the Shuttle are introduced and discuss their functions and tests for this day of the flight. There is actual footage of earth from space, of the MIR Space Station, a tour of the Shuttle cockpit, some footage from the MIR of the Space Shuttle, and footage from inside the MIR with the cosmonauts. Mission control communications with the Shuttle, communication between the Shuttle and MIR, and an historic communication between the Shuttle's astronauts and President Bill Clinton are included. President Clinton interviews each of the six-member team and discusses the upcoming space walk by Dr. Bernard Harris, the first black astronaut to walk in space. This video was recorded on February 6, 1995.	Transcript Link

2011 07 21	NASA STI Program	https://youtu.be/VX92zyct574	STS-71 Mission Highlights Resource Tape	This video highlights the international cooperative Shuttle/Mir mission of the STS-71 flight. The STS-71 flightcrew consists of Cmdr. Robert Hoot' Gibson, Pilot Charles Precourt, and Mission Specialists Ellen Baker, Bonnie Dunbar, and Gregory Harbaugh. The Mir 18 flightcrew consisted of Cmdr. Vladamir Dezhurov, Flight Engineer Gennady Strekalov, and Cosmonaut-Research Dr. Norman Thagard. The Mir 18 crew consisted of Cmdr. Anatoly Solovyev and Flight Engineer Nikolai Budarin. The prelaunch, launch, shuttle in-orbit, and in-orbit rendezvous and docking of the Mir Space Station to the Atlantis Space Shuttle are shown. The Mir 19 crew accompanied the STS-71 crew and will replace the Mir 18 crew upon undocking from the Mir Space Station. Shown is on-board footage from the Mir Space Station of the Mir 18 crew engaged in hardware testing and maintenance, medical and physiological tests, and a tour of the Mir. A spacewalk by the two Mir 18 cosmonauts is shown as they performed maintenance of the Mir Space Station. After the docking between Atlantis and Mir is completed, several mid-deck physiological experiments are performed along with a tour of Atlantis. Dr Thagard remained behind with the Shuttle after undocking to return to Earth with reports from his Mir experiments and observations. In-cabin experiments included the IMAX Camera Systems tests and the Shuttle Amateur Radio Experiment-2 (SAREX-2). There is footage of the shuttle landing.	Transcript Link
2011 07 20	NASA STI Program	https://youtu.be/UdeymDJnJoc	STS-65 Post Flight Presentation	This video contains footage selected by the astronauts, as well as their comments on their respective flights. It also contains launch, onboard crew activities, and landing.	Transcript Link
2011 07 19	NASA STI Program	https://youtu.be/wwBK1CxRG30	Astronauts, Number 3 The Flight of Friendship 7, Part 1	John Glenn's flight into space is reviewed. This is a re-release of 'The Flight of Friendship 7'.	Transcript Link

2011 07 18	NASA STI Program	https://youtu.be/rcX7csPfpHU	STS-59 SRL-1	This video covers the STS-59 mission. Video segments include breakfast, suit-up, departure, launch, on-orbit operations, and landing.	Transcript Link
2011 07 15	NASA STI Program	https://youtu.be/y8qBxdjYx7o	STS-85 Mission Highlights Resources Tape	The flight crew of STS-85, Cmdr. Curtis L. Brown, Jr., Pilot Kent V. Rominger, Payload Cmdr. N. Jan Davis (Ph.D.), Mission Specialists Robert L. Curbeam, Jr. and Stephen K. Robinson (Ph.D.), and Payload Specialist Bjarni V. Tryggvason, present an overview of their mission. During the pre-launch activities the shuttle is shown being mated to the external tank and Solid Rocket Boosters (SRBs). Also included: is the arrival of the crew at the Kennedy Space Center (KSC), their suit-up, the crew being transported to the pad, being strapped in, and launch control activities. The launch includes the count down, main engine start-up, SRB start-up, the launch, the roll maneuver and SRB separation. Once the crew is in orbit, they deploy the CRISTA-SPAS payload and conduct various micro-gravity experiments. In the last part of the video the crew is seen preparing for the landing phase of the mission.	Transcript Link
2011 07 15	NASA STI Program	https://youtu.be/KQCZlnbOmCM	Aeronautics and Space Report Highlights 1970	These highlights include the 1970 solar eclipse, Tiros, Nimbus, Intelsat, wake turbulence, the Peru earthquake, Oregon fishing grounds, Apollo 13, SI-C static firing, McDonnell/Douglas 90-day confinement test, and the moon from Galileo to 1971.	Transcript Link
2011 07 15	NASA STI Program	https://youtu.be/XD-JRT_EBKs	1978 Aeronautics and Space Highlights	These highlights include the space shuttle, new astronauts, Pioneers to Venus, Voyagers to Jupiter and Saturn, High Energy Astronomy Observatories Space Telescope, Landsat/Seasat, space applications, wind energy research, and aeronautics.	Transcript Link

