1
00:00:03,550 --> 00:00:04,550
Good day and welcome.

2
00:00:04,550 --> 00:00:06,540
Today is Friday, January 27.

3
00:00:06,540 --> 00:00:10,620
This is the International Space Station update
From Mission Control at the Johnson Space

4
00:00:10,620 --> 00:00:12,430
Center in Houston.

5
00:00:12,430 --> 00:00:17,689
The Orbit Two team is on duty today led by
flight director Jerry Jason, along with Capcom

6
00:00:17,689 --> 00:00:21,449
or spacecraft communicator Christie Bertels.

7
00:00:21,449 --> 00:00:28,890
Onboard the International Space Station we
have the Expedition 30 crew.

8
00:00:28,890 --> 00:00:32,570
Here is a photograph of the crew, beginning
with the front row, and that is Commander

9
00:00:32,570 --> 00:00:38,329
Dan Burbank along with Oleg Kononenko, and
on the back row beginning with Anton Shkaplerov,

10
00:00:38,329 --> 00:00:42,399
Anatoly Ivanishin Andre Kuipers and Don Pettit.

11
00:00:42,399 --> 00:00:48,429
One of the highlights of the week aboard this
week aboard the International Space Station

12
00:00:48,429 --> 00:00:52,660
was the SPHERES Robotic G, Zero-G Robotics
competition.

13
00:00:52,660 --> 00:00:58,960
That SPHERES stands for Synchronized Position
Hold Engage Reorient Experimental Satellites.

14
00:00:58,960 --> 00:01:04,390
Those are miniature satellites about the size
of bowling balls, and more than 250 high school

15
00:01:04,390 --> 00:01:10,140
students had gathered along with their teachers
and their family at MIT in Boston and at the

16
00:01:10,140 --> 00:01:14,970
Erasmus center in the Netherlands to watch
as the scientist and astronaut Don Pettit

17
00:01:14,970 --> 00:01:20,090
along with European astronaut Andre Kuipers
monitored those satellites as they performed

18
00:01:20,090 --> 00:01:22,570
tasks developed by the students.

19
00:01:22,570 --> 00:01:27,310
This year the competition provided an opportunity
for students to write algorithms for the satellites

20
00:01:27,310 --> 00:01:31,190
to accomplish tasks that are relevant to future
space missions.

21
00:01:31,190 --> 00:01:36,780
Students actually created a fictitious scenario
for each of the two satellites mined new source

22

00:01:36,780 --> 00:01:42,000
of energy on an asteroid and then returned
to the mining camp to unload.

23
00:01:42,000 --> 00:01:46,670
Apart from the satellites, all the other elements
of the experiment were virtual.

24
00:01:46,670 --> 00:01:49,590
It has been a busy week for the Expedition
30 crew.

25
00:01:49,590 --> 00:01:55,060
They saw the departure the Progress 45 and
had made ready for the arrival of that Progress

26
00:01:55,060 --> 00:01:59,670
46 vehicle tonight at 6:08 p.m. central time.

27
00:01:59,670 --> 00:02:03,700
Docking coverage begins here on NASA television
at 5:30 p.m.

28
00:02:03,700 --> 00:02:09,690
The unmanned cargo ship will be carrying about
3 tons of food, air and fuel and it will continue

29
00:02:09,690 --> 00:02:14,310
to find tune its path on its trip today to
the station with a the series of midcourse

30
00:02:14,310 --> 00:02:18,910
correction burns of its thrusters beginning
with the final phase of its rendezvous and

31
00:02:18,910 --> 00:02:22,850
docking to the Pirs docking compartment.

32
00:02:22,850 --> 00:02:27,370
Also here onboard the International Space

Station here in mission control, flight controllers

33
00:02:27,370 --> 00:02:31,770
are continuing to monitor that piece of Chinese
Fengyun satellite debris.

34
00:02:31,770 --> 00:02:37,381
That satellite debris poses a minimum concern
for probability of conjunction with the station

35
00:02:37,381 --> 00:02:38,381
over the weekend.

36
00:02:38,381 --> 00:02:43,700
It remains a minimum concern due to the oddity
of the debris' orbit, the recent solar activity

37
00:02:43,700 --> 00:02:48,420
and also the potential for any slight fluctuation
in the station's orbit following the docking

38
00:02:48,420 --> 00:02:50,850
with the Progress vehicle.

39
00:02:50,850 --> 00:02:55,370
Last night ballistics officers here in mission
control began calculations for a possible

40
00:02:55,370 --> 00:02:58,380
debris avoidance maneuver on Saturday night.

41
00:02:58,380 --> 00:03:02,520
That maneuver would steer the station clear
of the debris and also have the net effect

42
00:03:02,520 --> 00:03:07,530
of replacing a station reboost maneuver that
was already planned for next Wednesday.

43

00:03:07,530 --> 00:03:10,880
A final decision on that maneuver is expected
later today.

