1
00:00:05,349 --> 00:00:03,590
hi robert perlman with collectspace.com

2
00:00:08,549 --> 00:00:05,359
with a question for commander steve

3
00:00:10,709 --> 00:00:08,559
lindsey and his uh discovery crewmates

4
00:00:12,950 --> 00:00:10,719
outside of times when the media like

5
00:00:14,150 --> 00:00:12,960
myself ask about this being discovery's

6
00:00:16,150 --> 00:00:14,160
last mission

7
00:00:17,670 --> 00:00:16,160
how prevalent has the finality of this

8
00:00:19,670 --> 00:00:17,680
flight been during the course of your

9
00:00:21,510 --> 00:00:19,680
mission have there been specific times

10
00:00:24,550 --> 00:00:21,520
where the legacy and history of the

11
00:00:26,230 --> 00:00:24,560
vehicle has struck you

12
00:00:28,230 --> 00:00:26,240
well that's a that's a difficult

13
00:00:30,070 --> 00:00:28,240

question um

14
00:00:31,990 --> 00:00:30,080
we've been very busy during our mission

15
00:00:33,990 --> 00:00:32,000
as all shuttle missions are in space

16
00:00:36,310 --> 00:00:34,000
station missions and so mostly we've

17
00:00:39,350 --> 00:00:36,320
been probably spent spending 95 percent

18
00:00:41,430 --> 00:00:39,360
of our time to 99 on just doing the work

19
00:00:42,790 --> 00:00:41,440
and uh and getting the work done and and

20
00:00:44,310 --> 00:00:42,800
so when you're really busy like that

21
00:00:46,310 --> 00:00:44,320
you're focusing on doing the task doing

22
00:00:48,069 --> 00:00:46,320
the task correctly making sure you uh

23
00:00:50,470 --> 00:00:48,079
you get everything done how it's

24
00:00:51,990 --> 00:00:50,480
supposed to done and don't miss anything

25
00:00:53,510 --> 00:00:52,000
however there are times i know

26
00:00:55,670 --> 00:00:53,520
personally when i've been reflecting

27
00:00:57,990 --> 00:00:55,680
about it being the last mission and what

28
00:00:59,510 --> 00:00:58,000
a wonderful vehicle it is and probably

29
00:01:01,670 --> 00:00:59,520
you know we were coming up and docking

30
00:01:03,349 --> 00:01:01,680
and when you look at the cupola windows

31
00:01:05,270 --> 00:01:03,359
you can look right into discovery's

32
00:01:07,190 --> 00:01:05,280
payload bay and see the wings and see

33
00:01:09,429 --> 00:01:07,200
discovery written on the wings and times

34
00:01:11,429 --> 00:01:09,439
like that i really reflect about

35
00:01:14,390 --> 00:01:11,439
what a great vehicle it's been 39

36
00:01:16,950 --> 00:01:14,400
missions uh nearly one year on orbit and

37
00:01:19,350 --> 00:01:16,960
uh think about all the things that that

38
00:01:21,190 --> 00:01:19,360

vehicle has done and and uh it's just

39
00:01:23,749 --> 00:01:21,200
really inspiring to me and uh and kind

40
00:01:26,070 --> 00:01:23,759
of bittersweet um and and quite frankly

41
00:01:29,670 --> 00:01:26,080
sad that that knowing that when we land

42
00:01:35,350 --> 00:01:32,069
thank you and and to follow up on that

43
00:01:36,870 --> 00:01:35,360
a question for steve bowen and al drew

44
00:01:39,190 --> 00:01:36,880
they say a picture is worth a thousand

45
00:01:41,270 --> 00:01:39,200
words and through your helmet cam we got

46
00:01:43,190 --> 00:01:41,280
to see uh when you took a glance at

47
00:01:46,550 --> 00:01:43,200
discovery uh docked to the station

48
00:01:48,630 --> 00:01:46,560
during your spacewalks um would you one

49
00:01:52,069 --> 00:01:48,640
or both of you describe what it was like

50
00:01:53,990 --> 00:01:52,079
uh to see discovery there and uh and

51
00:02:01,749 --> 00:01:54,000
reflect on its

52
00:02:05,350 --> 00:02:03,749
a lot of us capture repeated what steve

53
00:02:06,630 --> 00:02:05,360
