



Aug 27 2009



1
00:00:07,629 --> 00:00:12,740

This Week @ NASA...

As space shuttle Discovery waits at launch

2
00:00:12,740 --> 00:00:19,330

pad 39A for its liftoff from the Kennedy Space Center, the STS-131 crew continues to ready

3
00:00:19,330 --> 00:00:25,009

itself for its upcoming mission to the International Space Station. Commander Alan Poindexter and

4
00:00:25,009 --> 00:00:29,599

his international team of astronauts will deliver science racks for use in the station's

5
00:00:29,599 --> 00:00:32,660

laboratories.

"The crew has been very busy training and

6
00:00:32,660 --> 00:00:37,550

we finished our Terminal Countdown Demonstration Test last week at the Kennedy Space Center.

7
00:00:37,550 --> 00:00:41,330

We have a few more weeks of training to finish up and we'll be ready for launch."

8
00:00:41,330 --> 00:00:47,890

Mission specialists Rick Mastracchio and Clay Anderson are scheduled to perform three, six-and-one-half-hour

9
00:00:47,890 --> 00:00:53,400

spacewalks to replace, retrieve and switch out various elements outside the orbiting

10
00:00:53,400 --> 00:00:58,890

complex. For Mastracchio, this'll be his third shuttle mission and second series of

11
00:00:58,890 --> 00:01:02,570
spacewalks.
“My first EVA, we’ll remove the new ammonia

12
00:01:02,570 --> 00:01:06,450
tank from the shuttle and get it on the station,
we’ll temporarily stow it. The second EVA

13
00:01:06,450 --> 00:01:10,020
we’ll actually swap the two ammonia tanks,
the new one for the old one, and then on the

14
00:01:10,020 --> 00:01:14,340
third EVA, we’ll moving the old tank from
the space station into the shuttle’s payload

15
00:01:14,340 --> 00:01:18,229
bay for return. That’s the biggest challenge.
Every EVA, between each EVA, we’re going

16
00:01:18,229 --> 00:01:22,219
to have to move the robotic arm. It has to
walk off the robotic arm to a new work site,

17
00:01:22,219 --> 00:01:25,829
basically. So, there’s a lot of team work
and a lot of integration involved. ”

18
00:01:25,829 --> 00:01:33,299
Rounding out the STS-131 crew is pilot Jim
Dutton, and Mission Specialists Dorothy Metcalf-Lindenburger,

19
00:01:33,299 --> 00:01:39,340
Stephanie Wilson and Naoko Yamazaki of the
Japan Aerospace Exploration Agency. Discovery’s

20
00:01:39,340 --> 00:01:44,490
launch is targeted for the morning of April
5.

21
00:01:44,490 --> 00:01:51,359
The final space shuttle mission to repair
and upgrade the Hubble Space Telescope is

22
00:01:51,359 --> 00:01:55,971
the subject of a new IMAX film.
“Hubble 3-D” was premiered during a special

23
00:01:55,971 --> 00:02:01,490
event held at the National Air and Space Museum
in Washington. The movie features the NASA

24
00:02:01,490 --> 00:02:08,440
astronauts from STS-125 who serviced Hubble
in May 2009; an IMAX 3D camera mounted in

25
00:02:08,440 --> 00:02:12,180
space shuttle Atlantis' payload bay filmed
their progress.

26
00:02:12,180 --> 00:02:16,310
A lot of cameras rolling while we were up
there. Of course everybody was watching. It

27
00:02:16,310 --> 00:02:20,320
was a mission that kept me on the edge of
my seat while we were do it. I am just thrilled

28
00:02:20,320 --> 00:02:21,910
that everything worked together and it came
out as well as it did at the end.”

29
00:02:21,910 --> 00:02:22,910
“I remember the first Hubble launch, and
obviously Charlie Bolden, my boss, was the

30
00:02:22,910 --> 00:02:23,910
pilot on the first launch of Hubble and we
talk about this a lot, and I love the fact

31
00:02:23,910 --> 00:02:32,740
that the public gets the story and it's
the meddling of science and human space flight

32
00:02:32,740 --> 00:02:47,820
in a perfect way and NASA helping to overcome
challenges, you couldn't write a better

33
00:02:47,820 --> 00:02:52,440
story."
The 43 minute film narrated by Leonardo DiCaprio

34
00:02:52,440 --> 00:03:00,900
will open in IMAX and IMAX 3D theaters worldwide
on March 19.

