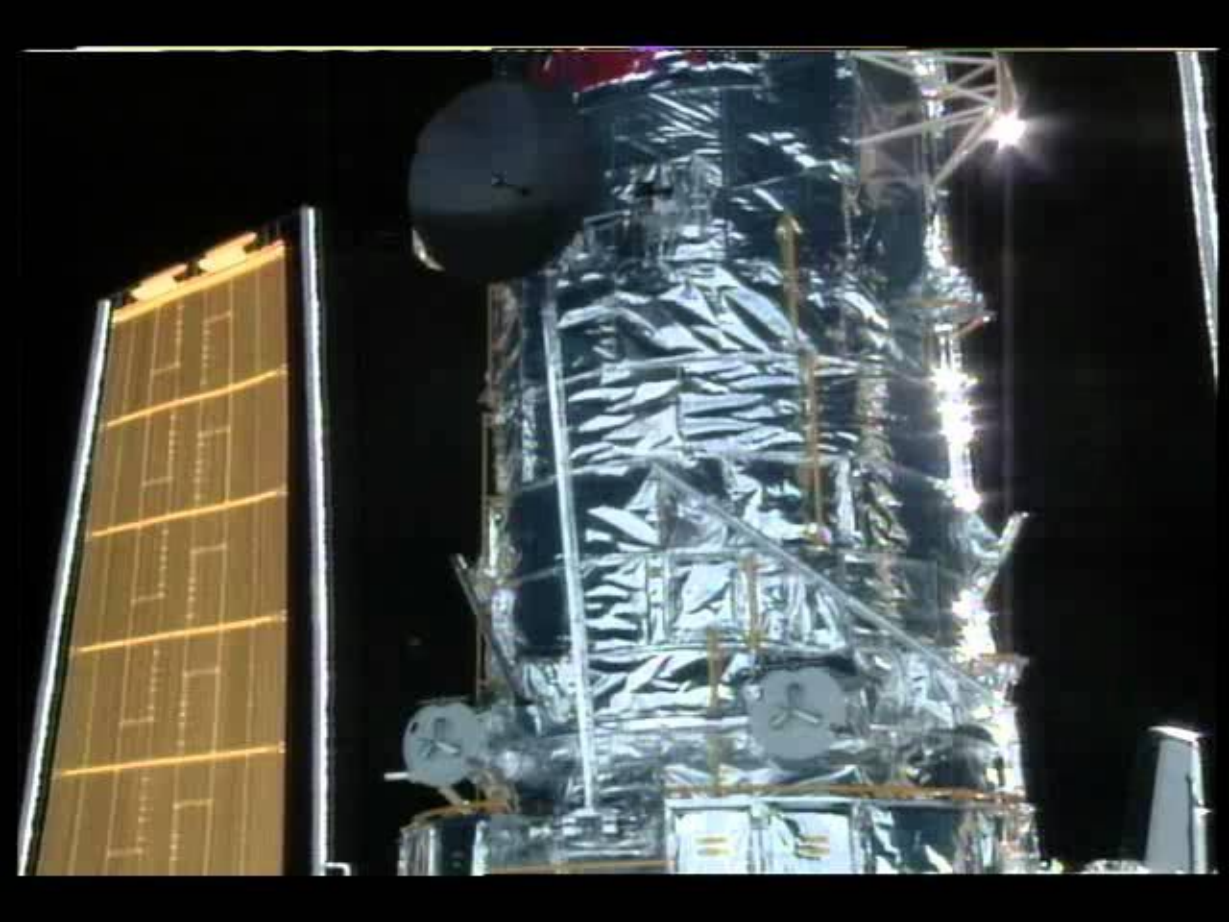

1
00:00:34,320 --> 00:00:29,370
once coming out from under the old MLI

2
00:00:39,979 --> 00:00:34,330
right did you took off okay otherwise it

3
00:00:43,140 --> 00:00:39,989
goes to the right hand of the

4
00:00:45,540 --> 00:00:43,150
replacement magnetometers each have four

5
00:01:37,179 --> 00:00:45,550
turn knobs to lock them in place over

6
00:01:49,570 --> 00:01:40,460
okay getting a good noodle we have a

7
00:01:54,320 --> 00:01:52,669
cy was the one that was on top that's

8
00:02:06,800 --> 00:01:54,330
the first one that I noticed was

9
00:03:16,640 --> 00:02:06,810
actually sort of sitting about like like

10
00:03:38,319 --> 00:03:36,259
I guess we'd get our lights off crews

11
00:03:40,640 --> 00:03:38,329
now are getting their worksite setup

12
00:03:43,210 --> 00:03:40,650
getting their tools in order and making

13
00:03:45,830 --> 00:03:43,220

sure that all the tethers are in place

14
00:03:47,780 --> 00:03:45,840
during a spacewalk the crew can be

15
00:03:50,360 --> 00:03:47,790
distinguished from one another by the

16
00:03:53,449 --> 00:03:50,370
fact that mission specialist Kathy

17
00:03:56,030 --> 00:03:53,459
Thornton will be riding on the arm while

18
00:04:01,789 --> 00:03:56,040
a KERS will be free-floating in addition

19
00:04:04,819 --> 00:04:01,799
Thornton's suit has a broken red stripe

20
00:04:06,979 --> 00:04:04,829
around the legs while Akers suit has a

21
00:04:15,559 --> 00:04:06,989
diagonally broken red stripe around the

22
00:04:18,279 --> 00:04:15,569
legs James one of the things we've been

23
00:04:20,870 --> 00:04:18,289
able to enjoy watching as the

24
00:04:22,460 --> 00:04:20,880
choreography between the crew member

25
00:04:23,719 --> 00:04:22,470
operate and the mechanical arm and the

26
00:04:27,040 --> 00:04:23,729
person that's out on the end of it is

27
00:04:29,450 --> 00:04:27,050
Kathy is here the canadian-built

28
00:04:33,080 --> 00:04:29,460
mechanical arm with a footer string in

29
00:04:34,730 --> 00:04:33,090
it is a marvelous way to do business if

30
00:04:36,980 --> 00:04:34,740
we didn't have that functioning or

31
00:04:39,080 --> 00:04:36,990
available to us we would have to have

32
00:04:41,180 --> 00:04:39,090
foot restraints placed throughout the

33
00:04:42,620 --> 00:04:41,190
payload Bay when the crew members would

34
00:04:45,529 --> 00:04:42,630
have to get in and out of those and kind

35
00:04:47,029 --> 00:04:45,539
of leapfrog the handling of the various

36
00:04:49,370 --> 00:04:47,039
different instruments to and from this

37
00:06:10,469 --> 00:04:49,380
telescope as here doing the work this

38
00:06:10,479 --> 00:07:07,380

altogether

39
00:07:17,430 --> 00:07:09,700
stitching the top stitching toward me a

40
00:07:20,500 --> 00:07:18,880
looking good

41
00:07:27,640 --> 00:07:20,510
why don't we stop that decade to you I'm

42
00:07:29,740 --> 00:07:27,650
comfortable with the position to watch

43
00:07:32,530 --> 00:07:29,750
you come back in within about six inches

44
00:08:30,830 --> 00:07:32,540
or so they look at it didn't touch

45
00:08:30,840 --> 00:10:15,300
on the west

46
00:10:19,509 --> 00:10:17,800
Debra houston we've got a good shot of

47
00:10:29,800 --> 00:10:19,519
your time from the elbow they want a way

48
00:10:31,449 --> 00:10:29,810
to pay and the girls sorry I just saying

