



THE SPIN GROUP  
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Mission Control Center



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1  
00:00:02,956 --> 00:00:04,166  
Good day and welcome.

2  
00:00:04,166 --> 00:00:07,636  
This is the International Space Station flight control room at the Johnson Space Center

3  
00:00:07,636 --> 00:00:11,976  
in Houston with the Expedition 29 update for Friday October 28.

4  
00:00:12,916 --> 00:00:16,826  
Flight Director Jerry Jason is leading today's team of flight controllers and serving

5  
00:00:16,826 --> 00:00:19,796  
as spacecraft communicator or Capcom is Kathy Bolt.

6  
00:00:21,036 --> 00:00:26,056  
This week the Expedition 29 crew members, Commander Mike Fossum, Satoshi Furukawa

7  
00:00:26,416 --> 00:00:29,326  
and Sergei Volkov, completed preparations for the departure

8  
00:00:29,326 --> 00:00:33,236  
of the Progress 42 vehicle including the packing of the vehicle with trash,

9  
00:00:33,696 --> 00:00:38,626  
testing the Russian segment's Kurs automated rendezvous system for the both the passive side

10  
00:00:38,626 --> 00:00:42,696  
of the Zvezda service module and the active side of the Progress supply ship

11

00:00:42,986 --> 00:00:46,426  
and made preparations to close the hatch  
between the station and the vehicle.

12  
00:00:47,036 --> 00:00:52,186  
Progress 42 is set to undock on  
Saturday at 4:04 a.m. Central time.

13  
00:00:53,016 --> 00:00:57,286  
With an eye towards undocking and deorbit of  
Progress 42 the crew today closed the hatch

14  
00:00:57,636 --> 00:00:59,816  
between the Pirs docking  
compartment and the vehicle.

15  
00:01:00,176 --> 00:01:05,296  
That happened this morning at 9:25 a.m. Central  
time and then they began to conduct leak checks.

16  
00:01:05,946 --> 00:01:11,096  
Departure of the Progress 42 sets the stage  
for the arrival of the Progress 45 vehicle,

17  
00:01:11,096 --> 00:01:14,916  
a supply ship filled with 2.8  
tons of food, fuel and supplies.

18  
00:01:15,476 --> 00:01:21,376  
That supply ship will launch at 5:11  
a.m. Sunday, 4:11 p.m. Baikonur time,

19  
00:01:21,816 --> 00:01:23,676  
and dock to the station on Wednesday Nov.

20  
00:01:23,676 --> 00:01:26,466  
2 at 6:40 a.m. Central time.

21  
00:01:26,466 --> 00:01:28,686  
All this can be seen on NASA Television.

22

00:01:29,216 --> 00:01:33,156

Progress 45 and its Soyuz booster rolled to the launch pad today

23

00:01:33,156 --> 00:01:36,006

at the Baikonur Cosmodrome in Kazakhstan.

24

00:01:36,006 --> 00:01:40,816

The Progress 45 launch will be the first for this configuration of the Soyuz booster rocket

25

00:01:41,206 --> 00:01:44,636

since the third stage engine failure in the flight of August 24.

26

00:01:45,116 --> 00:01:50,356

That failure resulted in the loss of that Progress cargo craft, the station's Progress 44.

27

00:01:52,356 --> 00:01:55,496

Earlier today, Volkov and Furukawa conducted a training session

28

00:01:55,496 --> 00:01:59,586

with the telerobotically operated rendezvous system in the Zvezda service module.

29

00:02:00,176 --> 00:02:05,476

That is the TORU and is the manual system that would be used next week in the unlikely event

30

00:02:05,856 --> 00:02:09,086

that the new Progress 45 cargo craft encounters a problem

31

00:02:09,466 --> 00:02:12,646

with its automated rendezvous system the Kurs for link

32  
00:02:12,646 --> 00:02:14,716  
up to the Pirs docking compartment on Wednesday.

33  
00:02:15,646 --> 00:02:21,496  
During the crew's daily earth observations,  
a time to capture video and photographs

34  
00:02:21,496 --> 00:02:26,556  
for scientists studying Earth's changes, this  
week crew was able to videotape Hurricane Rina

35  
00:02:26,556 --> 00:02:29,336  
as the hurricane swept over Southern Mexico.

36  
00:02:29,716 --> 00:02:34,156  
At its peak on Wednesday, Rina was near a  
category three hurricane but weakened Thursday

37  
00:02:34,156 --> 00:02:38,806  
as it closed in on Cancun and other resorts  
on Mexico's popular Caribbean coast.

38  
00:02:39,296 --> 00:02:41,236  
Rina is now a tropical depression.

