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ГАГАР
ЦПК
01
СОЮЗ МС
RUBINS
IVANISHIN
大西

1
00:00:11,030 --> 00:00:09,110
we are happy to see you at the

2
00:00:15,110 --> 00:00:11,040
pre-flight conference of the maine and

3
00:00:19,590 --> 00:00:17,269
49. 4849 would like to remind you that

4
00:00:21,990 --> 00:00:19,600
we just uh finished

5
00:00:24,390 --> 00:00:22,000
the meeting of the commission which

6
00:00:27,509 --> 00:00:24,400
discussed the readiness results of the

7
00:00:29,029 --> 00:00:27,519
prime and backup crew

8
00:00:31,189 --> 00:00:29,039
their readiness for flight and

9
00:00:34,709 --> 00:00:31,199
recommended them to continue pre-flight

10
00:00:36,870 --> 00:00:34,719
preparations at the baikonur cosmodrome

11
00:00:39,590 --> 00:00:36,880
again presenting

12
00:00:41,350 --> 00:00:39,600
the crews whose training we have been

13
00:00:43,910 --> 00:00:41,360

following closely la

14
00:00:46,549 --> 00:00:43,920
including last week as we all know the

15
00:00:49,910 --> 00:00:46,559
flight will be flying the new

16
00:00:50,790 --> 00:00:49,920
modification of soyuz so use ms prime

17
00:00:54,470 --> 00:00:50,800
crew

18
00:00:56,389 --> 00:00:54,480
commander for soyuz is anatoly avenation

19
00:00:59,430 --> 00:00:56,399
russia ross cosmos

20
00:01:00,709 --> 00:00:59,440
flight engineer dakuya ornishi japan

21
00:01:03,830 --> 00:01:00,719
jaxa

22
00:01:05,189 --> 00:01:03,840
flight engineer 2 kathleen robinson u.s

23
00:01:07,190 --> 00:01:05,199
nasa

24
00:01:18,230 --> 00:01:07,200
and the backup crew

25
00:01:20,469 --> 00:01:19,510
as you

26
00:01:22,469 --> 00:01:20,479
know

27
00:01:24,070 --> 00:01:22,479
the launch is

28
00:01:25,030 --> 00:01:24,080
scheduled for

29
00:01:28,950 --> 00:01:25,040
june

30
00:01:30,550 --> 00:01:28,960
24th from a baikonur let's uh proceed to

31
00:01:32,950 --> 00:01:30,560
our press conference

32
00:01:37,270 --> 00:01:32,960
please you're asking actions uh i have a

33
00:01:39,910 --> 00:01:37,280
question from the interfax news agency

34
00:01:42,630 --> 00:01:39,920
mr venetian you will be flying the new

35
00:01:45,830 --> 00:01:42,640
modification of the

36
00:01:47,670 --> 00:01:45,840
soyuz vehicle can you talk to us about

37
00:01:54,310 --> 00:01:47,680
your flight and the emblem for your

38
00:01:58,230 --> 00:01:55,990

hello thank you for your question yes so

39
00:02:02,310 --> 00:01:58,240
we have the emblem and i'll be happy to

40
00:02:07,590 --> 00:02:04,149
here i think that will look better this

41
00:02:10,949 --> 00:02:07,600
way this emblem depict our depicts our

42
00:02:16,229 --> 00:02:10,959
new flight so use ms which will deliver

43
00:02:24,309 --> 00:02:18,949
on the perimeter of the emblem we have

44
00:02:30,869 --> 00:02:26,869
in their native language

45
00:02:34,630 --> 00:02:30,879
oh we also have zero one this is the

46
00:02:40,949 --> 00:02:37,589
and then you have a little a red circle

47
00:02:43,430 --> 00:02:40,959
inside this zero which is the red planet

48
00:02:48,790 --> 00:02:45,830
that means that our flight

49
00:02:49,990 --> 00:02:48,800
is a small but a very important step

50
00:02:52,550 --> 00:02:50,000
towards

51
00:02:54,470 --> 00:02:52,560
flying eventually to this planet maybe

52
00:02:56,630 --> 00:02:54,480
not tomorrow but at some point in the

53
00:02:58,630 --> 00:02:56,640
future

54
00:02:59,990 --> 00:02:58,640
the design of the

55
00:03:01,990 --> 00:03:00,000
patch

56
00:03:03,190 --> 00:03:02,000
has been performed by the spanish

57
00:03:06,949 --> 00:03:03,200
designer

58
00:03:09,270 --> 00:03:06,959
by the name of jorge contest

59
00:03:25,430 --> 00:03:09,280
thank you very much colleagues

60
00:03:28,390 --> 00:03:27,270
tma that was the last vehicle in that

61
00:03:32,149 --> 00:03:28,400
series

62
00:03:34,229 --> 00:03:32,159
now you are looking at uh

63
00:03:36,149 --> 00:03:34,239

the very first flight of the new series

64
00:03:38,550 --> 00:03:36,159
vehicle there will be a lot of checks

65
00:03:39,990 --> 00:03:38,560
and tests in that flight can you tell us

66
00:03:42,229 --> 00:03:40,000
the main

67
00:03:44,149 --> 00:03:42,239
actions that you will be performing

68
00:03:45,430 --> 00:03:44,159
during the approach and also further

69
00:03:47,270 --> 00:03:45,440
work

70
00:03:50,309 --> 00:03:47,280
thank you for your question that is true

71
00:03:53,429 --> 00:03:50,319
that my first flight was performed in

72
00:04:01,190 --> 00:03:53,439
the last vehicle of series 200 as we

73
00:04:06,470 --> 00:04:03,750
we were supposed to fly also the last

74
00:04:09,830 --> 00:04:06,480
flight of series 700

75
00:04:11,190 --> 00:04:09,840
but things changed so user ms was

76
00:04:17,270 --> 00:04:11,200
initially

77
00:04:20,150 --> 00:04:17,280
scheduled to launch on in march of 2016.

