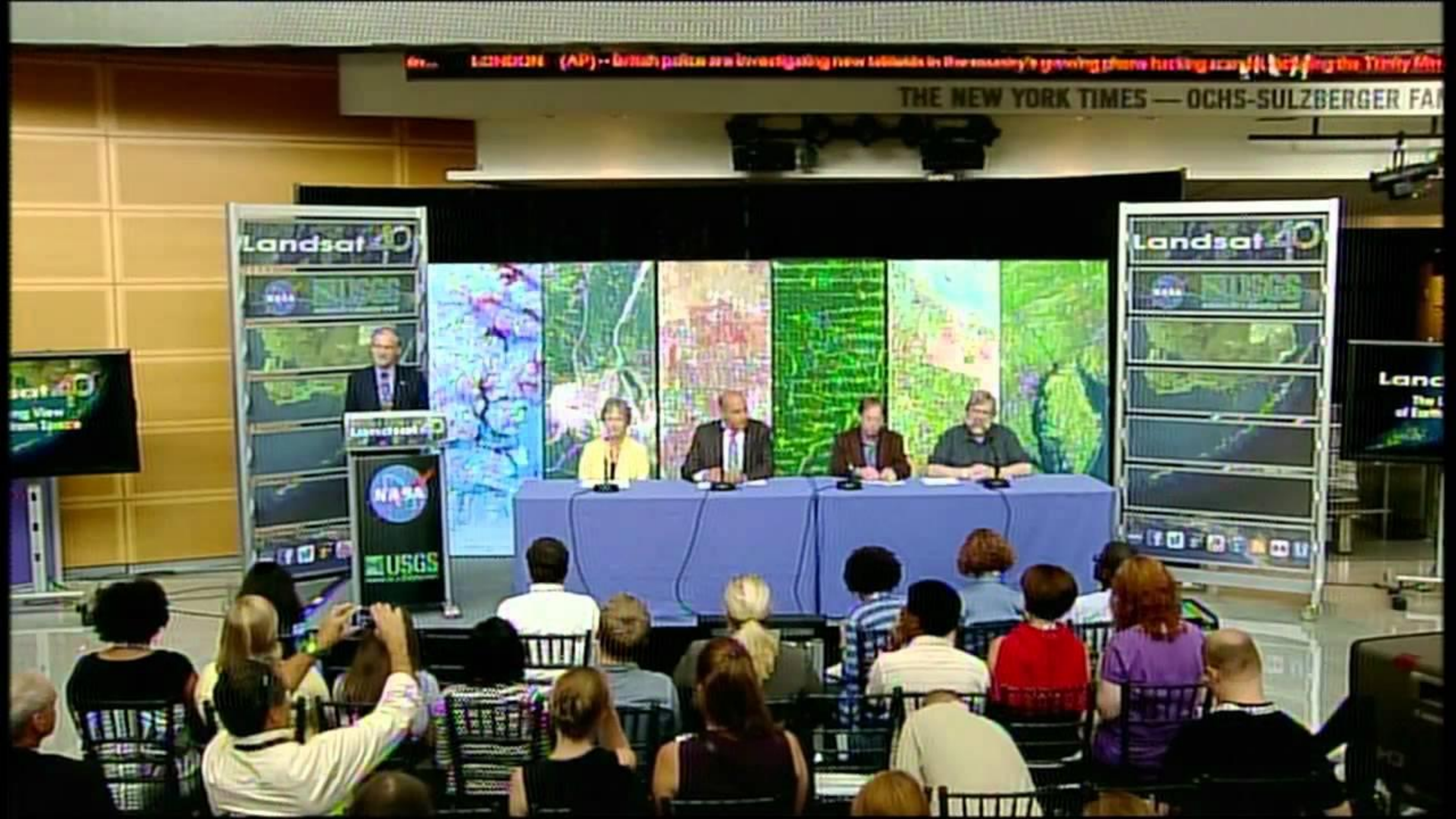
THE NEW YORK TIMES — OCHS-SULZBERGER FA
Landsat 40
NASA
USGS
Landsat 40

1
00:00:06,890 --> 00:00:10,910
This Week at NASA…

2
00:00:10,910 --> 00:00:16,490
The Curiosity rover continues to make its
way to Mars -- and its scheduled landing in

3
00:00:16,490 --> 00:00:21,910
Gale Crater on Monday, Aug. 6, at around 1:30
in the morning, Eastern.

