1
00:00:07,909 --> 00:00:06,230
good day from the international space

2
00:00:10,390 --> 00:00:07,919
station flight control room here at the

3
00:00:12,230 --> 00:00:10,400
johnson space center in houston which in

4
00:00:14,310 --> 00:00:12,240
the wee hours of a saturday morning

5
00:00:16,630 --> 00:00:14,320
would usually be somewhat devoid of

6
00:00:18,230 --> 00:00:16,640
activity on a crew off-duty day but this

7
00:00:20,390 --> 00:00:18,240
morning is the scene of cautionary

8
00:00:22,630 --> 00:00:20,400
vigilance as flight director chris

9
00:00:24,790 --> 00:00:22,640
edelen and his orbit one team of flight

10
00:00:27,029 --> 00:00:24,800
controllers monitor the approach of a

11
00:00:28,710 --> 00:00:27,039
small chunk of space debris in the

12
00:00:30,710 --> 00:00:28,720
vicinity of the station that prompted

13
00:00:33,270 --> 00:00:30,720

the precautionary sheltering of the six

14
00:00:34,870 --> 00:00:33,280
crew members in their respective soyuz

15
00:00:36,870 --> 00:00:34,880
spacecraft

16
00:00:39,030 --> 00:00:36,880
late friday night flight director jerry

17
00:00:40,790 --> 00:00:39,040
jason decided to place the station crew

18
00:00:42,229 --> 00:00:40,800
in their soyuz vehicles for a short

19
00:00:44,389 --> 00:00:42,239
period of time

20
00:00:46,950 --> 00:00:44,399
after ballistic specialists received

21
00:00:48,790 --> 00:00:46,960
data that showed a remote possibility of

22
00:00:50,869 --> 00:00:48,800
a conjunction with a small piece of a

23
00:00:52,470 --> 00:00:50,879
russian cosmos satellite

24
00:00:54,229 --> 00:00:52,480
although we will likely see that the

25
00:00:55,510 --> 00:00:54,239
debris will be no threat to the station

26
00:00:57,670 --> 00:00:55,520
and the crew

27
00:00:59,430 --> 00:00:57,680
very few tracking passes were received

28
00:01:02,150 --> 00:00:59,440
on this object friday due to its

29
00:01:03,270 --> 00:01:02,160
eccentric orbit and its relatively small

30
00:01:05,350 --> 00:01:03,280
size

31
00:01:07,270 --> 00:01:05,360
so taking a precautionary and prudent

32
00:01:09,910 --> 00:01:07,280
approach jason decided to place the six

33
00:01:12,789 --> 00:01:09,920
crew members in their soyuz return craft

34
00:01:15,190 --> 00:01:12,799
until the space junk would pass the crew

35
00:01:17,510 --> 00:01:15,200
was awakened at 10 40 p.m central time

36
00:01:19,590 --> 00:01:17,520
friday night to begin preparations

37
00:01:23,350 --> 00:01:19,600
just about an hour or so before their

38
00:01:25,350 --> 00:01:23,360

normal wake-up time for a saturday

39
00:01:26,870 --> 00:01:25,360
the cosmos satellite debris of interest

40
00:01:29,030 --> 00:01:26,880
today is one of the fragments from the

41
00:01:32,149 --> 00:01:29,040
satellite's collision on february 10

42
00:01:34,310 --> 00:01:32,159
2009 with an iridium satellite that

43
00:01:36,310 --> 00:01:34,320
attracted worldwide attention

44
00:01:37,270 --> 00:01:36,320
the debris was initially tracked friday

45
00:01:39,109 --> 00:01:37,280
morning

46
00:01:40,870 --> 00:01:39,119
but the timing of the notification to

47
00:01:42,789 --> 00:01:40,880
the flight control team of a possible

48
00:01:44,630 --> 00:01:42,799
conjunction came at a point that

49
00:01:47,109 --> 00:01:44,640
precluded planning for an avoidance

50
00:01:48,789 --> 00:01:47,119
maneuver to steer clear of the object

51
00:01:51,190 --> 00:01:48,799
the size of which has not yet been

52
00:01:53,030 --> 00:01:51,200
conclusively determined even though the

53
00:01:55,190 --> 00:01:53,040
trajectory operations officer here in

54
00:01:57,270 --> 00:01:55,200