78
00:04:23,110 --> 00:04:20,160
due to various technical

79
00:04:27,990 --> 00:04:23,120
reasons and the issues the launch was

80
00:04:33,909 --> 00:04:30,870
than delay the flight of the crew also

81
00:04:37,909 --> 00:04:33,919
the decision was made for us to fly on

82
00:04:43,270 --> 00:04:40,390
how did this come

83
00:04:45,270 --> 00:04:43,280
about this new modification it was

84
00:04:50,230 --> 00:04:45,280
necessary to replace some of the

85
00:05:03,749 --> 00:04:51,909
stations including

86
00:05:07,189 --> 00:05:06,070
is responsible for controlling radio

87
00:05:10,390 --> 00:05:07,199
objects

88
00:05:13,029 --> 00:05:10,400

there were certain difficulties for

89
00:05:15,270 --> 00:05:13,039
supply supplying the analog equipment

90
00:05:18,310 --> 00:05:15,280
for the controller

91
00:05:22,390 --> 00:05:18,320
equipment so therefore it was decided to

92
00:05:25,029 --> 00:05:22,400
perform to design a new modification

93
00:05:27,749 --> 00:05:25,039
the work was done

94
00:05:31,590 --> 00:05:27,759
the preparation work was done also in

95
00:05:36,310 --> 00:05:33,270
mission control

96
00:05:38,629 --> 00:05:36,320
what is the main differences

97
00:05:40,469 --> 00:05:38,639
from between this vehicle and previous

98
00:05:43,189 --> 00:05:40,479
modifications first

99
00:05:45,909 --> 00:05:43,199
we have the so-called yakatea system

100
00:05:49,350 --> 00:05:45,919
which replaces the kovan system

101
00:05:50,870 --> 00:05:49,360
the initial quant system was designed to

102
00:05:53,189 --> 00:05:50,880
send commands

103
00:05:55,830 --> 00:05:53,199
to the vehicle and sometimes to be a

104
00:05:57,590 --> 00:05:55,840
backup for the communication channels

105
00:06:00,469 --> 00:05:57,600
the new system

106
00:06:02,950 --> 00:06:00,479
includes the telemetry capability

107
00:06:05,430 --> 00:06:02,960
as well as being the backup

108
00:06:09,110 --> 00:06:05,440
communication channel

109
00:06:12,230 --> 00:06:09,120
for the station and even file transfer

110
00:06:14,390 --> 00:06:12,240
because the ground infrastructure

111
00:06:16,469 --> 00:06:14,400
has a hard time keeping up with the new

112
00:06:18,469 --> 00:06:16,479
modifications of the vehicle not all of

113
00:06:21,029 --> 00:06:18,479

these functions will be available maybe

114
00:06:23,909 --> 00:06:21,039
oleg will be luckier than us in his

115
00:06:28,150 --> 00:06:26,230
the new equipment for the core system

116
00:06:29,670 --> 00:06:28,160
has been installed as well this is the

117
00:06:32,469 --> 00:06:29,680
equipment that

118
00:06:34,550 --> 00:06:32,479
is designed to support the docking

119
00:06:36,469 --> 00:06:34,560
approach and docking of the vehicle to

120
00:06:39,990 --> 00:06:36,479
the station

121
00:06:42,390 --> 00:06:40,000
we have new equipment things are easier

122
00:06:44,710 --> 00:06:42,400
in terms of many components being

123
00:06:46,710 --> 00:06:44,720
manufactured in russia

124
00:06:49,110 --> 00:06:46,720
we have only half the number of the

125
00:06:51,189 --> 00:06:49,120
antennas that are necessary to support a

126
00:06:52,550 --> 00:06:51,199
robust functionality now we only have

127
00:06:54,950 --> 00:06:52,560
three

128
00:06:57,270 --> 00:06:54,960
we also introduced the satellite

129
00:06:59,589 --> 00:06:57,280
navigation equipment to the

130
00:07:00,830 --> 00:06:59,599
functionality of the system

131
00:07:04,230 --> 00:07:00,840
and so

132
00:07:06,950 --> 00:07:04,240
we use the satellites for calm

133
00:07:10,309 --> 00:07:06,960
so it's a very self-sufficient system

134
00:07:12,390 --> 00:07:10,319
with a course with

135
00:07:16,309 --> 00:07:12,400
gps and

136
00:07:19,350 --> 00:07:16,319
it allows us to calculate the uh burn

137
00:07:21,350 --> 00:07:19,360
magnitude and support the approach and

138
00:07:24,710 --> 00:07:21,360

docking

139
00:07:28,309 --> 00:07:24,720
the transmitter has changed as well

140
00:07:30,230 --> 00:07:28,319
the television system transmitter

141
00:07:34,390 --> 00:07:30,240
it's

142
00:07:35,749 --> 00:07:34,400
which is very important

143
00:07:38,870 --> 00:07:35,759
while performing

144
00:07:40,870 --> 00:07:38,880
the final approach and docking at the

145
00:07:44,469 --> 00:07:40,880
eight kilometers

146
00:07:47,909 --> 00:07:44,479
range we can perform the vehicle to

147
00:07:52,390 --> 00:07:50,790
sending the coordinates to the vehicle

148
00:07:55,110 --> 00:07:52,400
of various

149
00:07:57,029 --> 00:07:55,120
satellites the stator vector of the

150
00:07:58,390 --> 00:07:57,039
station that we receive from the

151
00:08:00,629 --> 00:07:58,400
navigation system

152
00:08:02,070 --> 00:08:00,639
of the station

153
00:08:05,909 --> 00:08:02,080
and that

154
00:08:09,510 --> 00:08:05,919
all is sent to soyuz and soyuz has its

155
00:08:11,990 --> 00:08:09,520
own state vector also transmitted to it

156
00:08:13,589 --> 00:08:12,000
by the satellites so that allows us to

157
00:08:15,909 --> 00:08:13,599
increase the

158
00:08:19,270 --> 00:08:15,919
precision of

159
00:08:21,430 --> 00:08:19,280
relative positions of the two vehicles

160
00:08:23,029 --> 00:08:21,440
we also have

161
00:08:25,749 --> 00:08:23,039
the new

162
00:08:28,150 --> 00:08:25,759
digital control

163
00:08:30,869 --> 00:08:28,160

unit for the attitude control it's

164
00:08:36,469 --> 00:08:30,879
digital versus analog from previous

165
00:08:42,630 --> 00:08:39,350
the older functionality allowed us to

166
00:08:45,750 --> 00:08:42,640
build the three axis attitude by

167
00:08:47,269 --> 00:08:45,760
performing a number of

168
00:08:50,630 --> 00:08:47,279
double axis

169
00:08:54,389 --> 00:08:50,640
