1
00:00:07,030 --> 00:00:02,950
iss this is houston are you ready for

2
00:00:10,870 --> 00:00:09,430
houston this is the iss we are ready for

3
00:00:13,430 --> 00:00:10,880
the event

4
00:00:20,870 --> 00:00:13,440
navy postgraduate school this is houston

5
00:00:25,349 --> 00:00:23,750
discovery isf this is dan bursch here at

6
00:00:29,669 --> 00:00:25,359
the naval post graduate school how do

7
00:00:33,110 --> 00:00:31,429
good morning dan we have you loud and

8
00:00:36,950 --> 00:00:33,120
clear welcome back to the international

9
00:00:41,990 --> 00:00:39,110
we're doing great here dex uh greetings

10
00:00:45,029 --> 00:00:42,000
to you jim and and dottie with me are

11
00:00:46,869 --> 00:00:45,039
jim newman and john phillips and and

12
00:00:48,950 --> 00:00:46,879
very some distinguished guests that we

13
00:00:51,670 --> 00:00:48,960

have here from the monterey peninsula

14
00:00:53,590 --> 00:00:51,680
and we have 700 other very excited

15
00:00:57,270 --> 00:00:53,600
guests that i'm gonna let them introduce

16
00:01:04,310 --> 00:00:57,280
themselves uh to you so on three one two

17
00:01:08,149 --> 00:01:06,390
all right so without further ado

18
00:01:11,030 --> 00:01:08,159
hopefully you heard that greeting okay

19
00:01:13,109 --> 00:01:11,040
they did they heard it

20
00:01:16,390 --> 00:01:13,119
we're going to go ahead and get into the

21
00:01:19,990 --> 00:01:16,400
uh get into the questions now

22
00:01:26,550 --> 00:01:20,950
uh

23
00:01:27,830 --> 00:01:26,560
astronaut that is the question is for

24
00:01:29,350 --> 00:01:27,840
i'll go ahead and say who it's supposed

25
00:01:31,429 --> 00:01:29,360
to be for

26
00:01:33,910 --> 00:01:31,439
excellent thank you dottie

27
00:01:37,109 --> 00:01:33,920
thank you

28
00:01:39,109 --> 00:01:37,119
yes they really are in orbit

29
00:01:41,030 --> 00:01:39,119
so i'll say who the questions for but of

30
00:01:43,990 --> 00:01:41,040
course you're the commander dex and you

31
00:01:45,590 --> 00:01:44,000
can have anybody answer that you want to

32
00:01:46,630 --> 00:01:45,600
so the first question is supposed to be

33
00:01:48,710 --> 00:01:46,640
for dex

34
00:01:50,710 --> 00:01:48,720
and

35
00:01:53,749 --> 00:01:50,720
here we go

36
00:01:56,709 --> 00:01:53,759
my name is ben hyman and my question is

37
00:02:03,190 --> 00:01:56,719
what was the first thing you saw on

38
00:02:07,270 --> 00:02:05,830

that's a great question we launched if

39
00:02:08,710 --> 00:02:07,280
you watched got to watch the launch it

40
00:02:09,669 --> 00:02:08,720
was really early in the morning so very

41
00:02:10,949 --> 00:02:09,679
early in the morning for you in

42
00:02:13,589 --> 00:02:10,959
california

43
00:02:15,510 --> 00:02:13,599
and we launched from florida

44
00:02:16,949 --> 00:02:15,520
at about 6 30 in the morning florida

45
00:02:19,190 --> 00:02:16,959
time and it was still dark about 40

46
00:02:21,830 --> 00:02:19,200
minutes before sunrise but as we

47
00:02:24,550 --> 00:02:21,840
launched and climbed up into the upper

48
00:02:27,110 --> 00:02:24,560
atmosphere we hit about uh eight times

49
00:02:30,229 --> 00:02:27,120
the speed of sound and went into sunrise

50
00:02:31,430 --> 00:02:30,239
a long time bef before the earth did uh

51
00:02:33,990 --> 00:02:31,440
on the ground

52
00:02:35,910 --> 00:02:34,000
and uh we got into sunrise and then

53
00:02:38,309 --> 00:02:35,920
shortly after the main engines cut off

54
00:02:39,910 --> 00:02:38,319
we came off of our external tank

55
00:02:41,509 --> 00:02:39,920
and we do this pitch maneuver that

56
00:02:43,430 --> 00:02:41,519
enables our

57