mission control has categorized the

55
00:01:59,429 --> 00:01:57,280
object as small

56
00:02:01,109 --> 00:01:59,439
as of this hour the debris is predicted

57
00:02:04,149 --> 00:02:01,119
to miss the station by an overall

58
00:02:06,069 --> 00:02:04,159
distance of between 11 and 14 kilometers

59
00:02:08,150 --> 00:02:06,079
and with a radial mist distance that is

60
00:02:10,389 --> 00:02:08,160
fluctuated throughout the day now

61
00:02:13,030 --> 00:02:10,399
estimated to range up to about a hundred

62
00:02:15,350 --> 00:02:13,040
meters or so either above or below the

63
00:02:17,670 --> 00:02:15,360

so-called three-dimensional box that the

64
00:02:19,270 --> 00:02:17,680
ballistics officers use in tracking the

65
00:02:24,869 --> 00:02:19,280
close approach of an object to the

66
00:02:30,390 --> 00:02:27,030
the station in this view from cameras on

67
00:02:33,030 --> 00:02:30,400
the truss of the orbital laboratory is

68
00:02:35,750 --> 00:02:33,040
orbiting at an altitude of 244 statute

69
00:02:38,229 --> 00:02:35,760
miles moving from northwest to southeast

70
00:02:40,070 --> 00:02:38,239
across the indian ocean soon to cross

71
00:02:41,509 --> 00:02:40,080
the the western coast of the continent

72
00:02:43,910 --> 00:02:41,519
of australia

73
00:02:47,110 --> 00:02:43,920
the time of closest approach of this

74
00:02:50,869 --> 00:02:47,120
piece of space debris is just 20 minutes

75
00:02:53,589 --> 00:02:50,879
and 45 seconds away at 1 38 and 33

76
00:02:55,509 --> 00:02:53,599
seconds am central time the station at

77
00:02:58,550 --> 00:02:55,519
that time will be flying at an altitude

78
00:03:00,309 --> 00:02:58,560
of 244 statute miles just to the south

79
00:03:02,390 --> 00:03:00,319
of new zealand

80
00:03:04,790 --> 00:03:02,400
nasa's expedition 30 commander dan

81
00:03:07,190 --> 00:03:04,800
burbank and his russian cosmonaut

82
00:03:10,390 --> 00:03:07,200
crewmates anton shkaplerov and anatoly

83
00:03:12,949 --> 00:03:10,400
ivanishin are in their soyuz tma-22

84
00:03:15,030 --> 00:03:12,959
spacecraft that is attached to the poisk

85
00:03:17,270 --> 00:03:15,040
module on the space-facing side of the

86
00:03:20,149 --> 00:03:17,280
zvezda service module

87
00:03:22,390 --> 00:03:20,159
meanwhile cosmonaut oleg kononenko

88
00:03:24,789 --> 00:03:22,400

nasa's don pettit and andre kuipers of

89
00:03:28,309 --> 00:03:24,799
the european space agency are settled

90
00:03:30,309 --> 00:03:28,319
into their soyuz tma-03m spacecraft that

91
00:03:32,070 --> 00:03:30,319
is attached to the rossviet module on

92
00:03:34,949 --> 00:03:32,080
the earth-facing side of the zarya

93
00:03:36,309 --> 00:03:34,959
module to wait for the debris to pass

94
00:03:38,070 --> 00:03:36,319
after which they will exit their

95
00:03:39,589 --> 00:03:38,080
respective spacecraft and resume their

96
00:03:41,910 --> 00:03:39,599
normal duties

97
00:03:43,670 --> 00:03:41,920
again it is serendipitous that this

98
00:03:45,910 --> 00:03:43,680
sheltering activity is occurring on a

99
00:03:48,229 --> 00:03:45,920
crew off-duty day with no impact to

100
00:03:50,470 --> 00:03:48,239
scientific research or any other crew

101
00:03:52,070 --> 00:03:50,480
work

102
00:03:53,670 --> 00:03:52,080
this is the third time in station

103
00:03:55,589 --> 00:03:53,680
history that a crew has had to shelter

104
00:03:57,429 --> 00:03:55,599
in their soyuz return craft due to the

105
00:03:59,990 --> 00:03:57,439
possibility of a conjunction with

106
00:04:03,750 --> 00:04:00,000
orbital debris the first sheltering of a

107
00:04:05,910 --> 00:04:03,760
crew since june of 2011.