rotations and translations now

170
00:08:57,590 --> 00:08:54,399
we have three axes that allow us to

171
00:09:00,870 --> 00:08:59,269
and another important

172
00:09:03,269 --> 00:09:00,880
change

173
00:09:04,550 --> 00:09:03,279
was related to

174
00:09:06,829 --> 00:09:04,560
the

175
00:09:10,790 --> 00:09:06,839
final approach

176
00:09:14,310 --> 00:09:10,800
thrusters we used to have two control

177
00:09:17,269 --> 00:09:14,320
loops and uh two manifolds which were

178
00:09:18,470 --> 00:09:17,279
independent and not interchangeable

179
00:09:20,829 --> 00:09:18,480
at this time

180
00:09:23,829 --> 00:09:20,839
with the new modification

181
00:09:26,150 --> 00:09:23,839
they approach sensors

182
00:09:29,190 --> 00:09:26,160
approach thrusters have been eliminated

183
00:09:31,670 --> 00:09:29,200
but instead we have two robust and full

184
00:09:34,710 --> 00:09:31,680
functionality manifolds that support all

185
00:09:36,870 --> 00:09:34,720
these functions this decision was made

186
00:09:42,070 --> 00:09:36,880
to

187
00:09:43,030 --> 00:09:42,080
precise with the attitude control and

188
00:09:48,829 --> 00:09:43,040

also

189
00:09:54,150 --> 00:09:52,230
system for both translation and rotation

190
00:09:56,430 --> 00:09:54,160
if you remember

191
00:09:59,590 --> 00:09:56,440
the crew for

192
00:10:01,430 --> 00:09:59,600
tma-19m which we were back up for

193
00:10:05,670 --> 00:10:01,440
while docking to the station had the

194
00:10:11,030 --> 00:10:09,430
this signal the false signal that

195
00:10:13,590 --> 00:10:11,040
was received by the vehicle that the

196
00:10:17,430 --> 00:10:13,600
thrusters were not functioning nominally

197
00:10:22,710 --> 00:10:20,069
back away from the station so

198
00:10:24,069 --> 00:10:22,720
commander malenchenko had to manually

199
00:10:26,150 --> 00:10:24,079
override

200
00:10:27,190 --> 00:10:26,160
that

201
00:10:29,910 --> 00:10:27,200
function

202
00:10:31,750 --> 00:10:29,920
now our vehicle will not repeat this

203
00:10:32,389 --> 00:10:31,760
situation

204
00:10:38,550 --> 00:10:32,399
the

205
00:10:46,069 --> 00:10:38,560
approach thrusters allows us to

206
00:10:50,069 --> 00:10:48,870
also this will be very helpful in case

207
00:10:53,829 --> 00:10:50,079
we need

208
00:10:58,150 --> 00:10:53,839
uh to perform a quick quick descent

209
00:11:01,350 --> 00:10:59,509
um

210
00:11:03,829 --> 00:11:01,360
lines for that so

211
00:11:06,310 --> 00:11:03,839
to summarize our vehicle became more

212
00:11:10,230 --> 00:11:06,320
interesting more reliable i'm not a

213
00:11:11,350 --> 00:11:10,240

specialist but it looks

214
00:11:13,190 --> 00:11:11,360
the the

215
00:11:15,269 --> 00:11:13,200
new modification of the vehicle looks

216
00:11:17,750 --> 00:11:15,279
exactly the same as the old one but the

217
00:11:20,790 --> 00:11:17,760
internal workings of it have changed

218
00:11:22,870 --> 00:11:20,800
significantly and for the better

219
00:11:26,150 --> 00:11:22,880
we will have various tests and flights

220
00:11:28,550 --> 00:11:26,160
such as a manual approach

221
00:11:31,269 --> 00:11:28,560
where we will be using both the discrete

222
00:11:33,509 --> 00:11:31,279
and the analog mode to test the various

223
00:11:36,790 --> 00:11:33,519
manifolds of the thrusters we will be

224
00:11:39,590 --> 00:11:36,800
using the rotational control

225
00:11:41,750 --> 00:11:39,600
handle and translational control handle

226
00:11:49,509 --> 00:11:41,760
to see how the vehicle responds to

227
00:11:59,750 --> 00:11:51,030
japanese

228
00:12:06,230 --> 00:12:03,269
as we have heard in great detail

229
00:12:08,829 --> 00:12:06,240
for the next soyuz the flight the the

230
00:12:11,509 --> 00:12:08,839
vehicle modification will be completely

231
00:12:14,230 --> 00:12:11,519
different have you had any difficulties

232
00:12:15,910 --> 00:12:14,240
while preparing on training do you have

233
00:12:18,310 --> 00:12:15,920
any interesting stories that you could

234
00:12:21,030 --> 00:12:18,320
share also

235
00:12:42,069 --> 00:12:21,040
how do you feel

236
00:12:46,550 --> 00:12:44,790
especially uh the short duration flight

237
00:12:50,790 --> 00:12:46,560
versus long duration flight that would

238
00:12:55,509 --> 00:12:53,190

thank you thank you for your question

239
00:12:57,350 --> 00:12:55,519
first question

240
00:12:59,509 --> 00:12:57,360
was

241
00:13:01,269 --> 00:12:59,519
related to the difficulties during

242
00:13:03,190 --> 00:13:01,279
training

243
00:13:06,389 --> 00:13:03,200
it is true that

244
00:13:09,269 --> 00:13:06,399
are we trained

245
00:13:10,150 --> 00:13:09,279
with the previous crew

246
00:13:12,790 --> 00:13:10,160
while

247
00:13:15,829 --> 00:13:12,800
preparing for the for flying on the old

248
00:13:19,430 --> 00:13:15,839
soyuz modification then things changed

249
00:13:21,750 --> 00:13:19,440
and we were training to fly on the new

250
00:13:23,750 --> 00:13:21,760
mod so use ms

251
00:13:24,550 --> 00:13:23,760
now the systems are different a lot of

252
00:13:25,509 --> 00:13:24,560
them

253
00:13:28,949 --> 00:13:25,519
but

254
00:13:33,269 --> 00:13:28,959
from the crew standpoint the difference

255
00:13:36,790 --> 00:13:35,269
again there are differences but not that

256
00:13:38,389 --> 00:13:36,800
great

257
00:13:39,910 --> 00:13:38,399
as far as the crew is concerned so the

258
00:13:42,470 --> 00:13:39,920
training

259
00:13:46,150 --> 00:13:42,480
was successful

260
00:13:48,629 --> 00:13:46,160
we trained in april and in may and we

261
00:13:53,509 --> 00:13:48,639
worked hard we passed our tests very

262
00:13:53,519 --> 00:13:57,269
grades good results

263
00:14:04,310 --> 00:13:58,629

