1
00:00:01,890 --> 00:00:03,940
Good morning to you from
Mission Control Houston.

2
00:00:03,940 --> 00:00:06,630
It is Monday, July 23, 2012.

3
00:00:06,630 --> 00:00:09,380
This is a live look inside the
International Space Station

4
00:00:09,380 --> 00:00:11,600
flight control room here at
the Johnson Space Center.

5
00:00:11,600 --> 00:00:15,080
We want to welcome you
to today's ISS update.

6
00:00:15,080 --> 00:00:16,940
It is a busy day for the crew

7
00:00:16,940 --> 00:00:19,960
of Expedition 32 onboard the
International Space Station.

8
00:00:19,960 --> 00:00:22,440
This team here in
Houston today is being led

9
00:00:22,440 --> 00:00:24,020
by flight director
Tony Ceccacci.

10
00:00:24,020 --> 00:00:26,110
He is there on the
right-hand side.

11
00:00:26,110 --> 00:00:28,690

Sitting beside him is
Tomas Gonzales Torres.

12
00:00:28,690 --> 00:00:34,470
He is the on-console flight
director that is training.

13
00:00:34,470 --> 00:00:37,040
He course is a former
spacewalk officer.

14
00:00:37,040 --> 00:00:41,430
Namely he did STS 125
which was the final mission

15
00:00:41,430 --> 00:00:44,200
to the Hubble space telescope,
but he's been learning how

16
00:00:44,200 --> 00:00:45,870
to be a flight director for
the last several months.

17
00:00:45,870 --> 00:00:48,970
And he is training there
with Tony Ceccacci.

18
00:00:48,970 --> 00:00:52,390
The crew onboard
currently consists

19
00:00:52,390 --> 00:00:55,970
of Gennady Padalka
Sergei Revin and Joe Acaba

20
00:00:55,970 --> 00:00:57,430
which you see there on
the right hand side.

21
00:00:57,430 --> 00:00:59,930

There's Revin, then
Padalka, second from right,

22
00:00:59,930 --> 00:01:01,440
Joe Acaba there in the middle.

23
00:01:01,440 --> 00:01:04,620
The newest half of Expedition 32
is there on the left-hand side.

24
00:01:04,620 --> 00:01:07,760
That is Aki Hoshide on the
far left side of the screen,

25
00:01:07,760 --> 00:01:11,060
Yuri Malenchenko there second
from left and Suni Williams,

26
00:01:11,060 --> 00:01:14,120
there in the middle
right beside Acaba.

27
00:01:14,120 --> 00:01:18,210
The big news of today is that
the crew is in the middle

28
00:01:18,210 --> 00:01:20,190
of operations getting
ready for re-docking

29
00:01:20,190 --> 00:01:22,810
of Progress 47 cargo vehicle.

30
00:01:22,810 --> 00:01:25,220
That cargo craft
undocked from the station,

31
00:01:25,220 --> 00:01:27,810
the Pirs docking
compartment last night

32
00:01:27,810 --> 00:01:31,440
at 3:25 PM central time.

33
00:01:31,440 --> 00:01:33,530
It backed away from that
docking compartment,

34
00:01:33,530 --> 00:01:37,010
performed a 16-second
automated separation burn

35
00:01:37,010 --> 00:01:39,000
as it backed away from
the Russian segment

36
00:01:39,000 --> 00:01:42,140
of the International Space
Station, and it moved

37
00:01:42,140 --> 00:01:44,640
out to a distance of
about 100 miles away

38
00:01:44,640 --> 00:01:46,330
from orbiting complex.

39
00:01:46,330 --> 00:01:49,750
It is going to be
re-docking later on tonight

40
00:01:49,750 --> 00:01:52,850
at 8:58 PM central time.

41
00:01:52,850 --> 00:01:56,460
We'll have live coverage of
it on NASA TV at 8:15 PM.

42
00:01:56,460 --> 00:01:58,380

The reason it is
doing this is to test

43
00:01:58,380 --> 00:02:00,780
out some brand-new
Kurs equipment that is

44
00:02:00,780 --> 00:02:02,230
on that Progress spacecraft.

45
00:02:02,230 --> 00:02:04,920
Kurs is the device
and the technology

46
00:02:04,920 --> 00:02:07,020
that allows these
Progress and these Soyuz

47
00:02:07,020 --> 00:02:11,030
to automatically rendezvous and
dock with the Russian segment

48
00:02:11,030 --> 00:02:12,840
of the International
Space Station.

49
00:02:12,840 --> 00:02:15,520
They have upgraded some of
these systems that will allow it

50
00:02:15,520 --> 00:02:20,880
to perform an easier docking and
also use fewer antennas onboard,

51
00:02:20,880 --> 00:02:24,040
so this Progress 47 backed
away yesterday afternoon

52
00:02:24,040 --> 00:02:26,640
and will re-dock tonight

53
00:02:26,640 --> 00:02:28,180
at to the very same
docking compartment.

54
00:02:28,180 --> 00:02:30,430
And again we'll have live
coverage tonight beginning

55
00:02:30,430 --> 00:02:35,400
at 8:15 PM central time with the
actual re-docking taking place

56
00:02:35,400 --> 00:02:38,400
at 8:58 PM central time.

