1
00:00:02,210 --> 00:00:02,940
>> Amiko Kauderer: Good day.

2
00:00:02,940 --> 00:00:04,920
This is Mission Control Houston.

3
00:00:04,920 --> 00:00:06,550
Welcome and thank
you for joining us

4
00:00:06,550 --> 00:00:08,900
for today's edition
of ISS Update.

5
00:00:08,900 --> 00:00:12,970
It's Friday, August 10th
and now we are going

6
00:00:12,970 --> 00:00:19,850
to have a weekly recap
to recap the activities

7
00:00:19,850 --> 00:00:24,530
of the busy crew aboard the
International Space Station.

8
00:00:24,530 --> 00:00:26,810
We're now inside the
International Space Station

9
00:00:26,810 --> 00:00:29,320
Flight Control Room where the
team has been monitoring the

10
00:00:29,320 --> 00:00:32,430
systems aboard the station and
supporting the day's activities

11
00:00:32,430 --> 00:00:35,980

of the Expedition
32 crewmembers.

12
00:00:35,980 --> 00:00:40,800
The six crewmembers aboard the
station include the Russian

13
00:00:40,800 --> 00:00:43,340
cosmonaut and commander of
the complex Gennady Padalka

14
00:00:43,340 --> 00:00:46,680
and flight engineers
cosmonaut Sergei Revin,

15
00:00:46,680 --> 00:00:51,190
NASA astronaut Joe Acaba and
cosmonaut Yuri Malenchenko,

16
00:00:51,190 --> 00:00:55,530
NASA astronaut Suni Williams and
Japanese astronaut Aki Hoshide.

17
00:00:55,530 --> 00:00:58,140
Malenchenko, Williams
and Hoshide arrived

18
00:00:58,140 --> 00:00:59,910
at the International
Space Station

19
00:00:59,910 --> 00:01:02,540
after docking their
Soyuz space craft

20
00:01:02,540 --> 00:01:05,170
to the Rassvet module
on July 16th.

21
00:01:05,170 --> 00:01:08,480

Today they complete their
fourth week in space.

22
00:01:08,480 --> 00:01:10,870
Meanwhile, the dock of
Revin and Acaba had launched

23
00:01:10,870 --> 00:01:13,560
to the orbiting complex
aboard the Soyuz space craft

24
00:01:13,560 --> 00:01:17,670
as the Expedition
31 crew back in May.

25
00:01:17,670 --> 00:01:18,970
Their vehicle had docked

26
00:01:18,970 --> 00:01:21,230
to the Poisk Modular Space
Station just two days

27
00:01:21,230 --> 00:01:25,420
after their launch,
which was on May 14.

28
00:01:25,420 --> 00:01:30,510
And today they complete their
89th consecutive day in space.

29
00:01:30,510 --> 00:01:40,180
[Silence]

30
00:01:40,180 --> 00:01:43,560
The space station with this crew
aboard is flying at an altitude

31
00:01:43,560 --> 00:01:48,100
of about 260 statute miles.

32
00:01:48,100 --> 00:01:48,970
The orbiting facility .

33
00:01:48,970 --> 00:01:49,040
. .

34
00:01:49,040 --> 00:01:53,130
[Silence]

35
00:01:53,130 --> 00:01:57,590
. . . is making a northeastern
track having just crossed

36
00:01:57,590 --> 00:02:02,110
over the southern tip of
Brazil and is now heading

37
00:02:02,110 --> 00:02:05,200
across the south Atlantic
Ocean and eventually

38
00:02:05,200 --> 00:02:07,510
for a pass across Africa.

39
00:02:07,510 --> 00:02:14,040
[Silence]

40
00:02:14,040 --> 00:02:16,940
And now let's look
back for the week --

41
00:02:16,940 --> 00:02:20,430
a week in space on
a Monday controllers

42
00:02:20,430 --> 00:02:23,850
on the ground had commanded
the space station's robotic arm

43
00:02:23,850 --> 00:02:26,850
to extract the exposed
pallet from the slide slot

44
00:02:26,850 --> 00:02:31,770
on the Japanese H2 transfer
vehicle cargo craft.