108
00:04:07,990 --> 00:04:05,920
meanwhile while this activity is ongoing

109
00:04:10,390 --> 00:04:08,000
the european space agency's eduardo

110
00:04:13,030 --> 00:04:10,400
amaldi automated transfer vehicle cargo

111
00:04:14,789 --> 00:04:13,040
craft continues a flawless flight to the

112
00:04:16,949 --> 00:04:14,799
station having launched from the

113
00:04:19,830 --> 00:04:16,959

arianespas launch site in kuru french

114
00:04:21,590 --> 00:04:19,840
guiana about 26 hours ago

115
00:04:23,749 --> 00:04:21,600
the cargo craft will dock to the aft

116
00:04:32,230 --> 00:04:23,759
port of the zvezda service module at 5

117
00:04:36,790 --> 00:04:34,710
with the six crew members now inside

118
00:04:38,790 --> 00:04:36,800
their respective soyuz spacecraft

119
00:04:40,469 --> 00:04:38,800
hatches to the respective u.s and

120
00:04:43,270 --> 00:04:40,479
russian segments of the station were

121
00:04:45,189 --> 00:04:43,280
closed a short time ago and the actual

122
00:04:47,430 --> 00:04:45,199
uh hatch closing of each of the two

123
00:04:49,270 --> 00:04:47,440
soyuz spacecraft will occur at the

124
00:04:51,430 --> 00:04:49,280
bottom of the hour about 10 minutes from

125
00:04:54,070 --> 00:04:51,440
now some eight minutes

126
00:04:57,430 --> 00:04:54,080
before the time of closest approach of

127
00:05:00,150 --> 00:04:57,440
this chunk of cosmos satellite debris

128
00:05:01,830 --> 00:05:00,160
again this is a very prudent and uh

129
00:05:03,990 --> 00:05:01,840
conservative approach

130
00:05:06,469 --> 00:05:04,000
for the crew this particular object did

131
00:05:09,749 --> 00:05:06,479
not have particularly good tracking

132
00:05:12,550 --> 00:05:09,759
because of the small size of the object

133
00:05:16,150 --> 00:05:12,560
and because of the uh odd nature of its

134
00:05:17,749 --> 00:05:16,160
orbit and so uh the prudent thing to do

135
00:05:20,710 --> 00:05:17,759
in the eyes of the flight control team

136
00:05:24,310 --> 00:05:20,720
here in houston was to shelter the crew

137
00:05:26,550 --> 00:05:24,320
uh just to be absolutely sure that all

138
00:05:29,270 --> 00:05:26,560

steps had been taken to protect the crew

139
00:05:31,110 --> 00:05:29,280
in the highly unlikely event that this

140
00:05:32,710 --> 00:05:31,120
piece of debris would come into contact

141
00:05:54,070 --> 00:05:32,720
with the structure of the international

142
00:05:58,070 --> 00:05:56,070
various views of the international space

143
00:05:58,950 --> 00:05:58,080
station from cameras on the truss of the

144
00:06:01,590 --> 00:05:58,960
uh

145
00:06:02,710 --> 00:06:01,600
orbital complex you're looking at the

146
00:06:03,430 --> 00:06:02,720
cupola

147
00:06:04,830 --> 00:06:03,440
that

148
00:06:09,189 --> 00:06:04,840
provides a

149
00:06:11,430 --> 00:06:09,199
360 degree view of the world from its uh

150
00:06:13,430 --> 00:06:11,440
turret-like structure

151
00:06:15,510 --> 00:06:13,440
that is attached to the u.s segment of

152
00:06:17,590 --> 00:06:15,520
the international space station which is

153
00:06:20,390 --> 00:06:17,600
currently approaching the

154
00:06:22,469 --> 00:06:20,400
western coast of australia moving from

155
00:06:25,990 --> 00:06:22,479
northwest to southeast at an altitude of

156
00:06:46,230 --> 00:06:26,000
244 statute miles 17 minutes away from

157
00:06:46,240 --> 00:06:53,029
look

158
00:06:58,469 --> 00:06:56,309
part of the preparations that are normal

159
00:07:00,790 --> 00:06:58,479
fare for one of these sheltering

160
00:07:03,909 --> 00:07:00,800
operations include the positioning of

161
00:07:08,629 --> 00:07:03,919
the solar arrays locking them in place

162
