



**DOUG MCCUISTION**

DIRECTOR, MARS EXPLORATION PROGRAM

1  
00:00:08,160 --> 00:00:12,360  
This Week at NASA...

2  
00:00:12,360 --> 00:00:17,480  
With launch day fast approaching, the STS-130 crew and launch team have their hands full

3  
00:00:17,480 --> 00:00:23,180  
with last minute preparations. As pad maintenance and system checks are performed, Commander

4  
00:00:23,180 --> 00:00:29,230  
George Zamka, Pilot Terry Virts, and Mission Specialists Nicholas Patrick, Bob Behnken,

5  
00:00:29,230 --> 00:00:34,850  
Steve Robinson and Kathryn Hire continue to review flight data and practice tasks they'll

6  
00:00:34,850 --> 00:00:40,360  
perform during launch and on orbit. Virts, the only first-time flyer of the crew, is

7  
00:00:40,360 --> 00:00:42,350  
understandably excited about the mission.

8  
00:00:42,350 --> 00:00:47,120  
I think everybody on their first space flight is just looking forward to going into space.

9  
00:00:47,120 --> 00:00:52,430  
It's an amazing concept to think of leaving the planet earth and just not that many people

10  
00:00:52,430 --> 00:00:54,160  
have gotten to do that so I'm really looking forward to that.

11  
00:00:54,160 --> 00:00:59,969

At launch pad 39A Endeavour's payload bay doors are closed and ready for flight. Inside

12

00:00:59,969 --> 00:01:04,430

is Tranquility, a pressurized module that will house many of the station's life support

13

00:01:04,430 --> 00:01:09,770

systems, and a cupola, a seven-window work station that will give the astronauts a vastly

14

00:01:09,770 --> 00:01:14,330

improved view of the station's exterior. Launch of Endeavour is scheduled for Feb.

15

00:01:14,330 --> 00:01:20,380

7 at 4:39 am eastern.

16

00:01:20,380 --> 00:01:26,240

A NASA aircraft with extensive radar capabilities will help study earthquake faults in Haiti

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00:01:26,240 --> 00:01:31,670

and the Dominican Republic. A Gulfstream III carrying NASA's Uninhabited Aerial Vehicle

18

00:01:31,670 --> 00:01:37,270

Synthetic Aperture Radar, or UAVSAR, was already scheduled to perform a three-week series of

19

00:01:37,270 --> 00:01:43,200

science over flights in Central America. After the Haitian earthquake, NASA managers added

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00:01:43,200 --> 00:01:48,580

additional science objectives that will allow UAVSAR's unique observational capabilities

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00:01:48,580 --> 00:01:53,970

to study geologic processes in Hispaniola

following the earthquake. UAVSAR's ability

22  
00:01:53,970 --> 00:01:59,920  
to provide rapid access to regions of interest,  
short repeat flight intervals, high resolution

23  
00:01:59,920 --> 00:02:05,060  
and its variable viewing geometry make it  
a powerful tool for studying ongoing Earth

24  
00:02:05,060 --> 00:02:06,060  
processes.

25  
00:02:06,060 --> 00:02:17,250  
It began as a 90-day mission, but NASA's  
Mars Exploration Rover, Spirit, roamed for

26  
00:02:17,250 --> 00:02:23,740  
more than six years to gather and return unprecedented  
science from the Red Planet. Now, impossibly

27  
00:02:23,740 --> 00:02:29,910  
stuck in a sand trap, Spirit has been designated  
a stationary science platform after efforts

28  
00:02:29,910 --> 00:02:33,290  
during the past several months to free it  
have been unsuccessful.

29  
00:02:33,290 --> 00:02:39,910  
With the loss of mobility on Spirit, people  
are disappointed. These have really become

30  
00:02:39,910 --> 00:02:45,970  
public icons, globally, not just in the United  
States. Even children, easily, identify with

31  
00:02:45,970 --> 00:02:52,150  
the rovers; they're cute, and they give  
you a human's eye view of the surface of

32

00:02:52,150 --> 00:02:55,920

another planet for the first time.

Spirit's primary objective in the coming

33

00:02:55,920 --> 00:03:01,440

weeks will be to tilt itself more towards

the sun and collect enough solar energy to

34

00:03:01,440 --> 00:03:07,400

weather the severe Martian winter. If Spirit

survives, it could continue conducting significant

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00:03:07,400 --> 00:03:11,150

new science for years.

36

00:03:11,150 --> 00:03:15,350

NASA's Solar Dynamics Observatory mission

gets underway with a launch from Cape Canaveral

37

00:03:15,350 --> 00:03:16,970

Air Force Station in February.

38

00:03:16,970 --> 00:03:23,250

SDO is our first opportunity to use a piece

of instrumentation called a heliosiesmometer,

39

00:03:23,250 --> 00:03:28,630

and what this does is it does the same thing

as a sonogram for a human diagnostic, where

40

00:03:28,630 --> 00:03:33,520

you look inside of a human to see organs and

processes going on, and we are going to be

41

00:03:33,520 --> 00:03:38,170

able to see the birth of magnetic fields in

the sun and their evolutions this is the first

42

00:03:38,170 --> 00:03:39,390  
time ever we'll be able to do that.

