EXPEDITION 33

AKIHIKO HOSHIDE

Flight Engineer

1
00:00:06,230 --> 00:00:03,750
greetings from mission control houston

2
00:00:08,470 --> 00:00:06,240
and welcome to this friday's edition of

3
00:00:09,990 --> 00:00:08,480
international space station update

4
00:00:11,749 --> 00:00:10,000
joining us here inside of the flight

5
00:00:13,830 --> 00:00:11,759
control room at the johnson space center

6
00:00:15,749 --> 00:00:13,840
in houston texas orbit two team

7
00:00:17,510 --> 00:00:15,759
currently on console being led by that

8
00:00:19,189 --> 00:00:17,520
man right there walking

9
00:00:21,510 --> 00:00:19,199
flight director chris edlin and right

10
00:00:23,830 --> 00:00:21,520
behind him in the blue shirt capcom clay

11
00:00:26,150 --> 00:00:23,840
anderson nasa astronaut who will serve

12
00:00:28,230 --> 00:00:26,160
as the communication link between the

13
00:00:30,630 --> 00:00:28,240

controllers down here on the ground and

14
00:00:31,910 --> 00:00:30,640
the astronauts up in space those

15
00:00:34,389 --> 00:00:31,920
astronauts right now the crew of

16
00:00:35,990 --> 00:00:34,399
expedition 33 being led by nasa

17
00:00:38,069 --> 00:00:36,000
astronaut sunny williams all the way on

18
00:00:40,709 --> 00:00:38,079
the left there in the middle russian

19
00:00:43,270 --> 00:00:40,719
cosmonaut yuri malenchenko veteran space

20
00:00:44,630 --> 00:00:43,280
flier on his fifth space flight and then

21
00:00:47,110 --> 00:00:44,640
all the way on the right

22
00:00:49,270 --> 00:00:47,120
japanese astronaut aki hoshide on his

23
00:00:52,310 --> 00:00:49,280
second flight of veteran of one previous

24
00:00:55,830 --> 00:00:54,150
it's a very busy time for the astronauts

25
00:00:57,510 --> 00:00:55,840
up on orbit this week

26
00:01:00,229 --> 00:00:57,520
seeing the arrival of a new cargo

27
00:01:02,389 --> 00:01:00,239
vehicle taking up a good deal of their

28
00:01:04,710 --> 00:01:02,399
time throughout the week

29
00:01:06,950 --> 00:01:04,720
starting off on monday though expedition

30
00:01:08,070 --> 00:01:06,960
33 commander suni williams was involved

31
00:01:09,910 --> 00:01:08,080
with some

32
00:01:11,830 --> 00:01:09,920
ultrasound scans for an ongoing

33
00:01:13,510 --> 00:01:11,840
experiment known as sprint

34
00:01:16,070 --> 00:01:13,520
these astronauts getting in about two

35
00:01:17,670 --> 00:01:16,080
hours of exercise every day in order to

36
00:01:19,350 --> 00:01:17,680
combat some of the negative effects of

37
00:01:21,990 --> 00:01:19,360
weightlessness

38
00:01:24,070 --> 00:01:22,000

sprint is a an ongoing study to see if

39
00:01:25,350 --> 00:01:24,080
shorter exercise periods but at higher

40
00:01:27,510 --> 00:01:25,360
intensities

41
00:01:28,950 --> 00:01:27,520
can have a better effect at combating

42
00:01:31,270 --> 00:01:28,960
some of the negative effects of

43
00:01:33,990 --> 00:01:31,280
weightlessness so she was taking some

44
00:01:36,149 --> 00:01:34,000
ultrasounds of her legs being assisted

45
00:01:37,109 --> 00:01:36,159
by aki hoshide and then transmitting all

46
00:01:40,149 --> 00:01:37,119
that

47
00:01:42,149 --> 00:01:40,159
data down to researchers on the ground

48
00:01:44,630 --> 00:01:42,159
sunny also took some time to do a ham

49
00:01:46,630 --> 00:01:44,640
radio pass using standard ham radio

50
00:01:48,950 --> 00:01:46,640
equipment with the saint george

51
00:01:50,950 --> 00:01:48,960
international school in luxembourg

52
00:01:52,710 --> 00:01:50,960
getting a chance to talk to students and

53
00:01:54,950 --> 00:01:52,720
answer their questions directly from the

54
00:01:56,630 --> 00:01:54,960
international space station she's also

55
00:01:58,950 --> 00:01:56,640
going through a conference with

56