45
00:02:31,770 --> 00:02:33,690
Again, that was on Monday.

46
00:02:33,690 --> 00:02:37,540
The station on then
handed the pallet off

47
00:02:37,540 --> 00:02:40,850
to the Kibo modules robotic
arm under the control

48
00:02:40,850 --> 00:02:43,900
of Expedition 32 flight
engineers Joe Acaba

49
00:02:43,900 --> 00:02:45,930
and Aki Hoshide.

50
00:02:45,930 --> 00:02:48,070
Acaba and Hoshide
installed the pallet

51
00:02:48,070 --> 00:02:50,510
on Kibo's exposed facility.

52
00:02:50,510 --> 00:02:54,040
[Silence]

53
00:02:54,040 --> 00:02:57,960
On Monday Acaba also worked with
the binary colloidal aloid test,

54
00:02:57,960 --> 00:03:01,030
the science payload and
this experiment also known

55
00:03:01,030 --> 00:03:04,980
as VCAT C1 station
crewmembers photographed samples

56
00:03:04,980 --> 00:03:07,970
of the colloidal particles as
they face separate like oil

57
00:03:07,970 --> 00:03:10,790
and water and self-assemble
into crystals

58
00:03:10,790 --> 00:03:13,120
that interact strongly
with light.

59
00:03:13,120 --> 00:03:17,490
The results will help scientists
develop fundamental physis

60
00:03:17,490 --> 00:03:20,340
concepts previously
cloaked by the gravity --

61
00:03:20,340 --> 00:03:22,310
the effects of gravity.

62
00:03:23,360 --> 00:03:25,870
And on Monday, Hoshide
had participated

63
00:03:25,870 --> 00:03:28,490
in the Japanese experiment
known as Biorhythm,

64
00:03:28,490 --> 00:03:31,790
which measures a crew members
cardiac activity during long

65
00:03:31,790 --> 00:03:35,320
duration stays in space.

66
00:03:35,320 --> 00:03:38,740
And Commander Gennady Padalka
had installed the crews P

67
00:03:38,740 --> 00:03:40,400
antenna, the receiving antenna

68
00:03:40,400 --> 00:03:44,660
for the crews automated lawn
[inaudible] system that was used

69
00:03:44,660 --> 00:03:48,770
in progress supply ship dockings
and [inaudible] service module.

70
00:03:48,770 --> 00:03:50,610
He also transferred some cargo

71
00:03:50,610 --> 00:03:54,510
from the newly arrived space
station progress 48 vehicle.

72
00:03:54,510 --> 00:03:59,310
[Silence]

73
00:03:59,310 --> 00:04:05,070
And on Tuesday flight engineer
Joe Acaba had focused his

74
00:04:05,070 --> 00:04:06,220
efforts on the fluids

75
00:04:06,220 --> 00:04:11,650
and combustion facilities
combustion integrated rack

76
00:04:12,790 --> 00:04:15,980
replacing hardware for
the multiuser droplet

77
00:04:15,980 --> 00:04:17,850
combustion apparatus.

78
00:04:17,850 --> 00:04:22,360
Then on Tuesday, flight
engineer Suni Williams

79
00:04:22,360 --> 00:04:25,060
and Aki Hoshide spent part
of their day preparing

80
00:04:25,060 --> 00:04:28,220
for a spacewalk they will
perform on August 30th.

81
00:04:28,220 --> 00:04:30,870
Williams cycled the positive
pressure relief valves

82
00:04:30,870 --> 00:04:32,260
on the space suits, she

83
00:04:32,260 --> 00:04:34,380
and Hoshide will wear
during the excursion

84
00:04:34,380 --> 00:04:36,180
out to the station's truss

85
00:04:36,180 --> 00:04:40,950
to replace a failed

main by switching unit.

86
00:04:40,950 --> 00:04:44,390
This is a distribution hub
with the station's power system

87
00:04:44,390 --> 00:04:48,320
with a spare located on an
external storage platform.