00:02:45,830 --> 00:02:43,440
our crew members to to photograph the

58
00:02:48,309 --> 00:02:45,840
external tank for engineering purposes

59
00:02:50,710 --> 00:02:48,319
well anyway a few about 30 minutes later

60
00:02:52,309 --> 00:02:50,720
jim and i uh took the orbiter and we

61
00:02:55,910 --> 00:02:52,319
maneuvered it so that we could do our

62
00:02:57,030 --> 00:02:55,920
next orbit burn to uh circularize our

63
00:02:59,030 --> 00:02:57,040

orbit

64
00:03:01,509 --> 00:02:59,040
well when we did that we looked down and

65
00:03:02,710 --> 00:03:01,519
there was the coast of france

66
00:03:04,949 --> 00:03:02,720
and

67
00:03:06,630 --> 00:03:04,959
we could see the orange

68
00:03:08,949 --> 00:03:06,640
external tank

69
00:03:11,030 --> 00:03:08,959
uh way down below us but still flying

70
00:03:12,229 --> 00:03:11,040
formation with us basically as we're

71
00:03:16,830 --> 00:03:12,239
headed over europe it was really

72
00:03:23,830 --> 00:03:19,350
see great great

73
00:03:27,910 --> 00:03:25,990
hi my name is evan patel

74
00:03:32,470 --> 00:03:27,920
can you show us how things behave in

75
00:03:35,910 --> 00:03:34,149
take the ball or the ctb or something

76
00:03:37,750 --> 00:03:35,920
hey evan well that's that's one of the

77
00:03:39,350 --> 00:03:37,760
best parts about space is how things

78
00:03:41,430 --> 00:03:39,360
behave and yeah i think dotty gave you a

79
00:03:44,550 --> 00:03:41,440
little demo a second ago but we got a

80
00:03:47,030 --> 00:03:44,560
few things here that we came up with um

81
00:03:48,869 --> 00:03:47,040
to show you let me see here dex do you

82
00:03:50,789 --> 00:03:48,879
mind holding the mic for a sec

83
00:03:52,149 --> 00:03:50,799
so you know one of the little things i

84
00:03:53,990 --> 00:03:52,159
found is just like

85
00:03:55,750 --> 00:03:54,000
picking up tools and and messing around

86
00:03:57,190 --> 00:03:55,760
with them today i was fiddling around

87
00:03:59,429 --> 00:03:57,200
this thing kind of get a rate on this

88
00:04:01,110 --> 00:03:59,439

little handle here and then let go and

89
00:04:02,630 --> 00:04:01,120
and wow you know

90
00:04:04,229 --> 00:04:02,640
it takes off and

91
00:04:06,229 --> 00:04:04,239
and sometimes you get an access to

92
00:04:08,070 --> 00:04:06,239
symmetry where it spins normally and

93
00:04:09,750 --> 00:04:08,080
sometimes you don't and it takes off

94
00:04:10,869 --> 00:04:09,760
like that

95
00:04:13,670 --> 00:04:10,879
all right

96
00:04:17,189 --> 00:04:13,680
we have fun with food

97
00:04:19,030 --> 00:04:17,199
food is one of the more fun things we do

98
00:04:21,110 --> 00:04:19,040
you don't just have to eat like normal

99
00:04:24,550 --> 00:04:21,120
you can play with your food it's allowed

100
00:04:24,560 --> 00:04:29,350
great answer jim

101
00:04:33,510 --> 00:04:32,710
thanks guys next question is for dottie

102
00:04:35,909 --> 00:04:33,520
um

103
00:04:37,350 --> 00:04:35,919
hi my name is christian johnson and what

104
00:04:42,230 --> 00:04:37,360
has been the hardest part of the mission

105
00:04:47,189 --> 00:04:44,310
hey christian thanks for participating

106
00:04:49,430 --> 00:04:47,199
in this and um the hardest thing for me

107
00:04:52,150 --> 00:04:49,440
so far is actually just doing some of

108
00:04:55,350 --> 00:04:52,160
your morning operations as you can see

109
00:04:57,590 --> 00:04:55,360
my hair is really long and curly

110
00:05:00,070 --> 00:04:57,600
and you can't really wash your hair in

111
00:05:02,150 --> 00:05:00,080
space we have this camping shampoo that

112
00:05:03,510 --> 00:05:02,160
you run through and then you kind of