00:02:01,030 --> 00:01:58,960
controllers down on the ground as they

57
00:02:03,510 --> 00:02:01,040
continue to prep for the arrival of the

58
00:02:05,270 --> 00:02:03,520
dragon spacex capsule which would arrive

59
00:02:07,749 --> 00:02:05,280
the following day

60
00:02:09,830 --> 00:02:07,759
also on monday aki hoshide was

61
00:02:11,910 --> 00:02:09,840
continuing his extended session of the

62
00:02:15,190 --> 00:02:11,920
isa energy experiment

63
00:02:16,229 --> 00:02:15,200

the energy experiment looking to

64
00:02:17,830 --> 00:02:16,239
further

65
00:02:19,510 --> 00:02:17,840
understand the direct relationship

66
00:02:21,510 --> 00:02:19,520
between nutrition and the effects of

67
00:02:25,030 --> 00:02:21,520
space on the astronauts

68
00:02:26,390 --> 00:02:25,040
energy levels also helping to

69
00:02:28,309 --> 00:02:26,400
further determine the energy

70
00:02:30,550 --> 00:02:28,319
requirements that are necessary for

71
00:02:32,470 --> 00:02:30,560
recommending healthy nutrition in these

72
00:02:34,070 --> 00:02:32,480
astronauts during their extended stay in

73
00:02:36,309 --> 00:02:34,080
weightlessness

74
00:02:38,309 --> 00:02:36,319
aki also working on the water recovery

75
00:02:39,830 --> 00:02:38,319
system on board the station is filling

76
00:02:41,589 --> 00:02:39,840
up one of the contingency water

77
00:02:42,630 --> 00:02:41,599
containers and also transferring some of

78
00:02:44,550 --> 00:02:42,640
the urine

79
00:02:47,270 --> 00:02:44,560
that is stored over to the

80
00:02:49,509 --> 00:02:47,280
urine processing assembly which is then

81
00:02:51,430 --> 00:02:49,519
processed and then filtered back into

82
00:02:53,910 --> 00:02:51,440
potable drinking water for this

83
00:02:56,070 --> 00:02:53,920
expedition 33 crew

84
00:02:58,229 --> 00:02:56,080
our third crew member on board yuri

85
00:03:00,070 --> 00:02:58,239
malenchenko spent monday doing some

86
00:03:02,869 --> 00:03:00,080
routine servicing of the environmental

87
00:03:04,630 --> 00:03:02,879
control and life support system or eclis

88
00:03:07,030 --> 00:03:04,640

over on the russian segment inside of

89
00:03:09,030 --> 00:03:07,040
the zvezda service module it's also

90
00:03:11,110 --> 00:03:09,040
working with the russian identification

91
00:03:13,190 --> 00:03:11,120
experiment which looks to study

92
00:03:15,190 --> 00:03:13,200
different dynamic loads on the station

93
00:03:16,229 --> 00:03:15,200
structure especially during dynamic

94
00:03:17,750 --> 00:03:16,239
events

95
00:03:20,149 --> 00:03:17,760
and he was downloading some new

96
00:03:21,589 --> 00:03:20,159
structural dynamic measurements to the

97
00:03:22,869 --> 00:03:21,599
computer's

98
00:03:25,270 --> 00:03:22,879
readers

99
00:03:26,789 --> 00:03:25,280
moving on to tuesday

100
00:03:29,750 --> 00:03:26,799
sunny williams

101
00:03:31,750 --> 00:03:29,760
relocating a laptop for the upcoming

102
00:03:34,309 --> 00:03:31,760
capture of that dragon spacecraft which

103
00:03:36,789 --> 00:03:34,319
was scheduled to take place on wednesday

104
00:03:38,149 --> 00:03:36,799
she was relocating a few items over to

105
00:03:40,229 --> 00:03:38,159
the kuflow where

106
00:03:43,270 --> 00:03:40,239
her and aki hoshide would be standing by

107
00:03:45,190 --> 00:03:43,280
the robotics controls she also got the

108
00:03:46,789 --> 00:03:45,200
vestibule ready for

109
00:03:48,630 --> 00:03:46,799
fitting the airlock and the harmony

110
00:03:51,270 --> 00:03:48,640
module where the dragon would be

111
00:03:52,149 --> 00:03:51,280
arriving and docking and also going over

112
00:03:56,630 --> 00:03:52,159
some

113
00:03:58,789 --> 00:03:56,640

of the lists of high priority items that

114
00:04:01,190 --> 00:03:58,799
