
Mission Control Center
JAXA
ISS SAL 1 LOS
ISS SAL 4 LOS
OSO
ADCO
ISO
CATO

1
00:00:00,121 --> 00:00:02,121
[Silence]

2
00:00:02,236 --> 00:00:03,496
>> This is Mission
Control, Houston.

3
00:00:03,496 --> 00:00:05,166
Welcome to today's ISS update.

4
00:00:05,166 --> 00:00:07,876
It is Tuesday, October
16th, 2012.

5
00:00:07,876 --> 00:00:10,636
You're looking at a live view
inside the Space Station Flight

6
00:00:10,636 --> 00:00:12,496
Control Room here at the
Johnson Space Center.

7
00:00:12,496 --> 00:00:15,446
This is the Orbit 2 team
that is currently on duty.

8
00:00:15,446 --> 00:00:18,866
They are working with the
Expedition 33 crew members

9
00:00:18,866 --> 00:00:20,446
onboard the orbiting complex.

10
00:00:20,446 --> 00:00:22,806
Right now the Space
Station is high above Turkey

11
00:00:23,216 --> 00:00:25,466
at an altitude of 263 miles.

12
00:00:25,466 --> 00:00:27,946
That is heading up toward
the northeast over parts

13
00:00:27,946 --> 00:00:29,586
of Kazakhstan, Russia.

14
00:00:29,936 --> 00:00:31,276
And parts of Asia.

15
00:00:31,666 --> 00:00:33,176
The crew is very busy today.

16
00:00:33,176 --> 00:00:36,106
Working on a variety of
different experiment work

17
00:00:36,106 --> 00:00:38,286
and research work onboard
the orbiting complex.

18
00:00:39,016 --> 00:00:40,816
The commander of Expedition 33,

19
00:00:40,816 --> 00:00:43,566
Suni Williams started
off her morning working

20
00:00:43,566 --> 00:00:48,216
with the European Modular
Cultivation System or EMCS.

21
00:00:48,356 --> 00:00:51,686
She was opening up some of the
gas module valves that are part

22
00:00:51,686 --> 00:00:54,006
of that research facility.

23
00:00:54,376 --> 00:00:56,676
This is a large incubator
onboard the Space Station

24
00:00:56,676 --> 00:00:58,766
that serves as a growth chamber

25
00:00:58,766 --> 00:01:01,736
for different types
of small plants.

26
00:01:02,396 --> 00:01:06,206
That particular incubator can
actually simulate different

27
00:01:06,316 --> 00:01:07,316
forces of gravity.

28
00:01:07,316 --> 00:01:09,686
It can either have no gravity,
like they do up in space.

29
00:01:09,816 --> 00:01:11,876
Or it can have two times the
gravity you would find here

30
00:01:11,876 --> 00:01:12,326
on Earth.

31
00:01:12,326 --> 00:01:15,276
And all that is designed
to find out what kind

32
00:01:15,276 --> 00:01:18,376
of effects plants see
while they're up in space

33
00:01:18,476 --> 00:01:19,356

with the crew members.

34
00:01:19,726 --> 00:01:23,266
She also has a ham radio
pass with a school in Spain.

35
00:01:23,756 --> 00:01:25,636
She's also performing
an acoustic survey

36
00:01:25,636 --> 00:01:27,246
of the Space Station
environment.

37
00:01:27,826 --> 00:01:30,056
The ground teams here instruct
the crew members throughout

38
00:01:30,056 --> 00:01:31,746
their time onboard
the Space Station

39
00:01:31,746 --> 00:01:33,366
to basically monitor their home.

40
00:01:33,756 --> 00:01:34,976
Monitor the complex.

41
00:01:35,746 --> 00:01:37,496
They take a variety
of different samples

42
00:01:37,496 --> 00:01:39,286
around the orbiting laboratory.

43
00:01:39,286 --> 00:01:41,136
Including the sound
environment just to make sure

44

00:01:41,136 --> 00:01:44,426
that the sound levels with all
of that machinery and computers.

45
00:01:44,796 --> 00:01:47,276
And all the acoustics
there are acceptable.

46
00:01:47,276 --> 00:01:50,496
So she will send down the
results of that later on today.

47
00:01:54,156 --> 00:01:57,696
She also has an onboard
training tag-up

48
00:01:57,696 --> 00:01:59,426
as we call it here at NASA.

49
00:01:59,426 --> 00:02:00,886
Just a quick conference
call with some

50
00:02:00,886 --> 00:02:02,626
of the ground controllers
here in Houston.