00:07:10,390 --> 00:07:08,639
at the proper orientation as well as the

163
00:07:11,909 --> 00:07:10,400

securing of the environmental control

164
00:07:13,830 --> 00:07:11,919
systems in both the us and russian

165
00:07:16,230 --> 00:07:13,840
segments of the station and the highly

166
00:07:18,230 --> 00:07:16,240
unlikely event of an impact from this

167
00:07:20,870 --> 00:07:18,240
small piece of debris

168
00:07:23,589 --> 00:07:20,880
once the debris passes the crews will

169
00:07:26,309 --> 00:07:23,599
back out of these sheltering procedures

170
00:07:27,110 --> 00:07:26,319
that they have trained for on the ground

171
00:07:29,749 --> 00:07:27,120
and

172
00:07:46,390 --> 00:07:29,759
for which they conduct on orbit training

173
00:07:49,990 --> 00:07:47,909
we'll regain our television signal

174
00:07:51,909 --> 00:07:50,000
momentarily we're in a handover between

175
00:07:55,589 --> 00:07:51,919
uh satellites and the tracking and data

176
00:08:00,390 --> 00:07:58,629
commander dan burbank uh and his uh

177
00:08:02,150 --> 00:08:00,400
two russian crewmates who he launched

178
00:08:04,469 --> 00:08:02,160
with from the baikonur cosmodrome in

179
00:08:06,629 --> 00:08:04,479
kazakhstan back in november

180
00:08:09,110 --> 00:08:06,639
soyuz commander anton shkaplerov and

181
00:08:12,790 --> 00:08:09,120
flight engineer anatoly ivanishin

182
00:08:15,430 --> 00:08:12,800
once again inside their soyuz tma-22

183
00:08:17,830 --> 00:08:15,440
spacecraft that is attached to the poisk

184
00:08:20,070 --> 00:08:17,840
module on the space-facing side of the

185
00:08:21,990 --> 00:08:20,080
zvezda service module of the russian

186
00:08:24,390 --> 00:08:22,000
segment of the station

187
00:08:27,029 --> 00:08:24,400
they are due to return to earth in late

188
00:08:30,790 --> 00:08:27,039

april to complete five and a half months

189
00:08:35,190 --> 00:08:32,630
the other three crew members uh who were

190
00:08:36,870 --> 00:08:35,200
launched in late december to the station

191
00:08:38,709 --> 00:08:36,880
nasa's don pettit

192
00:08:40,790 --> 00:08:38,719
alec kononenko in the middle of this

193
00:08:43,670 --> 00:08:40,800
crew portrait who is the soyuz commander

194
00:08:45,509 --> 00:08:43,680
for the tma-03m spacecraft and on the

195
00:08:49,750 --> 00:08:45,519
right andre kuipers of the european

196
00:08:53,190 --> 00:08:49,760
space agency are uh snugly uh fit inside

197
00:08:55,670 --> 00:08:53,200
the descent module of the soyuz tma-03m

198
00:08:57,750 --> 00:08:55,680
that is docked to the rossviet module of

199
00:09:08,630 --> 00:08:57,760
the international space station they are

200
00:09:13,910 --> 00:09:10,870
in the center of your picture doctor ii

201
00:09:17,110 --> 00:09:13,920
rashvia that is the o3m spacecraft in

202
00:09:18,470 --> 00:09:17,120
which don pettit andre kuipers and oleg

203
00:09:21,110 --> 00:09:18,480
kononenko

204
00:09:22,470 --> 00:09:21,120
are housed at the moment on the far left

205
00:09:25,590 --> 00:09:22,480
attached to the piers docking

206
00:09:28,230 --> 00:09:25,600
compartment is the 46 progress resupply

207
00:09:29,990 --> 00:09:28,240
vehicle the russian cargo craft that

208
00:09:33,030 --> 00:09:30,000
will be undocking from the international

209
00:09:34,949 --> 00:09:33,040
space station on april 19th uh and

210
00:09:37,590 --> 00:09:34,959
deorbited to burn up in the earth's

211
00:09:40,230 --> 00:09:37,600
atmosphere it will be replaced a few

212
00:09:42,710 --> 00:09:40,240
days later by the progress 47 cargo

213
00:09:44,550 --> 00:09:42,720

craft a brand new resupply vehicle that

214
00:09:47,590 --> 00:09:44,560
will launch from the baikonur cosmodrome