88
00:04:48,320 --> 00:04:51,360
Hoshide meanwhile moved unneeded
hardware out to the airlock

89
00:04:51,360 --> 00:04:56,930
to clean up the work area as
spacewalk preparations continue.

90
00:04:56,930 --> 00:05:00,370
Also on Tuesday Williams
and Hoshide also had teamed

91
00:05:00,370 --> 00:05:03,300
up to record an educational
video demonstrating how

92
00:05:03,300 --> 00:05:05,630
astronauts orient
themselves in an environment

93
00:05:05,630 --> 00:05:08,840
where there is no gravity
to point the way up or down.

94
00:05:08,840 --> 00:05:14,180
And Williams rounded out her day
installing the electromagnetic

95
00:05:14,180 --> 00:05:15,300
interference filters

96
00:05:15,300 --> 00:05:18,940
on the fluid science
laboratory's video management

97
00:05:18,940 --> 00:05:20,960
unit and had also
set up equipment

98
00:05:20,960 --> 00:05:24,590
for the VO2 Max experiment,
which allows researchers

99
00:05:24,590 --> 00:05:26,010
on earth to measure changes

100
00:05:26,010 --> 00:05:29,800
in the astronaut's aerobic
capacity during long duration

101
00:05:29,800 --> 00:05:30,810
space flight.

102
00:05:30,810 --> 00:05:35,770
And then on Tuesday on the
Russian side of the house,

103
00:05:35,770 --> 00:05:39,100
Commander Padalka and flight
engineer Malenchenko had studied

104
00:05:39,100 --> 00:05:41,150
procedures for their spacewalk.

105
00:05:41,150 --> 00:05:43,230
They will conduct on August 20th

106
00:05:43,230 --> 00:05:45,880
to prepare the piers docking

compartment for its replacement

107
00:05:45,880 --> 00:05:48,820
with the new laboratory
and docking module.

108
00:05:48,820 --> 00:05:52,940
The spacewalkers will relocate
the Strella 2 hand operated

109
00:05:52,940 --> 00:05:56,510
crane from the piers docking
compartment to the Zaria module.

110
00:05:56,510 --> 00:06:03,040
[Silence]

111
00:06:03,040 --> 00:06:09,520
And on Wednesday Expedition 32
crew remained busy preparing

112
00:06:09,520 --> 00:06:13,700
for those two spacewalks.

113
00:06:13,700 --> 00:06:16,880
The Russian spacewalk is
scheduled again for August 20th

114
00:06:16,880 --> 00:06:21,560
and the U.S. spacewalk is
planned for August 30th.

115
00:06:21,560 --> 00:06:25,010
The crewmembers have spent time
getting their spacewalk tools

116
00:06:25,010 --> 00:06:29,740
ready while reviewing procedures
and also had been checking

117
00:06:29,740 --> 00:06:35,410
out the Russian Orlan space
suits for that first spacewalk

118
00:06:35,410 --> 00:06:38,950
that is again to
occur on August 20th.

119
00:06:40,690 --> 00:06:43,780
Meanwhile, the six station
crew members had time scheduled

120
00:06:43,780 --> 00:06:47,150
for ongoing science and
routine maintenance.

121
00:06:47,150 --> 00:06:50,620
Williams had participated
in the VO2 Max experiment

122
00:06:50,620 --> 00:06:54,410
that measures an
astronaut's aerobic capacity.

123
00:06:54,410 --> 00:06:57,670
She also fed spiders and
swapped out their habitats

124
00:06:57,670 --> 00:07:00,800
for a YouTube experiment.

125
00:07:00,800 --> 00:07:03,810
And also on Wednesday flight
engineer Joe Acaba then assisted

126
00:07:03,810 --> 00:07:06,030
Williams for an educational
demonstration

127

00:07:06,030 --> 00:07:08,520
with the Lego bricks.

128
00:07:08,520 --> 00:07:11,100
Acaba also downloaded
data captured

129
00:07:11,100 --> 00:07:13,910
for the integrated
cardiovascular experiment

130
00:07:13,910 --> 00:07:18,040
and replaced batteries
in an express rack.