43

00:03:39,390 --> 00:03:43,819  
The Solar Dynamics Observatory, will help  
scientists zoom in on solar activity such

44

00:03:43,819 --> 00:03:49,500  
as sunspots, solar flares and coronal mass  
ejections, thus improving forecasting of how

45

00:03:49,500 --> 00:03:55,040  
this solar weather will affect us. The Observatory  
is expected to deliver startling images of

46

00:03:55,040 --> 00:04:01,060  
the sun with ten times more detail than High  
Definition Television cameras. SDO is the

47

00:04:01,060 --> 00:04:05,380  
first in NASA's "Living with a Star"  
satellites and has been designed to provide

48

00:04:05,380 --> 00:04:10,670  
invaluable data about the sun for five years.

49

00:04:10,670 --> 00:04:16,340  
WISE, the Wide-Field Infrared Survey Explorer  
has discovered a near-Earth asteroid some

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00:04:16,340 --> 00:04:22,019  
98 million miles away. The asteroid is not  
expected to come near enough to our planet

51

00:04:22,019 --> 00:04:27,650  
to pose a threat. Scientists say this is just  
the beginning for WISE, which began its all-sky

52

00:04:27,650 --> 00:04:28,850  
survey at the beginning of the year.

53  
00:04:28,850 --> 00:04:36,440  
Ignition and lift-off of a Delta II rocket  
and WISE searching for stars at galaxies never

54  
00:04:36,440 --> 00:04:39,910  
seen before.  
The telescope should find as many as a thousand

55  
00:04:39,910 --> 00:04:45,160  
previously undiscovered asteroids in the belt  
between Mars and Jupiter, as well as hundreds

56  
00:04:45,160 --> 00:04:48,540  
of new near-Earth asteroids and other hidden  
objects.

57  
00:04:48,540 --> 00:04:55,190  
The things we did on our flight, of course  
launch, landing & space station

58  
00:04:55,190 --> 00:05:00,040  
The STS-129 crew continued its center tour  
with a stop in northeast Ohio at the Glenn

59  
00:05:00,040 --> 00:05:04,550  
Research Center. There, they presented video  
highlights from their 11-day mission last

60  
00:05:04,550 --> 00:05:05,550  
November.

61  
00:05:05,550 --> 00:05:12,150  
The 129 crew also visited the Pro Football  
Hall of Fame in Canton, Ohio, bringing with

62  
00:05:12,150 --> 00:05:18,440  
them several items that accompanied the astronauts  
on their 4.5 million mile journey into space:

63  
00:05:18,440 --> 00:05:24,430  
a specially-minted silver coin that will be  
used at the kickoff of Super Bowl XLIV; jerseys

64  
00:05:24,430 --> 00:05:29,220  
representing the Detroit Lions and Dallas  
Cowboys, the two NFL teams with whom crew

65  
00:05:29,220 --> 00:05:34,320  
member Leland Melvin had a tryout; and, a  
football, inscribed with the names of Pro

66  
00:05:34,320 --> 00:05:39,740  
Football Hall of Fame members. Local students  
and community partners joined in the event.

67  
00:05:39,740 --> 00:05:44,370  
Commander Charlie Hobaugh, who attended high  
school in Ridgeville, Ohio, and Cleveland-area

68  
00:05:44,370 --> 00:05:49,990  
native, Mission Specialist Mike Foreman, were  
joined by crew members Melvin, Barry Wilmore,

69  
00:05:49,990 --> 00:05:54,669  
Randy Bresnik and Bobby Satcher at a Cleveland  
Cavaliers game with the visiting Minnesota

70  
00:05:54,669 --> 00:05:57,080  
Timberwolves at Quicken Loans Arena.

71  
00:05:57,080 --> 00:06:01,540  
Joining us tonight with that jersey is the  
crew from the space shuttle Atlantis

72  
00:06:01,540 --> 00:06:06,830  
As well as taking in the matchup, the astronauts  
participated in pregame activities and met

73

00:06:06,830 --> 00:06:09,310  
with fans.

74  
00:06:09,310 --> 00:06:15,160  
Fifteen years ago, on February 3, 1995, Space Shuttle Discovery launched from the Kennedy

75  
00:06:15,160 --> 00:06:23,570  
Space Center on mission STS-63. A night launch and the 20th mission for Discovery, it marked

76  
00:06:23,570 --> 00:06:28,820  
the first time a space shuttle mission had a female pilot, Eileen Collins. Dubbed the

77  
00:06:28,820 --> 00:06:35,419  
Near-Mir mission, STS-63 rendezvoused with and did a fly around of Russian space station

78  
00:06:35,419 --> 00:06:41,520  
Mir, in preparation for STS-71, the first mission to dock with Mir. Along with Collins,

79  
00:06:41,520 --> 00:06:48,210  
the STS-63 crew included Commander Jim Weatherbee, Mike Foale, Janice Voss, Bernard Harris and

80  
00:06:48,210 --> 00:06:53,720  
cosmonaut Vladimir Titov. Collins went on to become the first female commander of a

81  
00:06:53,720 --> 00:06:58,910  
space shuttle mission, STS-93, in 1999.