44
00:03:10,880 --> 00:03:17,000
If it is carried out the Zvezda service module
thrusters will be fired at about 5:50 p.m.

45
00:03:17,000 --> 00:03:22,130
central time on Saturday and it will.. and
that will be about 55 minutes before the first

46
00:03:22,130 --> 00:03:27,130
of seven different opportunities for the debris
to make a close approach to the station both

47
00:03:27,130 --> 00:03:29,520
on Saturday night and Sunday morning.

48
00:03:29,520 --> 00:03:34,920
Those opportunities violate what we call the
green threshold, the green threshold of safety

49
00:03:34,920 --> 00:03:40,650
here at NASA, and this is just to maneuver,
is just to assure that the station is well

50
00:03:40,650 --> 00:03:42,290
away from any station..

51
00:03:42,290 --> 00:03:47,240
space station debris or any debris that would
hit the space station.

52
00:03:47,240 --> 00:03:52,070
So again if it's conducted, the Saturday night
debris avoidance maneuver will replace a reboost

53
00:03:52,070 --> 00:03:55,340
of the station that’s planned for next Wednesday.

54
00:03:55,340 --> 00:03:59,370
During the week onboard the space station
this past Tuesday and Wednesday, Commander

55
00:03:59,370 --> 00:04:05,230
Burbank took fluid samples from the Internal
Thermal Control System in the Columbus module.

56
00:04:05,230 --> 00:04:09,790
That samples, the reports have already been
received by flight controllers and there has

57
00:04:09,790 --> 00:04:13,959
been no microorganisms detected.

58
00:04:13,959 --> 00:04:19,340
Also Burbank and, took samples in two the
stations connecting nodes.

59
00:04:19,340 --> 00:04:22,979
That's the Harmony and Tranquility and also
the Japanese Kibo.

60
00:04:22,979 --> 00:04:27,949
This week he also did a Q&A session, a question
and answer session, with the US Coast Guard

61
00:04:27,949 --> 00:04:32,069
Academy and talked with students and now Wise
County, Virginia.

62
00:04:32,069 --> 00:04:36,760
He was joined by astronaut Don Pettit for
that student activity.

63
00:04:36,760 --> 00:04:41,990
Pettit did a safety tour video for the space
station ground controllers giving them a close-up

64
00:04:41,990 --> 00:04:44,469
view of what goes on inside the station.

65
00:04:44,469 --> 00:04:45,469
He did that on Tuesday.

66
00:04:45,469 --> 00:04:50,240
And then on Wednesday he did a Legos brick
educational activity, building a model of

67
00:04:50,240 --> 00:04:54,240
the Solar Dynamics Observatory and a radar
satellite.

68
00:04:54,240 --> 00:04:59,870
He did all this from a guidebook, and then
on Thursday he cleaned the filter on the International

69
00:04:59,870 --> 00:05:01,909
Space Station Agricultural Camera.

70
00:05:01,909 --> 00:05:05,931
That camera captures photos of vegetation
in the Great Plains, and that’s a study

71
00:05:05,931 --> 00:05:09,750
that's run by students at the University of
North Dakota.

72
00:05:09,750 --> 00:05:12,750
European astronaut Andre Kuipers.

73
00:05:12,750 --> 00:05:17,499
swapped out telemetry cables on the station's
KU band antenna.

74
00:05:17,499 --> 00:05:18,499
That…

75
00:05:18,499 --> 00:05:22,460
He also tested that equipment and this helps
maintain a high rate of communication between

76
00:05:22,460 --> 00:05:24,930
the International Space Station and ground
controllers.

77
00:05:24,930 --> 00:05:29,860
That’s important not only for good TV coverage,
but it also is important for the downlink

78
00:05:29,860 --> 00:05:32,680
of information from the space station.

79
00:05:32,680 --> 00:05:39,180
Kuipers also along with Dan Burbank worked
in the Kibo’s clean bench facility.

80
00:05:39,180 --> 00:05:43,900
They made sure that the facility is in working
order, and also activated a microscope there.

81
00:05:43,900 --> 00:05:49,319
And Kuipers spent some time on Thursday working
that VIABLE payload with, that payload studies

82
00:05:49,319 --> 00:05:55,190
the micro- microbial development on materials
that are used in space.

83
00:05:55,190 --> 00:06:00,789
And the three astronauts, Kuipers, Burbank
and Pettit did some on orbit training with

84
00:06:00,789 --> 00:06:03,379
the space station's robotic arm.

85
00:06:03,379 --> 00:06:09,349

If you'll notice, the crew is having a strange sleep shift today.

86
00:06:09,349 --> 00:06:16,129
You'll see that they were awakened at midnight and then they've had a midday meal today,

87
00:06:16,129 --> 00:06:20,860
and they've also are beginning to take a siesta, so they are sleeping right now.

88
00:06:20,860 --> 00:06:23,919
And they'll be asleep until about one central time.

89
00:06:23,919 --> 00:06:28,569
This is to accommodate the work that they'll do on the Progress docking later today.