215
00:09:49,750 --> 00:09:47,600
in kazakhstan on april 20th and dock

216
00:10:17,430 --> 00:09:49,760
to that same piers docking compartment

217
00:10:22,949 --> 00:10:20,550
the uh six crew members uh following uh

218
00:10:24,949 --> 00:10:22,959
the closest approach of this object to

219
00:10:27,670 --> 00:10:24,959
the station once it uh passes the

220
00:10:29,990 --> 00:10:27,680
station uh we'll uh have the rest of the

221
00:10:33,190 --> 00:10:30,000
weekend of essentially off-duty time uh

222
00:10:35,269 --> 00:10:33,200
some minor maintenance and housekeeping

223
00:10:37,190 --> 00:10:35,279
activities to perform the usual earth

224
00:10:38,230 --> 00:10:37,200
observation work that they do on a daily

225
00:10:40,550 --> 00:10:38,240
basis

226
00:10:42,630 --> 00:10:40,560
as they gear up for the arrival of the

227
00:10:43,990 --> 00:10:42,640
european space agency's

228
00:10:46,069 --> 00:10:44,000
huge

229
00:10:48,710 --> 00:10:46,079
eduardo amaldi cargo craft that is

230
00:10:51,110 --> 00:10:48,720
scheduled to dock to the station at 5 32

231
00:10:53,910 --> 00:10:51,120
pm central time next wednesday

232
00:10:56,630 --> 00:10:53,920
the eduardo amaldi is equipped with

233
00:10:58,790 --> 00:10:56,640
more than seven tons of food fuel and

234
00:11:00,710 --> 00:10:58,800
supplies for the six crew members of the

235
00:11:03,350 --> 00:11:00,720
international space station it will dock

236
00:11:06,310 --> 00:11:03,360
automatically to the aft port of the

237
00:11:08,550 --> 00:11:06,320
zvezda service module

238
00:11:10,470 --> 00:11:08,560

the eduardo amaldi will spend about six

239
00:11:12,470 --> 00:11:10,480
months docked to the russian segment of

240
00:11:15,350 --> 00:11:12,480
the international space station

241
00:11:17,430 --> 00:11:15,360
it can be used if required to maneuver

242
00:11:18,790 --> 00:11:17,440
the station or reboost the station from

243
00:11:21,030 --> 00:11:18,800
time to time

244
00:11:23,430 --> 00:11:21,040
uh things uh gearing up on the station

245
00:11:25,910 --> 00:11:23,440
for an almost unprecedented level of

246
00:11:29,030 --> 00:11:25,920
vehicle traffic back and forth uh one of

247
00:11:31,030 --> 00:11:29,040
the highlights of course being the

248
00:11:33,269 --> 00:11:31,040
much anticipated launch of the first

249
00:11:36,230 --> 00:11:33,279
commercial cargo vehicle the

250
00:11:38,310 --> 00:11:36,240
spacex dragon spacecraft that will be

251
00:11:40,310 --> 00:11:38,320
launched on a falcon 9 rocket from the

252
00:11:48,790 --> 00:11:40,320
cape canaveral air force station on

253
00:11:48,800 --> 00:11:54,790
i will have close both hatches

254
00:11:54,800 --> 00:12:07,110
that's

255
00:12:13,430 --> 00:12:10,150
it is in electric mode okay and the cap

256
00:12:18,949 --> 00:12:15,269
yeah the cap and clamps are removed

257
00:12:23,030 --> 00:12:20,790
you're listening to the interpretation

258
00:12:24,310 --> 00:12:23,040
of alek kononenko as he talks to flight

259
00:12:27,430 --> 00:12:24,320
controllers at the russian mission

260
00:12:29,750 --> 00:12:27,440
control center in karayof outside moscow

261
00:12:33,430 --> 00:12:29,760
preparing to close the hatch to the

262
00:12:38,310 --> 00:12:33,440
tma-03m spacecraft that he andre kuipers

263
00:12:44,470 --> 00:12:40,870

close both hatches and go to the descent

264
00:12:50,790 --> 00:12:48,629
so i close uh those uh both edges airmen

265
00:13:00,389 --> 00:12:50,800
so and then go to

266
00:13:05,269 --> 00:13:02,629
coming up on 10 minutes until the time

267
00:13:17,750 --> 00:13:05,279
of closest approach for this uh fragment

268
00:13:17,760 --> 00:13:38,470