so

264
00:14:12,870 --> 00:14:07,990
i am very glad that we passed our tests

265
00:14:15,030 --> 00:14:12,880
and we are fully prepared for flight

266
00:14:20,069 --> 00:14:15,040
space flight has been my dream since i

267
00:14:29,110 --> 00:14:23,509
every stage of our flight will be

268
00:14:29,120 --> 00:14:32,470
that's all i had thank you

269
00:14:32,480 --> 00:14:51,590
thank you very much next question please

270
00:14:55,350 --> 00:14:53,829
did not exactly decide to become an

271
00:14:58,069 --> 00:14:55,360
astronaut

272
00:15:00,150 --> 00:14:58,079
it's it was more like a dream when i was

273
00:15:01,829 --> 00:15:00,160
five or six years old after that i

274
00:15:04,949 --> 00:15:01,839
decided

275
00:15:08,470 --> 00:15:04,959
to become a biologist

276
00:15:12,790 --> 00:15:08,480
it was very interesting for me to see

277
00:15:15,269 --> 00:15:12,800
how our immune system reacts to no

278
00:15:17,509 --> 00:15:15,279
problems with viruses

279
00:15:19,509 --> 00:15:17,519
attacking the body

280
00:15:22,949 --> 00:15:19,519
i had a real laboratory i was a

281
00:15:22,959 --> 00:15:37,110
my a friend of mine noticed

282
00:15:40,710 --> 00:15:38,870
four or five years and so she found out

283
00:15:42,150 --> 00:15:40,720
about that and she said maybe you should

284
00:15:43,509 --> 00:15:42,160
try

285
00:15:45,269 --> 00:15:43,519
and i said

286
00:15:49,350 --> 00:15:45,279
no

287
00:16:06,949 --> 00:15:49,360
for me i'm pretty sure

288
00:16:11,110 --> 00:16:09,030

to it would be good to have a scientist

289
00:16:14,069 --> 00:16:11,120
on board because we could perform a lot

290
00:16:18,069 --> 00:16:14,079
of scientific experiments

291
00:16:19,590 --> 00:16:18,079
so we need pilots and we need

292
00:16:21,509 --> 00:16:19,600
various specialists and to have

293
00:16:23,829 --> 00:16:21,519
scientists on board so i'm glad that i

294
00:16:25,990 --> 00:16:23,839
decided to apply

295
00:16:28,629 --> 00:16:26,000
thank you so much next question

296
00:16:30,470 --> 00:16:28,639
amiri newspaper for mr

297
00:16:33,189 --> 00:16:30,480
anishi

298
00:16:35,509 --> 00:16:33,199
the token for the flight is the toy

299
00:16:37,430 --> 00:16:35,519
bearer of your daughter

300
00:16:39,350 --> 00:16:37,440
why did you decide

301
00:16:40,470 --> 00:16:39,360
to use that

302
00:16:42,310 --> 00:16:40,480
and

303
00:16:45,110 --> 00:16:42,320
how do you feel about

304
00:16:47,749 --> 00:16:45,120
flying with a

305
00:16:49,350 --> 00:16:47,759
toy that comes from your daughter

306
00:16:54,790 --> 00:16:49,360
also for the commander what do you think

307
00:16:57,829 --> 00:16:56,389
token that you chose

308
00:16:59,990 --> 00:16:57,839
yes thank you

309
00:17:02,389 --> 00:17:00,000
for the question it's true that we have

310
00:17:05,829 --> 00:17:02,399
a toy here

311
00:17:08,309 --> 00:17:05,839
from my daughter that's her favorite

312
00:17:11,909 --> 00:17:10,949
she gave it to me

313
00:17:18,309 --> 00:17:11,919

and

314
00:17:22,150 --> 00:17:18,319
to select

315
00:17:25,510 --> 00:17:23,669
my daughter

316
00:17:29,909 --> 00:17:25,520
is also excited

317
00:17:30,830 --> 00:17:29,919
that her toy bear will fly in space

318
00:17:32,789 --> 00:17:30,840
very

319
00:17:35,909 --> 00:17:32,799
soon i

320
00:17:38,950 --> 00:17:35,919
wanted to show it to you today but

321
00:17:41,190 --> 00:17:38,960
unfortunately it's already

322
00:17:42,789 --> 00:17:41,200
quarantined

323
00:17:45,669 --> 00:17:42,799
to prepare for

324
00:17:49,190 --> 00:17:45,679
its flight and so i cannot show it to

325
00:17:51,590 --> 00:17:49,200
you today i apologize

326
00:17:54,150 --> 00:17:51,600
traditionally

327
00:17:57,110 --> 00:17:54,160
the indicator of weightlessness is a toy

328
00:17:58,830 --> 00:17:57,120
from a child of one of the crew members

329
00:18:02,870 --> 00:17:58,840
now

330
00:18:05,270 --> 00:18:02,880
um doesn't have any kids my son is 23

331
00:18:06,950 --> 00:18:05,280
years old and his toys are very big and

332
00:18:09,110 --> 00:18:06,960
heavy

333
00:18:11,029 --> 00:18:09,120
and more importantly he won't give them

334
00:18:13,190 --> 00:18:11,039
to me so

335
00:18:14,549 --> 00:18:13,200
we are very lucky to have

336
00:18:16,870 --> 00:18:14,559
our colleague

337
00:18:22,070 --> 00:18:16,880
takuya-san who

338
00:18:26,150 --> 00:18:24,630

interface news agency my question is for

339
00:18:28,630 --> 00:18:26,160
all crew members

340
00:18:30,390 --> 00:18:28,640
could you tell us about the experiments

341
00:18:31,430 --> 00:18:30,400
that you plan to perform on board of the

342
00:18:34,870 --> 00:18:31,440
ss

343
00:18:38,230 --> 00:18:34,880
yes of course we are planning to perform

344
00:18:45,350 --> 00:18:38,240
a wide science program on board some of

345
00:18:50,070 --> 00:18:48,070
technical experiment for example which

346
00:18:54,230 --> 00:18:50,080
is intended to

347
00:18:57,909 --> 00:18:54,240
study the response of breaking up the

348
00:19:04,310 --> 00:19:01,590
with tiny microscopic particles

349
00:19:06,630 --> 00:19:04,320
to obtain information about their decay

350
00:19:13,350 --> 00:19:06,640
and their distribution

351
00:19:18,390 --> 00:19:16,070
elements of the vehicles that have spent

352
00:19:20,870 --> 00:19:18,400
a significant time on

353
00:19:25,190 --> 00:19:20,880
in spaces such as solar rays this

354
00:19:27,590 --> 00:19:25,200
technology allows us to use a dozen

355
00:19:29,669 --> 00:19:27,600
sensors that are installed internally to

356
00:19:32,310 --> 00:19:29,679
the service module

357
00:19:36,310 --> 00:19:32,320
these are the electric sensors that

358
00:19:39,990 --> 00:19:36,320