2011 07 13	NASA STI Program	https://youtu.be/TAOWKi56AOw	From Space to Earth	This video presents a few NASA spinoffs, including Statue of Liberty paint, Unistick, an ocular screening device, and running shoes.	Transcript Link
2011 07 13	NASA STI Program	https://youtu.be/muMhCsYXUIA	Aeronautics and Space Report Space Highlights 1965	This document includes Ranger to the Moon, Mariner to Mars, Tiros weather watcher, Early Bird satellite, scientific satellites, sounding rockets, aeronautical research, preparation for the moon, and manned Gemini flights.	Transcript Link
2011 07 13	NASA STI Program	https://youtu.be/s529h-6mzm8	Advanced Solid Rocket Motor	This video tape describes the redesign and construction of the Advanced Solid Rocket Motor.	Transcript Link
2011 07 12	NASA STI Program	https://youtu.be/uVcc-Ayk0G0	STS-60 Mission Highlights Resource Tape	The important visual events of each mission including launch, onboard crew activities, and landing are depicted.	Transcript Link
2011 07 06	NASA STI Program	https://youtu.be/tSKewfaXUbM	STS-66 Post Flight Presentation	This video contains mission footage selected by the STS-66 crew of pre-launch, launch, onboard activities and experiments, ATLAS-3, CRISTA/SPAS, SSBUV/A, ESCAPE II, Earth views, and landing. Crew members provide descriptive voice-over narration of the scenes.	Transcript Link

2011 07 05	NASA STI Program	https://youtu.be/GFb5kV9RBkc	Aeronautics and Space Highlights [1979 Highlights]	The videotape includes footage of the following: Voyagers to Jupiter, Pioneer to Saturn, High Energy Astronomy Observatory, space telescope, space shuttle, astronauts Young and Crippen, 10th anniversary of Apollo 11, Skylab reentry, Landsat, satellite freeze warning, Fire Fighting Module, SAGE, wind generators, Solar Energy Project, electric car research, XV-15, HiMAT, and crash worthiness tests.	Transcript Link
2011 07 05	NASA STI Program	https://youtu.be/tfPdBx80uvI	Aeronautics and Space Report 1973 Highlights	These highlights include man in space, Pioneer to Jupiter, Mariner to Venus and Mercury, sounding rockets, comet Kohoutek, Earth resources, and aeronautics.	Transcript Link
2011 06 30	NASA STI Program	https://youtu.be/ztg-Wec_lzI	STS-66 Mission Highlights Resource Tape	This video contains the mission highlights of the STS-66 Space Shuttle Atlantis Mission in November 1994. Astronauts included: Don McMonagle (Mission Commander), Kurt Brown, Ellen Ochoa (Payload Commander), Joe Tanner, Scott Parazynski, and Jean-Francois Clervoy (collaborating French astronaut). Footage includes: pre-launch suitup, entering Space Shuttle, countdown and launching of Shuttle, EVA activities (ATLAS-3, CRISTA/SPAS, SSBUV/A, ESCAPE-2), on-board experiments dealing with microgravity and its effects, protein crystal growth experiments, daily living and sleeping compartment footage, earthviews of various meteorological processes (dust storms, cloud cover, ocean storms), pre-landing and land footage (both from inside the Shuttle and from outside with long range cameras), and tracking and landing shots from inside Mission Control Center. Included is air-to-ground communication between Mission Control and the Shuttle. This Shuttle was the last launch of 1994.	Transcript Link
2011 06 29	NASA STI Program	https://youtu.be/x2MTHGhcHWM	STS-57 Post Flight Press Conference	This video contains footage selected and narrated by crew members.	Transcript Link

2011 06 28	NASA STI Program	https://youtu.be/1wGgpXTkigo	STS-67 Post Flight Presentation	This video is the post-flight presentation by the astronauts of the STS-67 Space Shuttle Mission. The astronauts were: Steve Oswald (Mission Commander), Bill Gregory (Shuttle Pilot), John Grunsfeld (Mission Specialist), Sam Durrance (Payload Specialist), Ron Parise (Payload Specialist), and Tammy Jernigan (Payload Commander). Footage includes: pre-launch suitup and launch (liftoff), the deployment of the telescope package payload (Hopkins UV telescope, Wisconsin UV polarimeter, and Astrostar Tracker) for their astronomical observations of different stellar objects, inside Shuttle shots of data collection stations, protein crystal growth experiments, medical BSO of head and eye functions in microgravity environment, storm activity over the United States and other Earth observation shots, Mid-deck Act Control Experiments, school-Shuttle direct radio communication, and descent and landing footage. This launch was a night launch and the flight was a 17 day flight (extended two days from original flight plan).	Transcript Link
2011 06 24	NASA STI Program	https://youtu.be/MxSzkg2-ZmY	STS-72 Mission Highlights Resource Tape	The flight crew of the STS-72 Space Shuttle Orbiter Endeavour Cmdr. Brian Duffy, Pilot Brent W. Jett, and Mission Specialists; Leroy Chiao, Daniel T. Barry, Winston E. Scott, and Koichi Wakata (NASDA) present an overview of their mission, whose primary objective is the retrieval of two research satellites. The major activities of the mission will include retrieval of the Japanese Space Flyer Unit (SFU), which was launched aboard a Japanese H-2 rocket to conduct a variety of microgravity experiments. In addition, the STS-72 crew will deploy the AST-Flyer, a satellite, that will fly free of the Shuttle for about 50 hours. Four experiments on the science platform will operate autonomously before the satellite is retrieved by Endeavour's robot arm. Three of Endeavour's astronauts will conduct a pair of spacewalks during the mission to test hardware and tools that will be used in the assembly of the Space Station. Video footage includes the following: prelaunch and launch activities; the crew eating breakfast; shuttle launch; retrieval of the Japanese Space Flyer Unit (SFU); suit-up and EVA-1; EVA-2; crew members performing various physical exercises; various earth views; and the night landing of the shuttle at KSC.	Transcript Link
2011 06 24	NASA STI Program	https://youtu.be/PJIWY3r-bpo	ASRM Testing at Stennis Space Center (Proposed)	This summary of the Advanced Solid Rocket Motor (ASRM) program at Stennis Space Center has a specific focus on the environmental impact. D520Q: English	Transcript Link