4
00:00:21,910 --> 00:00:27,269
Once delivered to the Red Planet's surface,
Curiosity will begin a two-year prime mission

5
00:00:27,269 --> 00:00:32,470
to investigate one of the most intriguing
places on Mars.

6
00:00:32,470 --> 00:00:39,240
Join NASA TV coverage of Curiosity's landing
on Sunday, Aug. 5, at 11:30 p.m. Eastern.

7
00:00:39,240 --> 00:00:49,320
We'll have it on all three NTV channels,
on nasa.gov, AND, on Xbox 360, as well!!

8
00:00:49,320 --> 00:00:53,890
While the real Curiosity rover makes its way
to the Red Planet, reporters on Earth met

9
00:00:53,890 --> 00:00:57,570
the rover's "stunt doubles" in the JPL
Mars Yard.

10
00:00:57,570 --> 00:00:58,940
"We had a rare moment.

11
00:00:58,940 --> 00:01:04,420

We're between testing where we can invite
people over and actually watch us do some

12
00:01:04,420 --> 00:01:05,420
testing."

13
00:01:05,420 --> 00:01:10,160
"The Vehicle System Test Vehicle rover is
essentially Curiosity's twin sister where

14
00:01:10,160 --> 00:01:13,729
it's almost the same rover that's about
to touch down on Mars.

15
00:01:13,729 --> 00:01:15,860
And we're testing autonomous navigation
software today.

16
00:01:15,860 --> 00:01:20,000
So what we're doing is setting a pile of
rocks and the rover is imaging the world around

17
00:01:20,000 --> 00:01:24,530
it and it's determining where is it safe
to drive and where is it not to."

18
00:01:24,530 --> 00:01:31,390
Media visitors saw the rovers in action and
talked to scientists, rover drivers, and engineers.

19
00:01:31,390 --> 00:01:34,780
Landing day is on everyone's mind, after
all, it's coming up fast.

20
00:01:34,780 --> 00:01:36,260
"You have to be nervous.

21
00:01:36,260 --> 00:01:42,210
It's a very difficult thing to get right,
but the thing is we have done all the testing

22
00:01:42,210 --> 00:01:48,600
we can think of, but we did it and we put
the effort in and I’m very proud of the

23
00:01:48,600 --> 00:01:49,600
team.”

24
00:01:49,600 --> 00:01:53,840
The rocket that will launch humans farther
into space than ever before has passed a major

25
00:01:53,840 --> 00:01:55,100
milestone.

26
00:01:55,100 --> 00:01:59,920
The Space Launch System Program completed
a combined System Requirements and System

27
00:01:59,920 --> 00:02:06,210
Definition review, which set technical, performance,
cost and schedule requirements to provide

28
00:02:06,210 --> 00:02:09,560
on-time development of the overall launch
vehicle system.

29
00:02:09,560 --> 00:02:15,200
SLS now moves ahead to the preliminary design
phase of the heavy-lift rocket that will carry

30
00:02:15,200 --> 00:02:21,400
NASA's Orion spacecraft and other payloads,
and provide an entirely new capability for

31
00:02:21,400 --> 00:02:24,700
human exploration beyond low Earth orbit.

32
00:02:24,700 --> 00:02:25,700

The first test flight, which will feature
a configuration for a 70-metric-ton (77-ton)

33
00:02:25,700 --> 00:02:28,390
lift capacity, is scheduled for 2017.

34
00:02:28,390 --> 00:02:35,120
A large inflatable heat shield developed by
NASA's Space Technology Program at Langley

35
00:02:35,120 --> 00:02:40,870
Research Center has successfully survived
a trip through Earth's atmosphere while travelling

36
00:02:40,870 --> 00:02:45,110
at hypersonic speeds up to 76-hundred miles
per hour.

37
00:02:45,110 --> 00:02:51,700
IRVE-3, The Inflatable Reentry Vehicle Experiment,
was launched by sounding rocket from NASA's

38
00:02:51,700 --> 00:02:58,670
Wallops Flight Facility, inflated as expected
to a mushroom shape almost 10 feet in diameter,

39
00:02:58,670 --> 00:03:03,620
returned safely through Earth's atmosphere
at hypersonic speeds and fell into the Atlantic

40
00:03:03,620 --> 00:03:06,310
Ocean off the coast of North Carolina.

41
00:03:06,310 --> 00:03:12,620
The test demonstrated that a space capsule
can use an inflatable outer shell to slow

42
00:03:12,620 --> 00:03:18,099
and protect itself during planetary entry
and descent.The program is managed by the

43
00:03:18,099 --> 00:03:23,950
Langley Research Center.