had from the cupola just to have

54
00:02:08,949 --> 00:02:06,640
discovery right there and filling our

55
00:02:11,110 --> 00:02:08,959
entire visor up close and personal you

56
00:02:13,830 --> 00:02:11,120
realize it's just a magnificent ship

57
00:02:16,390 --> 00:02:13,840
it's huge it's complex just a wonderful

58
00:02:17,350 --> 00:02:16,400
completely capable vehicle and uh to be

59
00:02:19,270 --> 00:02:17,360
out there

60
00:02:20,949 --> 00:02:19,280
working on and around near is just a

61
00:02:23,670 --> 00:02:20,959
privilege to be part of the legacy of

62
00:02:28,790 --> 00:02:23,680
discovery is just a i guess it just

63
00:02:31,910 --> 00:02:30,229

this is gerhard daumer the german

64
00:02:34,470 --> 00:02:31,920
aerospace center and space expo

65
00:02:36,150 --> 00:02:34,480
association question for el drew what

66
00:02:44,869 --> 00:02:36,160
was the most difficult and the most

67
00:02:48,949 --> 00:02:46,949
that's easy they were both the same

68
00:02:50,470 --> 00:02:48,959
when i first exited the airlock on my

69
00:02:51,910 --> 00:02:50,480
first eva

70
00:02:53,430 --> 00:02:51,920
we were over top the jungles that looked

71
00:02:55,350 --> 00:02:53,440
like it was maybe south america the

72
00:02:57,190 --> 00:02:55,360
amazon basin somewhere

73
00:02:59,350 --> 00:02:57,200
just beautiful the clouds the river

74
00:03:01,270 --> 00:02:59,360
valleys down there all the greenery and

75
00:03:02,630 --> 00:03:01,280
i had to remind myself that i had work

76
00:03:03,670 --> 00:03:02,640
to do and i couldn't just take in the

77
00:03:05,270 --> 00:03:03,680
scenery

78
00:03:06,869 --> 00:03:05,280
so it's exciting and it was difficult to

79
00:03:08,630 --> 00:03:06,879
tear my eyes away from that and actually

80
00:03:11,430 --> 00:03:08,640
focus on getting things ready for our

81
00:03:15,990 --> 00:03:14,070
question for paolo you accomplished

82
00:03:17,910 --> 00:03:16,000
about half of your long duration mission

83
00:03:19,910 --> 00:03:17,920
what was your most challenging task and

84
00:03:22,309 --> 00:03:19,920
did you have any surprises and what was

85
00:03:24,550 --> 00:03:22,319
your most exciting moment so far

86
00:03:26,789 --> 00:03:24,560
well it's been a pleasure so far here

87
00:03:28,630 --> 00:03:26,799
we've been spent uh yeah two months uh

88
00:03:32,149 --> 00:03:28,640

89
00:03:34,309 --> 00:03:32,159
and uh i think the most challenging

90
00:03:36,710 --> 00:03:34,319
time here is not there is not really a

91
00:03:38,390 --> 00:03:36,720
time i mean the challenge is when i look

92
00:03:40,070 --> 00:03:38,400
at a procedure for the first time it

93
00:03:42,070 --> 00:03:40,080
looks very complex and i try to

94
00:03:44,149 --> 00:03:42,080
understand and interpret it try to do it

95
00:03:45,830 --> 00:03:44,159
without making mistakes and sometimes i

96
00:03:48,550 --> 00:03:45,840
do

97
00:03:52,710 --> 00:03:48,560
so i think those are the for me are the

98
00:03:54,470 --> 00:03:52,720
most challenging times but uh as usual

99
00:03:57,270 --> 00:03:54,480
with the familiarity we're repeating

100
00:03:59,830 --> 00:03:57,280
things things get familiar and we get to

101
00:04:01,110 --> 00:03:59,840
do it with no problems and of course we

102
00:04:03,110 --> 00:04:01,120
always have the

103
00:04:08,869 --> 00:04:03,120
ground control mission control helping

104
00:04:13,190 --> 00:04:10,710
this is jill tulk representing the

105
00:04:15,350 --> 00:04:13,200
cohasset mariner in massachusetts a

106
00:04:17,590 --> 00:04:15,360
question for the east coast steve

107
00:04:19,430 --> 00:04:17,600