2011 06 23	NASA STI Program	https://youtu.be/ttJnjTOmjfo	STS-59 Mission Highlights Resource Tape	The important visual events of each mission including launch, onboard crew activities, and landing are depicted.	Transcript Link
2011 06 22	NASA STI Program	https://youtu.be/-l5-yhcQjbs	STS-62 Mission Highlights Resource Tape	The important visual events of each mission including launch, onboard crew activities, and landing are depicted.	Transcript Link
2011 06 21	NASA STI Program	https://youtu.be/axo_JoMH-PU	STS Flight 64 Mission Highlights	The pre-launch, launch, in-flight, and landing activities of STS Flight 64 are highlighted in this video. Footage of the astronauts (Richard, Hammond, Lee, Helms, Meade, and Linenger) suiting up, the payload activities with the Shuttle arm, the deployment of the Spartan satellite, the untethered spacewalk of Lee and other in-space experiments with Lee and Meade (including a body roll), the pre-landing shots and actual landing, and some footage of the Mission Operations Control Room watching the Space Shuttle maneuvers are included.	Transcript Link
2011 06 20	NASA STI Program	https://youtu.be/5BQfFMiKb04	The Astronauts Flight of Freedom 7	The story of Alan Shepard's May 1961 suborbital flight is presented. This is a re-release of 'The Flight of Freedom 7'.	Transcript Link
2011 06 20	NASA STI Program	https://youtu.be/dfVTX25hH-I	Crew Escape Certification Test	This video tape shows the Shuttle hatch jettison test at Rockwell facilities. The video also shows a Shuttle escape pole deployment test from a NASA aircraft, and an emergency egress test performed by a volunteer Navy parachutist using the pole and a parachute escape system.	Transcript Link

2011 06 20	NASA STI Program	https://youtu.be/1o4LMIyxvVs	Rotor Stator CGI	This video contains computer graphics of numerous kinds of flow within jet engines. Analyses include pressure contours (shock waves), fluid pressures, etc. The video also contains dramatic views of jet engine manufacturing.	Transcript Link
2011 06 16	NASA STI Program	https://youtu.be/8XKFmD03pXg	Apollo 14 Shepard Hitting Golf Ball on Moon	Live footage of astronaut Alan Shepard hitting a golf ball on the Moon is featured on this video.	Transcript Link
2011 06 16	NASA STI Program	https://youtu.be/CE--wFAu1w0	STS-26 Through STS-34, Deploy Activities	This video shows on orbit deployments since Shuttle flights resumed in 1988. These deployments include TDRS-C and TDRS-D, and the Magellan and Galileo spacecrafts.	Transcript Link
2011 06 16	NASA STI Program	https://youtu.be/pwbWZSezwz4	XV-15 Tiltrotor	This film explains the technology of the XV-15 aircraft that takes off and lands like a helicopter and flies like a jet.	Transcript Link
2011 06 13	NASA STI Program	https://youtu.be/yFXgCy8gS4g	Langley's 50th Year	This video gives an historical overview of Langley Research Center's major achievements in aeronautics and astronautics research between the years 1917-1967. Historical footage accompanies explanation of research into wind tunnel, spin tunnel, and hydrodynamic test tanks for studying aircraft airflow, wartime research into over-water combat ditching, diving, and braking, the X series aircraft experiments with supersonic flight, helicopter and vertical Take Off and Landing (VTOL) aircraft, airport landing studies, and early prototypes for the Space Shuttle.	Transcript Link

2011 06 13	NASA STI Program	https://youtu.be/zjAengzZogA	1967 Aeronautics and Space Report	This document includes Surveyor, Lunar Orbiter, Apollo 4, Biosatellite, Orbiting Geophysical Observatory, Orbiting Solar Observatory, Explorers, Applications Technology satellites, operational satellites, Mariner to Venus, San Marco, sounding rockets, and aeronautical research.	Transcript Link
2011 06 10	NASA STI Program	https://youtu.be/In0dQQMjkFo	1981 Aeronautics and Space Highlights	This video presentation covers Shuttle flights 1 and 2, Spacelab, mobile workstation, Voyager 2 Saturn, Infrared Astronomy Satellite, Hubble Space Telescope, Kuiper Airborne Observatory, High Altitude Earth Survey, Landsat, aerodynamic research, electric cars, wind energy, XV-15, Quiet Shorthaul Research Aircraft, X-14 BVTOL, 40 x 80 Wind Tunnel, and turboprop research.	Transcript Link
2011 06 10	NASA STI Program	https://youtu.be/pmaKXA5oDQ8	Gemini 8, This is Houston Flight	The historic first docking in space with the Agena is completed. Camaras record the harrowing experiences of the astronauts as Gemini VIII wildly gyrates through space following a malfunction. The spacecraft is separated from the Agena, brought under control and reentry is achieved.	Transcript Link
2011 06 08	NASA STI Program	https://youtu.be/T0G64PnLEJo	Galileo The Jovian Laboratory	This video presentation gives a pre-launch description of the Galileo Mission to Jupiter.	Transcript Link
2011 06 08	NASA STI Program	https://youtu.be/50-QVbaIdbM	First U.S. Mars Landing	This video shows the launches of Viking 1 and 2 and discusses objectives of the first mission to Mars. Released Jun 1976.	Transcript Link