113
00:05:04,870 --> 00:05:03,520

comb it through your hair and you try to

114
00:05:06,950 --> 00:05:04,880
towel it off

115
00:05:08,950 --> 00:05:06,960
but it's much easier for me to take a

116
00:05:11,430 --> 00:05:08,960
shower on earth

117
00:05:13,430 --> 00:05:11,440
and also uh changing my contacts i

118
00:05:15,990 --> 00:05:13,440
always have to think okay i gotta put

119
00:05:18,070 --> 00:05:16,000
this contact in so i put it on the wall

120
00:05:20,469 --> 00:05:18,080
and then i uh get it prepped and then i

121
00:05:22,790 --> 00:05:20,479
get it out and make sure i don't drop it

122
00:05:25,909 --> 00:05:22,800
and then i get it in my eye and on earth

123
00:05:26,950 --> 00:05:25,919
uh you it seems a little bit easier but

124
00:05:29,590 --> 00:05:26,960
today

125
00:05:32,950 --> 00:05:29,600
we were doing a lot of transfer

126
00:05:35,670 --> 00:05:32,960
and that is so much easier than on earth

127
00:05:38,790 --> 00:05:35,680
in fact yesterday my friend naoko moved

128
00:05:40,310 --> 00:05:38,800
almost three tons of equipment all with

129
00:05:41,749 --> 00:05:40,320
her legs

130
00:05:43,830 --> 00:05:41,759
through the international space station

131
00:05:49,990 --> 00:05:43,840
well some with her hands too but in

132
00:05:56,150 --> 00:05:53,510
thanks dottie next question is for dex

133
00:05:58,550 --> 00:05:56,160
hi my name is caitlin stewie and my

134
00:06:01,029 --> 00:05:58,560
question is how has it been working with

135
00:06:05,990 --> 00:06:01,039
the iss crew and when was the last time

136
00:06:10,469 --> 00:06:08,150
well let's see the uh the iss crew as

137
00:06:12,790 --> 00:06:10,479
you may know we have the 13 people on

138
00:06:15,029 --> 00:06:12,800

board right now we have seven uh from

139
00:06:17,270 --> 00:06:15,039
the shuttle discovery we docked three or

140
00:06:19,430 --> 00:06:17,280
four days ago and there were six people

141
00:06:22,710 --> 00:06:19,440
already heating discovery we docked

142
00:06:26,230 --> 00:06:24,710
in kazakhstan

143
00:06:28,870 --> 00:06:26,240
we had two russians and one american

144
00:06:30,469 --> 00:06:28,880
astronaut on that soyuz and before them

145
00:06:32,790 --> 00:06:30,479
there were three others

146
00:06:36,070 --> 00:06:32,800
we had tj creamer

147
00:06:38,710 --> 00:06:36,080
and uh suici

148
00:06:41,110 --> 00:06:38,720
and oleg kotov and oleg is the commander

149
00:06:43,029 --> 00:06:41,120
of the space station he's a russian

150
00:06:44,230 --> 00:06:43,039
and it's just been great we've had an

151
00:06:46,390 --> 00:06:44,240
opportunity to train with all those

152
00:06:48,390 --> 00:06:46,400
people uh back in houston before they

153
00:06:49,830 --> 00:06:48,400
launched

154
00:06:52,070 --> 00:06:49,840
late last fall

155
00:06:54,309 --> 00:06:52,080
and they're just terrific hosts and we

156
00:06:55,589 --> 00:06:54,319
love being here in their home and trying

157
00:06:57,510 --> 00:06:55,599
to help them

158
00:06:59,909 --> 00:06:57,520
add more science and research

159
00:07:01,510 --> 00:06:59,919
capabilities to their home and also

160
00:07:03,510 --> 00:07:01,520
giving them a lot of supplies this bag

161
00:07:06,390 --> 00:07:03,520
i'm holding in front of me is what we

162
00:07:08,629 --> 00:07:06,400
call a ctb bag and it has a lot of

163
00:07:09,830 --> 00:07:08,639

supplies in it and captain birch can

164
00:07:12,790 --> 00:07:09,840
tell you all about moving these things

165
00:07:14,390 --> 00:07:12,800
around as as can duck dr phillips there

166
00:07:16,230 --> 00:07:14,400
but we move a whole lot of these bags

167
00:07:17,909 --> 00:07:16,240