49
00:10:33,009 --> 00:10:31,459
that we got a great shot of Tom there we

50
00:11:10,630 --> 00:10:33,019
can see his face very clearly I thought

51
00:11:29,849 --> 00:11:19,430
that's good for out now right someone

52
00:11:37,379 --> 00:11:33,369
it's like the picture stretchy okay

53
00:11:41,799 --> 00:11:40,059
blow me down a little more I know we're

54
00:11:43,599 --> 00:11:41,809
gonna need that when we get to okay

55
00:11:46,179 --> 00:11:43,609
mention some calories we'll just stop

56
00:11:52,599 --> 00:11:46,189
stop I think you may be ditching me down

57
00:11:55,569 --> 00:11:52,609
whisper all right okay hey sorry yes

58
00:12:01,679 --> 00:11:55,579
there was 42 42 turns it sucks to get

59
00:12:23,810 --> 00:12:01,689
this guide start out I can't believe me

60
00:12:28,019 --> 00:12:26,759
okay I'm just starting each of them a

61
00:12:41,069 --> 00:12:28,029
couple turn story

62
00:12:45,590 --> 00:12:41,079
make sure lined up all starting other to

63
00:12:49,439 --> 00:12:45,600

it down large cut eating down slowly

64
00:13:31,559 --> 00:12:49,449
from the a flash side not touching the

65
00:13:39,910 --> 00:13:34,059
well I guess we have to close this

66
00:13:41,470 --> 00:13:39,920
pretty picture up safety very closing

67
00:13:45,129 --> 00:13:41,480
the thermal cover story

68
00:13:48,970 --> 00:13:45,139
I get bitter water next does that ride

69
00:14:06,780 --> 00:13:48,980
you want to reduce the Yukon I'm getting

70
00:14:13,020 --> 00:14:09,690
I do have some good news for you Jeff

71
00:14:16,050 --> 00:14:13,030
and for everybody the Palos folks

72
00:14:17,670 --> 00:14:16,060
informed me that the D F and the

73
00:14:24,180 --> 00:14:17,680
coprocessor have gone through a complete

74
00:14:24,960 --> 00:14:24,190
checkout and are fully functional great

75
00:14:29,160 --> 00:14:24,970
news

76
00:14:34,020 --> 00:14:29,170
well almost home-free that's right the

77
00:14:38,040 --> 00:14:34,030
way I see it then we've got a basically

78
00:14:40,140 --> 00:14:38,050
a new telescope up there and it should

79
00:14:41,940 --> 00:14:40,150
be real exciting for the astronomical

80
00:14:46,530 --> 00:14:41,950
community I guess for the whole world to

81
00:14:54,570 --> 00:14:46,540
see what really could do with a good set

82
00:14:55,760 --> 00:14:54,580
of eyeballs endeavour Houston more good

83
00:14:57,750 --> 00:14:55,770
news

84
00:15:15,350 --> 00:14:57,760
coprocessor is checked out fully

85
00:15:19,610 --> 00:15:17,389
this is Mission Control Houston aboard

86
00:15:21,110 --> 00:15:19,620
endeavour at present the crew is just a

87
00:15:23,780 --> 00:15:21,120
little more than five minutes away from

88
00:15:25,699 --> 00:15:23,790

an engine firing that will serve to

89
00:15:28,910 --> 00:15:25,709
reboost endeavour and the Hubble Space

90
00:15:46,300 --> 00:15:28,920
Telescope raise the orbit to circular

91
00:16:30,290 --> 00:15:49,190
Debra's moving toward sunset about five

92
00:16:31,850 --> 00:16:30,300
minutes away from a store where you

93
00:17:06,400 --> 00:16:31,860
think about you putting your tether on

94
00:17:06,410 --> 00:18:02,110
he's gonna catch up

95
00:18:09,980 --> 00:18:05,630
in progress the manual deploy of the

96
00:18:13,190 --> 00:18:09,990
second solar array down to the open

97
00:18:15,050 --> 00:18:13,200
position the secondary drive mechanisms

