



1
00:00:01,820 --> 00:00:02,840
Good morning.

2
00:00:02,840 --> 00:00:04,390
This is Mission Control Houston.

3
00:00:04,390 --> 00:00:09,230
Thank you for joining us for today's
ISS update this Tuesday, September 27.

4
00:00:09,230 --> 00:00:13,230
We are coming to you now live inside the
International Space Station flight control room

5
00:00:13,230 --> 00:00:16,240
of the Christopher C. Kraft
Mission Control Center,

6
00:00:16,240 --> 00:00:20,630
where the team here is monitoring
the systems aboard the station

7
00:00:20,630 --> 00:00:24,000
and supporting the day's activities
of the Expedition 29 crew members.

8
00:00:24,000 --> 00:00:30,660
Leading the team here in the station flight
control room today is Flight Director Derek

9
00:00:30,660 --> 00:00:34,190
Hassmann, seen here in the yellow shirt
on the right-hand side of your screen

10
00:00:34,190 --> 00:00:36,730
with astronaut Dan Tani there next to him,

11
00:00:36,730 --> 00:00:42,450
who is serving as CAPCOM relaying

all ground messages up to the crew.

12

00:00:42,450 --> 00:00:46,130

Aboard the orbiting complex
station Commander Mike Fossum

13

00:00:46,130 --> 00:00:49,530

and Flight Engineers Satoshi
Furukawa and Sergei Volkov are

14

00:00:49,530 --> 00:00:52,350

in their second week aboard the orbiting complex

15

00:00:52,350 --> 00:00:58,100

as the Expedition 29 crew
and 16th week in space.

16

00:00:58,100 --> 00:01:00,990

Commander Fossum, Volkov,
and Furukawa had launched

17

00:01:00,990 --> 00:01:03,590

to the orbiting complex aboard
their Soyuz spacecraft

18

00:01:03,590 --> 00:01:06,920

as the Expedition 28 crew this summer on June 7.

19

00:01:06,920 --> 00:01:08,760

They then docked to the Rassvet module

20

00:01:08,760 --> 00:01:11,940

of the space station two days
after their launch on June 9.

21

00:01:11,940 --> 00:01:16,450

Today they will complete their 112th
consecutive day in space with a little less

22

00:01:16,450 --> 00:01:24,590
than two months left before they
return to Earth on November 22.

23
00:01:24,590 --> 00:01:29,990
Meanwhile back on Earth, the second half of
the Expedition 29 crew - astronaut Dan Burbank

24
00:01:29,990 --> 00:01:34,960
and cosmonauts Anton Shkaplerov and Anatoly
Ivanishin - who are scheduled to launch

25
00:01:34,960 --> 00:01:39,900
from Baikonur in Kazakhstan on November 14,
have begun their final flow of preparations

26
00:01:39,900 --> 00:01:44,360
to join their crew mates there aboard
the International Space Station.

27
00:01:44,360 --> 00:01:48,350
The trio will join the crew aboard
station on November 16 and will make

28
00:01:48,350 --> 00:01:52,520
up the full crew of Expedition 29.

29
00:01:54,070 --> 00:01:58,450
On orbit while the Expedition crew members
continue to conduct scientific research

30
00:01:58,450 --> 00:02:02,560
and perform maintenance to their home away
from home, they also take time out today

31
00:02:02,560 --> 00:02:06,050
to engage students in a variety
of educational opportunities.

32
00:02:06,050 --> 00:02:10,440

With class now in session in schools around the world, the space station sets the stage

33

00:02:10,440 --> 00:02:12,640

for learning from the highest classroom.

34

00:02:12,640 --> 00:02:19,460

Currently circling the Earth at an altitude of about 230 statute miles,

35

00:02:19,460 --> 00:02:22,790

the space station with its crew on board had made a pass

36

00:02:22,790 --> 00:02:27,230

across the United States before coming across the North Atlantic Ocean

37

00:02:27,230 --> 00:02:30,210

and is now headed toward east Brazil.

38

00:02:30,210 --> 00:02:38,010

After the crew's wake up at 1 a.m. Central time today, the expedition crew had participated

39

00:02:38,010 --> 00:02:40,990

in the first of two daily planning conferences with ground controllers

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00:02:40,990 --> 00:02:44,240

at mission control centers around the world to review the day's activities

41

00:02:44,240 --> 00:02:46,190

and plan for the next set of tasks.

42

00:02:46,190 --> 00:02:50,080

The crew will participate in another daily planning conference just before entering its

43

00:02:50,080 --> 00:02:55,170

pre-sleep period a couple of hours
after today's ISS update hour.

44

00:02:55,170 --> 00:03:03,150

The crew is then scheduled to go
to bed at 4:30 p.m. Central time.