god someone

269
00:13:56,230 --> 00:13:40,470
because we can

270
00:13:59,030 --> 00:13:57,590
can you see

271
00:14:10,870 --> 00:13:59,040
yeah yeah

272
00:14:15,269 --> 00:14:13,030
you heard don pettit there uh speaking

273
00:14:18,629 --> 00:14:15,279
in russian the crew in good spirits uh

274
00:14:21,829 --> 00:14:18,639
this uh activity uh posing very little

275
00:14:24,629 --> 00:14:21,839
uh impact on their work day again uh

276
00:14:26,949 --> 00:14:24,639
they were awakened a little over an hour

277
00:14:29,269 --> 00:14:26,959
earlier than their normal wake-up time

278
00:14:30,389 --> 00:14:29,279
but once the closest approach is over

279
00:14:32,949 --> 00:14:30,399
and done with

280
00:14:35,269 --> 00:14:32,959
the crew will back out of these

281
00:15:19,750 --> 00:14:35,279
sheltering procedures and

282
00:15:44,550 --> 00:15:29,990
so

283
00:15:48,389 --> 00:15:46,389
the international space station and its

284
00:15:50,870 --> 00:15:48,399
six crew members now flying just to the

285
00:15:52,870 --> 00:15:50,880
south of tasmania

286
00:16:19,910 --> 00:15:52,880
you know which direction it comes from

287
00:16:23,910 --> 00:16:21,590
maybe the same seven kilometers per

288
00:16:23,920 --> 00:16:30,550

you may be at the same exactly

289
00:16:30,560 --> 00:16:37,110
but i understand how many numbers

290
00:16:40,629 --> 00:16:38,069
yeah

291
00:16:56,310 --> 00:16:40,639
that's from which direction

292
00:17:06,390 --> 00:16:57,990
how can you hear us

293
00:17:12,309 --> 00:17:09,669
coming up on the six minute mark

294
00:17:15,909 --> 00:17:12,319
to the time of closest approach which

295
00:17:18,870 --> 00:17:15,919
again is 138 and 33 seconds am central

296
00:17:25,510 --> 00:17:18,880
time of this small fragment of cosmos

297
00:17:30,150 --> 00:17:26,230
the

298
00:17:33,750 --> 00:17:30,160
vehicles are

299
00:17:35,190 --> 00:17:33,760
equipped with cameras and have been uh

300
00:17:40,310 --> 00:17:35,200
given uh

301
00:17:44,150 --> 00:17:43,029
the trajectory of this object uh based

302
00:17:46,390 --> 00:17:44,160
on uh

303
00:17:48,549 --> 00:17:46,400
the best guess of tracking

304
00:17:51,270 --> 00:17:48,559
from the trajectory operations officer

305
00:17:53,350 --> 00:17:51,280
and the pointing officer as uh as well

306
00:17:55,909 --> 00:17:53,360
as the other flight control

307
00:17:57,830 --> 00:17:55,919
positions here in mission control

308
00:18:00,630 --> 00:17:57,840
in the uh

309
00:18:01,990 --> 00:18:00,640
in the event that something can be seen

310
00:18:13,029 --> 00:18:02,000
they will be at the ready to try to

311
00:18:17,990 --> 00:18:15,110
okay

312
00:18:22,870 --> 00:18:19,590
have close the hatches and go to the

313
00:18:28,710 --> 00:18:25,190

and the hatch is now closed in each of

314
00:18:30,710 --> 00:18:28,720
the soyuz vehicles per the yellow

315
00:18:55,029 --> 00:18:30,720
procedures with five minutes to go until

316
00:18:55,039 --> 00:18:57,990
half closed

317
00:19:17,830 --> 00:18:59,990
yes half close

318
00:19:49,350 --> 00:19:28,150
so

319
00:20:22,390 --> 00:20:00,070
okay

320
00:20:27,190 --> 00:20:24,470
coming up on the three-minute mark until

321
00:20:30,310 --> 00:20:27,200
the time of closest approach

322
00:20:32,710 --> 00:20:30,320
the two crews are uh

323
00:20:34,549 --> 00:20:32,720
well into their uh procedures they're in

324
00:20:39,590 --> 00:20:34,559
their respective soyuz vehicles with the

325
00:20:44,870 --> 00:20:42,470
for them to monitor the time that will

326
00:20:47,510 --> 00:20:44,880
come and go of the closest approach of

327
00:20:49,590 --> 00:20:47,520
this small piece of cosmos satellite