98
00:18:17,150 --> 00:18:15,060
that actually roll out the new solar

99
00:18:21,400 --> 00:18:17,160
array blankets is not done until after

100
00:18:27,820 --> 00:18:24,020
the payload community commenting that

101
00:18:33,790 --> 00:18:27,830
they're relieved to see this solar array

102
00:18:46,880 --> 00:18:37,130
Deborah Houston the GRS is ready and

103
00:18:49,490 --> 00:18:46,890
awaiting space telescope operations

104
00:18:51,440 --> 00:18:49,500
control center has turned off any

105
00:18:53,300 --> 00:18:51,450
electrical connections or an electrical

106
00:18:56,270 --> 00:18:53,310
power to the Goddard high-resolution

107
00:18:59,000 --> 00:18:56,280
spectrograph and cruise been given a go

108
00:19:01,850 --> 00:18:59,010
to install the redundancy kit the

109
00:19:07,120 --> 00:19:01,860
cabling kit that was designed for this

110
00:19:10,880 --> 00:19:07,130
task once they get the doors open

111
00:19:13,700 --> 00:19:10,890
there's four latches on the doors that

112
00:19:26,700 --> 00:19:13,710
protect the the instrument along with

113
00:19:26,710 --> 00:20:58,199

I can do

114
00:21:03,069 --> 00:21:01,179
back to the top of the telescope story

115
00:21:06,159 --> 00:21:03,079
Musgrave and Jeff Hoffman again to

116
00:21:09,189 --> 00:21:06,169
install some fabricated insulation boxes

117
00:21:11,529 --> 00:21:09,199
over the old magnetic sensing systems as

118
00:21:20,769 --> 00:21:11,539
the orbiter moves up the northwest coast

119
00:21:22,119 --> 00:21:20,779
of Australia and Kyle those two

120
00:21:23,859 --> 00:21:22,129
gentlemen on the end of that arm are

121
00:21:25,659 --> 00:21:23,869
having the view of their lives right now

122
00:21:27,399 --> 00:21:25,669
looking over the top of the scope down

123
00:21:30,309 --> 00:21:27,409
at the earth you heard story even remark

124
00:21:32,679 --> 00:21:30,319
about it I can tell you this is this is

125
00:21:43,659 --> 00:21:32,689
probably a moment they'll remember for

126
00:21:45,549 --> 00:21:43,669
many many many many years and we have

127
00:22:20,980 --> 00:21:45,559
got an unbelievable picture from the

128
00:22:25,750 --> 00:22:23,380
never Houston we're ready for free drift

129
00:22:29,470 --> 00:22:25,760
and we need a camera view of the array

130
00:22:31,840 --> 00:22:29,480
please we do not want to leave and we do

131
00:22:39,280 --> 00:22:31,850
not want to delay the egress of the MFR

132
00:23:08,440 --> 00:22:39,290
however back over on here a org or 3

133
00:23:40,419 --> 00:23:33,039
or a checkup - you're right you're gonna

134
00:24:23,049 --> 00:23:40,429
hit him help story hit their rock 101 is

135
00:24:29,240 --> 00:24:26,659
the second solar array wing process of

136
00:24:36,070 --> 00:24:29,250
being deployed as endeavour moves off

137
00:24:43,180 --> 00:24:39,230
again the flex in the arrays is designed

138
00:25:14,140 --> 00:24:43,190

to account for any tolerances in

139
00:25:18,820 --> 00:25:16,900
high gain antenna deploy is in progress

140
00:25:27,970 --> 00:25:18,830
aboard endeavour and aboard the Hubble

141
00:25:31,000 --> 00:25:27,980
Space Telescope this is a simultaneous

142
00:25:34,060 --> 00:25:31,010
deploy of both antennas one on this side

143
00:25:38,890 --> 00:25:34,070
of the telescope and 180 degrees around

144
00:25:40,980 --> 00:25:38,900
