



1
00:00:01,826 --> 00:00:03,366
This is Mission Control Houston.

2
00:00:03,366 --> 00:00:07,956
Welcome to today's ISS update
for Friday, February 17, 2012.

3
00:00:07,956 --> 00:00:11,736
This is a live view inside the International
Space Station's Flight Control Room here

4
00:00:11,736 --> 00:00:12,856
at the Johnson Space Center.

5
00:00:14,596 --> 00:00:15,836
This team here is being led today

6
00:00:15,836 --> 00:00:18,186
by Flight Director Mike Sarafin
who is there in the middle.

7
00:00:18,186 --> 00:00:23,086
Sitting beside him is Tony Ceccaci a
former fellow shuttle flight director.

8
00:00:23,086 --> 00:00:27,076
He is also sitting on console getting
trained on the space station and its systems.

9
00:00:27,696 --> 00:00:31,696
Sitting beside them both as the
Capcom is astronaut Kjell Lindgren.

10
00:00:32,086 --> 00:00:34,276
He is the voice of the team here in Houston

11
00:00:34,676 --> 00:00:38,206
to the Expedition 30 crew aboard
the International Space Station.

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00:00:39,716 --> 00:00:40,576

There's a look at the crew.

13

00:00:40,576 --> 00:00:42,516

The crew has a very busy Friday on tap for them.

14

00:00:42,516 --> 00:00:47,416

Don Pettit who is on the far right has been working on an experiment called SLICE.

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00:00:48,236 --> 00:00:52,136

This stands for the Structure and Liftoff in Combustion Experiment.

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00:00:52,136 --> 00:00:57,336

What it does is take a look at how different flames perform in space.

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00:00:57,336 --> 00:01:02,146

There is a phenomena called liftoff which is where the flame actually comes up off the burner

18

00:01:02,486 --> 00:01:05,076

and this is caused by a series of different things,

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00:01:05,076 --> 00:01:09,436

whether its the combustion elements themselves, what makes up the flame

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00:01:09,736 --> 00:01:11,766

or the different type of flow that is happening.

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00:01:11,766 --> 00:01:16,196

Obviously, flames behave a bit differently up in space than they do here on the ground.

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00:01:16,666 --> 00:01:22,386

But by studying this liftoff phenomena, as we talked about, it is hoped that teams are

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00:01:22,386 --> 00:01:27,396

in the ground can design better products that have better fuel efficiency

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00:01:27,716 --> 00:01:29,846

or a better combustion inside of them.

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00:01:30,236 --> 00:01:32,986

Pettit is also working today on some routine maintenance

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00:01:32,986 --> 00:01:35,276

on the robotic workstation that is down in the cupola.

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00:01:35,276 --> 00:01:39,476

This is sort of the windows on the world module of the International Space Station.

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00:01:39,476 --> 00:01:41,016

There is a robotics workstation there

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00:01:41,376 --> 00:01:46,016

that is used anytime the crew is operating the station's robotic arm

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00:01:46,336 --> 00:01:48,756

so he will take care of that later on this afternoon.

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00:01:50,186 --> 00:01:53,076

Meanwhile, Anatoly Ivanishin, another member of Expedition 30,

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00:01:53,076 --> 00:01:56,746

is working on opening the transfer hatch between the Pirs docking compartment,

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00:01:56,746 --> 00:02:02,106
which is the site of yesterday's
spacewalk, and the Progress 46 cargo craft.

34
00:02:02,186 --> 00:02:06,346
Those hatches were closed obviously because
the cosmonauts were opening up a hatch on Pirs

35
00:02:06,346 --> 00:02:09,976
and decompressing it so they could
step outside so they had to seal off

36
00:02:09,976 --> 00:02:11,966
that Progress cargo craft, which you see the lay

37
00:02:11,966 --> 00:02:14,946
out of the station there
docked back there with Pirs.

38
00:02:14,946 --> 00:02:19,416
So that will take care of opening
that hatch back up later on today.

39
00:02:21,486 --> 00:02:24,886
Andre Kuipers is working on
an experiment called MARES.

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00:02:25,026 --> 00:02:28,276
This is the Muscle Atrophy
Research and Exercise System.

41
00:02:29,096 --> 00:02:33,026
It's sort of an exercise system that you
would...looks like something you would find

42
00:02:33,026 --> 00:02:36,046
on the ground here in a gym but
operates a little bit differently.

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00:02:36,046 --> 00:02:40,526

This item measures and exercises seven different joints to see what happens

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00:02:41,146 --> 00:02:43,116

to the crew members bodies as they all live

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00:02:43,116 --> 00:02:45,976

up on board the International Space Station for up to six months.