57
00:02:38,400 --> 00:02:43,590
In order to support this
the crew has a split shift

58
00:02:43,590 --> 00:02:46,690
of a sleep period today.

59
00:02:46,690 --> 00:02:49,850
The Russian crew will go to
sleep at 10 AM central time

60
00:02:49,850 --> 00:02:51,470
about one hour from now.

61
00:02:51,470 --> 00:02:52,920
They'll sleep for about
5 and a half hours.

62
00:02:52,920 --> 00:02:56,760
They're going to wake up
at 3:30 PM central time.

63
00:02:56,760 --> 00:03:00,600

They will support the Progress
re-docking we just talked about,

64
00:03:00,600 --> 00:03:04,370
then they'll go back to sleep
at about 10:30 PM central time

65
00:03:04,370 --> 00:03:06,890
and will sleep for nine
and a half hours waking

66
00:03:06,890 --> 00:03:09,980
up tomorrow morning
at 8 AM central time.

67
00:03:09,980 --> 00:03:12,040
The US side of the
crew will go to sleep

68
00:03:12,040 --> 00:03:15,870
at their normal time 4:30 PM
central time later on today.

69
00:03:15,870 --> 00:03:18,150
They'll sleep for about
three hours and 15 minutes

70
00:03:18,150 --> 00:03:22,880
and will wake up at 7:45 PM
central to support the Progress

71
00:03:22,880 --> 00:03:25,670
and then will go back
to sleep at 9:15,

72
00:03:25,670 --> 00:03:28,370
sleep for about five hours
15 minutes and will wake

73
00:03:28,370 --> 00:03:31,200

up about an hour and half
later than they normally would

74
00:03:31,200 --> 00:03:33,430
at 2:30 AM central time.

75
00:03:33,430 --> 00:03:35,630
So a split schedule
for the crew today.

76
00:03:35,630 --> 00:03:38,790
All of this in order to
support the Progress re-docking

77
00:03:38,790 --> 00:03:42,280
which will take place
later on tonight.

78
00:03:42,280 --> 00:03:45,790
However there is some experiment
work taking place today while

79
00:03:45,790 --> 00:03:48,950
the crew is up getting ready
for tonight's activities.

80
00:03:48,950 --> 00:03:50,460
Suni Williams has been working

81
00:03:50,460 --> 00:03:52,100
on an experiment we've
talked about before.

82
00:03:52,100 --> 00:03:52,900
It's called BASS.

83
00:03:52,900 --> 00:03:54,010
This is the Burning

84

00:03:54,010 --> 00:03:56,300
And Suppression Of
Solids experiment.

85
00:03:56,300 --> 00:03:57,760
This is one which
they take at look

86
00:03:57,760 --> 00:03:59,350
at how flames behave in space.

87
00:03:59,350 --> 00:04:01,580
There's different
types of materials

88
00:04:01,580 --> 00:04:02,900
that they burn up there.

89
00:04:02,900 --> 00:04:05,770
There's different
types of fuel samples.

90
00:04:05,770 --> 00:04:07,170
This experiment's
very interesting

91
00:04:07,170 --> 00:04:09,280
because it takes a look at
how you extinguish a fire,

92
00:04:09,280 --> 00:04:11,510
which fire obviously behaves
quite a bit differently

93
00:04:11,510 --> 00:04:12,540
up in space.

94
00:04:12,540 --> 00:04:15,130
Here on Earth if there's a flame
you typically would aim your

95
00:04:15,130 --> 00:04:17,760
extinguisher or whatever are
you using to put it out down

96
00:04:17,760 --> 00:04:18,850
at the base of the flame.

97
00:04:18,850 --> 00:04:21,080
That's because it's where
the air enters the flame.

98
00:04:21,080 --> 00:04:22,890
It's where the flame
is most stable.

99
00:04:22,890 --> 00:04:25,560
But of course up in space you
don't have that kind of effect

100
00:04:25,560 --> 00:04:27,660
so how you would put
out a fire up there

101
00:04:27,660 --> 00:04:29,960
in zero gravity is
quite a bit different.

102
00:04:29,960 --> 00:04:31,570
This is a look inside
that glovebox.

103
00:04:31,570 --> 00:04:33,880
It's where the BASS
experiment resides.

104
00:04:33,880 --> 00:04:37,690
You see one of these small
spheres, fuel spheres burning

105
00:04:37,690 --> 00:04:40,730
as Suni Williams performs
this experiment up there

106
00:04:40,730 --> 00:04:41,790
in the weightless environment

107
00:04:41,790 --> 00:04:45,530
of space taking a
look at these flames.

108
00:04:45,530 --> 00:04:47,940
Williams is also busy taking
some sound measurements today

109
00:04:47,940 --> 00:04:51,340
using what's called
an acoustic dosimeter.