51
00:02:02,996 --> 00:02:06,236
As they get ready for the end of
the SpaceX Dragon mission coming

52
00:02:06,236 --> 00:02:09,366
up at the end of the --
at the end of the month.

53
00:02:10,786 --> 00:02:12,416
Suni Williams, as
well as Aki Hoshide,

54
00:02:12,416 --> 00:02:14,486

her fellow Expedition
33 crew member.

55
00:02:14,486 --> 00:02:20,106
Were a key part of capturing
the Dragon back last week

56
00:02:20,106 --> 00:02:20,846
and installing it.

57
00:02:20,846 --> 00:02:23,246
Toward the end of this month,
once that spacecraft is full

58
00:02:23,246 --> 00:02:25,816
of all the items that are
going to come back to Earth.

59
00:02:26,186 --> 00:02:28,156
They will basically be
reversing the process.

60
00:02:28,156 --> 00:02:30,866
Using the Station's arm that
you saw there on the outside

61
00:02:30,866 --> 00:02:33,186
of the Station to grab
on to Dragon once again.

62
00:02:33,566 --> 00:02:35,186
To remove it from
the Space Station.

63
00:02:35,186 --> 00:02:36,636
And to send it on its way.

64
00:02:36,636 --> 00:02:39,386
So they're going to have a
conference call later on today

65
00:02:39,386 --> 00:02:40,696
with some of the
ground controllers

66
00:02:40,736 --> 00:02:43,136
who will be working
with them on that.

67
00:02:44,956 --> 00:02:47,936
She, as well as Aki Hoshide,
also today are taking a look

68
00:02:47,936 --> 00:02:50,016
at some of the proposed
procedures for the

69
00:02:50,316 --> 00:02:52,066
up coming space walk
that may not.

70
00:02:52,066 --> 00:02:53,956
That may take place toward
the end of this month.

71
00:02:54,246 --> 00:02:55,526
Or the early part of November.

72
00:02:56,416 --> 00:02:59,426
As we speak here
today on ISS update.

73
00:02:59,426 --> 00:03:03,306
The Space Station program
management team is meeting

74
00:03:03,306 --> 00:03:06,656
to talk exactly what will take
place during that space walk.

75
00:03:06,656 --> 00:03:07,936
Whether we're going
to have one or two.

76
00:03:07,936 --> 00:03:11,456
But the main focus of the
procedures are to look

77
00:03:11,456 --> 00:03:13,706
at this ammonia leak
that the team has seen

78
00:03:14,116 --> 00:03:15,686
on the P6 radiator.

79
00:03:15,686 --> 00:03:18,636
The P6 truss is one of the
far out trusses out there

80
00:03:18,636 --> 00:03:20,156
on the left-hand
side of the Station.

81
00:03:20,566 --> 00:03:22,786
There's an ammonia leak on
part of the radiator there

82
00:03:22,786 --> 00:03:25,396
that has increased
here recently.

83
00:03:25,856 --> 00:03:28,066
So they're going to come up with
a way for the crew members to go

84
00:03:28,066 --> 00:03:29,186
out there and mitigate that.

85
00:03:29,606 --> 00:03:33,566

And once the Space Station
program control board approves

86
00:03:33,566 --> 00:03:34,256
all of that.

87
00:03:34,256 --> 00:03:37,386
We'll have information for
you here on NASA television.

88
00:03:37,686 --> 00:03:40,956
As well as on nasa.gov,
in terms of what day

89
00:03:40,956 --> 00:03:42,256
that space walk will take place.

90
00:03:42,256 --> 00:03:44,436
And exactly what will
be involved in it.

91
00:03:46,616 --> 00:03:49,006
Aki Hoshide is performing
an analysis to some

92
00:03:49,006 --> 00:03:51,116
of the water onboard
the Space Station today.

93
00:03:51,116 --> 00:03:54,316
He is setting up some radiation
monitors throughout the

94
00:03:54,316 --> 00:03:54,916
Space Station.

95
00:03:54,916 --> 00:03:57,836
As we talked about, Suni
Williams is doing some sampling

96
00:03:57,836 --> 00:03:59,996
of the sound and the
acoustics onboard.

97
00:04:00,276 --> 00:04:03,426
Aki Hoshide is setting up
some sensors that will measure

98
00:04:03,796 --> 00:04:06,256
over the next several weeks
what the radiation levels are.

99
00:04:06,846 --> 00:04:08,416
And that data will
be down linked

100
00:04:08,506 --> 00:04:09,616
to the ground teams as well.

101
00:04:11,086 --> 00:04:13,036
He is changing out
some batteries on some

102
00:04:13,036 --> 00:04:15,226
of the laboratory
systems onboard.