2011 04 27	NASA STI Program	https://youtu.be/jAjIjuQhmZA	Houston, I think we've got a satellite	This video highlights the record breaking mission of STS-49, the maiden voyage of the Space Shuttle Endeavor. It includes the dramatic capture, repair, and reboost of the INTELSAT VI Satellite, as well as the ASEM experiment. The effectiveness of certain EVA techniques for the future construction of a space station is demonstrated.	Transcript Link
2011 04 22	NASA STI Program	https://youtu.be/P0LB_BN2T0E	Historical Footage of John Glenn Friendship 7	The Friendship 7 mission, launched on the 20th day of February, marked the first time that an American attempts to orbit the Earth. Historical footage of John Glenn's suit up, ride out to the launch pad, countdown, liftoff, booster engine cutoff, and separation of the booster engine escape tower is shown. Views of the Earth, Glenn's manual control of the electrical fly-by wire system, and the recovery of the landing vehicle from the ocean are presented.	Transcript Link
2011 04 21	NASA STI Program	https://youtu.be/PSGg83GDcyI	And Then There Was Voyager	NASA's legendary grand tour of the outer solar system from the mission conception in the early 1970's is described. The search for the heliopause is discussed. This presentation is told in the words of the key members of the Voyager team. Also cataloged as NASA-CR-195928.	Transcript Link
2011 04 06	NASA STI Program	https://youtu.be/oPUo2ZHpKHc	The Four Great Observatories	This video presentation introduces the Hubble Space Telescope, Gamma Ray Observatory, Advanced X-ray Astrophysics Facility (AXAF), and the Shuttle Infrared Telescope Facility (SIRTF). This film is cataloged as NASA-TM-109311.	Transcript Link
2011 04 05	NASA STI Program	https://youtu.be/qrfUQMiFPNc	Shuttle-C The Future is Now	This video details plans for Shuttle-C, an unmanned heavy launch vehicle to carry payloads into orbit. Computer animations depict the Shuttle-C, which uses the same recoverable external boosters, external fuel tank and main orbiter engines as the existing Space Shuttles, through liftoff and entry into orbit, where it progressively jettisons the cargo shroud, external fuel tank, and nose shroud. The video also shows computer simulations of a remotely controlled orbital maneuvering vehicle positioning pre-assembled components of a Space Station and delivering planetary probes and lunar exploration materials to orbit. This 1989 video is also cataloged as NASA-TM-109355	Transcript Link

2011 03 23	NASA STI Program	https://youtu.be/G5ipYrE-VZc	Aeronautics and Space Report Highlights 1968	These highlights include the end of the Surveyor Program, planetary studies, Pioneers, Orbiting Geophysical Observatory, sounding rockets, radio astronomy Explorer, Orbiting Astronomical Observatory, Nimbus, lifting bodies, X-15 Program, XB-70, V/TOL, model research, jet noise reduction, flight safety, nuclear engines, Project Apollo (testing and training), and Apollo 5, 6, 7, and 8.	Transcript Link
2011 03 14	NASA STI Program	https://youtu.be/jKXZ7ZaV0u0	EVA Assembly of Large Space Structure Neutral Buoyancy, Zero-Gravity Simulation	The film depicts an extravehicular activity (EVA) that involved the assembly of six "space-weight" columns into a regular tetrahedral cell by a team of two "space"-suited test subjects. This cell represents the fundamental "element" of a tetrahedral truss structure. The tests were conducted under simulated zero-gravity conditions, achieved by neutral buoyancy in water. The cell was assembled on an "outrigger" assembly aid off the side of a mock-up of the Shuttle Orbiter cargo bay. Both manual and simulated remote manipulator system (RMS) modes were evaluated. The simulated RMS was used only to transfer stowed hardware from the cargo bay to the work sites. Articulation limits of the pressure suit and zero gravity could be accommodated by work stations with foot restraints. The results of this study have confirmed that astronaut EVA assembly of large, erectable space structure is well within man's capabilities. You can read the associated NASA Technical Publication (NASA TP 1872) here: http://hdl.handle.net/2060/19810017623	Transcript Link
2011 03 11	NASA STI Program	https://youtu.be/rPdFAA4jYQU	Aeronautics and Space Report Highlights 1966	The video includes footage of the following: space and aeronautic montage, Surveyor lands on the Moon, Lunar Orbiter, weather satellites, Orbiting Geophysical Observatory, Pioneer, sounding rockets, solar eclipse, X-15, lifting bodies, solid rockets, nuclear powered engines, Project Gemini ends, and Apollo-Saturn.	Transcript Link
2011 02 14	NASA STI Program	https://youtu.be/M9uHmRFmrx4	Apollo 11 For All Mankind	Historical film footage of Apollo 11 is shown. The pre-flight, launch, module docking, lunar orbit, lunar landing, ascent, and return-to-Earth flight is shown. There are lunar surface shots, Moon views, Earth views from Earth orbit, Earth views from the Moon, and footage of actual moon walk by astronauts. Mission control and space to ground control communication is heard.	Transcript Link