44
00:03:23,950 --> 00:03:29,390
NASA engineers surpassed the previously set
J-2X powerpack record during the latest test

45
00:03:29,390 --> 00:03:30,940
at Stennis Space Center.

46
00:03:30,940 --> 00:03:37,560
The 13-hundred-50-second test on the A-1 Test
Stand broke the previous record of 11-hundred-50

47
00:03:37,560 --> 00:03:40,530
seconds – set earlier this summer on June
8.

48
00:03:40,530 --> 00:03:46,980
The July 24 test gathered data on performance
of the liquid oxygen and fuel pumps during

49
00:03:46,980 --> 00:03:47,980
extreme conditions -- critical information
for continued development of the turbopump

50
00:03:47,980 --> 00:03:48,980
for use on the J-2X engine.

51
00:03:48,980 --> 00:03:53,470
The J-2X is the first human-rated liquid oxygen
and liquid hydrogen rocket engine to be developed

52
00:03:53,470 --> 00:04:02,860
in four decades and is being built for NASA’s
Marshall Space Flight Center.

53
00:04:02,860 --> 00:04:12,950

The successful, July 20th launch of "Kounotori
3," the H-II Transfer Vehicle, from the Tanegashima

54
00:04:12,950 --> 00:04:18,850
Space Center in southern Japan was followed
seven days later by the arrival of the unpiloted

55
00:04:18,850 --> 00:04:22,110
cargo ship at the International Space Station.

56
00:04:22,110 --> 00:04:29,300
HTV-3 was captured by the ISS crew using the
station’s robotic Canadarm-2, then berthed

57
00:04:29,300 --> 00:04:37,890
to a docking port on the Earth-facing side
of the Harmony node.

58
00:04:37,890 --> 00:04:48,100
Glenn Research Center employees watched the
launch of the HTV-3 with heightened interest.

59
00:04:48,100 --> 00:04:54,810
Among the almost 4 tons of supplies, experiments
and hardware HTV-3 is delivering to station

60
00:04:54,810 --> 00:05:00,660
is the Space Communications and Navigation,
or SCaN, testbed.

61
00:05:00,660 --> 00:05:05,910
Designed and built at Glenn, the device will
allow researchers to conduct experiments which

62
00:05:05,910 --> 00:05:10,130
could lead to a new generation of space communications.

63
00:05:10,130 --> 00:05:16,610
Also onboard -- a remote-controlled Earth-observing
camera system named ISERV Pathfinder.

64
00:05:16,610 --> 00:05:21,530
The new imaging instrument, designed and built
at the Marshall Space Flight Center, will

65
00:05:21,530 --> 00:05:28,530
acquire imagery of specific areas of the globe
for disaster analysis and environmental studies.

66
00:05:28,530 --> 00:05:34,560
The program is operated as a partnership between
NASA and the U.S. Agency for International

67
00:05:34,560 --> 00:05:35,650
Development.

68
00:05:35,650 --> 00:05:42,441
“I can’t tell you how privileged we feel
to be part of the crew going to the space

69
00:05:42,441 --> 00:05:46,600
station and how thrilled we are to be at this
point in our training.”

70
00:05:46,600 --> 00:05:52,360
NASA astronaut Kevin Ford, and crewmates Evgeny
Tarelkin and Oleg Novitskiy of the Russian

71
00:05:52,360 --> 00:05:58,240
Federal Space Agency were at the Johnson Space
Center to preview for media their upcoming

72
00:05:58,240 --> 00:06:02,660
Expedition 33 and 34 missions to the International
Space Station.

73
00:06:02,660 --> 00:06:08,690
“We really appreciate the magnitude of the
effort to get us into space and what the space

74
00:06:08,690 --> 00:06:10,690
station represents.

75
00:06:10,690 --> 00:06:16,570
So few people get to fly up there compared
to the number of people who invest their lives

76
00:06:16,570 --> 00:06:17,570
in it.”

77
00:06:17,570 --> 00:06:22,350
A prior briefing outlined mission priorities
and objectives, including hundreds of research

78
00:06:22,350 --> 00:06:28,390
experiments, a Russian spacewalk, international
and commercial cargo deliveries to the complex

79
00:06:28,390 --> 00:06:31,160
and a commercial cargo demonstration flight.

80
00:06:31,160 --> 00:06:37,250
“During the six month period for Expedition
33 and 34, we’ll see over 198 experiments

81
00:06:37,250 --> 00:06:42,470
active on the space station with hundreds
of participating scientists across the entire

82
00:06:42,470 --> 00:06:44,290
partnership and around the world.”

