
АПОГЕЙ
ЦПК
Олег КОТОВ
Oleg KOTOV

1
00:00:10,470 --> 00:00:08,310
federal space agency colleagues

2
00:00:13,350 --> 00:00:10,480
state commission has

3
00:00:15,350 --> 00:00:13,360
listened to all of the reports about the

4
00:00:19,510 --> 00:00:15,360
preparation of the

5
00:00:23,670 --> 00:00:19,520
vehicle and the ground support services

6
00:00:26,950 --> 00:00:23,680
and we are ready for the mission

7
00:00:29,029 --> 00:00:26,960
and on the 29th of march

8
00:00:32,389 --> 00:00:29,039
we decided to launch

9
00:00:37,750 --> 00:00:35,990
and today we are going to approve the

10
00:00:40,069 --> 00:00:37,760
cruise so

11
00:00:41,030 --> 00:00:40,079
please i am

12
00:00:49,910 --> 00:00:41,040
giving

13
00:00:57,110 --> 00:00:53,430

the members of the state commission

14
00:01:00,709 --> 00:00:57,120
for the expedition 3536

15
00:01:03,189 --> 00:01:00,719
to the iss we uh have prepared

16
00:01:06,390 --> 00:01:03,199
um the following cruise prime crew pavel

17
00:01:08,630 --> 00:01:06,400
vinogradov uh the commander

18
00:01:09,910 --> 00:01:08,640
f e for

19
00:01:12,230 --> 00:01:09,920
uh

20
00:01:15,910 --> 00:01:12,240
expedition 35.36

21
00:01:19,109 --> 00:01:15,920
alexander misurkin fe for the iss and

22
00:01:23,190 --> 00:01:19,119
christopher cassidy fe2

23
00:01:25,830 --> 00:01:23,200
for soyuz and and fe 2 for the station

24
00:01:27,670 --> 00:01:25,840
ola cordov commander of the soyuz

25
00:01:31,030 --> 00:01:27,680
vehicle fe

26
00:01:33,749 --> 00:01:31,040
on board the station sergey ryazanskiy

27
00:01:36,870 --> 00:01:33,759
fe for the soyuz vehicle and the station

28
00:01:39,830 --> 00:01:36,880
and michael hopkins fe2 for the soyuz

29
00:01:42,069 --> 00:01:39,840
vehicle and the station

30
00:01:44,950 --> 00:01:42,079
pro the preparation

31
00:01:46,149 --> 00:01:44,960
program has been completed successfully

32
00:01:49,190 --> 00:01:46,159
everybody

33
00:01:50,870 --> 00:01:49,200
passed all exams and comprehensive

34
00:01:53,030 --> 00:01:50,880
training sessions

35
00:01:55,350 --> 00:01:53,040
the state commission

36
00:01:58,230 --> 00:01:55,360
comes to conclusion that the crews are

37
00:02:00,709 --> 00:01:58,240
ready for the mission and

38
00:02:03,190 --> 00:02:00,719

intergovernmental commission

39
00:02:06,149 --> 00:02:03,200
reviewed the results of the tests and

40
00:02:09,350 --> 00:02:06,159
exams uh for the preparation of the

41
00:02:12,869 --> 00:02:09,360
crews and concluded that

42
00:02:14,710 --> 00:02:12,879
crews for expedition 35 and 36

43
00:02:16,150 --> 00:02:14,720
for soyuz stem

44
00:02:19,510 --> 00:02:16,160
0 8 m

45
00:02:20,550 --> 00:02:19,520
uh and the russian segment are ready

46
00:02:22,390 --> 00:02:20,560
and

47
00:02:25,270 --> 00:02:22,400
the uh

48
00:02:27,750 --> 00:02:25,280
the whole program for the pre-launch

49
00:02:29,670 --> 00:02:27,760
activities has also been

50
00:02:32,470 --> 00:02:29,680
uh successfully completed

51
00:02:34,790 --> 00:02:32,480
prime crew 148

52
00:02:36,710 --> 00:02:34,800
m is going to be

53
00:02:38,390 --> 00:02:36,720
vladimir

54
00:02:40,949 --> 00:02:38,400
for the commander

55
00:02:44,710 --> 00:02:40,959
alexander misurkin for fe1 and

56
00:02:47,430 --> 00:02:44,720
christopher cassidy for fe2 um

57
00:02:50,470 --> 00:02:47,440
backup crew is going to be commander

58
00:02:51,910 --> 00:02:50,480
cordov sergey ryazanskiy f

59
00:02:53,830 --> 00:02:51,920
and fe2

60
00:02:56,630 --> 00:02:53,840
is going to be michael hopkins the

61
00:03:00,630 --> 00:02:56,640
report is over and now the

62
00:03:02,149 --> 00:03:00,640
word goes to sharon kirkwelden

63
00:03:07,190 --> 00:03:02,159

the