what has been the most challenging part

108
00:04:26,230 --> 00:04:19,440
and the most rewarding part of your

109
00:04:30,230 --> 00:04:28,310
i think the most challenging part was uh

110
00:04:32,070 --> 00:04:30,240
trying to get up to speed to understand

111
00:04:34,070 --> 00:04:32,080
the evas and then

112
00:04:35,670 --> 00:04:34,080
uh even more so trying to get them to

113
00:04:37,350 --> 00:04:35,680

speed with everything else that goes on

114
00:04:39,030 --> 00:04:37,360
on a shuttle flight and where my tasks

115
00:04:40,710 --> 00:04:39,040
would be and what they were and how

116
00:04:42,629 --> 00:04:40,720
familiar i was with them and how much

117
00:04:44,950 --> 00:04:42,639
more training i had to have so

118
00:04:45,990 --> 00:04:44,960
that was uh clearly the most difficult

119
00:04:47,590 --> 00:04:46,000
part of it

120
00:04:49,430 --> 00:04:47,600
uh

121
00:04:52,070 --> 00:04:49,440
the the best part really was you know

122
00:04:54,230 --> 00:04:52,080
getting to work with the croods uh

123
00:04:56,870 --> 00:04:54,240
four of my classmates from

124
00:04:59,350 --> 00:04:56,880
2000 and uh commander steve lindsey and

125
00:05:00,790 --> 00:04:59,360
that's been great uh great crew just

126
00:05:02,469 --> 00:05:00,800
having the ability to spend time with

127
00:05:04,790 --> 00:05:02,479
them it's been fantastic and then

128
00:05:08,870 --> 00:05:04,800
getting up here with the iss crew it's

129
00:05:13,830 --> 00:05:11,189
thanks for the good word stevo now a

130
00:05:16,870 --> 00:05:13,840
question for the west coast steve and

131
00:05:18,870 --> 00:05:16,880
for eric bowe what good bowen anecdote

132
00:05:22,870 --> 00:05:18,880
from this week could you share with

133
00:05:27,670 --> 00:05:25,430
i i i think the favorite uh our favorite

134
00:05:29,909 --> 00:05:27,680
uh steve bowen story for uh for this

135
00:05:33,350 --> 00:05:29,919
mission so far was uh i'm sure there are

136
00:05:35,510 --> 00:05:33,360
more to come um was uh when uh when

137
00:05:38,550 --> 00:05:35,520
steve was taking the pump module off of

138
00:05:41,590 --> 00:05:38,560

uh off of a a transporter on the on the

139
00:05:43,510 --> 00:05:41,600
truss segment uh eva and mike barrett

140
00:05:46,150 --> 00:05:43,520
and scott kelly were driving him on the

141
00:05:48,390 --> 00:05:46,160
robotic arm um about the time they

142
00:05:49,510 --> 00:05:48,400
released that pump module um which about

143
00:05:51,990 --> 00:05:49,520
a uh

144
00:05:53,590 --> 00:05:52,000
several hundred pounds for steve to uh

145
00:05:55,990 --> 00:05:53,600
to take in his arm so they could fly him

146
00:05:58,150 --> 00:05:56,000
over to where it belonged um the the

147
00:06:00,870 --> 00:05:58,160
entire uh space station robotic arm

148
00:06:03,670 --> 00:06:00,880
crashed and uh which means he was stuck

149
00:06:05,590 --> 00:06:03,680
there holding this uh payload for

150
00:06:07,749 --> 00:06:05,600
not for for what seemed like a really

151
00:06:10,150 --> 00:06:07,759
long time for him but actually uh the

152
00:06:12,070 --> 00:06:10,160
crew did a great job reconfiguring to an

153
00:06:14,150 --> 00:06:12,080
alternate to robotic workstation to get

154
00:06:15,510 --> 00:06:14,160
it back alive pretty quickly but steve

155
00:06:17,749 --> 00:06:15,520
was stuck there for probably i don't

156
00:06:18,710 --> 00:06:17,759
know 30 35 minutes uh holding this pump

157
00:06:21,350 --> 00:06:18,720
module

158
00:06:23,510 --> 00:06:21,360
loose and so it gave us an opportunity

159
00:06:25,510 --> 00:06:23,520
to uh to joke with him and kind of make