83
00:06:44,290 --> 00:06:50,070
The trio is scheduled to launch to the station
aboard a Soyuz spacecraft on October 15.

84
00:06:50,070 --> 00:06:55,170
Once there, they’ll join NASA astronaut
Suni Williams, Japan Aerospace Exploration

85
00:06:55,170 --> 00:07:01,770
Agency astronaut Aki Hoshide and Russian cosmonaut
Yuri Malenchenko to round out the Expedition

86
00:07:01,770 --> 00:07:05,160
33 crew.

87
00:07:05,160 --> 00:07:10,590
The Newseum in Washington, DC served as the
site of a joint news conference by NASA and

88
00:07:10,590 --> 00:07:17,030
the U.S. Geological Survey to highlight 40
years worth of accomplishments by Landsat,

89
00:07:17,030 --> 00:07:20,430
the world's longest-running, Earth-observing
satellite program.

90
00:07:20,430 --> 00:07:25,340
“No other satellite program in our country
or in any other nation in the world comes

91
00:07:25,340 --> 00:07:32,440
close to having the historical length and
breadth and the continuity in the coverage

92
00:07:32,440 --> 00:07:34,130
of the Landsat archive.”

93
00:07:34,130 --> 00:07:38,590
NASA launched the first Landsat satellite
on July 23, 1972.

94
00:07:38,590 --> 00:07:45,970
The resulting four decades of imagery from
the fleet of Landsat satellites forms an impartial,

95

00:07:45,970 --> 00:07:51,560
comprehensive, and easily-accessed register
of human and natural changes on the land.

96
00:07:51,560 --> 00:07:57,550
This information supports the improvement
of human and environmental health, biodiversity,

97
00:07:57,550 --> 00:08:03,250
energy and water management, urban planning,
disaster recovery and crop monitoring.

98
00:08:03,250 --> 00:08:08,190
“It’s really by stepping back and looking
at the Earth, observing these changes in that

99
00:08:08,190 --> 00:08:12,650
context from space can we really understand
what’s happening.”

100
00:08:12,650 --> 00:08:18,280
“Hopefully you will enjoy the opportunity
to present to your peers.”

101
00:08:18,280 --> 00:08:23,000
Administrator Charlie Bolden helped welcome
to Headquarters members of the next generation

102
00:08:23,000 --> 00:08:29,740
of idea makers The Ideas in Flight program
provided a forum for summer interns in NASA’s

103
00:08:29,740 --> 00:08:35,360
Aeronautics Research Mission Directorate to
give “What I Did This Summer” -type presentations.

104
00:08:35,360 --> 00:08:41,970
Topics ranged from intelligent aircraft engines
to technologies for reducing harmful emissions.

105

00:08:41,970 --> 00:08:47,550
"Ideas in Flight" was designed to provide
unique hands-on experiences in careers related

106
00:08:47,550 --> 00:08:51,900
to science, technology, engineering and mathematics.

107
00:08:51,900 --> 00:08:57,110
Also at NASA headquarters, the Science Mission
Directorate sponsored the DEVELOP Program's

108
00:08:57,110 --> 00:08:59,950
Annual Summer Highlight Presentation.

109
00:08:59,950 --> 00:09:04,200
Presentations were given by young professionals
and students who worked on Earth Observation

110
00:09:04,200 --> 00:09:08,930
research projects this summer focused on environmental
issues around the globe.

111
00:09:08,930 --> 00:09:13,330
"The students really benefit because they
get the exposure and they've got a nice

112
00:09:13,330 --> 00:09:17,200
thing at the end of the summer that they can
go back and tell their family and their friends

113
00:09:17,200 --> 00:09:20,630
and other students that they've made a difference
for the summer."

114
00:09:20,630 --> 00:09:26,750
Mentored by NASA and partner agency scientists,
DEVELOP interns extend NASA Earth Science

115
00:09:26,750 --> 00:09:31,540
data and technology to policy and decision

makers.

116
00:09:31,540 --> 00:09:36,700
"Kevin Ford in control of the stick at this
moment…(double sonic boom)…Discovery now

117
00:09:36,700 --> 00:09:41,380
going sub-sonic, the fleet-leading shuttle
announcing its arrival at the landing site

118
00:09:41,380 --> 00:09:43,630
with a pair of sonic booms…"

119
00:09:43,630 --> 00:09:47,950
When Space Shuttle Discovery touched down
at Edwards Air Force Base in Southern California

120
00:09:47,950 --> 00:09:54,490
on September 11th, 2009 to conclude mission
STS-128, no one could have foreseen that it

121
00:09:54,490 --> 00:10:01,190
would be the last of 54 such landings at the
famed desert air base.