64
00:03:09,670 --> 00:03:07,200
you've completed your training

65
00:03:11,750 --> 00:03:09,680
and uh it's been a wonderful uh to watch

66
00:03:13,990 --> 00:03:11,760
you go through that experience

67
00:03:22,869 --> 00:03:14,000
the iss and the teams in houston are

68
00:03:29,030 --> 00:03:25,670
crew members we are glad to announce

69
00:03:31,030 --> 00:03:29,040
that you have completed your training

70
00:03:33,190 --> 00:03:31,040
there's a lot of work a lot of research

71
00:03:35,910 --> 00:03:33,200
a lot of uh actually visiting vehicles

72
00:03:37,830 --> 00:03:35,920
to come visit you in uh in space

73
00:03:41,030 --> 00:03:37,840
so we wish you a

74
00:03:44,550 --> 00:03:41,040
safe trip and uh and enjoy your stay on

75
00:03:44,560 --> 00:03:49,910
so let's listen to the cruise pavilion

76
00:03:53,910 --> 00:03:52,550
first of all i would like to

77
00:03:55,110 --> 00:03:53,920
thank

78
00:03:56,949 --> 00:03:55,120
everybody

79
00:03:58,630 --> 00:03:56,959
all specialists

80
00:04:00,470 --> 00:03:58,640
on the launch pad

81
00:04:04,309 --> 00:04:00,480
everybody who

82
00:04:07,990 --> 00:04:04,319
supports the launch and prepares the

83
00:04:10,869 --> 00:04:08,000
vehicles in moscow and in samara

84
00:04:13,589 --> 00:04:10,879
our crew is ready

85
00:04:15,670 --> 00:04:13,599
and we will do our best to not let you

86
00:04:22,870 --> 00:04:15,680
down

87
00:04:27,110 --> 00:04:25,670
i would like to thank for the trust that

88
00:04:28,790 --> 00:04:27,120

was

89
00:04:35,590 --> 00:04:28,800
given to me

90
00:04:39,030 --> 00:04:37,830
dear commission

91
00:04:41,830 --> 00:04:39,040
we are

92
00:04:44,150 --> 00:04:41,840
choosing the four orbits

93
00:04:46,629 --> 00:04:44,160
approach and docking we are ready for

94
00:04:51,189 --> 00:04:46,639
the mission and we are happy

95
00:04:55,110 --> 00:04:51,199
that we were entrusted with this honor

96
00:05:01,990 --> 00:04:55,120
expedition 35 and 36 is ready to launch

97
00:05:05,350 --> 00:05:03,350
according to the results of the state

98
00:05:07,830 --> 00:05:05,360
commission that took place a half an

99
00:05:11,590 --> 00:05:07,840
hour ago the crews the fallen crews were

100
00:05:14,710 --> 00:05:11,600
approved commission that just uh

101
00:05:18,230 --> 00:05:14,720
half an hour ago has approved the cruise

102
00:05:21,430 --> 00:05:20,469
prime crew is the commander of the

103
00:05:23,590 --> 00:05:21,440
vehicle

104
00:05:26,390 --> 00:05:23,600
and fe for iss

105
00:05:30,950 --> 00:05:26,400
pavel vinogradov commander of expedition

106
00:05:32,150 --> 00:05:30,960
3536 ross cosmis russia engineer f.e

107
00:05:35,510 --> 00:05:32,160
engineer

108
00:05:38,550 --> 00:05:35,520
one for the soyuz and iss alexander

109
00:05:42,070 --> 00:05:38,560
misurkin roscosmos russia

110
00:05:44,790 --> 00:05:42,080
fe 2 for the soyuz vehicle and the iss

111
00:05:46,950 --> 00:05:44,800
christopher cassidy nasty nasa the

112
00:05:49,350 --> 00:05:46,960
united states of america

113
00:05:52,710 --> 00:05:49,360

the backup crew commander of the soyuz

114
00:05:53,909 --> 00:05:52,720
vehicle and fe 1 for

115
00:05:56,070 --> 00:05:53,919
um

116
00:05:57,430 --> 00:05:56,080
the stationery quarter of oleg

117
00:06:01,510 --> 00:05:57,440
fe

118
00:06:04,790 --> 00:06:01,520
one for the soyuz and i the iss

119
00:06:09,510 --> 00:06:04,800
sergey ryazanskiy roscosmos russia fe2

120
00:06:12,629 --> 00:06:09,520
for the soyuz and iss michael hopkins

121
00:06:14,230 --> 00:06:12,639
nasa the united states of america

122
00:06:15,990 --> 00:06:14,240
the crews are all excited and they're

123
00:06:17,909 --> 00:06:16,000
ready to answer any