on the backside of this telescope this

145
00:26:18,810 --> 00:25:40,990
is about a seven minute in duration

146
00:26:24,680 --> 00:26:21,480
in view the to grapple fixtures that are

147
00:26:28,050 --> 00:26:24,690
available for the shuttles robot arm to

148
00:26:32,730 --> 00:26:28,060
retrieve and deploy the telescope for

149
00:26:35,040 --> 00:26:32,740
servicing this is Mission Control

150
00:26:38,330 --> 00:26:35,050
Houston we now have live television from

151
00:26:40,590 --> 00:26:38,340
a cameras in endeavours cargo bay

152
00:26:42,570 --> 00:26:40,600
Dever currently above the Southern

153
00:26:45,720 --> 00:26:42,580
Pacific Ocean on a track that will have

154
00:26:49,440 --> 00:26:45,730
it to make landfall above Central

155
00:26:52,170 --> 00:26:49,450
America this view showing the solar

156
00:26:54,750 --> 00:26:52,180
panels the new solar arrays that were

157
00:26:56,910 --> 00:26:54,760
installed by the crew on the second

158
00:27:06,120 --> 00:26:56,920
spacewalk of the mission and that were

159
00:27:07,760 --> 00:27:06,130
unfurled yesterday Kubby we'd like you

160
00:27:10,590 --> 00:27:07,770
to go ahead and not perform the maneuver

161
00:27:13,380 --> 00:27:10,600
that you've got loaded up for 1800 and

162
00:27:15,870 --> 00:27:13,390
I'll tell you why we have been spending

163
00:27:20,760 --> 00:27:15,880

a lot of time looking at Diu 2 telemetry

164
00:27:22,650 --> 00:27:20,770
and we now conclude that we do see more

165
00:27:24,420 --> 00:27:22,660
than just data dropouts and that

166
00:27:27,230 --> 00:27:24,430
telemetry we're looking at the signature

167
00:27:29,670 --> 00:27:27,240
of the power control unit and it is

168
00:27:31,080 --> 00:27:29,680
indicating that there is some

169
00:27:34,100 --> 00:27:31,090
troubleshooting that it's worthwhile to

170
00:27:36,240 --> 00:27:34,110
perform before we deploy this thing

171
00:27:40,230 --> 00:27:36,250
primarily having to do with the a side

172
00:27:43,200 --> 00:27:40,240
of the Diu so what we want to do is

173
00:27:46,110 --> 00:27:43,210
spend the next 2 to 3 revs doing this

174
00:27:48,390 --> 00:27:46,120
troubleshooting it involves going to

175
00:27:52,190 --> 00:27:48,400
internal power once we get to our next

176
00:27:54,240 --> 00:27:52,200
sunset and then swapping to the B side

177
00:27:55,650 --> 00:27:54,250
of that Diu

178
00:27:57,600 --> 00:27:55,660
and in addition to that we're also

179
00:28:01,890 --> 00:27:57,610
checking out the functionality of the

180
00:28:04,800 --> 00:28:01,900
battery charge relays all of this is

181
00:28:07,020 --> 00:28:04,810
going to take at least 2 revs to

182
00:28:09,900 --> 00:28:07,030
accomplish and because of that we are

183
00:28:13,230 --> 00:28:09,910
definitely going to delay to deploy by 2

184
00:28:14,370 --> 00:28:13,240
revs during the next couple hours we're

185
00:28:17,010 --> 00:28:14,380
going to be looking at all of this

186
00:28:20,220 --> 00:28:17,020
troubleshooting information and by m ET

187
00:28:22,230 --> 00:28:20,230
of 20 hours we hope to have a decision

188
00:28:24,300 --> 00:28:22,240

of whether or not we will actually

189
00:28:27,230 --> 00:28:24,310
deploy today this will of course depend

190
00:28:29,490 --> 00:28:27,240
on what we see over the next couple revs

191
00:28:32,700 --> 00:28:29,500
in the meantime we'd like you guys to

192