328
00:21:22,630 --> 00:20:49,600
debris

329
00:21:22,640 --> 00:21:53,990
so

330
00:21:58,789 --> 00:21:56,390
coming up on about 90 seconds until the

331
00:22:01,270 --> 00:21:58,799
time of closest approach the trajectory

332
00:22:02,789 --> 00:22:01,280
operations officer estimates that this

333
00:22:05,510 --> 00:22:02,799
small object

334
00:22:07,190 --> 00:22:05,520
will be moving from the port side of the

335
00:22:10,789 --> 00:22:07,200
station to the starboard side of the

336
00:22:14,310 --> 00:22:10,799
station and in front of the complex

337
00:22:16,630 --> 00:22:14,320
37 now yes

338
00:22:18,789 --> 00:22:16,640

around two feet supposed to

339
00:22:20,390 --> 00:22:18,799
about one minute from tca

340
00:22:22,789 --> 00:22:20,400
we expect

341
00:22:36,710 --> 00:22:22,799
the object to be moving from uh

342
00:22:36,720 --> 00:22:45,590
which is the good news

343
00:22:45,600 --> 00:22:58,070
so

344
00:23:02,149 --> 00:22:59,830
flight controllers standing by here in

345
00:23:31,190 --> 00:23:02,159
mission control just 30 seconds to go

346
00:23:31,200 --> 00:23:45,110
looks like that's it

347
00:23:48,789 --> 00:23:47,110
the trajectory operations officer has

348
00:23:51,430 --> 00:23:48,799
told flight director chris edelman that

349
00:24:29,510 --> 00:23:51,440
we have passed the time of closest

350
00:24:33,430 --> 00:24:31,750
flight director chris italian is talking

351
00:24:35,590 --> 00:24:33,440
to his russian counterpart at the

352
00:24:38,470 --> 00:24:35,600
russian mission control center in karl

353
00:24:40,789 --> 00:24:38,480
yaff outside moscow to his right is uh

354
00:24:43,029 --> 00:24:40,799
capcom shel lindgren

355
00:24:46,950 --> 00:24:43,039
uh italian informing uh the russian

356
00:24:48,789 --> 00:24:46,960
flight director in karl yaff that

357
00:24:50,310 --> 00:24:48,799
the uh the green light has been given

358
00:24:52,470 --> 00:24:50,320
for the crew to back out of their

359
00:24:55,350 --> 00:24:52,480
sheltering procedures and to begin the

360
00:24:56,310 --> 00:24:55,360
process of reopening the hatches

361
00:24:58,789 --> 00:24:56,320
with the

362
00:25:01,269 --> 00:24:58,799
piece of cosmos satellite debris having

363
00:25:03,669 --> 00:25:01,279

come and gone with no threat to the

364
00:25:05,990 --> 00:25:03,679
international space station

365
00:25:07,430 --> 00:25:06,000
so the sheltering exercise has been

366
00:25:09,430 --> 00:25:07,440
completed

367
00:25:12,070 --> 00:25:09,440
with due diligence and in a very

368
00:25:13,190 --> 00:25:12,080
precautionary and conservative fashion

369
00:25:14,710 --> 00:25:13,200
the six crew members of the

370
00:25:17,830 --> 00:25:14,720
international space station were

371
00:25:19,830 --> 00:25:17,840
directed to uh shelter uh in their

372
00:25:22,070 --> 00:25:19,840
respective soyuz vehicles for a short

373
00:25:24,710 --> 00:25:22,080
period of time this morning uh but

374
00:25:27,350 --> 00:25:24,720
everything went uh by the book and uh as

375
00:25:28,710 --> 00:25:27,360
expected uh the small piece of cosmo

376
00:25:31,029 --> 00:25:28,720
satellite debris passed the

377
00:25:32,149 --> 00:25:31,039
international space station without

378
00:25:34,310 --> 00:25:32,159
incident

379
00:25:35,590 --> 00:25:34,320
install the clamps and restore

380
00:25:37,830 --> 00:25:35,600
ventilation

381
00:25:53,029 --> 00:25:37,840
but please let us know when you install

382
00:25:53,039 --> 00:26:05,110
okay very good

383
00:26:08,070 --> 00:26:06,950
so here in mission control uh it will

384
00:26:10,789 --> 00:26:08,080
take

385
00:26:13,029 --> 00:26:10,799
the better part of the next hour for the