2011 02 14	NASA STI Program	https://youtu.be/g0wr-BfWo74	Legacy of Gemini	In the perspective of a single composite mission, this documentary illustrates the major accomplishments of the Gemini two man space flights and the significance of these flights to the Apollo Program. This film includes outstanding photography of the Earth and man in space.	Transcript Link
2011 02 11	NASA STI Program	https://youtu.be/qLguo9Q4apg	Dynamic Model Tests of Models of the McDonnell Design of Project Mercury...	Dynamic Model Tests of Models of the McDonnell Design of Project Mercury Capsule in the Langley 20-Foot Free-Spinning Tunnel On 10 June 1961, 33 tests of the aerodynamic response of the McDonnell model Mercury capsule were conducted. Variables included spin, different parachute tethers, and the addition of baffles.	Transcript Link
2011 02 11	NASA STI Program	https://youtu.be/VxwXp8Dj2po	Landing of Manned Reentry Vehicles	Landing characteristics were investigated using dynamic models. The landing speeds for several let-down systems are simulated. Demonstrations include: (1) the vertical landing of parachute-supported capsules on water; (2) reduction of landing acceleration by shaping the impact surface for water entry; (3) problems created by horizontal velocity due to wind; (4) the use of energy absorbers (yielding metal legs or torus bags) for land or water landings; (5) problems associated with horizontal land landings; (6) the use of a paraglider to aid in vehicle direction control; (7) a curved under-surface to serve as a skid-rocker to convert sinking-speed energy into angular energy; (8) horizontal-type landing obtained with winged vehicles on a hard runway; (9) the dangers of high-speed water landings; and (10) the positive effects of parachute support for landing winged vehicles.	Transcript Link

2011 02 11	NASA STI Program	https://youtu.be/gznswxaV8jI	Apollo 12 Pinpoint for Science	This video, using historical film footage, photography, and computer animation, describes the launch, flight, lunar landing and exploration, and return flight of Apollo 12, one of the manned lunar missions. The astronauts were Charles Conrad, Richard Gordon, and Allen Bean. Thirty-six seconds into the November 14, 1969 launch, the spacecraft was hit by lightning from the thunderstorm surrounding the launch site. In spite of this mishap, the vehicle and astronauts were not harmed and continued with their mission. The Yankee Clipper (command module) docked with the Intrepid (lunar module) and upon reaching the Moon, the Intrepid disconnected during lunar orbit and descended to the Moon's surface to a landing area previously marked by the Surveyor satellite. After lunar surface exploration, soil sample collection, satellite maintenance, and setting up various lunar surface monitoring equipment (a seismometer and two atmospheric monitors), the Intrepid launched back into lunar orbit, docked with the Yankee Clipper, and returned to Earth. There are both B/W and color photography and film footage, which includes the earth launch, lunar orbit, descent and ascent of Intrepid on the Moon, return flight, atmospheric reentry, and recovery on the Earth, and ground to air and space communication is shown.	Transcript Link
2011 02 10	NASA STI Program	https://youtu.be/CKgaKD3uNog	Apollo 13 Houston, We've Got a Problem	This video contains historical footage of the flight of Apollo-13, the fifth Lunar Mission and the third spacecraft that was to land on the Moon. Apollo-13's launch date was April 11, 1970. On the 13th of April, after docking with the Lunar Module, the astronauts, Jim Lovell, Fred Haise, and Jack Swigert, discovered that their oxygen tanks had ruptured and ended up entering and returning to Earth in the Lunar Module instead of the Command Module. There is footage of inside module and Mission Control shots, personal commentary by the astronauts concerning the problems as they developed, national news footage and commentary, and a post-flight Presidential Address by President Richard Nixon. Film footage of the approach to the Moon and departing from Earth, and air-to-ground communication with Mission Control is included.	Transcript Link
2011 02 10	NASA STI Program	https://youtu.be/a5nTyYoy2EI	Apollo 14 Mission to Fra Mauro	The 1971 Apollo 14 Mission to Fra Mauro, a lunar highland area, is highlighted in this video. The mission's primary goal was the collection of lunar rocks and soil samples and lunar exploration. The soil and rock sampling was for the geochronological determination of the Moon's evolution and its comparison with that of Earth. A remote data collection station was assembled on the Moon and left for continuous data collection and surface monitoring experiments. The Apollo 14 astronauts were Alan B. Shepard, Edgar D. Mitchell, and Stuart A. Rossa. Astronauts Shepard and Mitchell landed on the Moon (February 5, 1971) and performed the sampling, the EVA, and deployment of the lunar experiments. There is film-footage of the lunar surface, of the command module's approach to both the Moon and the Earth, Moon and Earth spacecraft launching and landing, in-orbit command- and lunar-module docking, and of Mission Control.	Transcript Link