160
00:06:28,309 --> 00:06:25,520
fun of him while he was out there stuck

161
00:06:30,550 --> 00:06:28,319
with nowhere to go

162
00:06:32,230 --> 00:06:30,560
hi uh denise ciao at space.com with a

163
00:06:33,510 --> 00:06:32,240

question for either steve lindsey or

164
00:06:35,270 --> 00:06:33,520
eric beau

165
00:06:36,950 --> 00:06:35,280
when discovery does its fly around after

166
00:06:38,390 --> 00:06:36,960
undocking i was wondering if either or

167
00:06:40,629 --> 00:06:38,400
both of you could speak to the

168
00:06:42,469 --> 00:06:40,639
significance of performing that maneuver

169
00:06:44,070 --> 00:06:42,479
with discovery for the final time and in

170
00:06:45,909 --> 00:06:44,080
doing so seeing the space station

171
00:06:47,590 --> 00:06:45,919
completed with a vehicle that's been so

172
00:06:51,909 --> 00:06:47,600
instrumental in its construction thank

173
00:06:56,150 --> 00:06:53,749
well we've been talking about the

174
00:06:57,909 --> 00:06:56,160
the long history of the space shuttle

175
00:06:59,589 --> 00:06:57,919
and it's a privilege to get the

176
00:07:01,430 --> 00:06:59,599
opportunity to undock and do the fly

177
00:07:04,150 --> 00:07:01,440
around the space station you know

178
00:07:06,230 --> 00:07:04,160
the international space station has

179
00:07:07,749 --> 00:07:06,240
every partner represented with the

180
00:07:09,749 --> 00:07:07,759
different modules on board right now we

181
00:07:11,189 --> 00:07:09,759
have atv which is from the european

182
00:07:16,150 --> 00:07:11,199
space agency

183
00:07:18,309 --> 00:07:16,160
and the htv from the japanese jaxa

184
00:07:19,990 --> 00:07:18,319
and also after we finish the fly around

185
00:07:21,749 --> 00:07:20,000
it what's amazing is how big this

186
00:07:23,830 --> 00:07:21,759
structure is right now we're docked with

187
00:07:25,350 --> 00:07:23,840
more than a million pounds and so to

188
00:07:26,469 --> 00:07:25,360

actually fly around the vehicle take

189
00:07:29,510 --> 00:07:26,479
pictures

190
00:07:31,589 --> 00:07:29,520
and marvel at that every the majority of

191
00:07:33,830 --> 00:07:31,599
the us segment was brought up piece by

192
00:07:37,830 --> 00:07:33,840
piece by the space shuttle will be truly

193
00:07:42,390 --> 00:07:40,469
hi uh eric berger with houston chronicle

194
00:07:44,230 --> 00:07:42,400
congratulations on a successful mission

195
00:07:46,309 --> 00:07:44,240
a question maybe maybe for nicole or

196
00:07:47,670 --> 00:07:46,319
someone else who wants to tackle it but

197
00:07:49,749 --> 00:07:47,680
i don't think people on the ground can

198
00:07:51,589 --> 00:07:49,759
sort of fully appreciate what the living

199
00:07:53,510 --> 00:07:51,599
space is like in the space station so

200
00:07:54,790 --> 00:07:53,520
now that it's complete maybe you could

201
00:07:56,469 --> 00:07:54,800
talk a little bit

202
00:07:57,909 --> 00:07:56,479
in terms that people can understand how

203
00:08:01,189 --> 00:07:57,919
large it is and how much space you have

204
00:08:05,749 --> 00:08:02,070
and

205
00:08:07,990 --> 00:08:05,759
points this out is that

206
00:08:11,510 --> 00:08:08,000
this space station here now is the

207
00:08:14,070 --> 00:08:11,520
largest pressurized volume in space in

208
00:08:15,909 --> 00:08:14,080
history it's it's huge i mean i i use a

209
00:08:17,749 --> 00:08:15,919
word my son uses all the time which is

210
00:08:19,909 --> 00:08:17,759
ginormous um

211
00:08:22,390 --> 00:08:19,919
we have 12 people up here now and

212
00:08:24,790 --> 00:08:22,400
honestly if we spread ourselves out you