around and and bring them to bring the

168
00:07:22,710 --> 00:07:17,919
station crew a lot of supplies and

169
00:07:27,909 --> 00:07:25,189
thanks dex uh next question is for jim

170
00:07:29,909 --> 00:07:27,919
hi i'm stella crawl and my question is

171
00:07:31,749 --> 00:07:29,919
how well do the training you receive

172
00:07:37,510 --> 00:07:31,759
prepare you for this mission like for

173
00:07:40,710 --> 00:07:39,110
well it's really incredible how well

174
00:07:44,469 --> 00:07:40,720
trained you are yesterday we had our

175
00:07:46,469 --> 00:07:44,479
first spacewalk and myself and stephanie

176
00:07:49,430 --> 00:07:46,479
wilson were the two uh station arm

177
00:07:51,110 --> 00:07:49,440
robotic operators um supporting the

178
00:07:52,869 --> 00:07:51,120
mission they actually right here is the

179
00:07:55,430 --> 00:07:52,879
robotic operator station that we were

180
00:07:56,869 --> 00:07:55,440
working at these two controls you see

181
00:07:59,029 --> 00:07:56,879
are the ones that we were using to fly

182
00:08:00,710 --> 00:07:59,039
the arm and

183
00:08:03,430 --> 00:08:00,720
i'll tell you if it hadn't been for the

184
00:08:05,589 --> 00:08:03,440
beautiful views we saw behind

185
00:08:08,150 --> 00:08:05,599
our our camera views of the station and

186
00:08:09,430 --> 00:08:08,160
the and the eva guys the spacewalkers i

187
00:08:12,550 --> 00:08:09,440
wouldn't have believed that wasn't in a

188
00:08:14,309 --> 00:08:12,560

sim because it was so similar and uh so

189
00:08:17,029 --> 00:08:14,319
things just went really flawlessly

190
00:08:20,790 --> 00:08:17,039
yesterday uh from a robotics standpoint

191
00:08:22,790 --> 00:08:20,800
and we just you know we we have great um

192
00:08:25,029 --> 00:08:22,800
support back in houston the people that

193
00:08:26,469 --> 00:08:25,039
train us work so hard to make sure we

194
00:08:30,150 --> 00:08:26,479
know what we're doing and they do a

195
00:08:33,909 --> 00:08:32,149
thanks jim and we see that behind you

196
00:08:36,709 --> 00:08:33,919
that fighter pilots really do like to

197
00:08:38,469 --> 00:08:36,719
fly upside down next question is for

198
00:08:40,870 --> 00:08:38,479
dottie

199
00:08:42,709 --> 00:08:40,880
hi i'm nicole um what do you see as the

200
00:08:48,630 --> 00:08:42,719
biggest challenge to exploring new

201
00:08:52,710 --> 00:08:50,949
well nicole i think uh some of the

202
00:08:54,790 --> 00:08:52,720
biggest challenge or the biggest

203
00:08:57,190 --> 00:08:54,800
challenge is getting to those planets in

204
00:09:00,230 --> 00:08:57,200
a time that humans would still have

205
00:09:01,829 --> 00:09:00,240
enough strength to operate on the planet

206
00:09:04,310 --> 00:09:01,839
now obviously

207
00:09:06,870 --> 00:09:04,320
mars is the closest one that we would

208
00:09:09,590 --> 00:09:06,880
probably try in the near future

209
00:09:11,670 --> 00:09:09,600
but if you try to go to mars using the

210
00:09:13,750 --> 00:09:11,680
technology we have right now it would

211
00:09:16,150 --> 00:09:13,760
take anywhere between six and nine

212
00:09:18,870 --> 00:09:16,160
months i don't know about you

213
00:09:21,350 --> 00:09:18,880

but uh six to nine months with anyone

214
00:09:27,509 --> 00:09:21,360
for in tight quarters might be a little

215
00:09:31,350 --> 00:09:30,310
thanks daddy uh next question is is for

216
00:09:33,750 --> 00:09:31,360
dex

217
00:09:40,150 --> 00:09:33,760
hi my name's zach as the commander what

218
00:09:44,790 --> 00:09:42,470
hey zach that's a good question

219
00:09:46,790 --> 00:09:44,800
you know it's just like you can sort of