would need to be offloaded

115
00:04:03,830 --> 00:04:01,200
first off and then

116
00:04:05,589 --> 00:04:03,840
any other cargo operations during a tag

117
00:04:06,550 --> 00:04:05,599
up with controllers down here on the

118
00:04:08,149 --> 00:04:06,560
ground

119
00:04:09,190 --> 00:04:08,159
she was also doing some on-orbit

120
00:04:11,509 --> 00:04:09,200
training

121
00:04:13,429 --> 00:04:11,519
the astronauts had access to a few

122
00:04:15,589 --> 00:04:13,439
simulators as they walked through the

123
00:04:17,509 --> 00:04:15,599
steps that would be necessary to capture

124
00:04:20,710 --> 00:04:17,519
the dragon spacecraft with that station

125
00:04:22,629 --> 00:04:20,720
robotic arm also known as canada arm 2

126
00:04:25,189 --> 00:04:22,639
also going over some computer-based

127
00:04:27,350 --> 00:04:25,199
training on general vehicle operations

128
00:04:29,030 --> 00:04:27,360
to assist in her knowledge while the

129
00:04:31,270 --> 00:04:29,040
vehicle is docked to the station for

130
00:04:33,749 --> 00:04:31,280
about 18 days

131
00:04:36,070 --> 00:04:33,759
joining her and all of that

132
00:04:37,030 --> 00:04:36,080
on board training was aki hoshide who

133
00:04:39,590 --> 00:04:37,040
was

134
00:04:42,310 --> 00:04:39,600
side by side working in tandem with

135
00:04:43,670 --> 00:04:42,320
sunny williams on wednesday so he on

136
00:04:45,670 --> 00:04:43,680
tuesday he was

137
00:04:47,990 --> 00:04:45,680
going over the final

138
00:04:49,909 --> 00:04:48,000

rendezvous and capture simulations and

139
00:04:51,189 --> 00:04:49,919
also getting some vehicle operations

140
00:04:53,590 --> 00:04:51,199
training

141
00:04:55,430 --> 00:04:53,600
again alongside with suni williams

142
00:04:57,430 --> 00:04:55,440
aside from that he was inside of the

143
00:04:59,070 --> 00:04:57,440
japanese experiment module doing a

144
00:05:01,749 --> 00:04:59,080
pretty thorough analysis of the

145
00:05:04,230 --> 00:05:01,759
microbiological environment he's using a

146
00:05:05,510 --> 00:05:04,240
device known as the swab asd or the

147
00:05:08,310 --> 00:05:05,520
surface water and air

148
00:05:09,909 --> 00:05:08,320
biocharacterization air sampling device

149
00:05:12,710 --> 00:05:09,919
i'm just getting a readout of the

150
00:05:15,110 --> 00:05:12,720
general environment on a microscopic

151
00:05:17,430 --> 00:05:15,120
microscopic scale inside of that

152
00:05:19,510 --> 00:05:17,440
japanese experiment module

153
00:05:21,189 --> 00:05:19,520
meanwhile on tuesday yuri malenchenko

154
00:05:23,270 --> 00:05:21,199
our russian cosmonaut

155
00:05:25,990 --> 00:05:23,280
immediately woke up and participated in

156
00:05:28,150 --> 00:05:26,000
the sprut experiment a russian medical

157
00:05:30,230 --> 00:05:28,160
research project on the distribution

158
00:05:31,510 --> 00:05:30,240
behavior of human body fluids in zero

159
00:05:33,189 --> 00:05:31,520
gravity

160
00:05:35,350 --> 00:05:33,199
since these astronauts are in that

161
00:05:37,430 --> 00:05:35,360
extended period of weightlessness for

162
00:05:39,510 --> 00:05:37,440
long periods of time

163
00:05:41,670 --> 00:05:39,520

it doesn't have the same effect

164
00:05:43,590 --> 00:05:41,680
no gravity pushing the majority of the

165
00:05:44,950 --> 00:05:43,600
body's fluids down towards the legs so

166
00:05:46,390 --> 00:05:44,960
spread looks to

167
00:05:48,469 --> 00:05:46,400
track just how that affects the

168
00:05:51,830 --> 00:05:48,479
astronauts performance once they're on

169
00:05:53,510 --> 00:05:51,840
orbit and also how well they adapt to it

170
00:05:55,270 --> 00:05:53,520
regular gravity conditions following

171
00:05:57,510 --> 00:05:55,280
their arrival back down here on the