213
00:08:26,869 --> 00:08:24,800

could spread across this vehicle and you

214
00:08:29,430 --> 00:08:26,879
know not see another person it's it's

215
00:08:30,309 --> 00:08:29,440
that big i think volume wise equivalent

216
00:08:32,870 --> 00:08:30,319
to

217
00:08:34,389 --> 00:08:32,880
the interior of a 747 or a little bit

218
00:08:37,110 --> 00:08:34,399
bigger and

219
00:08:38,310 --> 00:08:37,120
um it's just really really impressive to

220
00:08:41,509 --> 00:08:38,320
know that

221
00:08:43,509 --> 00:08:41,519
as a volume and a total volume workspace

222
00:08:45,269 --> 00:08:43,519
we can use every single one of the walls

223
00:08:46,550 --> 00:08:45,279
and every single one of these modules in

224
00:08:48,389 --> 00:08:46,560
a way that

225
00:08:50,150 --> 00:08:48,399
we just can't do on the ground and so it

226
00:08:50,870 --> 00:08:50,160
makes for a really wonderful resource

227
00:08:53,030 --> 00:08:50,880
for

228
00:08:54,470 --> 00:08:53,040
science and living and

229
00:08:57,590 --> 00:08:54,480
and just being up here floating around

230
00:09:01,269 --> 00:08:59,430
it's chris baltimore the houston bureau

231
00:09:04,710 --> 00:09:01,279
chief for reuters news agency and i have

232
00:09:08,389 --> 00:09:04,720
a question about garbage literally um

233
00:09:15,910 --> 00:09:08,399
how much trash does the iss generate

234
00:09:20,790 --> 00:09:18,310
we we do recycle certain things we

235
00:09:23,509 --> 00:09:20,800
recycle our water and

236
00:09:26,710 --> 00:09:23,519
turn it into our urine and turn it into

237
00:09:28,790 --> 00:09:26,720
water and that's very helpful because uh

238
00:09:31,590 --> 00:09:28,800

you know disposing of that is

239
00:09:33,269 --> 00:09:31,600
and disposing of any trash is quite a

240
00:09:35,269 --> 00:09:33,279
challenge

241
00:09:37,590 --> 00:09:35,279
right now believe it or not we don't

242
00:09:39,350 --> 00:09:37,600
have a whole lot of what's called common

243
00:09:41,670 --> 00:09:39,360
trash on board which is basically the

244
00:09:43,190 --> 00:09:41,680
garbage we generate from our food

245
00:09:43,990 --> 00:09:43,200
and our clothing

246
00:09:49,030 --> 00:09:44,000
and

247
00:09:51,269 --> 00:09:49,040
two progress vehicles uh depart

248
00:09:52,949 --> 00:09:51,279
and uh you know our cosmonaut colleagues

249
00:09:54,310 --> 00:09:52,959
were very efficient in getting them

250
00:09:56,870 --> 00:09:54,320
loaded with uh

251
00:10:01,030 --> 00:09:56,880
we had probably about 11 or 12 very

252
00:10:02,949 --> 00:10:01,040
large garbage bags like uh you know

253
00:10:04,870 --> 00:10:02,959
outdoor kind of garbage bag filled with

254
00:10:08,069 --> 00:10:04,880
trash and we were able to

255
00:10:10,069 --> 00:10:08,079
uh get rid of those and

256
00:10:12,550 --> 00:10:10,079
generally though the trash stays in a

257
00:10:14,550 --> 00:10:12,560
certain area of the node as well as

258
00:10:16,550 --> 00:10:14,560
there's a certain area in the russian

259
00:10:18,470 --> 00:10:16,560
segment where some trash stays and it

260
00:10:20,150 --> 00:10:18,480
stays there until we can dispose of it

261
00:10:22,069 --> 00:10:20,160
and we can dispose of it

262
00:10:24,069 --> 00:10:22,079
probably on average every uh you know

263
00:10:27,110 --> 00:10:24,079

two to three months when we have a

264
00:10:28,790 --> 00:10:27,120
vehicle that that departs and

265
00:10:31,269 --> 00:10:28,800
generally burns up in the in the

266
00:10:32,949 --> 00:10:31,279
atmosphere

267
00:10:34,949 --> 00:10:32,959
uh hello this is marcia dunna the

268
00:10:36,310 --> 00:10:34,959