220
00:09:48,230 --> 00:09:46,800
equate it to a military commander job

221
00:09:49,670 --> 00:09:48,240
you know my job is to make sure that we

222
00:09:51,590 --> 00:09:49,680
get the mission done

223
00:09:53,430 --> 00:09:51,600
and then we get everybody home and all

224
00:09:55,590 --> 00:09:53,440
the equipment homes safely

225
00:09:57,829 --> 00:09:55,600
so i i'm obviously concerned about my

226
00:09:58,470 --> 00:09:57,839
crew and their well-being

227
00:10:00,070 --> 00:09:58,480
and

228
00:10:01,670 --> 00:10:00,080
i'm also concerned about making sure

229
00:10:02,870 --> 00:10:01,680
that there's enough time in the day to

230
00:10:05,750 --> 00:10:02,880
get everything done that we need to get

231
00:10:08,230 --> 00:10:05,760
done it's rather busy up here and a

232
00:10:09,829 --> 00:10:08,240
shuttle flight is like a sprint you know

233
00:10:12,470 --> 00:10:09,839
as whereas the

234
00:10:13,750 --> 00:10:12,480
the guys up here long duration have more

235
00:10:16,150 --> 00:10:13,760
of a marathon

236
00:10:17,910 --> 00:10:16,160
approach to living in space and

237
00:10:19,110 --> 00:10:17,920
and when we get up here and go we we

238
00:10:22,230 --> 00:10:19,120

really got to get everything done

239
00:10:24,230 --> 00:10:22,240
quickly and and safely and so i'm always

240
00:10:25,509 --> 00:10:24,240
keeping a watchful eye out for uh things

241
00:10:27,110 --> 00:10:25,519
and making sure that things are going

242
00:10:29,110 --> 00:10:27,120
safely and that the crew was well

243
00:10:33,829 --> 00:10:29,120
trained and they're just doing a superb

244
00:10:37,110 --> 00:10:36,069
thanks dex and we're all very proud of

245
00:10:39,190 --> 00:10:37,120
you down here it looks like the

246
00:10:40,790 --> 00:10:39,200
mission's going going going great thank

247
00:10:43,110 --> 00:10:40,800
you very much

248
00:10:45,509 --> 00:10:43,120
next question is for jim

249
00:10:47,350 --> 00:10:45,519
hi my name is alana mckeachen and as the

250
00:10:52,790 --> 00:10:47,360
pilot what are you looking forward to

251
00:10:57,590 --> 00:10:55,990
hi alana um i think as a pilot the

252
00:10:58,630 --> 00:10:57,600
launch was probably the most exciting

253
00:11:01,990 --> 00:10:58,640
part

254
00:11:04,389 --> 00:11:02,000
i just uh have looked at space shuttle

255
00:11:06,550 --> 00:11:04,399
posters and pictures and and always been

256
00:11:08,870 --> 00:11:06,560
enthralled by by the launch and then to

257
00:11:11,030 --> 00:11:08,880
actually be sitting in there um as the

258
00:11:13,110 --> 00:11:11,040
main engines lit it was it was actually

259
00:11:15,590 --> 00:11:13,120
uh pretty chaotic the engines don't

260
00:11:17,990 --> 00:11:15,600
don't start up real smoothly

261
00:11:19,590 --> 00:11:18,000
and and then when the solid rocket

262
00:11:21,990 --> 00:11:19,600
boosters lit it was a little bit like

263
00:11:23,990 --> 00:11:22,000

having a mine go off underneath you is

264
00:11:26,470 --> 00:11:24,000
the best way to explain it to at least

265
00:11:27,910 --> 00:11:26,480
as i felt it and

266
00:11:29,910 --> 00:11:27,920
even though we were a night launch it

267
00:11:33,030 --> 00:11:29,920
was just really bright out the windows

268
00:11:34,870 --> 00:11:33,040
for the first uh probably 30 seconds um

269
00:11:36,630 --> 00:11:34,880
so you know i think that was

270
00:11:41,110 --> 00:11:36,640
the thrill that i was most looking

271
00:11:44,790 --> 00:11:43,829
thanks jim next question is for dottie

272
00:11:46,790 --> 00:11:44,800
jim

273
00:11:48,550 --> 00:11:46,800
my name is matthew mercado what has been

274
00:11:53,990 --> 00:11:48,560