register the impact locations for the

359
00:19:42,470 --> 00:19:40,000
micro meter rights and the particles

360
00:19:45,190 --> 00:19:42,480
against the

361
00:19:47,750 --> 00:19:45,200
insulation of the vehicle and it allows

362
00:19:50,390 --> 00:19:47,760
us to also study the possible

363
00:19:57,029 --> 00:19:50,400

penetration locations

364
00:20:00,070 --> 00:19:57,909
see

365
00:20:02,549 --> 00:20:00,080
how things function nominally on the

366
00:20:04,710 --> 00:20:02,559
board and also

367
00:20:06,789 --> 00:20:04,720
see

368
00:20:10,710 --> 00:20:06,799
how we can fight

369
00:20:12,230 --> 00:20:10,720
possible loss of pressure integrity

370
00:20:14,230 --> 00:20:12,240
one of the functions that allows us to

371
00:20:17,430 --> 00:20:14,240
do that is

372
00:20:22,390 --> 00:20:19,909
we will be performing the arbiter

373
00:20:24,310 --> 00:20:22,400
technical experiment that will allow us

374
00:20:30,950 --> 00:20:24,320
to study

375
00:20:35,270 --> 00:20:33,270
in order to increase the efficiency of

376
00:20:37,270 --> 00:20:35,280
electrical generation on borealis so

377
00:20:41,830 --> 00:20:37,280
right now the solar rays are tracking

378
00:20:43,590 --> 00:20:41,840
the sun and only use the direct solar

379
00:20:46,630 --> 00:20:43,600
light but it is possible to use the

380
00:20:49,590 --> 00:20:46,640
reflected light as well

381
00:20:51,750 --> 00:20:49,600
so we will be rotating this solar arrays

382
00:20:54,230 --> 00:20:51,760
at some point specifically to point at

383
00:20:59,350 --> 00:20:56,789
and see how much electricity we can

384
00:21:00,630 --> 00:20:59,360
generate by using the reflected

385
00:21:05,110 --> 00:21:00,640
light

386
00:21:08,549 --> 00:21:07,669
range of functionality for the solar

387
00:21:12,950 --> 00:21:08,559
rays

388
00:21:16,870 --> 00:21:12,960

now biopolymer experiment is directed to

389
00:21:19,510 --> 00:21:16,880
creating new polymer materials that

390
00:21:21,830 --> 00:21:19,520
are capable uh

391
00:21:24,149 --> 00:21:21,840
of withstanding the biological uh in

392
00:21:25,990 --> 00:21:24,159
disintegration

393
00:21:36,390 --> 00:21:26,000
some of the equipment external to the

394
00:21:40,470 --> 00:21:39,190
where there's bacteria and

395
00:21:43,230 --> 00:21:40,480
fungus

396
00:21:46,310 --> 00:21:43,240
growing externally which leads to the

397
00:21:49,750 --> 00:21:46,320
biodegradation of polymer coatings

398
00:21:55,830 --> 00:21:52,710
i'm guessing from the microorganisms

399
00:21:58,870 --> 00:21:55,840
that are toxic to humans so we are

400
00:22:00,870 --> 00:21:58,880
trying to devise develop such a

401
00:22:02,950 --> 00:22:00,880
structure for the

402
00:22:05,510 --> 00:22:02,960
polymers that are

403
00:22:07,830 --> 00:22:05,520
not susceptible to this

404
00:22:11,990 --> 00:22:07,840
influence we also have the vizier

405
00:22:14,230 --> 00:22:12,000
experiment and vizier you

406
00:22:17,430 --> 00:22:14,240
equipment is infrared

407
00:22:20,230 --> 00:22:17,440
equipment that allows us to receive the

408
00:22:21,110 --> 00:22:20,240
information in real time on the location

409
00:22:23,190 --> 00:22:21,120
and

410
00:22:24,789 --> 00:22:23,200
movement of the crew members

411
00:22:27,830 --> 00:22:24,799
as well as the equipment and board of

412
00:22:29,350 --> 00:22:27,840
the iss we the equipment or a person

413
00:22:32,630 --> 00:22:29,360

wears um

414
00:22:35,590 --> 00:22:32,640
a special infrared sensor

415
00:22:38,310 --> 00:22:35,600
and a very sensor is located uh

416
00:22:40,230 --> 00:22:38,320
across the iss it measures the movement

417
00:22:41,909 --> 00:22:40,240
and tracks the movement that's important

418
00:22:44,070 --> 00:22:41,919
for various situations such as of

419
00:22:46,149 --> 00:22:44,080
nominal situations or extrovertical

420
00:22:48,870 --> 00:22:46,159
activities

421
00:22:51,830 --> 00:22:51,029
u stands for ultrasound

422
00:22:53,430 --> 00:22:51,840
is

423
00:22:57,029 --> 00:22:53,440
intended

424
00:22:59,510 --> 00:22:57,039
not for determining the coordinates but

425
00:23:02,390 --> 00:22:59,520
mostly for determining the

426
00:23:06,710 --> 00:23:02,400
rotational angles for very for various

427
00:23:06,720 --> 00:23:09,590
still

428
00:23:14,870 --> 00:23:13,350
that allows us to build on this sigma

429
00:23:16,789 --> 00:23:14,880
equipment

430
00:23:19,350 --> 00:23:16,799
which gives us the information of where

431
00:23:21,350 --> 00:23:19,360
where we're flying

432
00:23:23,270 --> 00:23:21,360
using this equipment the crew

433
00:23:24,390 --> 00:23:23,280
gets the ability

434
00:23:25,669 --> 00:23:24,400
to

435
00:23:28,630 --> 00:23:25,679
determine

436
00:23:31,270 --> 00:23:28,640
the coordinates

437
00:23:32,070 --> 00:23:31,280
of the locations that we are performing

438
00:23:34,710 --> 00:23:32,080

the

439
00:23:36,710 --> 00:23:34,720
photo and video imagery for

440
00:23:40,470 --> 00:23:36,720
on the one hand and sometimes it's very

441
00:23:42,390 --> 00:23:40,480
difficult especially if there are no

442
00:23:45,669 --> 00:23:42,400
specific points that would be very

443
00:23:48,230 --> 00:23:45,679
characteristic for a certain location

444
00:23:50,789 --> 00:23:48,240
this equipment

445
00:23:53,350 --> 00:23:50,799
allows us to

446
00:23:57,110 --> 00:23:53,360
if we know the station coordinates and

447
00:23:59,269 --> 00:23:57,120
the angle of the lens will

448
00:24:00,630 --> 00:23:59,279
allow us to

449
00:24:02,230 --> 00:24:00,640
calculate

450
00:24:06,870 --> 00:24:02,240
the coordinates

451
00:24:11,110 --> 00:24:09,350
yeah it's also voice command activated

452
00:24:12,789 --> 00:24:11,120