172
00:05:59,270 --> 00:05:57,520
surface aside from that he was involved

173
00:06:01,029 --> 00:05:59,280
in the russian kolonovsky crystal

174
00:06:03,270 --> 00:06:01,039
experiment he'd be working on this for

175
00:06:05,270 --> 00:06:03,280
about three days this week a fairly

176
00:06:07,670 --> 00:06:05,280
complex physics experiment on board the

177
00:06:10,469 --> 00:06:07,680
station looking to study the dynamic and

178
00:06:12,710 --> 00:06:10,479
structural characteristics of crystal

179
00:06:14,390 --> 00:06:12,720
systems known as column crystals that

180
00:06:16,790 --> 00:06:14,400
are formed when ions are stored inside

181
00:06:19,350 --> 00:06:16,800
of an electromagnetic trap

182
00:06:21,189 --> 00:06:19,360
moving on to wednesday a very big day

183
00:06:23,590 --> 00:06:21,199
for the astronauts on board the station

184
00:06:26,629 --> 00:06:23,600
seeing the arrival

185
00:06:28,150 --> 00:06:26,639
of the dragon spacecraft sunny williams

186
00:06:29,830 --> 00:06:28,160
started her day out

187
00:06:31,830 --> 00:06:29,840
moving the command

188
00:06:32,790 --> 00:06:31,840

the crew command panel

189
00:06:34,550 --> 00:06:32,800
into

190
00:06:37,909 --> 00:06:34,560
their position inside of the cupola that

191
00:06:39,830 --> 00:06:37,919
would be used for the crew her and aki

192
00:06:41,590 --> 00:06:39,840
to interact with the dragon capsule

193
00:06:43,029 --> 00:06:41,600
during its final approach

194
00:06:45,510 --> 00:06:43,039
as it moved through a series of

195
00:06:48,550 --> 00:06:45,520
different stop and hold points

196
00:06:50,710 --> 00:06:48,560
she would be monitoring the dragon

197
00:06:52,629 --> 00:06:50,720
throughout its final approach and then

198
00:06:54,629 --> 00:06:52,639
standing by to capture with the space

199
00:06:57,670 --> 00:06:54,639
station robotic arm

200
00:06:59,350 --> 00:06:57,680
this dragon capsule

201
00:07:01,990 --> 00:06:59,360
in the mission dubbed

202
00:07:03,830 --> 00:07:02,000
spacex crs1 or commercial resupply one

203
00:07:05,990 --> 00:07:03,840
is the first commercial resupply mission

204
00:07:07,830 --> 00:07:06,000
to the international space station

205
00:07:09,749 --> 00:07:07,840
capsule launched from the cape canaveral

206
00:07:13,510 --> 00:07:09,759
air force station in florida back on

207
00:07:15,189 --> 00:07:13,520
sunday about 7 35 pm central time

208
00:07:16,950 --> 00:07:15,199
during its final

209
00:07:18,550 --> 00:07:16,960
up you can see it here

210
00:07:19,670 --> 00:07:18,560
parked just about 10 meters from its

211
00:07:21,670 --> 00:07:19,680
final home

212
00:07:23,670 --> 00:07:21,680
on the harmony module on the

213
00:07:26,070 --> 00:07:23,680

earth-facing side

214
00:07:27,990 --> 00:07:26,080
sunny williams and aki hoshide

215
00:07:29,990 --> 00:07:28,000
manipulating that robotic arm to reach

216
00:07:32,309 --> 00:07:30,000
out and grapple with the spacex dragon

217
00:07:35,110 --> 00:07:32,319
capsule that was done successfully about

218
00:07:37,110 --> 00:07:35,120
5 56 a.m central time

219
00:07:39,909 --> 00:07:37,120
following that successful grapple

220
00:07:41,990 --> 00:07:39,919
controllers down here in mission control

221
00:07:44,550 --> 00:07:42,000
maneuvered the dragon spacecraft into

222
00:07:46,950 --> 00:07:44,560
its final docking attitude

223
00:07:48,950 --> 00:07:46,960
and then once it was finally lined up it

224
00:07:52,309 --> 00:07:48,960
was then

225
00:07:54,309 --> 00:07:52,319
the robotic arm was taken back over by

226
00:07:56,710 --> 00:07:54,319
williams and hoshide as they guided it

227
00:07:59,189 --> 00:07:56,720
in birthing it with the harmony module

228
00:08:01,110 --> 00:07:59,199