103
00:04:15,476 --> 00:04:18,306
He's also working with what's
called the Microbe 3 experiment.

104
00:04:18,306 --> 00:04:21,816
Which takes a look at bacteria
inside the Kibo Laboratory.

105
00:04:21,816 --> 00:04:24,686
That is the Japanese
facility onboard the Station.

106

00:04:25,256 --> 00:04:28,036
That just takes a look at
different fungi and bacteria

107
00:04:28,416 --> 00:04:29,646
that are growing in there.

108
00:04:29,646 --> 00:04:31,186
Things that the human
eye can't see.

109
00:04:31,646 --> 00:04:34,906
And that will help combat
things as we look toward going

110
00:04:34,906 --> 00:04:36,776
on longer space flights
to an asteroid.

111
00:04:36,776 --> 00:04:38,146
And on to Mars one day.

112
00:04:38,146 --> 00:04:41,056
Obviously, you want to have
as sterile of an environment

113
00:04:41,056 --> 00:04:43,556
as you possibly can
in your spaceship.

114
00:04:44,626 --> 00:04:46,356
As we mentioned, he's also
going to be taking part

115
00:04:46,356 --> 00:04:49,306
in that Dragon training
conference call

116
00:04:49,306 --> 00:04:50,156
with the ground teams.

117
00:04:50,156 --> 00:04:51,846
To figure out what
the crew's going

118
00:04:51,846 --> 00:04:53,416
to be doing once Dragon departs.

119
00:04:53,766 --> 00:04:58,276
And then Yuri Malenchenko, the
other flight engineer onboard,

120
00:04:58,276 --> 00:04:59,806
is working in the
Russian segment.

121
00:05:00,566 --> 00:05:03,106
He is working on
part of an experiment

122
00:05:03,106 --> 00:05:04,426
that looks at circadian rhythms.

123
00:05:04,426 --> 00:05:06,896
Obviously, most people here
on Earth know what that is.

124
00:05:06,976 --> 00:05:09,736
What your body and how it reacts
to daylight and nighttime.

125
00:05:10,106 --> 00:05:11,796
It's a little bit different
whenever you're up in space.

126
00:05:11,796 --> 00:05:15,516
And you see more than a dozen
sunrises and sunsets per day.

127

00:05:16,296 --> 00:05:18,286
Your body clock gets
thrown off a little bit.

128
00:05:18,286 --> 00:05:19,666
So they're going to be
taking a look at that.

129
00:05:19,666 --> 00:05:21,436
He's going to be wearing
some instrumentation

130
00:05:21,886 --> 00:05:23,236
over the next several hours.

131
00:05:23,596 --> 00:05:25,646
As they monitor how
his body reacts

132
00:05:25,646 --> 00:05:27,846
to the Space Station
environment.

133
00:05:27,846 --> 00:05:29,966
He's also going to be doing
a fitness evaluation today.

134
00:05:30,366 --> 00:05:31,806
Spending about an
hour and a half

135
00:05:31,806 --> 00:05:34,676
on the treadmill inside
the Russian segment.

136
00:05:34,676 --> 00:05:36,886
Obviously, exercise
is an important part

137
00:05:37,266 --> 00:05:39,626

of the crew members'
daily activities.

138
00:05:39,626 --> 00:05:42,226
Down at the Baikonur Cosmodrome,
while the crew is up in space.

139
00:05:42,616 --> 00:05:44,426
Their fellow crew members that
are going to be joining them

140
00:05:44,426 --> 00:05:45,916
as part of Expedition 33.

141
00:05:46,306 --> 00:05:49,126
Oleg Novitskiy, Evgeny
Tarelkin, and Kevin Ford.

142
00:05:49,126 --> 00:05:51,356
Which you see there are
undergoing final preparations

143
00:05:51,356 --> 00:05:52,296
for their launch.

144
00:05:52,696 --> 00:05:54,826
That launch is coming
up on October 23rd,

145
00:05:55,196 --> 00:05:58,336
at 5:51 a.m. Central Time.

146
00:05:58,336 --> 00:06:00,756
That is 6:51 a.m. Eastern Time.

147
00:06:01,166 --> 00:06:02,686
They'll be launching
on a Soyuz rocket.

148

00:06:02,686 --> 00:06:04,036
Of course, we'll have
live coverage here

149
00:06:04,036 --> 00:06:05,056
on NASA television.

150
00:06:05,426 --> 00:06:09,006
As well as of their docking
two days later on October 25th.

151
00:06:09,006 --> 00:06:13,326
That docking scheduled for
7:35 a.m. Central Time.