associated press with a question for

269
00:10:38,630 --> 00:10:36,320
katie coleman

270
00:10:40,470 --> 00:10:38,640
there's great interest in r2 all the way

271
00:10:42,310 --> 00:10:40,480
up to the president of the united states

272
00:10:44,470 --> 00:10:42,320
and i'm wondering will the robots

273
00:10:46,870 --> 00:10:44,480
unveiling be moved up considering all

274
00:10:52,310 --> 00:10:46,880
the interest and how excited are you to

275
00:10:55,910 --> 00:10:54,630
well i think we've all been voting to

276
00:10:58,230 --> 00:10:55,920
move up the

277
00:10:59,590 --> 00:10:58,240
move up getting him out of his box in

278
00:11:02,230 --> 00:10:59,600
fact we're all pretty sure that we hear

279
00:11:04,069 --> 00:11:02,240
scratching from the inside there um

280
00:11:05,190 --> 00:11:04,079
there's a very elaborate choreography of

281
00:11:07,670 --> 00:11:05,200
all the things that have to come out of

282
00:11:09,190 --> 00:11:07,680
the pmm and get stowed different places

283
00:11:11,110 --> 00:11:09,200
and uh folks on the ground are working

284
00:11:12,790 --> 00:11:11,120
real hard at that and we'll see if we

285
00:11:14,949 --> 00:11:12,800
end up being able to bring robonaut

286
00:11:16,949 --> 00:11:14,959
robonaut out before discovery leaves i'm

287
00:11:18,790 --> 00:11:16,959
really not sure i am looking forward to

288
00:11:21,190 --> 00:11:18,800

working with him you know as we bring

289
00:11:23,190 --> 00:11:21,200
robots up into space one of the reasons

290
00:11:24,710 --> 00:11:23,200
to do that is just to understand a how

291
00:11:26,230 --> 00:11:24,720
to work with them and b just the

292
00:11:28,470 --> 00:11:26,240
mechanics of how they work and how

293
00:11:30,389 --> 00:11:28,480
that's affected by zero g we want to

294
00:11:32,630 --> 00:11:30,399
learn those lessons here on the inside

295
00:11:34,230 --> 00:11:32,640
of the space station before we send them

296
00:11:36,630 --> 00:11:34,240
out to the outside of the space station

297
00:11:38,949 --> 00:11:36,640
or to other planets which we need to be

298
00:11:40,630 --> 00:11:38,959
able to do in in terms of exploring both

299
00:11:42,310 --> 00:11:40,640
as you know a human presence and a

300
00:11:44,150 --> 00:11:42,320
robotics presence it'll take both of

301
00:11:46,230 --> 00:11:44,160
those to get us further out into the

302
00:11:49,509 --> 00:11:46,240
universe and robonaut is a good first

303
00:11:53,990 --> 00:11:51,670
thank you and for steve bowen it's been

304
00:11:56,069 --> 00:11:54,000
a real whirlwind for you the past month

305
00:11:57,829 --> 00:11:56,079
i'm wondering um are you pinching

306
00:12:00,230 --> 00:11:57,839
yourself that you're even in space on

307
00:12:02,230 --> 00:12:00,240
this mission and have had a chance to go

308
00:12:03,829 --> 00:12:02,240
space walking and how are you going to

309
00:12:08,949 --> 00:12:03,839
make it up to tim crow pro when you get

310
00:12:13,350 --> 00:12:11,110
i am pinching myself and there's no

311
00:12:14,790 --> 00:12:13,360
possible way i can make it up to tim but

312
00:12:15,910 --> 00:12:14,800
you know tim did an incredible job

313
00:12:18,389 --> 00:12:15,920

putting this together it's the only

314
00:12:21,350 --> 00:12:18,399
reason we were so successful outside uh

315
00:12:23,190 --> 00:12:21,360
he really did a fantastic job uh so if

316
00:12:27,269 --> 00:12:23,200
there's anything i can do for him i'm

317
00:12:29,350 --> 00:12:27,279
willing to to discuss it

318
00:12:31,190 --> 00:12:29,360
hi this is emily baldwin from astronomy

319
00:12:32,790 --> 00:12:31,200