that successful birthing coming at 803

229
00:08:02,790 --> 00:08:01,120
a.m central time

230
00:08:05,430 --> 00:08:02,800
following that birthing

231
00:08:06,950 --> 00:08:05,440
the astronauts would go through and do a

232
00:08:09,510 --> 00:08:06,960
system of leak checks to make sure

233
00:08:11,270 --> 00:08:09,520
everything was uh latched in

234
00:08:13,270 --> 00:08:11,280
correctly and they had a good mate

235
00:08:16,150 --> 00:08:13,280
between the two spacecraft

236
00:08:18,309 --> 00:08:16,160
also going through and removing

237
00:08:19,670 --> 00:08:18,319
a number of the different

238
00:08:22,150 --> 00:08:19,680

components of the common birthing

239
00:08:24,230 --> 00:08:22,160
mechanism so they could get into the

240
00:08:25,749 --> 00:08:24,240
actual hatch opening

241
00:08:27,350 --> 00:08:25,759
again williams doing all this on

242
00:08:29,350 --> 00:08:27,360
wednesday she was

243
00:08:31,830 --> 00:08:29,360
assisted throughout the day and handing

244
00:08:33,589 --> 00:08:31,840
off control of the robotic arm and some

245
00:08:36,550 --> 00:08:33,599
of the

246
00:08:38,949 --> 00:08:36,560
birthing operations with aki hoshide

247
00:08:40,469 --> 00:08:38,959
but this dragon spacecraft taking up

248
00:08:42,230 --> 00:08:40,479
pretty much their entire day on

249
00:08:45,509 --> 00:08:42,240
wednesday they were able to open up that

250
00:08:48,310 --> 00:08:45,519
hatch about 12 40 p.m central time again

251
00:08:53,110 --> 00:08:50,230
moving on to

252
00:08:55,910 --> 00:08:53,120
yuri malenchenko also on wednesday was

253
00:08:57,670 --> 00:08:55,920
working on a few more

254
00:08:59,910 --> 00:08:57,680
experiments on board the russian segment

255
00:09:01,750 --> 00:08:59,920
he was he spent a few hours working

256
00:09:03,990 --> 00:09:01,760
through the tipologia experiment which

257
00:09:05,269 --> 00:09:04,000
is an assessment of the mental state of

258
00:09:07,190 --> 00:09:05,279
these astronauts and also their

259
00:09:09,190 --> 00:09:07,200
prediction and correction quality

260
00:09:11,190 --> 00:09:09,200
basically just

261
00:09:14,470 --> 00:09:11,200
recording their ability to perform

262
00:09:15,910 --> 00:09:14,480
different tasks or series of exercises

263
00:09:18,070 --> 00:09:15,920

looking to track throughout their space

264
00:09:21,190 --> 00:09:18,080
flights any cognitive differences that

265
00:09:23,350 --> 00:09:21,200
they may experience there's also back at

266
00:09:25,269 --> 00:09:23,360
uh working with that kolonovsky crystal

267
00:09:27,350 --> 00:09:25,279
experiment for the second day in a row

268
00:09:29,110 --> 00:09:27,360
and did a pre-pack of a freon leak

269
00:09:31,829 --> 00:09:29,120
analyzer which is scheduled to be

270
00:09:33,350 --> 00:09:31,839
returned down on the dragon spacecraft

271
00:09:36,310 --> 00:09:33,360
which will be dragging and bringing back

272
00:09:37,750 --> 00:09:36,320
down about 1600 pounds of supplies once

273
00:09:40,230 --> 00:09:37,760
it departs the international space

274
00:09:42,710 --> 00:09:40,240
station a little bit later in november

275
00:09:46,150 --> 00:09:42,720
or a little bit later this month

276
00:09:47,590 --> 00:09:46,160
moving on to thursday sunny williams

277
00:09:49,190 --> 00:09:47,600
working with the environmental health

278
00:09:51,430 --> 00:09:49,200
system on board the international space

279
00:09:53,269 --> 00:09:51,440
station

280
00:09:55,750 --> 00:09:53,279
removing a buffer container from the

281
00:09:57,509 --> 00:09:55,760
total organic carbon analyzer which is

282
00:09:59,030 --> 00:09:57,519
one of the items in that environmental

283
00:10:01,110 --> 00:09:59,040
health system that looks to track any

284
00:10:03,269 --> 00:10:01,120