00:28:34,769 --> 00:28:32,710
sit tight don't perform any maneuver

193
00:28:36,539 --> 00:28:34,779
like the attitude we're in right now we

194
00:28:38,850 --> 00:28:36,549
will give you a call for the internal

195
00:28:40,889 --> 00:28:38,860
power step and we want you to just relax

196
00:28:42,450 --> 00:28:40,899
for a while and in bask in the glow of

197
00:28:50,850 --> 00:28:42,460
all the great work you've been doing the

198
00:28:54,120 --> 00:28:50,860
last week okay well we understand

199
00:28:56,760 --> 00:28:54,130
understand Susan we've got plenty of

200
00:29:00,690 --> 00:28:56,770
work to do other than a deploy we're

201
00:29:03,180 --> 00:29:00,700
taking care of that stuff now get back

202
00:29:05,490 --> 00:29:03,190
together and we'll continue working

203
00:29:06,899 --> 00:29:05,500
those things my understanding is there's

204
00:29:13,159 --> 00:29:06,909
nothing at the white plan that you want

205
00:29:17,310 --> 00:29:15,960
that's correct Covey if we decide that

206
00:29:18,960 --> 00:29:17,320
we need to put you to work on something

207
00:29:20,610 --> 00:29:18,970
else in order to make our time more

208
00:29:24,510 --> 00:29:20,620
efficient for the next couple days we

209
00:29:27,690 --> 00:29:24,520
will call you this is the Space

210
00:29:29,130 --> 00:29:27,700
Telescope operations Control Center at

211
00:29:31,769 --> 00:29:29,140
the Goddard Space Flight Center in

212
00:29:32,970 --> 00:29:31,779
Greenbelt Maryland with that call from

213
00:29:35,250 --> 00:29:32,980

mission specialists Kathy Thornton

214
00:29:36,750 --> 00:29:35,260
confirming that the Space Telescope has

215
00:29:38,580 --> 00:29:36,760
now been switched to its own internal

216
00:29:41,250 --> 00:29:38,590
power sources the next step in this

217
00:29:42,899 --> 00:29:41,260
troubleshooting procedure during this

218
00:29:45,110 --> 00:29:42,909
night pass endeavour now is on the

219
00:29:47,760 --> 00:29:45,120
nighttime side of Earth with about a

220
00:29:49,769 --> 00:29:47,770
little under 33 minutes left to go

221
00:29:52,049 --> 00:29:49,779
before sunrise comes again for the

222
00:29:54,240 --> 00:29:52,059
spacecraft the next step is

223
00:29:56,250 --> 00:29:54,250
disconnection of the umbilical through

224
00:29:58,830 --> 00:29:56,260
which electrical power has been fed to

225
00:30:02,220 --> 00:29:58,840
the telescope throughout its stay in the

226
00:30:04,019 --> 00:30:02,230
cargo bay and the Space Telescope but

227
00:30:10,139 --> 00:30:04,029
now already operating off of its own

228
00:30:18,300 --> 00:30:10,149
battery power on board endeavour Houston

229
00:30:24,420 --> 00:30:22,140
final chapters now quick welcome you

230
00:30:26,400 --> 00:30:24,430
I've got good news we have taken a look

231
00:30:29,700 --> 00:30:26,410
at that data from the B side and it all

232
00:30:32,520 --> 00:30:29,710
checks out the HST project would like to

233
00:30:35,940 --> 00:30:32,530
deploy today and so we are going to go

234
00:30:38,160 --> 00:30:35,950
ahead and press toward a relief we are

235
00:30:40,170 --> 00:30:38,170
going to uplink to you a nuri planned

236
00:30:43,170 --> 00:30:40,180
flight plan that has moved all of your

237
00:30:44,700 --> 00:30:43,180
activities for that Rev 121 deploy and

238
00:30:47,130 --> 00:30:44,710

we just want to let you know that right