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00:02:48,376 --> 00:02:53,026

Monitoring the body's performance and how it adapts to space is incredibly important

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00:02:53,026 --> 00:02:56,256

and one of the main things that the International Space Station is teaching us.

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00:02:56,866 --> 00:03:00,956

Obviously, those lessons will be very important as humans venture beyond low Earth orbit

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00:03:01,286 --> 00:03:04,296

and head to even further destinations out in space.

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00:03:04,546 --> 00:03:06,996

Kuipers also working on the cabin fan assemblies

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00:03:06,996 --> 00:03:11,366

and ventilation ducts there inside the Columbus module later on this afternoon.

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00:03:13,226 --> 00:03:18,936

Oleg Kononenko and Anton Shkaplerov are taking care of quite a number

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00:03:18,936 --> 00:03:22,046

of different activities today and also recovering from yesterday's spacewalk.

54
00:03:22,046 --> 00:03:25,186
That spacewalk lasted six hours and 15 minutes.

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00:03:25,676 --> 00:03:29,826
They'll be talking with ground controllers today to review yesterday's spacewalk and talk

56
00:03:30,346 --> 00:03:33,876
about everything that was accomplished during that spacewalk.

57
00:03:33,876 --> 00:03:35,706
They completed move of the Strela boom.

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00:03:35,706 --> 00:03:39,816
This is one of the two large extension booms that are on the outside

59
00:03:39,816 --> 00:03:41,406
of the Russian segment of the station.

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00:03:41,406 --> 00:03:47,306
They use these to move around and to gain access to different portions of the Russian segment.

61
00:03:47,656 --> 00:03:51,306
Strela 1 used to be on the Pirs docking compartment which is on the bottom side

62
00:03:51,306 --> 00:03:55,056
of the station, the earth facing side of that part of the complex.

63
00:03:55,386 --> 00:03:59,116
They moved it up to the Poisk module which is directly up above Pirs

64
00:03:59,116 --> 00:04:02,506
on the space-facing side of the Russian segment.

65
00:04:03,586 --> 00:04:06,616
There is another boom called Strela
2 that is still down on Poisk.

66
00:04:06,616 --> 00:04:09,166
That will be moved...down on Pirs.

67
00:04:09,166 --> 00:04:09,536
Excuse me.

68
00:04:09,536 --> 00:04:13,646
That will be moved later on
this summer by a future crew.

69
00:04:13,946 --> 00:04:18,656
These Strela booms that you see the crew
moving yesterday are being moved up to the top

70
00:04:18,656 --> 00:04:21,896
of the station to make way
for the departure of Pirs.

71
00:04:22,236 --> 00:04:25,526
That particular portion of the station
has been up there for more than 10 years

72
00:04:25,856 --> 00:04:30,936
and it will say goodbye as it makes way for
a brand-new Multipurpose Laboratory Module

73
00:04:31,216 --> 00:04:34,996
that our Russian counterparts will
be launching later on next year.

74
00:04:37,796 --> 00:04:41,226
Dan Burbank, the Commander of Expedition

30, is working on quite a number

75
00:04:41,226 --> 00:04:43,326
of different experiments today including MELFI.

76
00:04:43,326 --> 00:04:45,036
This is the Minus-Eighty Laboratory.

77
00:04:45,036 --> 00:04:50,316
This is the large freezer on board the station
that is used to store different types of samples

78
00:04:50,316 --> 00:04:53,486
and experiments at really,
really cold temperatures.

79
00:04:53,486 --> 00:04:55,176
You are seeing a picture of it here.

80
00:04:55,526 --> 00:04:59,666
He is basically going to be doing a
nitrogen pressure check just to make sure

81
00:04:59,666 --> 00:05:01,586
that MELFI is operating as expected.

82
00:05:01,826 --> 00:05:05,586
He is also going to be working
on an experiment called BCAT-6.

83
00:05:05,586 --> 00:05:08,076
This is the Binary Colloidal Alloy Test.

84
00:05:09,466 --> 00:05:13,326
And he and the rest of the crew members also
have several different Crew Earth Observation

85
00:05:13,326 --> 00:05:14,326
opportunities today.

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00:05:14,326 --> 00:05:17,786

They will be flying directly
above Chile and will have a chance

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00:05:17,786 --> 00:05:19,516

to take look a down at the Woollya Cove.

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00:05:19,516 --> 00:05:22,526

This is an H.M.S. Beagle landing site.

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00:05:22,786 --> 00:05:27,636

And they will also be flying over
the St. Helena Island which is off

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00:05:27,636 --> 00:05:30,636

in the Atlantic Ocean off the coast of Africa.