potential contaminants in the astronauts

285
00:10:04,949 --> 00:10:03,279
drinking water she's also taking a few

286
00:10:06,230 --> 00:10:04,959
samples from the water processor

287
00:10:08,310 --> 00:10:06,240
assembly

288
00:10:10,230 --> 00:10:08,320

aside from that she was

289
00:10:12,870 --> 00:10:10,240
unloading some cargo throughout the day

290
00:10:14,870 --> 00:10:12,880
from the spacex capsule

291
00:10:17,030 --> 00:10:14,880
removing the double cold bag and also

292
00:10:19,110 --> 00:10:17,040
activating the newly arrived nanoracks

293
00:10:20,870 --> 00:10:19,120
experiment and transferring a few of the

294
00:10:22,389 --> 00:10:20,880
cold stowage items from the dragon's

295
00:10:24,310 --> 00:10:22,399
glacier freezer over to one of the

296
00:10:25,509 --> 00:10:24,320
merlin lockers onboard the international

297
00:10:27,670 --> 00:10:25,519
space station

298
00:10:29,509 --> 00:10:27,680
she also took some time out from her

299
00:10:32,230 --> 00:10:29,519
activities to speak with reporters from

300
00:10:33,910 --> 00:10:32,240
abc news and cnn giving them a look at

301
00:10:34,949 --> 00:10:33,920
life inside of the international space

302
00:10:37,110 --> 00:10:34,959
station

303
00:10:39,430 --> 00:10:37,120
meanwhile aki hoshide spent much of his

304
00:10:41,430 --> 00:10:39,440
day on thursday transferring cargo out

305
00:10:43,910 --> 00:10:41,440
from that newly arrived dragon

306
00:10:45,509 --> 00:10:43,920
spacecraft he was also swapping out one

307
00:10:47,829 --> 00:10:45,519
of the hard drives the crystal liquids

308
00:10:51,190 --> 00:10:47,839
and crystallization experiment but again

309
00:10:53,030 --> 00:10:51,200
much of his day spent on thursday

310
00:10:56,150 --> 00:10:53,040
inside of that

311
00:10:59,269 --> 00:10:56,160
dragon capsule removing some of the

312
00:11:00,790 --> 00:10:59,279
800 some pounds of cargo that arrived on

313
00:11:03,430 --> 00:11:00,800

board the station

314
00:11:05,590 --> 00:11:03,440
and then also prepping it for the

315
00:11:08,069 --> 00:11:05,600
installation of any items that will be

316
00:11:11,430 --> 00:11:08,079
sent back down to the ground

317
00:11:13,110 --> 00:11:11,440
also on thursday yuri malenchenko

318
00:11:15,750 --> 00:11:13,120
continued his third day of that

319
00:11:18,069 --> 00:11:15,760
kolonowski crystal experiment

320
00:11:19,990 --> 00:11:18,079
and also cleaned up a few ventilation

321
00:11:20,790 --> 00:11:20,000
screens and dust collectors over in the

322
00:11:23,430 --> 00:11:20,800
uh

323
00:11:24,870 --> 00:11:23,440
russian segment ensuring that the

324
00:11:27,269 --> 00:11:24,880
breathing atmosphere inside of the

325
00:11:28,389 --> 00:11:27,279
international space station is receiving

326
00:11:30,470 --> 00:11:28,399
the proper

327
00:11:32,470 --> 00:11:30,480
scrubbing of different uh potentially

328
00:11:33,509 --> 00:11:32,480
harmful particles

329
00:11:35,430 --> 00:11:33,519
just from some of the routine

330
00:11:37,670 --> 00:11:35,440
maintenance that goes on part of these

331
00:11:39,910 --> 00:11:37,680
astronauts today to ensure that their

332
00:11:42,949 --> 00:11:39,920
living environment in the orbiting

333
00:11:46,630 --> 00:11:42,959
laboratory is kept safe and healthy

334
00:11:48,150 --> 00:11:46,640
all that brings us to today on friday

335
00:11:51,030 --> 00:11:48,160
sunny williams

336
00:11:52,470 --> 00:11:51,040
earlier in the morning doing a an audit

337
00:11:53,750 --> 00:11:52,480
on one of the contingency water

338
00:11:55,590 --> 00:11:53,760

containers

339
00:11:57,350 --> 00:11:55,600
inside of the

340
00:11:59,590 --> 00:11:57,360
environmental health system onboard the

341
00:12:01,750 --> 00:11:59,600