122
00:10:01,190 --> 00:10:07,150
NASA astronaut Rick "C.J." Sturckow, who commanded
the mission, returned to NASA's Dryden Flight

123
00:10:07,150 --> 00:10:12,350
Research Center at Edwards recently to recap
the mission for Dryden employees.

124
00:10:12,350 --> 00:10:18,870
In his video-illustrated presentation, Sturckow
recalled highlights of the 13-day supply mission

125
00:10:18,870 --> 00:10:23,820
to the International Space Station, noting
that the station is contributing to both scientific

126
00:10:23,820 --> 00:10:27,840
understanding and future solar system exploration:

127
00:10:27,840 --> 00:10:33,860
"I think one of the biggest benefits of the
space station will be …we'll look back and

128
00:10:33,860 --> 00:10:38,760
go, wow, if we hadn't flown ISS we could
have never accomplished whatever it is we

129
00:10:38,760 --> 00:10:39,760
do next.

130
00:10:39,760 --> 00:10:42,950
I think that'll be one of the biggest contributions,
in addition to all the great science, other

131
00:10:42,950 --> 00:10:44,440
science that's going on up there."

132
00:10:44,440 --> 00:10:49,420
Fifteen of Discovery's 39 missions landed
at Edwards, the remainder at NASA's Kennedy

133
00:10:49,420 --> 00:10:50,970
Space Center in Florida.

134
00:10:50,970 --> 00:10:55,280
The retired space shuttle is now enshrined
at the Smithsonian National Air and Space

135
00:10:55,280 --> 00:11:00,990
Museum's Udvar-Hazy Center near Washington,
D.C.

136
00:11:00,990 --> 00:11:08,250
Twenty years ago on July 31, 1992, Space Shuttle

Atlantis launched from the Kennedy Space Center

137
00:11:08,250 --> 00:11:10,330
on STS-46.

138
00:11:10,330 --> 00:11:16,950
Atlantis' crew consisted of Commander Loren
Shriver, Pilot Andrew Allen, Mission Specialists

139
00:11:16,950 --> 00:11:24,220
Jeff Hoffman, Franklin Chang-Diaz, Marsha
Ivins and Claude Nicollier and Payload Specialist

140
00:11:24,220 --> 00:11:25,830
Franco Malerba.

141
00:11:25,830 --> 00:11:28,950
One of the mission's primary objectives
was called off.

142
00:11:28,950 --> 00:11:35,350
The joint NASA/Italian Space Agency Tethered
Satellite System or TSS was restowed and returned

143
00:11:35,350 --> 00:11:38,740
to Earth after a jammed tether line prevented
deployment.

144
00:11:38,740 --> 00:11:43,930
Meanwhile, The European Space Agency's European
Retrievable Carrier (EURECA) was deployed

145
00:11:43,930 --> 00:11:45,530
successfully.

146
00:11:45,530 --> 00:11:50,200
Atlantis and crew returned nearly eight days
later to conclude the mission.

147

00:11:50,200 --> 00:11:55,790
“It meant a lot to me to have the opportunity
to go into space and it meant a lot to me

148
00:11:55,790 --> 00:11:58,510
to be the first woman that was chosen.”

149
00:11:58,510 --> 00:12:04,940
When Sally Ride passed away recently at age
61, she left a legacy of accomplishment and

150
00:12:04,940 --> 00:12:06,650
inspiration.

151
00:12:06,650 --> 00:12:11,370
As the first American woman in space, Ride
proved there was nothing to which a young

152
00:12:11,370 --> 00:12:13,200
girl could not aspire.

153
00:12:13,200 --> 00:12:19,300
And, as a former astronaut, she continued
to reassure young women – and young men,

154
00:12:19,300 --> 00:12:26,050
too, that careers in science and exploration
can be exciting, fun, and rewarding.

155
00:12:26,050 --> 00:12:31,670
Sally Ride will be missed not only by the
NASA Family, but also countless millions of

156
00:12:31,670 --> 00:12:37,690
Americans and citizens of the world.

157
00:12:37,690 --> 00:12:39,910
And that’s This Week @NASA.

158

00:12:39,910 --> 00:12:45,130
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