this week at NASA NASA's new advanced communication satellite teed risque is set to be launched from the kennedy space center on wednesday from its geosynchronous orbit Deidre's k will have a wide enough view of our planet to pick up and relay signals from NASA's fleet of Earth orbiting spacecraft including the International Space Station and the Hubble Space Telescope Deidre's k is the first of a new generation of comm satellites meant to meet the increased demands of NASA's growing fleet of research satellites
teachers k will be the 11th satellite in the Tigres series launched by nasa since it began building the spaceborne network in 1983 two additional teedra spacecraft will follow in 2014 and 2015 the robotic refueling mission wrapped up four of its six days of testing of robotic technology on the International Space Station engineers at the Goddard Space Flight Center and operators at the Johnson Space Center successfully maneuvered Dexter the station's robotic arm to its target a fuel valve on a specially designed practice box NASA
developed tools precisely cut three separate wires and removed and safely stowed to unique caps in preparation for the main event the transfer of simulated fuel this would be a first of its kind robotic fluid transfer on orbit with our RM NASA is proving technology that will help us understand how we can one day use robots to refuel satellites in space especially those that were never designed to be serviced additional tests of this technology will continue throughout the year NASA engineers working on the nation's
new Space Launch System have resurrected

44 00:02:01,078 --> 00:02:07,589
the world's most powerful rocket engine

45 00:02:03,780 --> 00:02:09,659
ever flow the mighty f1 and test-fired

46 00:02:07,590 --> 00:02:12,509
its gas generator on the Marshall Space

47 00:02:09,659 --> 00:02:14,759
Flight centers test and what they learn

48 00:02:12,509 --> 00:02:17,098
will help engineers develop NASA's new

49 00:02:14,759 --> 00:02:19,769
heavy-lift rocket due to launch Orion

50 00:02:17,098 --> 00:02:22,169
and its astronauts into space we

51 00:02:19,769 --> 00:02:24,509
understand how the gas generator works

52 00:02:22,169 --> 00:02:27,119
that was designed in the 50s and the 60s

53 00:02:24,509 --> 00:02:30,780
how did it operate what are the

54 00:02:27,120 --> 00:02:32,610
characteristics of that engine then we

55 00:02:30,780 --> 00:02:34,709
have reduced the risk of understanding

56 00:02:32,610 --> 00:02:37,739
how can we then bring it into an

57 00:02:34,709 --> 00:02:39,959
advanced booster engine the f1 powered
the Saturn five rocket that sent Apollo

astronauts to the moon this 20 second
test is one in a series pushing the f1
gas generator to limits beyond Apollo

era tests President Obama's proposal for
a new national network for manufacturing
innovation brought some 350
representatives from industry academia
and economic development agencies to a
NASA co-sponsored workshop in Huntsville
the blueprint for action public workshop
was a forum at which the network's
proposed design could be reviewed and
refined the Marshall Space Flight Center
will be home to one of the network's regional components the Institute's for manufacturing innovation and advanced manufacturing technology is critical to NASA is critical to all of our missions it's critical to our science missions it's critical to our human spaceflight missions our Aeronautics missions and our space technology mission directorate technology that we that we producemarshall center director Patrick Scheuermann served as NASA's representative to the workshops
interagency working group nasa's space technology mission directorate leads the agency's participation in the nationwide advanced manufacturing network

a NASA sub-orbital telescope has given scientists the first clear evidence of energy transfer from the sun's magnetic field to the solar atmosphere or Corona this process called solar braiding has been theorized yet unobserved by researchers until the high-resolution coronal imager hi-c obtained highest resolution images from a large active region in the sun's corona
launched from the White Sands Missile Range in New Mexico last July the 464 pound 10 foot long hi-c telescope took 165 images during its roughly 10 minute flight initial image sequences were seen to demonstrate the evolution of the magnetic field and its repeated release of energy through activity seen on the Sun at temperatures ranging from 2 million to 4 million degrees while the Mars rover Curiosity may be grabbing its share of headlines these days another red planet rover is quietly embarking on its tenth year of exploration opportunity is smaller and doesn't carry
the same high-tech tools as curiosity

but since landing on Mars on January 25th 2004 it's made many notable discoveries including the red planet's warmer and wetter past opportunity and its twin spirit were only supposed to outlast their original mission spirit lost communication with Earth in 2010 shortly after getting stuck in Martian sand but opportunity remains healthy and studying interesting rocks in a massive crater another NASA spacecraft this one orbiting Mars is providing new evidence
of a wet underground environment that