the most enjoyable part of your mission

275
00:11:58,550 --> 00:11:56,470
wow that is a tough question because

276
00:12:02,069 --> 00:11:58,560
i've enjoyed a bunch of different things

277
00:12:03,910 --> 00:12:02,079
so far um as you can see floating is is

278
00:12:06,069 --> 00:12:03,920
probably one of my favorite things and i

279
00:12:07,750 --> 00:12:06,079
wish that i could float all the time in

280
00:12:10,230 --> 00:12:07,760
fact i have a three-year-old daughter

281
00:12:13,110 --> 00:12:10,240
back on earth and she asked her

282
00:12:16,069 --> 00:12:13,120
grandparents how does mommy do that

283
00:12:17,670 --> 00:12:16,079
and i hope she's not trying it at home

284
00:12:20,150 --> 00:12:17,680
but floating is one of my favorite

285
00:12:22,389 --> 00:12:20,160
things looking out the window i've had a

286
00:12:25,829 --> 00:12:22,399
chance to watch the crescent moon it's a

287
00:12:27,590 --> 00:12:25,839
waning crescent and uh so i've had a

288
00:12:29,230 --> 00:12:27,600

chance to see it a couple of times

289
00:12:31,430 --> 00:12:29,240
looked at some really cool

290
00:12:33,509 --> 00:12:31,440
constellations and then just being in

291
00:12:35,990 --> 00:12:33,519
the cupola window or any window that you

292
00:12:37,430 --> 00:12:36,000
can get into and looking at the beauty

293
00:12:41,190 --> 00:12:37,440
of the earth

294
00:12:44,470 --> 00:12:43,350
thanks thanks daddy next question is for

295
00:12:47,030 --> 00:12:44,480
dex

296
00:12:49,030 --> 00:12:47,040
hi my name is isabella and my question

297
00:12:53,990 --> 00:12:49,040
is what do you miss the most when you

298
00:12:58,069 --> 00:12:56,230
hi isabella great question i miss my

299
00:12:59,509 --> 00:12:58,079
family the most i think

300
00:13:02,230 --> 00:12:59,519
you know it's uh

301
00:13:04,710 --> 00:13:02,240
we we train a lot for space flight and

302
00:13:07,190 --> 00:13:04,720
our families just like military families

303
00:13:09,269 --> 00:13:07,200
uh put up with a lot of sacrifice

304
00:13:11,110 --> 00:13:09,279
and uh we work we we have to train

305
00:13:12,870 --> 00:13:11,120
really hard and we're gone an awful lot

306
00:13:14,550 --> 00:13:12,880
and we work long hours

307
00:13:16,550 --> 00:13:14,560
and especially the folks here for a long

308
00:13:18,790 --> 00:13:16,560
duration flight they train a lot

309
00:13:21,590 --> 00:13:18,800
overseas in different countries around

310
00:13:23,030 --> 00:13:21,600
the world and they uh they're gone from

311
00:13:24,629 --> 00:13:23,040
their families an awful lot in our and

312
00:13:27,269 --> 00:13:24,639
our families like i said just like

313
00:13:30,310 --> 00:13:27,279

military families and just like you guys

314
00:13:32,550 --> 00:13:30,320
uh sacrifice an awful lot and

315
00:13:38,230 --> 00:13:32,560
and uh i think we we miss them the most

316
00:13:43,030 --> 00:13:40,310
thanks dex uh next question

317
00:13:47,990 --> 00:13:45,750
hi i'm rebecca swanson and

318
00:13:55,269 --> 00:13:48,000
my question is is it hard to sleep in

319
00:13:58,710 --> 00:13:56,150
you know

320
00:14:01,110 --> 00:13:58,720
i i thought it probably would be and the

321
00:14:03,670 --> 00:14:01,120
first night it was my body for some

322
00:14:04,389 --> 00:14:03,680
reason just didn't know what to do uh it

323
00:14:09,110 --> 00:14:04,399
was

324
00:14:10,629 --> 00:14:09,120
of woke up a couple times feeling like i

325
00:14:13,189 --> 00:14:10,639
was falling

326
00:14:13,990 --> 00:14:13,199
which i am technically

327
00:14:15,910 --> 00:14:14,000
but

328
00:14:18,470 --> 00:14:15,920
every night since that first night i