239
00:30:50,280 --> 00:30:47,140
now there's no activity required from

240
00:30:52,710 --> 00:30:50,290
you until about 21 hours even when we'll

241
00:30:54,570 --> 00:30:52,720
be talking about a group B powerup we

242
00:30:57,360 --> 00:30:54,580
are hoping to get the uplink through

243
00:31:05,060 --> 00:30:57,370
tips of your new flight plan within the

244
00:31:08,790 --> 00:31:05,070
next half hour great do it and

245
00:31:16,470 --> 00:31:08,800
understand that at the 2100 hours which

246
00:32:03,890 --> 00:31:16,480
will be the scheduled activity and we're

247
00:32:31,100 --> 00:32:05,930
this view from the camera at the end of

248
00:32:35,239 --> 00:32:33,529
and the Pinto deploying or evil systems

249
00:32:36,820 --> 00:32:35,249
officer here the position with the

250
00:32:39,889 --> 00:32:36,830
responsibility for the mechanical arm

251
00:32:51,289 --> 00:32:39,899
reports that telescopes now securely

252
00:32:52,789 --> 00:32:51,299
captured laches continue to open again

253
00:32:55,310 --> 00:32:52,799
once all the latches are open the next

254
00:32:58,310 --> 00:32:55,320
step will be for claude nicollier to

255
00:33:00,039 --> 00:32:58,320
lift the telescope from its platform to

256
00:33:10,639 --> 00:33:00,049
position just above the cargo bay

257
00:33:12,349 --> 00:33:10,649
position called a low hover there the

258
00:33:15,320 --> 00:33:12,359
petal deploy retrieval systems officer

259
00:33:17,810 --> 00:33:15,330
reports telescopes now about two feet up

260
00:33:20,299 --> 00:33:17,820
above the platform as Nicole a continues

261
00:33:22,519 --> 00:33:20,309
to slowly raise it up to first a

262
00:34:28,409 --> 00:33:22,529
position paused above the cargo bay at

263
00:34:34,680 --> 00:34:31,200

commands are being sent now to open the

264
00:34:37,139 --> 00:34:34,690
telescopes aperture door and to activate

265
00:35:46,590 --> 00:34:37,149
the mechanisms control unit for the door

266
00:35:56,640 --> 00:35:51,300
we have a good release Pig Sepp was one

267
00:36:00,450 --> 00:35:56,650
our zero minutes 22 seconds copy one

268
00:36:02,220 --> 00:36:00,460
hour zero minutes 22 seconds cubby and

269
00:36:04,020 --> 00:36:02,230
we have to say that through your superb

270
00:36:06,270 --> 00:36:04,030
efforts you have really shown that NASA

271
00:36:21,330 --> 00:36:06,280
can do all that we promise to do and

272
00:36:24,330 --> 00:36:21,340
more and we very much appreciate it the

273
00:36:26,820 --> 00:36:24,340
sentiments of the payload community and

274
00:36:29,910 --> 00:36:26,830
in fact the all of the flight control

275
00:36:32,640 --> 00:36:29,920
team expressed on the model in front of

276
00:36:36,150 --> 00:36:32,650
the flight director console HST reopened

277
00:36:40,670 --> 00:36:36,160
for business completely completely

278
00:36:42,990 --> 00:36:40,680
renovated that now that the telescope is

279
00:36:51,770 --> 00:36:43,000
locked onto the tracking and data relay

280
00:36:51,780 --> 00:37:24,960
oh it's not bad

281
00:37:29,440 --> 00:37:28,420
and I got to tell you these views are so

282
00:37:31,300 --> 00:37:29,450
spectacular

283
00:37:33,460 --> 00:37:31,310
but over the course of the last week

284
00:37:35,920 --> 00:37:33,470
we've seen so many spectacular views

285
00:37:41,890 --> 00:37:35,930
that you almost get none to it

286