45

00:03:03,150 --> 00:03:06,960

Following a quick update on today's
activities aboard the station,

46

00:03:06,960 --> 00:03:11,000

Commander Mike Fossum will join us with
a live downlink here on NASA Television

47

00:03:11,000 --> 00:03:15,620

in an educational event with the Hispanic
Engineering, Science and Technology Conference

48

00:03:15,620 --> 00:03:19,730

at the University of Texas-Pan
American in Edinburg, Texas.

49

00:03:19,730 --> 00:03:26,130

He will be talking with the
university's president Dr. Robert Nelson,

50

00:03:26,130 --> 00:03:31,110

Congressman Rubin Hinojosa and
local middle school students.

51

00:03:31,110 --> 00:03:34,720

Again, that educational event will
air live here on NASA Television

52

00:03:34,720 --> 00:03:56,880

at 10:10 a.m. Central time,
11:10 a.m. Eastern time.

53

00:03:56,880 --> 00:03:56,950

[inaudible]

54

00:03:56,950 --> 00:04:01,430

After this morning's educational event, Fossum will record water analysis data from the

55

00:04:01,430 --> 00:04:04,510

on board Total Organic Carbon Analyzer.

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00:04:04,510 --> 00:04:09,290

Also during today's ISS update hour, Flight Engineer Sergei Volkov will inspect

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00:04:09,290 --> 00:04:15,350

and photograph shell elements of the Zarya module while Flight Engineer Satoshi Furukawa

58

00:04:15,350 --> 00:04:19,660

inspects the Condensate Water Separator Assembly.

59

00:04:19,660 --> 00:04:24,360

Afterward Furukawa will begin his daily exercise using the Advanced Resistive Exercise Device

60

00:04:24,360 --> 00:04:27,330

that simulates weight lifting here on Earth.

61

00:04:32,700 --> 00:04:36,610

Commander Fossum spent much of this early morning performing maintenance to the

62

00:04:36,610 --> 00:04:40,170

on board Water Recovery System and conducting a water analysis,

63

00:04:40,170 --> 00:04:45,150

this coming after he had replaced a faulty

Fluid Control and Pump Assembly last week

64

00:04:45,150 --> 00:04:49,030

to get the system that converts urine to drinking water back online.

65

00:04:49,030 --> 00:04:53,250

He also recorded a video podcast on the importance of cardiovascular health and,

66

00:04:53,250 --> 00:05:00,660

together with Furukawa, an educational demonstration on gyroscopes for later downlink.

67

00:05:00,660 --> 00:05:05,530

Earlier, Furukawa had set up the Legos bricks educational study that involves a series

68

00:05:05,530 --> 00:05:08,380

of toy Lego kits that are assembled on orbit and used

69

00:05:08,380 --> 00:05:11,680

to demonstrate scientific concepts to students.

70

00:05:11,680 --> 00:05:14,700

Meanwhile, Volkov had cleaned the ventilation grills and screens

71

00:05:14,700 --> 00:05:17,120

on interior panels of the Zarya module.

72

00:05:17,120 --> 00:05:23,550

He also captured oceanic photos and video as the station made a path

73

00:05:23,550 --> 00:05:27,970

across the southeastern Pacific as part of an ocean observation study and tended

74
00:05:27,970 --> 00:05:33,910
to the Russian Plants experiment that researches
the growth of wheat plants in microgravity.

75
00:05:33,910 --> 00:05:38,960
Volkov then performed an oxygen repress
from the docked Progress resupply ship.

76
00:05:39,980 --> 00:05:45,250
Later today, essential physical exercise will
dominate the last few hours of the crew's day

77
00:05:45,250 --> 00:05:49,480
as each crew member will have performed
their daily two-hour exercise regimen.

78
00:05:49,480 --> 00:05:53,600
The on board gym is equipped with a
treadmill that provides a cardio workout,

79
00:05:53,600 --> 00:05:56,750
a stationary bicycle that
provides both cardio and resistance

80
00:05:56,750 --> 00:06:00,640
and the Advanced Resistive Exercise
Device that simulates weight lifting here

81
00:06:00,640 --> 00:06:04,810
on Earth providing critical strength training
to prevent bone loss in the absence of gravity.

82
00:06:04,810 --> 00:06:08,890
After a run on the treadmill, Commander
Fossum will inspect the isolator

83
00:06:08,890 --> 00:06:10,920
on the station's bicycle equipment.

84

00:06:10,920 --> 00:06:13,160

He will then swap out the second camera battery

85

00:06:13,160 --> 00:06:16,890

of the ongoing Binary Colloidal Alloy experiment,

86

00:06:16,890 --> 00:06:20,480

and Volkov will perform daily routine maintenance

87

00:06:20,480 --> 00:06:24,160

to the Russian life support system known as the Sozh and later participate

88

00:06:24,160 --> 00:06:28,010

in a standard private medical conference before he and his crew mates go