as well that's one of the functions

453
00:24:15,350 --> 00:24:12,799
there is another interesting experiment

454
00:24:21,430 --> 00:24:16,830
which

455
00:24:23,750 --> 00:24:21,440
is designed to study the gas

456
00:24:26,230 --> 00:24:23,760
phase distribution or rather

457
00:24:28,789 --> 00:24:26,240
understanding the atmosphere of the ss

458
00:24:32,310 --> 00:24:28,799
the station has its own atmosphere which

459
00:24:34,950 --> 00:24:32,320
is built

460
00:24:36,310 --> 00:24:34,960
based on the the results of

461
00:24:40,310 --> 00:24:36,320
station life

462
00:24:53,350 --> 00:24:42,789
in order to determine

463
00:24:55,669 --> 00:24:54,630

so we will

464
00:24:57,510 --> 00:24:55,679
study

465
00:25:03,830 --> 00:24:57,520
certain events and how they impact the

466
00:25:07,830 --> 00:25:05,430
such as during the extra vehicle

467
00:25:09,269 --> 00:25:07,840
activity or approach and docking

468
00:25:11,590 --> 00:25:09,279
i have a bunch of other interesting

469
00:25:15,909 --> 00:25:11,600
experiments if you would like to hear

470
00:25:15,919 --> 00:25:20,470
next question please

471
00:25:24,230 --> 00:25:22,470
television

472
00:25:27,269 --> 00:25:24,240
company

473
00:25:29,909 --> 00:25:27,279
you have a lot of work

474
00:25:33,430 --> 00:25:29,919
but as a person

475
00:25:35,350 --> 00:25:33,440
who always wanted to fly in space

476
00:25:37,909 --> 00:25:35,360
what would you what would be the first

477
00:25:39,750 --> 00:25:37,919
thing that you would do

478
00:26:22,390 --> 00:25:39,760
and also if you could repeat that in the

479
00:26:22,400 --> 00:26:31,430
foreign

480
00:26:36,310 --> 00:26:33,510
my answer is

481
00:26:39,350 --> 00:26:36,320
that space flight it has been

482
00:26:41,990 --> 00:26:39,360
my dream since childhood

483
00:26:43,750 --> 00:26:42,000
and my goal right now is to

484
00:26:45,669 --> 00:26:43,760
perform

485
00:26:48,149 --> 00:26:45,679
all the tasks and achieve all the

486
00:26:49,990 --> 00:26:48,159
objectives successfully

487
00:26:52,710 --> 00:26:50,000
for example

488
00:26:58,789 --> 00:26:52,720

our flight program

489
00:27:04,950 --> 00:27:02,470
we will receive several cargo vehicle

490
00:27:07,110 --> 00:27:04,960
flights coming from different countries

491
00:27:10,070 --> 00:27:07,120
such as the us russia

492
00:27:10,080 --> 00:27:14,230
and so

493
00:27:29,669 --> 00:27:18,149
we will be using the robotic arm

494
00:27:35,990 --> 00:27:32,950
we will also perform a number of evas

495
00:27:40,950 --> 00:27:36,000
and we don't know who will be doing what

496
00:27:47,510 --> 00:27:44,070
and of course on board

497
00:27:48,870 --> 00:27:47,520
there are a lot of experiments right now

498
00:27:51,350 --> 00:27:48,880
so

499
00:27:52,950 --> 00:27:51,360
i hope that

500
00:27:55,190 --> 00:27:52,960
the results

501
00:27:57,269 --> 00:27:55,200
of our flight

502
00:27:59,430 --> 00:27:57,279
will be very beneficial for science in

503
00:28:02,710 --> 00:27:59,440
general

504
00:28:03,750 --> 00:28:02,720
um japanese news agency kyodo

505
00:28:07,110 --> 00:28:03,760
um

506
00:28:07,990 --> 00:28:07,120
my question is to only son

507
00:28:08,789 --> 00:28:08,000
japan

508
00:28:12,149 --> 00:28:08,799
you

509
00:28:13,510 --> 00:28:12,159
will become the 11th astronaut

510
00:28:14,389 --> 00:28:13,520
from japan

511
00:28:18,950 --> 00:28:14,399
and

512
00:28:20,389 --> 00:28:18,960
but

513
00:28:24,070 --> 00:28:20,399

how do you think

514
00:28:26,710 --> 00:28:24,080
how can you contribute how can japan

515
00:29:22,789 --> 00:28:26,720
contribute to iss mission

516
00:29:22,799 --> 00:29:39,350
my answer was as follows

517
00:29:43,590 --> 00:29:40,549
we

518
00:29:47,590 --> 00:29:43,600
designed a very good equipment such as

519
00:29:52,470 --> 00:29:47,600
htv the japanese cargo vehicle

520
00:29:54,870 --> 00:29:52,480
as well as a japanese module we have

521
00:29:57,350 --> 00:29:54,880
unique equipment

522
00:30:02,789 --> 00:29:57,360
for example earlog

523
00:30:05,510 --> 00:30:04,470
thanks to that

524
00:30:07,430 --> 00:30:05,520
we

525
00:30:09,909 --> 00:30:07,440
can perform

526
00:30:15,669 --> 00:30:12,950
for the cosmos the airlock allows us to

527
00:30:19,510 --> 00:30:18,070
the technology experiments in outside

528
00:30:22,549 --> 00:30:19,520
the station

529
00:30:24,630 --> 00:30:22,559
by using these unique technologies japan

530
00:30:27,190 --> 00:30:24,640
and japanese crew members continue

531
00:30:35,990 --> 00:30:27,200
working very successfully on board of

532
00:30:39,750 --> 00:30:37,830
dear cosmonauts and astronauts my

533
00:30:42,230 --> 00:30:39,760
question is for everybody

534
00:30:45,669 --> 00:30:42,240
mostly for those who have flown before

535
00:30:49,750 --> 00:30:48,070
what are you lacking most

536
00:30:53,590 --> 00:30:49,760
on board of the isis and what do you

537
00:30:59,110 --> 00:30:53,600
think you will be missing the most

538
00:31:04,470 --> 00:31:02,070

of course we miss our families the most

539
00:31:06,310 --> 00:31:04,480
but we are lucky in a way because

540
00:31:08,149 --> 00:31:06,320
our flight will only be

541
00:31:10,630 --> 00:31:08,159
four months long so it's going to be

542
00:31:14,070 --> 00:31:10,640
easier for us

543
00:31:20,149 --> 00:31:15,990
i heard that the best

544
00:31:21,190 --> 00:31:20,159
part of space flight for rookie is to

545
00:31:23,669 --> 00:31:21,200
see

546
00:31:25,029 --> 00:31:23,679
earth we have cupola we have a lot of

547
00:31:27,590 --> 00:31:25,039
windows

548
00:31:33,750 --> 00:31:27,600
and we can see our planet

549
00:31:37,430 --> 00:31:35,110
personally

550