131
00:07:18,040 --> 00:07:23,150
He also then took time to speak
with WAPA TV in Puerto Rico

132
00:07:23,150 --> 00:07:26,510
and the Spanish language
television channel Univision.

133
00:07:26,510 --> 00:07:35,390
[Silence]

134
00:07:35,390 --> 00:07:38,030
And on Thursday flight
engineers Aki Hoshide

135
00:07:38,030 --> 00:07:41,740
and Joe Acaba used the
Kibo modules robotic arm

136
00:07:41,740 --> 00:07:47,850
to transfer the multi-mission
consolidated equipment payload

137
00:07:47,850 --> 00:07:51,290
from the H2 transfer vehicle

three, the external pallet

138
00:07:51,290 --> 00:07:54,370
to the exposed facility
on the exterior

139
00:07:54,370 --> 00:07:57,360
of the Japanese experiment
module.

140
00:07:58,550 --> 00:08:01,200
Acaba was later joined by
flight engineer Suni Williams

141
00:08:01,200 --> 00:08:03,330
to review robotics
procedures in advance

142
00:08:03,330 --> 00:08:08,520
of the external pallets
reinsertion into H2TV3,

143
00:08:08,520 --> 00:08:10,510
which took place today.

144
00:08:10,510 --> 00:08:17,280
[Silence]

145
00:08:17,280 --> 00:08:20,100
Williams then had worked with
the burning and suppression

146
00:08:20,100 --> 00:08:22,450
of solids experiment on Thursday

147
00:08:22,450 --> 00:08:24,910
and that experiment
examines the burning

148

00:08:24,910 --> 00:08:27,930
and extinction characteristics
of a wide variety

149
00:08:27,930 --> 00:08:30,750
of fuel samples in microgravity.

150
00:08:30,750 --> 00:08:34,590
The experiment burning and
suppression of solids also known

151
00:08:34,590 --> 00:08:39,060
as BASS will help to develop
procedures and methods

152
00:08:39,060 --> 00:08:42,180
for extinguishing accidental
fires in microgravity

153
00:08:42,180 --> 00:08:45,340
and it will also contribute to
the design of fire detection

154
00:08:45,340 --> 00:08:51,390
and suppression systems in
microgravity and on earth.

155
00:08:51,390 --> 00:08:53,760
Also on Thursday,
Commander Gennady Padalka

156
00:08:53,760 --> 00:08:56,820
and flight engineer
Yuri Malenchenko

157
00:08:56,820 --> 00:08:59,580
and Sergei Revin worked
in the Russian segment

158
00:08:59,580 --> 00:09:03,530

of the station monitoring its
systems and performing a variety

159
00:09:03,530 --> 00:09:04,950
of maintenance duties.

160
00:09:04,950 --> 00:09:06,070
They also participated

161
00:09:06,070 --> 00:09:09,870
in a Russian medical
test called SPRUT-2

162
00:09:09,870 --> 00:09:12,590
which investigates the
distribution and behavior

163
00:09:12,590 --> 00:09:16,210
of human body fluids
in zero gravity.

164
00:09:16,210 --> 00:09:20,510
And later on Thursday, Hoshide
had some time set aside to speak

165
00:09:20,510 --> 00:09:21,800
with the Young Astronauts Club

166
00:09:21,800 --> 00:09:25,510
in Tokyo during an inflight
event in the Kibo module.

167
00:09:25,510 --> 00:09:35,090
[Silence]

168
00:09:35,090 --> 00:09:40,570
And today, Friday, August 10th
after an early morning wake

169

00:09:40,570 --> 00:09:44,440
up at 1:00 a.m. Central Time the
Expedition 32 crew had kicked

170
00:09:44,440 --> 00:09:48,470
off their day followed
by the first

171
00:09:48,470 --> 00:09:50,500
of two day daily
planning conferences

172
00:09:50,500 --> 00:09:53,370
with the ground controllers
at Michigan Control Centers

173
00:09:53,370 --> 00:09:55,940
to review their activities.