international space station she'll also

342
00:12:03,670 --> 00:12:01,760
be spending much of today transferring

343
00:12:05,190 --> 00:12:03,680
some of the cargo

344
00:12:07,110 --> 00:12:05,200
from the station into the dragon

345
00:12:08,389 --> 00:12:07,120
spacecraft as mentioned it'll be

346
00:12:10,470 --> 00:12:08,399
bringing down

347
00:12:11,910 --> 00:12:10,480
a total of sixteen hundred and thirty

348
00:12:14,550 --> 00:12:11,920
seven pounds

349
00:12:17,509 --> 00:12:14,560
of supplies once it returns back down to

350
00:12:20,470 --> 00:12:17,519
the earth for a splashdown a few hundred

351
00:12:22,790 --> 00:12:20,480
few miles off the coast of california

352
00:12:25,269 --> 00:12:22,800
among these this sixteen hundred pounds

353
00:12:28,150 --> 00:12:25,279
of supplies over 800 will be scientific

354
00:12:30,069 --> 00:12:28,160
research specific we're turning down a

355
00:12:31,750 --> 00:12:30,079
number of samples

356
00:12:33,030 --> 00:12:31,760
through from

357
00:12:34,790 --> 00:12:33,040
many

358
00:12:36,790 --> 00:12:34,800
biological experiments being conducted

359
00:12:39,190 --> 00:12:36,800
onboard station that have been stored in

360
00:12:41,590 --> 00:12:39,200
freezers since the retirement of the

361
00:12:43,269 --> 00:12:41,600
shuttle no large down mass capability

362
00:12:45,110 --> 00:12:43,279
has been available to the crews onboard

363
00:12:47,750 --> 00:12:45,120

the international space station

364
00:12:50,069 --> 00:12:47,760
so this spacex capsule providing an

365
00:12:50,829 --> 00:12:50,079
invaluable link in the chain

366
00:12:58,710 --> 00:12:50,839
of

367
00:13:00,230 --> 00:12:58,720
not only human but also different plant

368
00:13:02,389 --> 00:13:00,240
and animal cell

369
00:13:03,910 --> 00:13:02,399
biology experiments going on on board

370
00:13:05,990 --> 00:13:03,920
the international space station that

371
00:13:09,030 --> 00:13:06,000
require these samples to be returned

372
00:13:11,670 --> 00:13:09,040
down to researchers here on the ground

373
00:13:13,509 --> 00:13:11,680
so sunny transferring a bunch of cargo

374
00:13:14,949 --> 00:13:13,519
over into the dragon spacecraft today

375
00:13:16,470 --> 00:13:14,959
she also

376
00:13:18,710 --> 00:13:16,480
got a chance to speak with some

377
00:13:21,670 --> 00:13:18,720
reporters in their native massachusetts

378
00:13:23,269 --> 00:13:21,680
from wbz tv again giving them a look

379
00:13:24,790 --> 00:13:23,279
inside of life on board the

380
00:13:27,110 --> 00:13:24,800
international space station and all the

381
00:13:30,310 --> 00:13:27,120
activities she's been up to during her

382
00:13:32,310 --> 00:13:30,320
increment as expedition 33 commander

383
00:13:34,470 --> 00:13:32,320
meanwhile aki hoshide

384
00:13:37,030 --> 00:13:34,480
back inside of the japanese experiment

385
00:13:39,350 --> 00:13:37,040
module using a microbe air sampling

386
00:13:41,110 --> 00:13:39,360
device collecting a few microbes and

387
00:13:42,870 --> 00:13:41,120
continuing some of the activities that

388
00:13:43,670 --> 00:13:42,880

he started earlier this week checking

389
00:13:49,110 --> 00:13:43,680
the

390
00:13:50,790 --> 00:13:49,120
a fairly routine

391
00:13:52,310 --> 00:13:50,800
practice for these astronauts as they

392
00:13:53,750 --> 00:13:52,320
continually track

393
00:13:54,790 --> 00:13:53,760
to see

394
00:13:58,790 --> 00:13:54,800
the

395
00:13:59,910 --> 00:13:58,800
structure even down to a microscopic

396
00:14:01,509 --> 00:13:59,920
level

397
00:14:03,590 --> 00:14:01,519
aside from doing that work inside the

398
00:14:06,310 --> 00:14:03,600
gym he'll also be pressurizing the

399
00:14:08,310 --> 00:14:06,320
experiment modules air lock which leads