00:31:40,710 --> 00:31:37,440
for me it's very interesting

551
00:31:41,909 --> 00:31:40,720
to see the earth from space

552
00:31:43,750 --> 00:31:41,919
because

553
00:31:47,029 --> 00:31:43,760
everybody who came back

554
00:31:49,350 --> 00:31:47,039
from their expeditions

555
00:31:52,710 --> 00:31:49,360
says that the earth looks very beautiful

556
00:31:55,590 --> 00:31:52,720
from space so i'm very excited

557
00:32:14,950 --> 00:31:55,600
to soon be able to see

558
00:32:20,710 --> 00:32:17,909
will be interesting to do scientific

559
00:32:21,750 --> 00:32:20,720
research that's very important to me

560
00:32:25,590 --> 00:32:21,760
escape

561
00:32:27,269 --> 00:32:25,600
and takuya we're saying it's true

562
00:32:30,230 --> 00:32:27,279
i love

563
00:32:33,750 --> 00:32:30,240

seeing the earth

564
00:32:37,669 --> 00:32:34,630
all right

565
00:32:39,990 --> 00:32:37,679
agree seeing the earth is mesmerizing

566
00:32:43,110 --> 00:32:40,000
it's something that you cannot describe

567
00:32:45,190 --> 00:32:43,120
even if you use any of these wonderful

568
00:32:48,470 --> 00:32:45,200
cameras

569
00:32:52,389 --> 00:32:48,480
what we would miss of course is our

570
00:32:56,389 --> 00:32:52,399
family's gravity and the smell of fresh

571
00:33:01,350 --> 00:32:58,630
the question was what are we going to

572
00:33:04,389 --> 00:33:01,360
miss the most

573
00:33:06,630 --> 00:33:04,399
i would say french cheese for me because

574
00:33:09,430 --> 00:33:06,640
the food on board of the ss is alright

575
00:33:21,190 --> 00:33:09,440
but for a french person it would be too

576
00:33:21,200 --> 00:33:30,950
thank you japanese

577
00:33:35,110 --> 00:33:32,870
i know you're going to be very busy in

578
00:33:37,430 --> 00:33:35,120
space but if you have

579
00:33:40,630 --> 00:33:37,440
free time what are you planning to do

580
00:33:42,950 --> 00:33:40,640
maybe cook something for everybody or do

581
00:33:45,190 --> 00:33:42,960
something else

582
00:33:46,789 --> 00:33:45,200
all right well thanks for the question

583
00:33:49,190 --> 00:33:46,799
based on my previous space flight

584
00:33:51,830 --> 00:33:49,200
experience i can tell you that all of

585
00:33:53,430 --> 00:33:51,840
the free time i was busy taking pictures

586
00:33:55,110 --> 00:33:53,440
of the earth

587
00:33:59,029 --> 00:33:55,120
process

588
00:34:01,029 --> 00:33:59,039

time

589
00:34:02,789 --> 00:34:01,039
and you try to

590
00:34:04,789 --> 00:34:02,799
photograph

591
00:34:08,069 --> 00:34:04,799
earth you try to understand what you

592
00:34:10,470 --> 00:34:08,079
photographed you edit the pictures

593
00:34:13,430 --> 00:34:10,480
and despite the fact that there is

594
00:34:16,069 --> 00:34:13,440
special time allocated

595
00:34:19,190 --> 00:34:16,079
for arrest and recreation

596
00:34:21,430 --> 00:34:19,200
all of my free time was spent still

597
00:34:22,950 --> 00:34:21,440
photographing the earth although i would

598
00:34:25,190 --> 00:34:22,960
have i had never been an avid

599
00:34:26,869 --> 00:34:25,200
photographer or anything

600
00:34:28,790 --> 00:34:26,879
once i found myself in such a unique

601
00:34:31,109 --> 00:34:28,800
location that was something that i

602
00:34:32,790 --> 00:34:31,119
really enjoyed doing

603
00:34:34,629 --> 00:34:32,800
that is correct

604
00:34:39,349 --> 00:34:34,639
not much free time

605
00:34:40,950 --> 00:34:39,359
in space but i would say that

606
00:34:44,230 --> 00:34:40,960
it's strange but i think it would be

607
00:34:45,589 --> 00:34:44,240
interesting to do science experiments i

608
00:34:48,710 --> 00:34:45,599
plan

609
00:34:53,669 --> 00:34:48,720
to do science even in my free time

610
00:34:56,790 --> 00:34:54,710
take

611
00:34:59,670 --> 00:34:56,800
pictures and

612
00:35:02,310 --> 00:34:59,680
video for students of schools and

613
00:35:03,349 --> 00:35:02,320

universities to show how we live in

614
00:35:05,270 --> 00:35:03,359
space

615
00:35:07,910 --> 00:35:05,280
how to perform how we perform

616
00:35:10,390 --> 00:35:07,920
experiments

617
00:35:11,990 --> 00:35:10,400
how we do a lot of interesting things in

618
00:35:14,870 --> 00:35:12,000
space

619
00:35:18,390 --> 00:35:14,880
in the absence of gravity

620
00:35:22,470 --> 00:35:18,400
expedition our expedition will be

621
00:35:28,829 --> 00:35:25,750
only four months so i think that

622
00:35:31,910 --> 00:35:28,839
all free time of which we won't have

623
00:35:38,550 --> 00:35:31,920
much but if we do have free time all of

624
00:35:42,150 --> 00:35:39,990
one two two

625
00:35:45,109 --> 00:35:42,160
i look forward to just the simple things

626
00:35:46,950 --> 00:35:45,119
everything that happens eating sleeping

627
00:35:51,190 --> 00:35:46,960
working in space watching the earth

628
00:35:54,950 --> 00:35:53,270
thank you very much we have time for two

629
00:36:00,630 --> 00:35:54,960
more questions

630
00:36:04,069 --> 00:36:02,230
what will be the call sign for the crew

631
00:36:05,829 --> 00:36:04,079
and why did you select

632
00:36:08,950 --> 00:36:05,839
that

633
00:36:13,349 --> 00:36:08,960
a call a sign well the selection

634
00:36:15,750 --> 00:36:13,359
of it is a complicated issue

635
00:36:19,430 --> 00:36:15,760
my background is the military aviation

636
00:36:21,990 --> 00:36:19,440
and so things were simple at that time

637
00:36:23,990 --> 00:36:22,000
our call sign would change regularly and

638
00:36:24,950 --> 00:36:24,000

it was just a five digit number that's

639
00:36:27,270 --> 00:36:24,960
it

640
00:36:29,270 --> 00:36:27,280
so no headache no worrying

641
00:36:31,910 --> 00:36:29,280
now here we have the tradition that the

642
00:36:34,470 --> 00:36:31,920