2010 06 29	NASA STI Program	https://youtu.be/uUR6bFN3IMA	Summary of Attached Inflatable Decelerator (AID) Development	Attached inflatable decelerators (AID) were tested in an environmental chamber, a spin tunnel, and a wind tunnel. Deployment tests were conducted in environmental chamber to examine guided and unguided water alcohol vapor inflation. Subsonic performance tests were conducted in the spin tunnel. The full-scale wind tunnel was used for AID gust and supersonic performance tests. The supersonic tests were conducted at Mach number 3.0 with 12 ounces of fluid and Mach number 2.2 with six ounces of fluid. Related to: http://hdl.handle.net/2060/19700018039	Transcript Link
2010 06 01	NASA STI Program	https://youtu.be/ui2aQR7z04g	Excerpts from Test Films Langley Impacting Structures Facility, Lunar Module	The film includes excerpts from three studies: (1) Landing characteristics of a dynamic model of the HL-10 manned lifting entry vehicle, conducted by Sandy M. Stubbs, in which the vehicle landed on water at horizontal velocities of 240- and 250-feet per second (ft/sec). http://hdl.handle.net/2060/19670001463 (2) Dynamic model investigation of water pressures and accelrations encountered during landings of the Apollo spacecraft conducted by Sandy M. Stubbs, in which horizontal velocity was 50 ft/sec. and pitch attitude was -12 and -28 degrees. (3) Comparative landing impact tests of a 1/6-scale model as a free body under earth gravity and a tethered full-scale lunar module on the Lunar Gravity Simulator. Landing 8 is shown, with a vertical velocity of 10 ft/sec. and a horizontal velocity of 8 ft/sec. Motion pictures were taken at 400 and 64 pps. http://hdl.handle.net/2060/19680016381	Transcript Link
2010 05 24	NASA STI Program	https://youtu.be/JEed7FeZ7_Q	VSTOL Systems Research Aircraft (VSRA) Harrier	NASA's Ames Research Center has developed and is testing a new integrated flight and propulsion control system that will help pilots land aircraft in adverse weather conditions and in small confined ares (such as, on a small ship or flight deck). The system is being tested in the V/STOL (Vertical/Short Takeoff and Landing) Systems research Aircraft (VSRA), which is a modified version of the U.S. Marine Corps's AV-8B Harrier jet fighter, which can take off and land vertically. The new automated flight control system features both head-up and panel-mounted computer displays and also automatically integrates control of the aircraft's thrust and thrust vector control, thereby reducing the pilot's workload and help stabilize the aircraft for landing. Visiting pilots will be encouraged to test the new system and provide formal evaluation flights data and feedback. An actual flight test and the display panel of control system are shown in this video. You can learn more about some of the research done with this aircraft here: http://hdl.handle.net/2060/19960027449	Transcript Link
2010 05 18	NASA STI Program	https://youtu.be/ROWUfFfNilA	LLRV Apollo 11 25th Anniversary	This video was created at Dryden Flight Research Center to commemorate Apollo 11's landing on the moon and Dryden's contribution to the program in the form of the Lunar Landing Research Vehicle.	Transcript Link

2010 05 04	NASA STI Program	https://youtu.be/B0yvdKgS8uw	Landing characteristics of the Apollo spacecraft...	Title: Landing characteristics of the Apollo spacecraft with deployed-heat-shield impact attenuation systems Associated with NASA-TN-D-3059 located at: http://hdl.handle.net/2060/19660005612 An experimental investigation was made to determine the landing characteristics of a 1/4-scale dynamic model of the Apollo spacecraft command module using two different active (heat shield deployed prior to landing) landing systems for impact attenuation. One landing system (configuration 1) consisted of six hydraulic struts and eight crushable honeycomb struts. The other landing system (configuration 2), consisted of four hydraulic struts and six strain straps. Tests made on water and the hard clay-gravel composite landing surfaces simulated parachute letdown (vertical) velocities of 23 ft/sec (7.0 m/s) (full scale). Landings made on the sand landing surface simulated vertical velocities of 30 ft/sec (9.1 m/s). Horizontal velocities of from 0 to 50 ft/sec (15 m/s) were simulated. Landing attitudes ranged from -30'degrees to 20 degrees, and the roll attitudes were O degrees, 90 degrees, and 180 degrees. For configuration 1, maximum normal accelerations at the vehicle center of gravity for landings on water, sand, and the hard clay-gravel composite surface were 9g, 20g, and 18g, respectively. The maximum normal center-of-gravity acceleration for configuration 2 which was landed only on the hard clay-gravel landing surface was approximately 19g. Accelerations for configuration 2 were generally equal to or lower than accelerations for configuration 1 and normal.	Transcript Link
2010 04 15	NASA STI Program	https://youtu.be/ko7Kfc9GUXQ	United States Space Explorations 1958 (Part 2 of 2)	The film describes preparation and launch of five satellites and two space probes during 1958. On January 31, a Jupiter vehicle launched Explorer I into space. Data from this satellite was used to identify the van Allen radiation belts. On March 17, a Vanguard I rocket launched an Earth satellite with solar batteries. Data from the mission was used to determine that the Earth is slightly pear-shaped. On March 26, Explorer III was launched to further study the van Allen belts, micrometeoroid impacts, and internal and external temperatures. Explorer IV, launched on July 26, was intended to study radiation and temperature data. A lunar probe, ABLE I, was intended to measure radiation, magnetic fields of Earth and the Moon, density of micrometeoric matter, and internal temperatures. A four-stage rocket was used in the launch. However, a turbo-pump failed and the liquid oxygen pump stopped, resulting in a failed mission. On October 10, Pioneer I was launched by an ABLE vehicle. First and second stage velocity was less than desired and the probe did not leave Earth orbit. Attempts to attain escape velocity were unsuccessful. On December, a Jupiter boost vehicle was used to launch Juno II, with Pioneer III as the payload. Escape velocity was reached and Pioneer III left Earth's atmosphere. Failed launches, such as those of Vanguard boost vehicles and several Explorer satellites, also added to scientific knowledge.	Transcript Link