174
00:09:55,940 --> 00:09:57,440
Flight engineers Joe Acaba

175
00:09:57,440 --> 00:10:01,760
and Suni Williams had worked
together using the station

176
00:10:01,760 --> 00:10:05,870
robotic arm to return
the exposed pallet back

177
00:10:05,870 --> 00:10:08,510
into the Japanese
H2 transfer vehicle.

178
00:10:08,510 --> 00:10:19,060
[Silence]

179
00:10:19,060 --> 00:10:20,200
Prior to the crew's wake

180
00:10:20,200 --> 00:10:22,530
up the ground team had
[inaudible] then handed off

181
00:10:22,530 --> 00:10:29,190
that exposed pallet from the
Japanese experiment modules

182
00:10:29,190 --> 00:10:30,530
remote manipulator system,

183
00:10:30,530 --> 00:10:33,510
the Japanese robotic
arm to the station arm.

184
00:10:33,510 --> 00:10:42,070
[Silence]

185
00:10:42,070 --> 00:10:45,230
Acaba then woke to
remove the depressed hose

186
00:10:45,230 --> 00:10:46,800
from the water recovery system

187
00:10:46,800 --> 00:10:50,680
to resume nominal urine
processing assembly operations

188
00:10:50,680 --> 00:10:53,670
that water recovery
system converts urine,

189
00:10:53,670 --> 00:10:56,320
sweat and condensation
into drinkable water supply

190
00:10:56,320 --> 00:10:59,440
for the crew aboard the

International Space Station.

191
00:11:01,280 --> 00:11:03,180
Acaba also spent
some time working

192
00:11:03,180 --> 00:11:05,130
with the capillary
flow experiment

193
00:11:05,130 --> 00:11:09,640
that studies how fluids move
up surfaces in microgravity.

194
00:11:09,640 --> 00:11:14,150
Meanwhile, flight engineer
Suni Williams took photos

195
00:11:14,150 --> 00:11:15,310
of that experiment.

196
00:11:15,310 --> 00:11:17,330
She also performed some
medical experiments

197
00:11:17,330 --> 00:11:18,460
and took more photographs

198
00:11:18,460 --> 00:11:21,800
of the six YouTube space
lab group activation

199
00:11:21,800 --> 00:11:24,370
pack experiments.

200
00:11:24,370 --> 00:11:27,170
And also today Hoshide
has been transferring CDs

201

00:11:27,170 --> 00:11:31,580
between the CD library and
the H2 transfer vehicle three

202
00:11:31,580 --> 00:11:33,420
transfer case.

203
00:11:33,420 --> 00:11:35,900
He reconfigured a
space station computer

204
00:11:35,900 --> 00:11:39,650
from the Japanese Experiment
module remote manipulator system

205
00:11:39,650 --> 00:11:41,830
from earlier this morning.

206
00:11:43,590 --> 00:11:46,430
He and Acaba also worked
together this morning

207
00:11:46,430 --> 00:11:47,950
to connect cabin ducts

208
00:11:47,950 --> 00:11:51,870
to the environmental control
life support system racking the

209
00:11:51,870 --> 00:11:55,090
Japanese experiment module.

210
00:11:55,090 --> 00:11:56,930
He also performed in
flight maintenance

211
00:11:56,930 --> 00:12:00,110
to the portable emergency
provisions and clicked

212
00:12:00,110 --> 00:12:02,870
on mask assembly inspections.

213
00:12:02,870 --> 00:12:07,730
And at the end of the day the
crew members will have put

214
00:12:07,730 --> 00:12:09,180
in their daily two hours

215
00:12:09,180 --> 00:12:12,610
of exercise using the
onboard gym equipment.

216
00:12:12,610 --> 00:12:15,510
They will also participate

217
00:12:15,510 --> 00:12:17,040
in the final daily
planning conference

218
00:12:17,040 --> 00:12:17,980
with the ground controllers

219
00:12:17,980 --> 00:12:21,350
around the world before evening
prep for a light duty weekend.

220
00:12:21,350 --> 00:12:23,410
The crew is then
scheduled to go to bed

221
00:12:23,410 --> 00:12:27,770
at 4:30 p.m. Central Time.