400
00:14:09,750 --> 00:14:08,320
directly out into the exposed facility

401
00:14:11,670 --> 00:14:09,760
and is used to

402
00:14:13,189 --> 00:14:11,680
transfer

403
00:14:15,030 --> 00:14:13,199
different experiments back and forth

404
00:14:16,389 --> 00:14:15,040
between the pressurized

405
00:14:19,430 --> 00:14:16,399
portion of the international space

406
00:14:21,269 --> 00:14:19,440
station and the unpressurized vacuum

407
00:14:23,750 --> 00:14:21,279
setting of that japanese exposed

408
00:14:25,829 --> 00:14:23,760
facility he'll also be doing some of his

409
00:14:28,069 --> 00:14:25,839
own ultrasounds which suni williams is

410
00:14:30,870 --> 00:14:28,079
doing a little bit earlier this week

411
00:14:33,189 --> 00:14:30,880
all part of the sprint research project

412
00:14:34,790 --> 00:14:33,199
onboard the international space station

413
00:14:36,389 --> 00:14:34,800

and our final crew member yuri

414
00:14:37,990 --> 00:14:36,399
malenchenko doing some routine

415
00:14:39,509 --> 00:14:38,000
replacements today

416
00:14:41,670 --> 00:14:39,519
working on the russian toilet system

417
00:14:42,870 --> 00:14:41,680
also changing out a few dust filters

418
00:14:44,629 --> 00:14:42,880
throughout the

419
00:14:46,790 --> 00:14:44,639
air revitalization system over on the

420
00:14:48,389 --> 00:14:46,800
russian segment also working today with

421
00:14:51,750 --> 00:14:48,399
the matroyshka

422
00:14:53,030 --> 00:14:51,760
study it's a radiation study named after

423
00:14:55,030 --> 00:14:53,040
the

424
00:14:56,470 --> 00:14:55,040
nested russian dolls

425
00:14:59,189 --> 00:14:56,480
he'll be removing a few of the

426
00:15:01,110 --> 00:14:59,199
dosimeters and downlinking any of the

427
00:15:02,629 --> 00:15:01,120
data retrieved from those to researchers

428
00:15:05,590 --> 00:15:02,639
down on the ground

429
00:15:07,110 --> 00:15:05,600
as again it's one of the radiation

430
00:15:09,430 --> 00:15:07,120
studies onboard the international space

431
00:15:11,430 --> 00:15:09,440
station it's a mannequin sized object

432
00:15:13,590 --> 00:15:11,440
that has a number of readers spaced

433
00:15:14,790 --> 00:15:13,600
throughout it and looks to track any of

434
00:15:16,629 --> 00:15:14,800
the

435
00:15:18,550 --> 00:15:16,639
radiation levels during space flight

436
00:15:19,670 --> 00:15:18,560
that these astronauts are being exposed

437
00:15:21,590 --> 00:15:19,680
to

438
00:15:25,030 --> 00:15:21,600

and aside from all the astronaut work

439
00:15:26,949 --> 00:15:25,040
troubleshooting was occurring yesterday

440
00:15:29,110 --> 00:15:26,959
to reapply a few of the electrical loads

441
00:15:30,470 --> 00:15:29,120
on various components of the three eight

442
00:15:32,629 --> 00:15:30,480
power channel and all that

443
00:15:35,350 --> 00:15:32,639
troubleshooting was completed

444
00:15:37,030 --> 00:15:35,360
engineers are going to monitor

445
00:15:38,790 --> 00:15:37,040
the power channel over the next seven

446
00:15:41,749 --> 00:15:38,800
days to observe the performance of the

447
00:15:43,430 --> 00:15:41,759
system an apparent short was noticed

448
00:15:44,550 --> 00:15:43,440
several weeks ago that took down the

449
00:15:46,230 --> 00:15:44,560
channel

450
00:15:48,710 --> 00:15:46,240
but this reapplication of loads

451
00:15:50,389 --> 00:15:48,720
yesterday could mean that no spacewalk

452
00:15:52,389 --> 00:15:50,399
would be required to fix any of the

453
00:15:54,230 --> 00:15:52,399
issues outside of the station

454
00:15:56,550 --> 00:15:54,240
and then as of right now the batteries

455
00:15:58,470 --> 00:15:56,560
on that 3a power channel are charged but

456
00:16:00,470 --> 00:15:58,480
aren't delivering any power to the