110
00:04:51,340 --> 00:04:52,720
She's also reviewing procedures

111
00:04:52,720 --> 00:04:54,480
for medical ultrasound
operations

112
00:04:54,480 --> 00:04:57,420
and she also has a ham
pass later on today

113
00:04:57,420 --> 00:05:00,240
where she will use the
ham radio onboard to talk

114
00:05:00,240 --> 00:05:02,780
with some students
and some people

115
00:05:02,780 --> 00:05:05,670

at the Rochester Institute of
technology there in New York.

116
00:05:05,670 --> 00:05:08,740
And she's also working on
experiment called VIABLE,

117
00:05:08,740 --> 00:05:10,720
which stands for the
Evaluation And Monitoring

118
00:05:10,720 --> 00:05:13,110
Of Microbiofilms Inside the ISS.

119
00:05:13,110 --> 00:05:17,310
And she also has some
crew orientation time

120
00:05:17,310 --> 00:05:20,000
which just having been there
for a few days, she and the rest

121
00:05:20,000 --> 00:05:23,820
of that Expedition 32
crew is still getting used

122
00:05:23,820 --> 00:05:25,630
to their environment up there.

123
00:05:25,630 --> 00:05:27,240
Of course most of them
have been up there before

124
00:05:27,240 --> 00:05:30,290
but they still take some time
to learn their new surroundings

125
00:05:30,290 --> 00:05:34,370
and the emergency
procedures and all of that.

126
00:05:34,370 --> 00:05:36,290
Aki Hoshide is working
on the functional check

127
00:05:36,290 --> 00:05:38,910
out of the diagnostic kit
and medical laptop onboard.

128
00:05:38,910 --> 00:05:41,420
He is viewing reference
materials the Integrated

129
00:05:41,420 --> 00:05:44,630
Cardiovascular experiment
which is one of the experiments

130
00:05:44,630 --> 00:05:46,430
on board that takes a
look at how the human body

131
00:05:46,430 --> 00:05:48,950
and mainly the heart
and the muscles

132
00:05:48,950 --> 00:05:51,490
and the veins react
to being up in space.

133
00:05:51,490 --> 00:05:54,950
And he is also doing some
onboard training getting ready

134
00:05:54,950 --> 00:05:58,030
for the arrival of the
Japanese HTV cargo ship

135
00:05:58,030 --> 00:06:00,670
which you see there broken
out to different sections.

136
00:06:00,670 --> 00:06:02,650
The pressurized logistics
carrier which you see

137
00:06:02,650 --> 00:06:04,830
on the far left-hand
side, that is the portion

138
00:06:04,830 --> 00:06:07,410
that will be mounted
to the space station.

139
00:06:07,410 --> 00:06:09,090
There's also an exposed
pallet down there

140
00:06:09,090 --> 00:06:11,160
in the unpressurized
logistics carrier.

141
00:06:11,160 --> 00:06:15,200
This HTV can carry up items both
pressurize and unpressurized.

142
00:06:15,200 --> 00:06:17,450
And the crew will take care
of unloading all of that cargo

143
00:06:17,450 --> 00:06:18,970
over next several weeks.

144
00:06:18,970 --> 00:06:21,910
But HTV launched last...

145
00:06:21,910 --> 00:06:25,800
last Friday night which you
are seeing a playback of here.

146

00:06:25,800 --> 00:06:28,250
It was quite a rainy
and cloudy day there

147
00:06:28,250 --> 00:06:31,550
at the Tanegashima Space Center

148
00:06:31,550 --> 00:06:36,410
but the Japanese HTV three cargo
craft onboard its H-IIB rocket,

149
00:06:36,410 --> 00:06:40,190
which is just a gigantic rocket,
did lift off on time a little

150
00:06:40,190 --> 00:06:42,110
after 9 PM central time.

151
00:06:42,110 --> 00:06:44,750
That was 11 AM there locally.

152
00:06:44,750 --> 00:06:45,800
Quite a cloudy day.

153
00:06:45,800 --> 00:06:47,660
There was some rain in the
area and the rocket disappeared

154
00:06:47,660 --> 00:06:50,060
in the clouds just a few
seconds after liftoff.

155
00:06:50,060 --> 00:06:52,100
But it did have an uneventful

156
00:06:52,100 --> 00:06:55,080
and successful 15
minute ride into orbit.

157

00:06:55,080 --> 00:06:57,590
It is currently on its way
toward the International Space

158
00:06:57,590 --> 00:06:59,720
Station and then
it will rendezvous

159
00:06:59,720 --> 00:07:02,900
and berth Friday evening.

160
00:07:02,900 --> 00:07:04,800
We'll have live coverage
of that of course.

161
00:07:04,800 --> 00:07:08,700
The grapple scheduled
for 7:05 AM central time,

162
00:07:08,700 --> 00:07:11,740
8:05 AM Eastern time
there Friday morning.

163
00:07:11,740 --> 00:07:14,180
Joe Acaba will be in charge

164
00:07:14,180 --> 00:07:17,710
of actually performing the
robotics operations grappling

165
00:07:17,710 --> 00:07:20,530
that cargo craft and then
Aki Hoshide will take

166
00:07:20,530 --> 00:07:21,910
over after that.

167
00:07:21,910 --> 00:07:23,710
And he will be the one
actually installing it