329
00:14:20,389 --> 00:14:18,480
have slept so good um there is no

330
00:14:22,790 --> 00:14:20,399
pressure anywhere on your body while

331
00:14:25,430 --> 00:14:22,800
you're sleeping and so i've woken up a

332
00:14:27,189 --> 00:14:25,440
few times we uh typically will wear

333
00:14:28,870 --> 00:14:27,199
something over our eyes and earplugs

334
00:14:30,710 --> 00:14:28,880
because of the noise and and some light

335
00:14:32,069 --> 00:14:30,720
that gets in and like this morning i

336
00:14:33,590 --> 00:14:32,079
woke up and there were

337
00:14:35,030 --> 00:14:33,600
three people floating over the top of me

338
00:14:37,189 --> 00:14:35,040

and all the lights were on and i had

339
00:14:40,790 --> 00:14:37,199
been sleeping right through it so it's

340
00:14:47,189 --> 00:14:42,150
he's sleeping hard because i'm working

341
00:14:52,710 --> 00:14:49,990
thanks nick's uh questions for dottie

342
00:14:54,949 --> 00:14:52,720
hi my name's david and my question is do

343
00:14:56,790 --> 00:14:54,959
you have lockers or special areas for

344
00:15:01,509 --> 00:14:56,800
storing your clothes and other personal

345
00:15:05,670 --> 00:15:03,509
well david i bet at school that you have

346
00:15:08,550 --> 00:15:05,680
a locker that you keep all your books in

347
00:15:10,550 --> 00:15:08,560
and yes we do we have actually drawers

348
00:15:12,949 --> 00:15:10,560
in the shuttle that we

349
00:15:15,509 --> 00:15:12,959
keep all of our clothing in and

350
00:15:17,509 --> 00:15:15,519
there may be about this big

351
00:15:18,870 --> 00:15:17,519
and about this deep i don't know if you

352
00:15:21,829 --> 00:15:18,880
can see that

353
00:15:24,069 --> 00:15:21,839
and we really tightly roll all of our

354
00:15:25,350 --> 00:15:24,079
shirts and pants so that we can pack in

355
00:15:27,750 --> 00:15:25,360
a whole bunch

356
00:15:29,269 --> 00:15:27,760
and have them for the mission

357
00:15:32,310 --> 00:15:29,279
but that's how we stole all of our

358
00:15:35,350 --> 00:15:32,320
clothes and we each get one

359
00:15:42,069 --> 00:15:35,360
you saw that ctb we get about that space

360
00:15:46,470 --> 00:15:45,110
okay yeah thanks for showing that ctb

361
00:15:49,749 --> 00:15:46,480
thanks dottie

362
00:15:52,230 --> 00:15:49,759
next question is for dex

363
00:15:55,030 --> 00:15:52,240

hi my name is brian long and uh on an

364
00:15:56,870 --> 00:15:55,040
average day in orbit how much space junk

365
00:16:02,389 --> 00:15:56,880
do you see and how do you avoid hitting

366
00:16:05,829 --> 00:16:04,150
well we don't really see

367
00:16:08,069 --> 00:16:05,839
any space junk

368
00:16:10,710 --> 00:16:08,079
anything that we see floating outside

369
00:16:12,790 --> 00:16:10,720
usually comes from the shuttle

370
00:16:14,470 --> 00:16:12,800
you know one of the things we do is we

371
00:16:15,749 --> 00:16:14,480
produce a lot of water with our hydrogen

372
00:16:17,189 --> 00:16:15,759
fuel cells

373
00:16:19,509 --> 00:16:17,199
and occasionally we have to get rid of

374
00:16:21,829 --> 00:16:19,519
the excess water and what we can't give

375
00:16:23,189 --> 00:16:21,839
to the space station we dump overboard

376
00:16:25,430 --> 00:16:23,199
and it comes out of a little spray

377
00:16:27,189 --> 00:16:25,440
nozzle on the side of the of the shuttle

378
00:16:28,949 --> 00:16:27,199
and it looks like a snowstorm because it

379
00:16:30,710 --> 00:16:28,959
instantly turns into ice

380
00:16:33,030 --> 00:16:30,720
and it's it's propelled away from the

381
00:16:34,870 --> 00:16:33,040
shuttle and it's just beautiful with the

382
00:16:36,550 --> 00:16:34,880