2010 04 15	NASA STI Program	https://youtu.be/aDiy-5QmGgU	United States Space Explorations 1958 (Part 1 of 2)	The film describes preparation and launch of five satellites and two space probes during 1958. On January 31, a Jupiter vehicle launched Explorer I into space. Data from this satellite was used to identify the van Allen radiation belts. On March 17, a Vanguard I rocket launched an Earth satellite with solar batteries. Data from the mission was used to determine that the Earth is slightly pear-shaped. On March 26, Explorer III was launched to further study the van Allen belts, micrometeoroid impacts, and internal and external temperatures. Explorer IV, launched on July 26, was intended to study radiation and temperature data. A lunar probe, ABLE I, was intended to measure radiation, magnetic fields of Earth and the Moon, density of micrometeoric matter, and internal temperatures. A four-stage rocket was used in the launch. However, a turbo-pump failed and the liquid oxygen pump stopped, resulting in a failed mission. On October 10, Pioneer I was launched by an ABLE vehicle. First and second stage velocity was less than desired and the probe did not leave Earth orbit. Attempts to attain escape velocity were unsuccessful. On December, a Jupiter boost vehicle was used to launch Juno II, with Pioneer III as the payload. Escape velocity was reached and Pioneer III left Earth's atmosphere. Failed launches, such as those of Vanguard boost vehicles and several Explorer satellites, also added to scientific knowledge.	Transcript Link
2010 04 13	NASA STI Program	https://youtu.be/I84D_wSC57A	Model Investigation of Technique for Full Scale Landing Impact Tests at Simulated Lunar Gravity	An investigation of a 1/6-scale dynamic model has been made to develop and evaluate a technique for conducting full-scale landing-impact tests at simulated lunar gravity. Landings were made at touchdown pitch attitudes of -15 degrees, 0 degrees, and 15 degrees. All landings were made with two gear pads forward and at a roll attitude of 0 degrees. Both roll and yaw attitudes were constrained. Vertical landing speed was varied from 5 to 15 feet per second (1.5 to 4.6 m/s) and horizontal speed was varied from 0 to 10 feet per second (0 to 3.0 m/s). Most of the landings were made at a vertical and horizontal speed of 10 feet per second or 3.0 m/s (45 degree flight-path angle) while pitch attitude and surface characteristics, friction and topography, were varied. These parameters were investigated with the free-body earth-gravity and the simulated lunar-gravity test techniques. The landings were made at a model mass corresponding to a full-scale lunar weight (force due to gravity) of 1,440 pounds (6.41 kN) or an earth weight of 8,640 pounds (38.4 kN). This film is a supplement to http://hdl.handle.net/2060/19650008606.	Transcript Link
2010 04 13	NASA STI Program	https://youtu.be/gXOHeGpVkos	Simulator Study of Lunar Orbit Establishment	The film was made using the Lunar Orbit and Landing Approach Simulator (LOLA). It represents the view an astronaut would see if he were looking toward the lunar horizon just prior to and during retrofire for orbit establishment. During this period the astronaut is essentially flying backward, therefore the lunar surface features appear to be moving away during the flight	Transcript Link