now magazine in the uk

320
00:12:34,629 --> 00:12:32,800
and it's always really amazing seeing

321
00:12:35,990 --> 00:12:34,639
views of the earth from space and i'd

322
00:12:37,750 --> 00:12:36,000
certainly be interested to hear your

323
00:12:39,590 --> 00:12:37,760
comments on any earth observation you've

324
00:12:41,430 --> 00:12:39,600
done this mission but what i'd really

325
00:12:45,750 --> 00:12:41,440
like to know is do you do any nighttime

326
00:12:47,670 --> 00:12:45,760
astronomical observations and if so what

327
00:12:49,670 --> 00:12:47,680
well hello to the uk and

328
00:12:52,230 --> 00:12:49,680
let me get the first part of that the

329
00:12:53,990 --> 00:12:52,240
earth views are just stunning it's very

330
00:12:56,310 --> 00:12:54,000
very difficult to explain them to people

331
00:12:57,750 --> 00:12:56,320
even pictures don't do it justice

332
00:12:59,350 --> 00:12:57,760
and your senses can be really

333
00:13:02,150 --> 00:12:59,360
overwhelmed by how beautiful the earth

334
00:13:04,470 --> 00:13:02,160
is i want to mention to the uk that we

335
00:13:06,710 --> 00:13:04,480
actually have a medallion up here struck

336
00:13:08,470 --> 00:13:06,720
in honor of james cook this was

337
00:13:09,350 --> 00:13:08,480
commissioned about five years after his

338
00:13:11,430 --> 00:13:09,360

death

339
00:13:13,910 --> 00:13:11,440
and we're very very happy to have that

340
00:13:16,550 --> 00:13:13,920
and to honor the rich maritime legacy of

341
00:13:19,190 --> 00:13:16,560
world discovery that the uk has

342
00:13:20,870 --> 00:13:19,200
as far as astronomical observations one

343
00:13:22,710 --> 00:13:20,880
of the problems is that we're moving

344
00:13:24,790 --> 00:13:22,720
around the earth at seventeen thousand

345
00:13:26,389 --> 00:13:24,800
five hundred miles an hour it'd be uh

346
00:13:29,030 --> 00:13:26,399
kind of difficult to train on to

347
00:13:31,509 --> 00:13:29,040
something unless we were really uh more

348
00:13:32,949 --> 00:13:31,519
mechanically equipped to do that we keep

349
00:13:35,030 --> 00:13:32,959
our space station

350
00:13:37,030 --> 00:13:35,040
oriented so that we're looking belly to

351
00:13:38,949 --> 00:13:37,040
the ground most of the time and that's

352
00:13:40,710 --> 00:13:38,959
comfortable to us for a lot of reasons

353
00:13:43,350 --> 00:13:40,720
and we get really good ground views that

354
00:13:44,870 --> 00:13:43,360
way now having said that we have some

355
00:13:47,750 --> 00:13:44,880
very good cameras on board and we're

356
00:13:49,430 --> 00:13:47,760
able to take some astrophotographs

357
00:13:51,509 --> 00:13:49,440
that don't require much

358
00:13:54,230 --> 00:13:51,519
much in the way of exposures but most of

359
00:13:56,550 --> 00:13:54,240
these are milky way shots and aurora

360
00:13:57,990 --> 00:13:56,560
shots and they're quite spectacular but

361
00:14:00,949 --> 00:13:58,000
nothing compared to what the hubble can

362
00:14:05,990 --> 00:14:04,069
thank you um and my second question um

363
00:14:08,949 --> 00:14:06,000

apollo inspired the children of the 60s

364
00:14:11,430 --> 00:14:08,959
and the 70s um the shuttle the the 80s

365
00:14:13,269 --> 00:14:11,440
and 90s in the early 21st century with

366
00:14:15,750 --> 00:14:13,279
the shuttle program retiring how do you

367
00:14:18,870 --> 00:14:15,760
think we'll be able to inspire

368
00:14:24,230 --> 00:14:21,750
well you know i think the space program

369
00:14:25,750 --> 00:14:24,240
in general is is inspiring and i think

370
00:14:27,590 --> 00:14:25,760
you know our

371
00:14:29,430 --> 00:14:27,600