light hitting it looks like little water

383
00:16:39,590 --> 00:16:36,560
droplets that are frozen and they become

384
00:16:41,269 --> 00:16:39,600
ice and then and then they uh go away

385
00:16:43,590 --> 00:16:41,279
but uh to answer your question about

386
00:16:45,269 --> 00:16:43,600
space junk we we hope we don't see any

387
00:16:47,509 --> 00:16:45,279
at all there are a lot of people on the

388
00:16:48,470 --> 00:16:47,519

ground who watch that very closely and

389
00:16:50,550 --> 00:16:48,480
they'll let us know if we need to

390
00:16:53,110 --> 00:16:50,560
maneuver maneuver out of the way which

391
00:16:55,030 --> 00:16:53,120
the space station has to do occasionally

392
00:16:56,550 --> 00:16:55,040
but we never get

393
00:16:57,749 --> 00:16:56,560
which the space station has to do

394
00:17:06,230 --> 00:16:57,759
occasionally

395
00:17:10,549 --> 00:17:08,230
thanks thanks dex looks like we may just

396
00:17:13,429 --> 00:17:10,559
have a drop out there for a second uh

397
00:17:15,909 --> 00:17:13,439
next question is for jim

398
00:17:18,390 --> 00:17:15,919
hi my name is olivia and if someone

399
00:17:26,230 --> 00:17:18,400
constantly flying the shuttle or does it

400
00:17:30,390 --> 00:17:27,990
hi olivia that's a beautiful name i have

401
00:17:33,830 --> 00:17:30,400
a niece named olivia

402
00:17:35,510 --> 00:17:33,840
yeah that's a great question we um

403
00:17:37,350 --> 00:17:35,520
one of the things about being in space

404
00:17:39,190 --> 00:17:37,360
is that it's very hard to just hold

405
00:17:40,789 --> 00:17:39,200
still perfectly still you'll notice if i

406
00:17:43,190 --> 00:17:40,799
let go something he's going to move he's

407
00:17:45,830 --> 00:17:43,200
going to twist or turn or something and

408
00:17:47,590 --> 00:17:45,840
so when we're up in orbit the vehicles

409
00:17:49,350 --> 00:17:47,600
that we fly generally we want to hold

410
00:17:51,270 --> 00:17:49,360
them in a certain position like for

411
00:17:52,870 --> 00:17:51,280
example when we're undocked in the

412
00:17:54,549 --> 00:17:52,880
shuttle we're not on the space station

413
00:17:57,029 --> 00:17:54,559

we like to point our payload bay at the

414
00:17:59,029 --> 00:17:57,039
earth to help keep the the payload bay

415
00:18:01,590 --> 00:17:59,039
warm and so

416
00:18:03,350 --> 00:18:01,600
in order to do that we have little jets

417
00:18:05,430 --> 00:18:03,360
all over the vehicle that fire off to

418
00:18:07,510 --> 00:18:05,440
keep the attitude right where we want it

419
00:18:10,310 --> 00:18:07,520
and those jets are flown basically we

420
00:18:12,549 --> 00:18:10,320
tell them uh via computer what we want

421
00:18:15,110 --> 00:18:12,559
the attitude to be and then the computer

422
00:18:17,270 --> 00:18:15,120
flies sort of like an autopilot

423
00:18:18,789 --> 00:18:17,280
flies that attitude so no the there

424
00:18:21,029 --> 00:18:18,799
doesn't really need to be a pilot right

425
00:18:23,669 --> 00:18:21,039
there on the stick although if we need

426
00:18:28,310 --> 00:18:23,679
to we can take over and fly the vehicle

427
00:18:33,350 --> 00:18:30,470
thanks jim unfortunately it looks like

428
00:18:35,990 --> 00:18:33,360
we're out of time uh we have about 600

429
00:18:37,990 --> 00:18:36,000
more questions for you here today but uh

430
00:18:39,750 --> 00:18:38,000
thanks very much for your for your time

431
00:18:41,909 --> 00:18:39,760
today uh good luck with the rest of your

432
00:18:43,909 --> 00:18:41,919
mission we'll be watching you

433
00:18:49,510 --> 00:18:43,919
online here and

434
00:19:03,590 --> 00:18:59,270
thanks dan