crew selects its own call sign and i

643
00:36:38,550 --> 00:36:34,480
talked to my wife and asked her to help

644
00:36:42,390 --> 00:36:40,390
ear cut

645
00:36:43,510 --> 00:36:42,400
which is the name of the river in my

646
00:36:44,870 --> 00:36:43,520
hometown

647
00:36:46,950 --> 00:36:44,880
okay

648
00:36:48,950 --> 00:36:46,960
also what

649
00:36:51,030 --> 00:36:48,960
are you planning to bring what personal

650
00:36:53,990 --> 00:36:51,040
items are you planning to bring on board

651
00:36:55,589 --> 00:36:54,000
with you that's true we have we're

652
00:36:57,349 --> 00:36:55,599
allowed to take some personal

653
00:36:58,470 --> 00:36:57,359
possessions i'm bringing our wedding

654
00:37:00,470 --> 00:36:58,480
bands

655
00:37:01,829 --> 00:37:00,480
for me it will be photographs of my

656
00:37:03,589 --> 00:37:01,839
family

657
00:37:06,790 --> 00:37:03,599
and

658
00:37:09,030 --> 00:37:06,800
something to demonstrate

659
00:37:10,069 --> 00:37:09,040
for photo and video

660
00:37:11,190 --> 00:37:10,079
yeah

661
00:37:12,950 --> 00:37:11,200
i will

662
00:37:16,550 --> 00:37:12,960
bring personal

663
00:37:18,630 --> 00:37:16,560

items such as photos of my family

664
00:37:31,670 --> 00:37:18,640
of course music

665
00:37:42,950 --> 00:37:34,069
japanese newspaper my question is for

666
00:37:48,550 --> 00:37:46,630
you said that you wanted to be

667
00:37:51,589 --> 00:37:48,560
an astronaut since you were a child do

668
00:37:54,069 --> 00:37:51,599
you have any advice for the children who

669
00:37:59,109 --> 00:37:54,079
are dreaming of becoming

670
00:38:05,030 --> 00:38:01,190
japan of course everybody will be

671
00:38:07,270 --> 00:38:05,040
following the work of anish's anushistan

672
00:38:09,270 --> 00:38:07,280
so what would you recommend

673
00:38:11,510 --> 00:38:09,280
to those who want to be astronauts maybe

674
00:38:15,349 --> 00:38:11,520
study russian

675
00:38:21,030 --> 00:38:19,349
what helped me to become an astronaut

676
00:38:24,790 --> 00:38:21,040
is

677
00:38:32,870 --> 00:38:28,069
what i do what i don't want to do

678
00:38:34,870 --> 00:38:33,910
about

679
00:38:37,349 --> 00:38:34,880
this

680
00:38:39,190 --> 00:38:37,359
my strengths and weaknesses really

681
00:38:42,069 --> 00:38:39,200
helped me

682
00:38:48,710 --> 00:38:42,079
in becoming an astronaut so i recommend

683
00:38:51,910 --> 00:38:50,710
try to do

684
00:38:53,589 --> 00:38:51,920
everything

685
00:38:55,430 --> 00:38:53,599
right now

686
00:38:57,990 --> 00:38:55,440
and see what

687
00:39:00,069 --> 00:38:58,000
your inclinations are

688
00:39:01,349 --> 00:39:00,079

i would recommend to children to be good

689
00:39:03,190 --> 00:39:01,359
students

690
00:39:04,470 --> 00:39:03,200
and

691
00:39:06,950 --> 00:39:04,480
athletes

692
00:39:09,430 --> 00:39:06,960
be active

693
00:39:11,750 --> 00:39:09,440
these days you can have any professional

694
00:39:13,670 --> 00:39:11,760
background and still become an astronaut

695
00:39:16,630 --> 00:39:13,680
so it doesn't matter what profession you

696
00:39:18,790 --> 00:39:16,640
choose just try to succeed in whatever

697
00:39:21,270 --> 00:39:18,800
field you choose

698
00:39:24,310 --> 00:39:21,280
mathematics and

699
00:39:26,390 --> 00:39:24,320
science are very important but i think

700
00:39:31,670 --> 00:39:26,400
also

701
00:39:37,510 --> 00:39:35,270
something that interests you the most

702
00:39:39,510 --> 00:39:37,520
because what's important is to be

703
00:39:41,829 --> 00:39:39,520
interested in your job in your

704
00:39:43,510 --> 00:39:41,839
profession

705
00:39:44,630 --> 00:39:43,520
study something

706
00:39:47,670 --> 00:39:44,640
and

707
00:39:47,680 --> 00:39:51,430
that's my advice

708
00:39:51,440 --> 00:39:56,630
thank you very much last question

709
00:39:56,640 --> 00:40:04,470
okay last question

710
00:40:07,349 --> 00:40:05,750
what

711
00:40:10,550 --> 00:40:07,359
allows you

712
00:40:22,470 --> 00:40:10,560
to become a united single crew seeing

713
00:40:27,349 --> 00:40:24,710

that is something that any profession

714
00:40:29,349 --> 00:40:27,359
can benefit from

715
00:40:30,950 --> 00:40:29,359
how did we become a single crew i don't

716
00:40:33,910 --> 00:40:30,960
know we really didn't give it much

717
00:40:35,990 --> 00:40:33,920
thought we just worked it out

718
00:40:39,349 --> 00:40:36,000
i think

719
00:40:41,109 --> 00:40:39,359
humor is very important

720
00:40:43,510 --> 00:40:41,119
because we will be spending a lot of

721
00:40:47,030 --> 00:40:43,520
time together and

722
00:40:51,750 --> 00:40:47,040
we will have many difficult tasks

723
00:41:00,950 --> 00:40:54,230
work together very well and i think our

724
00:41:05,510 --> 00:41:02,390
we work

725
00:41:11,109 --> 00:41:08,790
in a very calm manner

726
00:41:12,630 --> 00:41:11,119
and of course we do have all have a good

727
00:41:13,589 --> 00:41:12,640
sense of humor

728
00:41:15,829 --> 00:41:13,599
and

729
00:41:17,829 --> 00:41:15,839
we have a very

730
00:41:20,790 --> 00:41:17,839
experienced cosmonaut who is our

731
00:41:24,950 --> 00:41:20,800
commander he's always calm

732
00:41:33,109 --> 00:41:27,270
he's calm even

733
00:41:38,309 --> 00:41:36,230
and so i like his style

734
00:41:39,589 --> 00:41:38,319
also okay

735
00:41:41,349 --> 00:41:39,599
for kate

736
00:41:42,230 --> 00:41:41,359
she

737
00:41:44,550 --> 00:41:42,240
is

738
00:41:47,030 --> 00:41:44,560

a serious

739
00:41:49,349 --> 00:41:47,040
biologist i'm a pilot

740
00:41:52,470 --> 00:41:49,359
and i think that

741
00:41:53,270 --> 00:41:52,480
we complement each other very well

742
00:42:13,190 --> 00:41:53,280
i