00:37:49,420 --> 00:37:41,900
they're still incredible though we know

287
00:38:48,170 --> 00:37:49,430
what you start the top the one from the

288
00:38:53,099 --> 00:38:51,900

okay we really appreciate being allowed

289
00:38:56,910 --> 00:38:53,109
total offense

290
00:38:59,190 --> 00:38:56,920
we got a kind of seat is really

291
00:39:03,390 --> 00:38:59,200
spectacular Mediterranean past at night

292
00:39:05,579 --> 00:39:03,400
and we're looking at what looks like the

293
00:41:29,600 --> 00:39:05,589
brightest morning star you ever saw over

294
00:41:35,990 --> 00:41:33,020
in this view showing the entire island

295
00:42:10,510 --> 00:41:36,000
of Madagascar off the east coast of

296
00:42:20,660 --> 00:42:15,500
go ahead endeavor Roger you get downlink

297
00:42:22,370 --> 00:42:20,670
video of the dump that's firm we're

298
00:42:30,859 --> 00:42:22,380
watching it right now looks pretty

299
00:42:46,780 --> 00:42:30,869
interesting kind of like a cycle and

300
00:42:53,080 --> 00:42:51,010
well this view showing the arm as it

301
00:43:00,520 --> 00:42:53,090
descends down into the cradle along the

302
00:43:03,850 --> 00:43:00,530
left-hand edge of the bay once it's in

303
00:44:09,920 --> 00:43:03,860
the cradle laches will latch it in place

304
00:44:16,609 --> 00:44:14,490
that's firm we sure are okay well what's

305
00:44:18,780 --> 00:44:16,619
the plan now is awesome

306
00:44:21,450 --> 00:44:18,790
Santonio at the top of the screen

307
00:44:27,050 --> 00:44:21,460
Houston at the bottom and Austin on the

308
00:44:29,609 --> 00:44:27,060
right side alright that's a great view

309
00:44:37,620 --> 00:44:29,619
this view showing actually a Houston

310
00:44:59,370 --> 00:44:37,630
Texas and we can only imagine and we're

311
00:45:01,079 --> 00:44:59,380
all jealous hey hey well we're getting a

312
00:45:02,270 --> 00:45:01,089
great picture of Fort Walton Beach and

313
00:45:27,490 --> 00:45:02,280

we'll pass that along

314
00:45:32,230 --> 00:45:31,000
in a Denver Houston for Jeff all of

315
00:45:38,339 --> 00:45:32,240
America would like to know what you've

316
00:45:40,690 --> 00:45:38,349
got in what you're doing with it well

317
00:45:44,050 --> 00:45:40,700
this is the Jewish holiday of Hanukkah

318
00:45:47,020 --> 00:45:44,060
and there's various ways that we

319
00:45:49,359 --> 00:45:47,030
celebrate it and one of the games that

320
00:45:52,420 --> 00:45:49,369
that we play is a little game with a

321
00:45:56,950 --> 00:45:52,430
dreidel and it's something that you spin

322
00:45:58,570 --> 00:45:56,960
and then you see which side comes up and

323
00:46:00,700 --> 00:45:58,580
according to that you either win or lose

324
00:46:03,670 --> 00:46:00,710
and I was just trying to see how you

325
00:46:09,450 --> 00:46:03,680
might reinterpret the rules for

326
00:46:14,620 --> 00:46:09,460
spaceflight since there's no up or down

327
00:46:15,700 --> 00:46:14,630
and I guess on the subject note the

328
00:46:18,520 --> 00:46:15,710
celebration

329
00:46:37,910 --> 00:46:18,530
I also brought along the other thing

330
00:46:44,790 --> 00:46:41,040
panic is the festival of lights' it

331
00:46:47,730 --> 00:46:44,800
lasts eight days and to celebrated we

332
00:46:50,250 --> 00:46:47,740
light a little menorah which has eight

333
00:46:52,800 --> 00:46:50,260
candles and you like one more every day