35
00:03:00,900 --> 00:03:06,570
About 25 seventh-grade girls from area middle
schools got up close and personal with unique

36
00:03:06,570 --> 00:03:12,080
aircraft and high technology when they participated
in a "Tech Trek" tour of the Dryden Flight

37
00:03:12,080 --> 00:03:16,400
Research Center.
The Tech Trek, to develop interest and excitement

38
00:03:16,400 --> 00:03:21,810
about math and science and self-confidence
among middle-school girls, included tours

39
00:03:21,810 --> 00:03:27,140
of Dryden's main aircraft hangar and several
specialized research and support aircraft,

40
00:03:27,140 --> 00:03:34,070
including the modified Boeing 747 Shuttle
Carrier Aircraft and the Global Hawk and Ikhana

41
00:03:34,070 --> 00:03:39,490
unmanned science aircraft.
They also tested their piloting skills in

42
00:03:39,490 --> 00:03:44,930
one of Dryden's flight simulators, and met
with female Dryden engineers and interns who

43
00:03:44,930 --> 00:03:49,340
encouraged them to pursue their science and
mathematics interests through high school

44
00:03:49,340 --> 00:03:53,030
and college.
Tech Trek was sponsored by the California

45
00:03:53,030 --> 00:04:00,010
branch of the American Association of University
Women, or AAUW.

46
00:04:00,010 --> 00:04:05,510
The 48th Robert H. Goddard Memorial space
symposium was held in Greenbelt, Maryland,

47
00:04:05,510 --> 00:04:10,260
home to the NASA center bearing the name of
America's pioneering rocketeer. Sponsored

48
00:04:10,260 --> 00:04:15,490
by the American Astronautical Society, the
three-day event drew leaders from NASA, the

49
00:04:15,490 --> 00:04:21,190
aerospace industry and academia, and Washington
policy-makers to discuss the major issues

50
00:04:21,190 --> 00:04:25,380
facing space exploration.
Among other topics, panel discussions and

51

00:04:25,380 --> 00:04:31,600

presentations addressed Commercial Space Missions, Extreme Space Weather, Climate Change, and

52

00:04:31,600 --> 00:04:41,060

Space Science and the future of Human Space Flight.

53

00:04:41,060 --> 00:04:48,460

In March 2006, heliophysicist Lika Guhathakurta was part of a NASA-led science expedition

54

00:04:48,460 --> 00:04:55,370

to Libya to witness a total solar eclipse. This international expedition was an unprecedented

55

00:04:55,370 --> 00:05:02,180

collaboration with Libyan scientists and researchers from across the globe. It was a project befitting

56

00:05:02,180 --> 00:05:07,740

a woman compelled to earn advanced degrees in astrophysics from American universities

57

00:05:07,740 --> 00:05:12,900

by a life-long fascination with the sky that began as a child in her native India.

58

00:05:12,900 --> 00:05:20,220

My parents never stopped me and said 'no you can't do this because you're a woman'."

59

00:05:20,220 --> 00:05:25,440

That young girl grew up to eventually become the lead scientist for NASA's "Living with

60

00:05:25,440 --> 00:05:31,320

a Star" program, a set of missions in the relatively-new field of heliophysics that

61
00:05:31,320 --> 00:05:36,580
focuses on understanding changes in the sun
and their effects on us here on Earth.

62
00:05:36,580 --> 00:05:44,990
“The goal of this program is to really study
the Sun as variable star and determine its

63
00:05:44,990 --> 00:05:49,389
impact on life and society.
The first “Living with a Star” mission,

64
00:05:49,389 --> 00:05:54,810
the Solar Dynamics Observatory, is in space
and is expected to begin producing important

65
00:05:54,810 --> 00:05:58,419
data about space weather for astrophysicists
this spring.

66
00:05:58,419 --> 00:06:04,639
“The chain effect is just unbelievable,
actually what happens, when you have disturbed

67
00:06:04,639 --> 00:06:09,980
our environment with a blast from the solar
storm.”

68
00:06:09,980 --> 00:06:15,310
Lika Guhathakurta says her parents never told
her she couldn't realize her dreams, something

69
00:06:15,310 --> 00:06:20,500
she's quick to remind other women who want
to make the study of the stars their careers.

70
00:06:20,500 --> 00:06:28,280
“To pursue something that you believe in
just doggedly. Don't let anyone stop

71

00:06:28,280 --> 00:06:31,949

you.”

And that’s This Week @ NASA.