39  
00:02:41,616 --> 00:02:46,426  
Hurricane Rina also impacted NASA's fifteenth  
Extreme Environment Mission Operations,

40  
00:02:46,796 --> 00:02:47,896  
or known as NEEMO.

41  
00:02:48,256 --> 00:02:52,686  
The six aquanauts of NEEMO crew left the  
facility where they lived for five days

42  
00:02:52,686 --> 00:02:56,306  
and returned to the surface of the  
Florida Keys National Marine Sanctuary

43

00:02:56,306 --> 00:02:57,696  
in Key Largo on Wednesday.

44

00:02:58,596 --> 00:03:02,086  
The National Oceanic and  
Atmospheric Administration, NOAA,

45

00:03:02,086 --> 00:03:06,616  
operates the Aquarius undersea laboratory and  
the agency determined that Rina posed a risk

46

00:03:06,616 --> 00:03:09,736  
to the safety of the mission  
taking place near Key Largo.

47

00:03:10,596 --> 00:03:13,096  
In other activities for the week, Fossum worked

48

00:03:13,096 --> 00:03:16,846  
on the Binary Colloidal Alloy  
Test, known as the BCAT experiment.

49

00:03:17,246 --> 00:03:20,996  
This experiment lays the foundation for  
nano-technology and nano-mechanical systems

50

00:03:20,996 --> 00:03:25,376  
in space and could apply to ceramics,  
composites and optical filters here on Earth.

51

00:03:25,736 --> 00:03:31,896  
Fossum also performed the Sprint experiment  
which evaluates the use of high intensity

52

00:03:31,896 --> 00:03:35,616  
and low volume exercise training  
to minimize the loss of muscle,

53

00:03:35,616 --> 00:03:38,536  
bone and cardiovascular function  
in station crew members.

54  
00:03:39,176 --> 00:03:41,606  
This study will help a scientist  
plan longer missions

55  
00:03:42,006 --> 00:03:47,216  
such as travel to an asteroid or to Mars.

56  
00:03:47,306 --> 00:03:51,196  
Fossum also performed the final  
VO2Max experiments this week.

57  
00:03:51,246 --> 00:03:55,826  
This study evaluates oxygen uptake by  
crew members and relates to the ability

58  
00:03:55,826 --> 00:03:59,676  
of an astronaut to perform an egress task,  
the task required to abandon the station,

59  
00:04:00,316 --> 00:04:02,426  
while wearing a launch and escape space suit.

60  
00:04:03,466 --> 00:04:09,776  
Japanese space agency astronaut Satoshi Furukawa  
completed work on the Gradient Heating Facility

61  
00:04:09,776 --> 00:04:13,456  
in the Kibo module, closed out his  
nutrition assessment for the mission

62  
00:04:13,846 --> 00:04:18,216  
and stored those samples in the station's Minus  
Eighty Degree Freezer, also known as the MELFI,

63  
00:04:18,286 --> 00:04:22,596  
set up equipment for additional biorhythm

experiments this week, did some maintenance work

64

00:04:22,596 --> 00:04:27,706

on the water on and off valve and installed egress markers around the Columbus module hatch.

65

00:04:28,576 --> 00:04:33,476

During the week crew was interviewed by CNN and MSNBC, talked with school children

66

00:04:33,476 --> 00:04:38,896

at the nineteenth International Space Olympiad and with ZZ Top musician Dusty Hill

67

00:04:38,896 --> 00:04:44,116

and his family and held several ham radio conferences with schools around the world.

68

00:04:44,596 --> 00:04:50,626

Furukawa also responded to questions from students at the Saga Space and Science Museum

69

00:04:51,476 --> 00:04:55,146

and at the Takayama Astronomical Observatory.

70

00:04:56,396 --> 00:05:01,156

In other news this week the Expedition 29/30 crew, U.S. astronaut Dan Burbank

71

00:05:01,156 --> 00:05:07,306

and Russian cosmonauts Anton Skhaplerov and Anatoly Ivanishin, conducted a news conference

72

00:05:07,306 --> 00:05:14,086

at the Gagarin Cosmonaut Training Center in Star City, Russia, toured Red Square in Moscow

73

00:05:14,086 --> 00:05:18,686

where they laid commemorative flowers at the Kremlin Wall and began preparations to fly

74  
00:05:18,686 --> 00:05:23,406  
to the Baikonur Cosmodrome in Kazakhstan  
on Monday to get ready for their launch

75  
00:05:23,406 --> 00:05:28,446  
to the station on their Soyuz  
28 at 10:14 p.m. on November 13.

76  
00:05:29,676 --> 00:05:33,506  
For more information on the space station  
and Expedition 29/30 be sure to look

77  
00:05:33,506 --> 00:05:35,676  
for the International Space  
Station home page on the web.