country and certain countries around the

372
00:14:30,949 --> 00:14:29,440
world have a strong history of

373
00:14:34,629 --> 00:14:30,959
exploration and

374
00:14:35,990 --> 00:14:34,639
even when the shuttle retires we're

375
00:14:38,389 --> 00:14:36,000
going to continue that we're still going

376
00:14:40,230 --> 00:14:38,399
to have a a space station it's still

377
00:14:42,230 --> 00:14:40,240
going to be uh

378
00:14:44,550 --> 00:14:42,240
supported by astronauts and cosmonauts

379
00:14:45,829 --> 00:14:44,560
from around the world and i think

380
00:14:47,590 --> 00:14:45,839
you know we're going to have a program

381
00:14:49,990 --> 00:14:47,600
beyond this we're not sure exactly what

382
00:14:51,670 --> 00:14:50,000
it is right now but you know someday

383
00:14:55,189 --> 00:14:51,680
humans are going to venture again beyond

384
00:14:57,350 --> 00:14:55,199
lower earth orbit back to the moon and

385
00:14:59,990 --> 00:14:57,360
mars and other destinations in our solar

386
00:15:01,910 --> 00:15:00,000
system and it's uh

387
00:15:03,590 --> 00:15:01,920
you know something i think can inspire

388
00:15:05,829 --> 00:15:03,600

kids and it's something that we all can

389
00:15:07,829 --> 00:15:05,839
be uh proud of

390
00:15:09,350 --> 00:15:07,839
from isa thank you to commanders kelly

391
00:15:11,910 --> 00:15:09,360
and lin for having us participate in

392
00:15:14,230 --> 00:15:11,920
this event first question for commander

393
00:15:16,790 --> 00:15:14,240
kelly how it is on station while having

394
00:15:21,350 --> 00:15:16,800
vehicles and components from all program

395
00:15:25,430 --> 00:15:23,269
well i think it's one of the uh the

396
00:15:27,990 --> 00:15:25,440
great things about this program that's

397
00:15:30,790 --> 00:15:28,000
it's an international program it shows

398
00:15:32,949 --> 00:15:30,800
how countries that uh cooperate can do

399
00:15:34,629 --> 00:15:32,959
great things and building a space

400
00:15:36,710 --> 00:15:34,639
station such as the international space

401
00:15:38,389 --> 00:15:36,720
station is probably one of the most

402
00:15:40,870 --> 00:15:38,399
you know significant engineering

403
00:15:42,949 --> 00:15:40,880
achievements that people have achieved

404
00:15:44,870 --> 00:15:42,959
and and we've done that

405
00:15:46,550 --> 00:15:44,880
with this international partnership that

406
00:15:52,230 --> 00:15:46,560
i think is really one of the the

407
00:15:57,670 --> 00:15:53,670
and from the news agency enrique

408
00:16:03,430 --> 00:16:00,310
and paolo today you are now grading the

409
00:16:05,189 --> 00:16:03,440
leonardo module an italian room on the

410
00:16:06,870 --> 00:16:05,199
international space station so what are

411
00:16:07,749 --> 00:16:06,880
the first operations that are going to

412
00:16:09,670 --> 00:16:07,759
happen

413
00:16:13,110 --> 00:16:09,680

on its interior

414
00:16:17,990 --> 00:16:15,910
we're working very hard inside the

415
00:16:20,790 --> 00:16:18,000
leonardo

416
00:16:23,910 --> 00:16:20,800
module because it came in a flight

417
00:16:26,310 --> 00:16:23,920
configuration so everything is fastened

418
00:16:28,629 --> 00:16:26,320
uh in a way to secure it

419
00:16:29,910 --> 00:16:28,639
for launch so we're removing

420
00:16:33,430 --> 00:16:29,920
all the

421
00:16:36,230 --> 00:16:34,310
and

422
00:16:39,030 --> 00:16:36,240
so that we can store it in the japanese

423
00:16:39,749 --> 00:16:39,040
module that's going to be leaving soon

424
00:16:41,590 --> 00:16:39,759
so

425
00:16:43,829 --> 00:16:41,600
we're using all the astronauts including