2010 04 13	NASA STI Program	https://youtu.be/RgGzUo9b-Eo	Dynamic Model Investigation of the Rough-Water Landing Characteristics of a Spacecraft	The investigation was made to study the rough-water landing characteristics of a Gemini type of spacecraft. The investigations were made with a 1/6-scale dynamic model in a simulated sea state 4 rough water. Parachute letdown landings were simulated with the model at various yaw angles and horizontal velocities. The vertical velocity and landing attitude remained constant. The range of maximum lateral and longitudinal acceleration was from about 3-1/2g to 16g while that for the maximum normal acceleration was from lg to 15g. The range of maximum angular acceleration was from about 0 to 190 radians per second(exp 2). The smoothest behavior and the lowest angular acceleration occurred at the 90 degree yaw angle. The normal acceleration was near minimum at this condition. This film is associated with http://hdl.handle.net/2060/19670013952	Transcript Link
2010 04 13	NASA STI Program	https://youtu.be/XsV1sMEzm-I	Apollo-Lunar Orbital Rendezvous Technique	The film shows artists rendition of the spacecrafts, boosters, and flight of the Apollo lunar missions. The Apollo spacecraft will consist of three modules: the manned Command Module; the Service Module, which contains propulsion systems; and the Lunar Excursion Module (LEM) to carry astronauts to the moon and back to the Command and Service Modules. The spacecraft will be launched via a three-stage Saturn booster. The first stage will provide 7.5 million pounds of thrust from five F-1 engines for liftoff and initial powered flight. The second stage will develop 1 million pounds of thrust from five J-2 engines to boost the spacecraft almost into Earth orbit. Immediately after ignition of the second stage, the Launch Escape System will be jettisoned. A single J-2 engine in the S4B stage will provide 200,000 pounds of thrust to place the spacecraft in an earth parking orbit. It also will be used to propel the spacecraft into a translunar trajectory, then it will separate from the Apollo Modules. Onboard propulsion systems will be used to insert the spacecraft into lunar orbit. Two astronauts will enter the LEM, which will separate from the command and service modules. The LEM will go into elliptical orbit and prepare for landing. The LEM will lift off of the Moon's surface to return to the Command and Service Modules, and most likely be left in lunar orbit. After leaving the Moon's orbit, and shortly before entering Earth's orbit, the Service Module will be ejected. The Command Module will be oriented for reentry into the Earth's atmosphere. A drogue parachute will deploy at approximately 50,000 feet, followed by the main parachute system for touchdown. Released 1963.	Transcript Link
2010 04 12	NASA STI Program	https://youtu.be/tsyUgqgnORI	Saturn A Giant Thrust into Space	The film provides an introduction and overview of the Saturn launch vehicle. It is designed with stages to drop off as fuel is spent. There may be two, three, or four stages, depending on the payload. The Saturn rocket will be used to send Apollo missions to the Moon and back. Guidance systems and booster engine rockets are based on proven mechanisms. Scale models are used to test the engines. Hardware, airframes, guidance systems, instrumentation, and the rockets are produced at sites throughout the country. The engines go to Marshall Space Flight Center for further tests. After partial assembly, the vehicle is shipped to Cape Canaveral in large pieces where it is assembled using specially built equipment and structures. Further trials are performed to assure successful launches. Originally recorded in 16mm. Released Jan. 1962.	Transcript Link

2010 04 12	NASA STI Program	https://youtu.be/27-482Kbkyw	Preliminary Landing Tests of a 1 6-Scale Dynamic Model of a Lunar Excursion Vehicle	The film shows 21 trials made on 8 days of the scale Model 413 lunar landing vehicle. Attitudes tested were a pitch of 0, -15, or 15 degrees and yaw of 0 or 45 degrees. Velocities were vertical 10 and horizontal 10, though two trials were simple vertical drops. Originally recorded in 16mm. No sound. Released July 1962.	Transcript Link
2010 04 12	NASA STI Program	https://youtu.be/OLpdSuRS-Y0	Rendezvous Docking Simulator	The simulation demonstrated linear and gimbal motions of the capsule and a Gemini-Agena docking.	Transcript Link
2010 04 09	NASA STI Program	https://youtu.be/d6RgZDKtyRA	Experimental Ablation Cooling	The film shows ablation tests on Teflon, nylon, a 27-percent phenolic resin, Haveg Rocketon, and graphite. Teflon hemisphere-shaped and flat face noses were tested with laboratory-scale ceramic-heated, pilot-model ceramic-heated, and electric-arc-powered air jets. Nylon hemisphere-shaped noses were tested with laboratory-scale ceramic-heated and electric-arc-powered air jets. Phenolic resin hemisphere-shaped noses were tested with laboratory-scaled ceramic-heated air jets. Haveg Rocketon and graphite hemisphere-shaped noses were tested with electric-arc-powered air jets. Originally recorded in 16mm. No sound. Released Feb. 1958. This is the film supplement to: http://hdl.handle.net/2060/19930090170.	Transcript Link

2010 04 09	NASA STI Program	https://youtu.be/R4gCzC0H4Q	The Lunar Orbiter A Spacecraft to Advance Lunar Exploration	The film describes the Lunar Orbiter's mission to photograph landing areas on the Moon. The Orbiter will be launched from Cape Kennedy using an Atlas Agena booster rocket. Once it is boosted in a trajectory toward the Moon, the Orbiter will deploy two-way earth communication antennas and solar panels for electricity. Attitude control jets will position the solar panels toward the sun and a tracker for a fix on its navigational star. The Orbiter will be put in an off-center orbit around the Moon where it will circle from four to six days. Scientists on Earth will study the effects of the Moon's gravitational field on the spacecraft, then the orbit will be lowered to 28 miles above the Moon's surface. Engineers will control the Orbiter manually or by computer to activate two camera lenses. The cameras will capture pictures of 12,000 square miles of lunar surface in 25 and 400 square mile increments. Pictures will be sent back to Earth using solar power to transmit electrical signals. The signals will be received by antennas at Goldstone, CA, and in Australia and Spain. Incoming photographic data will be electronically converted and processed to produce large-scale photographic images. The mission will be directed from the Space Flight Operations Facility in Pasadena, CA by NASA and Boeing engineers. After the photographic mission, the Orbiter will continue to circle the Moon providing information about micrometeoroids and radiation in the vicinity.	Transcript Link