adds to an increasingly complex picture

of the planets early evolution

researchers analyzing spectrometer data

captured by the Mars Reconnaissance

orbiter MRO of the floor of McLaughlin

crater think the 1.4 mile deep crater

once allowed underground water which

otherwise would have stayed hidden to

flow into the crater's interior layered

flat rocks found at the bottom of the

crater contained carbonate and clay

minerals that form in the presence of

water McLaughlin also lacks large inflow
channels and small channels originating within the crater wall and near a level that could have marked the surface of a lake launched in 2005 mro and it's six instruments have provided more high-resolution data about the red planet then all other Mars orbiters combined NASA scientists routinely use lasers to track the position of the Lunar Reconnaissance orbiters laser altimeter as it orbits the moon recently however they also tried something a little different in addition to tracking the
instrument they use the laser to send a picture of the famous Mona Lisa in the first demonstration of laser communication with a satellite at the moon to do this the LRO team used the existing laser tracking signal sent by the next generation satellite laser ranging stationed at NASA's Goddard Space Flight Center the image was divided into pixels which were then sent to the spacecraft one at a time by retiming the regular tracking pulses by delaying the tracking pulses by specific amounts LRO scientists could use the difference between the expected arrival
time in the actual arrival time to indicate the brightness of an individual pixel once the image was sent scientists corrected for transmission errors caused by the Earth's atmosphere using common techniques used in CDs and DVDs they also studied signal fluctuations due to Earth's atmosphere the final image was verified when it was returned to Earth using LRO's radio telemetry system this test and the data obtained from it sets the stage for future high data rate laser communication demonstrations that will be a central feature of NASA's next
moon mission the lunar atmosphere and dust environment Explorer so while lasers are currently being used to track NASA satellites in the future they may also be used to communicate with them sending not only data but perhaps images that one day will be as famous as the Mona Lisa I do want to welcome all of you here for what I hope will be a very inspiring program NASA Administrator Charles Bolden kicked off a special commemoration at headquarters of the life and vision of dr. Martin Luther King Jr.
the MLK Day of Remembrance program

featured musical selections poetry and

speakers celebrating the continuing

impact of Dr. King's work and philosophy

people all over the country including

dr. King were very important in the
civil rights movement the NASA

headquarters chapter of blacks in
government big sponsored the event

liftoff we have liftoff with Apollo 14

42 years ago on January thirty first

nineteen seventy one the Apollo 14

mission began with the launch of the

Saturn five rocket from the Kennedy
Space Center astronauts Alan Shepard

00:09:12,059 --> 00:09:17,219
Stuart Roosa an Edgar Mitchell manned

00:09:14,850 --> 00:09:20,040
NASA's third mission to land on the moon

00:09:17,220 --> 00:09:23,820
I looks like gear about up a bottom step

00:09:20,039 --> 00:09:25,919
and on the surface have been middlemen

00:09:23,820 --> 00:09:28,230
Shepherd and Mitchell conducted two

00:09:25,919 --> 00:09:30,990
lunar EV eggs and collected more

00:09:28,230 --> 00:09:34,278
material and scientific data than Apollo

00:09:30,990 --> 00:09:37,169
11 and 12 combined and famously

00:09:34,278 --> 00:09:40,289
Commander Shepard swung the first Golf

00:09:37,169 --> 00:09:45,449
Club in space sending two balls across

00:09:40,289 --> 00:09:47,399
the lunar frontier Apollo 14 touched

00:09:45,450 --> 00:09:54,028
down safely in the Pacific Ocean on

00:09:47,399 --> 00:09:55,980
februari 9 1971 this commemorative

00:09:54,028 --> 00:09:58,139
plaque was issued to the United States
and the governments of fourteen other countries to mark the signing of the space station intergovernmental agreement fifteen years ago on January 29, 1998. The IGA is an element of the legal structure used to regulate the international space station and is an agreement between NASA, the Canadian Space Agency, the Japan Aerospace Exploration Agency, the Russian Federal Space Agency, and 11 member states of the European Space Agency.

Alright here's your clue: she won more than sixty-nine thousand dollars this
month on the nationally syndicated TV game show Jeopardy the answer posed in the form of a question who is Kristin Morgan the engineer turned strategic analyst at the Marshall Space Flight Center leveraged her strong engineering and science background and several early college semesters as an art history major to catch in on the show she's watched regularly since childhood who's Richard the third Morgan thanked her colleagues in Marshall's office of strategic analysis and communications who pitched in after hours to help
prepare her he has a very impressive

five days later of 69,000 $98 Morgan was
top money winner on five jeopardy

episodes qualifying her for the show's

next tournament of champions and that's

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