386
00:26:16,549 --> 00:26:13,039
two crews to complete their back out of

387
00:26:18,470 --> 00:26:16,559
their sheltering procedures and uh to uh

388
00:26:20,549 --> 00:26:18,480

move out of their soyuz vehicles back

389
00:26:22,870 --> 00:26:20,559
into their uh the us and russian

390
00:26:26,149 --> 00:26:22,880
segments of the station and open those

391
00:26:28,470 --> 00:26:26,159
hatches to resume a normal and relaxing

392
00:26:30,870 --> 00:26:28,480
weekend for themselves

393
00:26:32,630 --> 00:26:30,880
that'll wrap up our coverage of this

394
00:26:34,149 --> 00:26:32,640
morning's sheltering of the

395
00:26:36,070 --> 00:26:34,159
international space station crew and

396
00:26:39,430 --> 00:26:36,080
their soyuz vehicles to allow a small

397
00:26:41,830 --> 00:26:39,440
piece of russian cosmos satellite debris

398
00:26:45,110 --> 00:26:41,840
to pass the station

399
00:26:47,750 --> 00:26:45,120
it did so without incident at 1 38 and

400
00:26:48,950 --> 00:26:47,760
33 seconds am central time

401
00:26:50,230 --> 00:26:48,960
this morning

402
00:26:51,750 --> 00:26:50,240
so we'll close with a couple of

403
00:26:54,630 --> 00:26:51,760
programming notes

404
00:26:56,310 --> 00:26:54,640
our coverage of expedition 30 activities

405
00:26:59,350 --> 00:26:56,320
aboard the international space station

406
00:27:01,669 --> 00:26:59,360
will will resume on monday morning at 10

407
00:27:04,549 --> 00:27:01,679
a.m central time 11 a.m eastern time

408
00:27:06,470 --> 00:27:04,559
with our iss update commentary hour to

409
00:27:08,789 --> 00:27:06,480
bring you up to date on all of the

410
00:27:11,110 --> 00:27:08,799
activities for the six crew members on

411
00:27:13,269 --> 00:27:11,120
board the orbital laboratory one of the

412
00:27:15,190 --> 00:27:13,279
highlights of the coming week will be

413
00:27:17,110 --> 00:27:15,200

the arrival of the eduardo amaldi

414
00:27:19,830 --> 00:27:17,120
automated transfer vehicle the european

415
00:27:22,070 --> 00:27:19,840
space agency's large cargo craft that

416
00:27:24,470 --> 00:27:22,080
was launched from the arianespas launch

417
00:27:28,070 --> 00:27:24,480
site in kuru french guiana in the wee

418
00:27:31,190 --> 00:27:28,080
hours of friday morning

419
00:27:33,830 --> 00:27:31,200
the atv-3 as it is called is well on its

420
00:27:37,510 --> 00:27:33,840
way to the station executing uh in

421
00:27:39,590 --> 00:27:37,520
automated fashion it's um

422
00:27:41,750 --> 00:27:39,600
its rendezvous burns to fine-tune its

423
00:27:44,070 --> 00:27:41,760
path to the international space station

424
00:27:45,990 --> 00:27:44,080
it will arrive on wednesday march 28th

425
00:27:48,070 --> 00:27:46,000
with our coverage of its docking to the

426
00:27:51,510 --> 00:27:48,080
aft port of the zvezda service module

427
00:27:55,110 --> 00:27:51,520
scheduled to begin at 4 45 pm central

428
00:27:55,909 --> 00:27:55,120
time 5 45 pm eastern time that will set

429
00:28:03,590 --> 00:27:55,919
up

430
00:28:05,750 --> 00:28:03,600
service module at 5 32 pm central time 6

431
00:28:09,110 --> 00:28:05,760
32 p.m eastern time this coming

432
00:28:10,310 --> 00:28:09,120
wednesday march 28th for now we'll wrap

433
00:28:12,470 --> 00:28:10,320
it up here

434
00:28:14,070 --> 00:28:12,480
at the johnson space center the six crew

435
00:28:15,269 --> 00:28:14,080
members on board the international space

436
00:28:17,430 --> 00:28:15,279
station

437
00:28:20,630 --> 00:28:17,440
getting out of their soyuz vehicles and

438
00:28:23,350 --> 00:28:20,640

will have a relaxing off-duty period

439
00:28:25,590 --> 00:28:23,360
over the rest of their weekend