334
00:46:54,750 --> 00:46:52,810
until finally on the eighth day you have

335
00:46:57,120 --> 00:46:54,760
eight candles and so I bought a little

336
00:46:59,970 --> 00:46:57,130
traveling menorah for supper in the

337
00:47:01,920 --> 00:46:59,980
shuttle we're not going to actually

338
00:47:04,500 --> 00:47:01,930

light the candles to help the

339
00:47:07,050 --> 00:47:04,510
celebration of the season I brought it

340
00:47:09,960 --> 00:47:07,060
along it's a little little silver

341
00:47:10,740 --> 00:47:09,970
travelling menorah and so with that in

342
00:47:14,820 --> 00:47:10,750
the dreidel

343
00:47:26,970 --> 00:47:14,830
I'm all set for my onboard Hanukkah

344
00:47:29,070 --> 00:47:26,980
celebration we are getting a spectacular

345
00:47:50,540 --> 00:47:29,080
view of all of Florida at this moment

346
00:47:54,980 --> 00:47:52,430
I believe we have here the signatures of

347
00:47:56,840 --> 00:47:54,990
all the personnel of particular surgery

348
00:48:48,000 --> 00:47:56,850
and people that's gonna be those on

349
00:48:53,350 --> 00:48:51,400
endeavor it looks like the entry team is

350
00:48:55,480 --> 00:48:53,360
going to come in and take our hours for

351
00:48:58,300 --> 00:48:55,490
the rest of the mission so orbit one

352
00:51:56,329 --> 00:48:58,310
would like to say at you and good luck

353
00:52:00,499 --> 00:51:58,219
this is Mission Control Houston this

354
00:52:03,109 --> 00:52:00,509
television view from endeavours flight

355
00:52:06,609 --> 00:52:03,119
deck at the cockpit of endeavour shows a

356
00:52:09,709 --> 00:52:06,619
commander dick Covey as he prepares to

357
00:52:11,870 --> 00:52:09,719
work with the pilot to in-flight landing

358
00:52:15,410 --> 00:52:11,880
operations trainer it's a simulation of

359
00:52:17,349 --> 00:52:15,420
landing that Covey and then that pilot

360
00:52:20,059 --> 00:52:17,359
Ken Bowersox will both work with

361
00:52:22,190 --> 00:52:20,069
Bowersox here right - behind Covey as

362
00:53:02,750 --> 00:52:22,200
Covey works with it to hone their

363
00:57:01,670 --> 00:53:06,140

that was a very nice approach yeah tacos

364
00:57:08,269 --> 00:57:05,870
and finally from the orbit 2 team we

365
00:57:11,420 --> 00:57:08,279
would like to convey our thanks to you

366
00:57:14,059 --> 00:57:11,430
guys for doing just a stupendous job it

367
00:57:16,910 --> 00:57:14,069
was great for us who watch you

368
00:57:18,710 --> 00:57:16,920
professionals at work up there and for

369
00:57:21,319 --> 00:57:18,720
me down here to watch the professionals

370
00:57:24,260 --> 00:57:21,329
of work down here it was a heck of a

371
00:57:26,900 --> 00:57:24,270
team and we're all proud of how well

372
00:57:34,250 --> 00:57:26,910
this has turned out and we wish you

373
00:57:37,700 --> 00:57:34,260
Godspeed in a safe trip home thanks Greg

374
00:57:42,529 --> 00:57:37,710
and melt and all of the rest of the

375
00:57:45,019 --> 00:57:42,539
orbit 2 team that's there we appreciate

376
00:57:47,089 --> 00:57:45,029
that the work that you put in being a

377
00:57:49,839 --> 00:57:47,099
part of the team helping us through the

378
00:57:52,279 --> 00:57:49,849
things we had to do in order to get to

379
00:57:55,250 --> 00:57:52,289
the end of this mission which hopefully

380
00:57:59,390 --> 00:57:55,260
will be tomorrow and we'll see y'all at