124
00:06:19,830 --> 00:06:17,919
of your questions

125
00:06:29,430 --> 00:06:19,840
and are ready to answer your questions

126
00:06:33,670 --> 00:06:30,790
first of all we would like to

127
00:06:36,870 --> 00:06:33,680
congratulate the crew and the

128
00:06:37,990 --> 00:06:36,880
and wish them all the best i have two

129
00:06:41,110 --> 00:06:38,000
questions

130
00:06:41,990 --> 00:06:41,120
one is more technical and another is

131
00:06:43,830 --> 00:06:42,000
more

132
00:06:46,870 --> 00:06:43,840
uh emotional

133
00:06:50,550 --> 00:06:46,880
the technical one is

134
00:06:53,430 --> 00:06:50,560
the four orbits launch and docking why

135
00:06:56,550 --> 00:06:53,440
it was not possible early and why we

136
00:06:57,749 --> 00:06:56,560
decided to choose it and use it now

137
00:07:01,110 --> 00:06:57,759
and

138
00:07:02,950 --> 00:07:01,120

can we make the approach to the station

139
00:07:05,589 --> 00:07:02,960
even shorter

140
00:07:06,629 --> 00:07:05,599
hold on let them answer the first one

141
00:07:07,830 --> 00:07:06,639
otherwise they will jump to the

142
00:07:10,710 --> 00:07:07,840
emotional ones

143
00:07:13,990 --> 00:07:10,720
well as for the uh

144
00:07:16,230 --> 00:07:14,000
uh four orbits approach and docking it

145
00:07:17,909 --> 00:07:16,240
all started about three years ago we

146
00:07:20,230 --> 00:07:17,919
discussed it in

147
00:07:22,550 --> 00:07:20,240
our cn air gear and we were thinking

148
00:07:27,029 --> 00:07:22,560
about the vehicle

149
00:07:28,629 --> 00:07:27,039
and uh ralph murkaisen nikolai and i

150
00:07:32,550 --> 00:07:28,639
uh

151
00:07:38,790 --> 00:07:35,350
came up with an idea that

152
00:07:41,749 --> 00:07:38,800
um maybe we can uh make the flights

153
00:07:45,029 --> 00:07:41,759
faster and at first everybody

154
00:07:49,189 --> 00:07:45,039
was very apprehensive about it

155
00:07:53,350 --> 00:07:49,199
but later on our ballistic specialists

156
00:07:56,830 --> 00:07:53,360
calculated the possibility looked at the

157
00:08:04,230 --> 00:08:00,150
um verified the capabilities of the

158
00:08:06,790 --> 00:08:04,240
soyuz vehicle that now is has a digital

159
00:08:08,869 --> 00:08:06,800
command and control system and the

160
00:08:11,830 --> 00:08:08,879
onboard computer can do pretty much

161
00:08:14,790 --> 00:08:11,840
anything now and that's how we slowly

162
00:08:17,110 --> 00:08:14,800
started to develop the idea and about

163
00:08:18,950 --> 00:08:17,120

half an a year ago

164
00:08:21,029 --> 00:08:18,960
when we made

165
00:08:22,070 --> 00:08:21,039
quite a lot of calculations

166
00:08:30,469 --> 00:08:22,080
we

167
00:08:37,029 --> 00:08:34,790
and to our surprise mr popovkin was

168
00:08:40,709 --> 00:08:37,039
very pleased and interested with the

169
00:08:42,630 --> 00:08:40,719
idea so he charged everybody with

170
00:08:45,590 --> 00:08:42,640
different tasks

171
00:08:49,350 --> 00:08:45,600
to develop this idea and

172
00:08:52,389 --> 00:08:49,360
we used this expedited

173
00:08:55,269 --> 00:08:52,399
launch and docking system for three

174
00:08:57,829 --> 00:08:55,279
progresses and the

175
00:09:03,110 --> 00:08:57,839
corolla specialists

176
00:09:09,030 --> 00:09:06,870
studied this new plan

177
00:09:10,949 --> 00:09:09,040
scheme and

178
00:09:14,389 --> 00:09:10,959
everything looked fine so

179
00:09:17,110 --> 00:09:14,399
now we're going to continue to use this

180
00:09:19,269 --> 00:09:17,120
expedited plan for

181
00:09:20,870 --> 00:09:19,279
future launches and

182
00:09:23,750 --> 00:09:20,880
we

183
00:09:25,350 --> 00:09:23,760
are going to be using the four orbits

184
00:09:28,070 --> 00:09:25,360
launch and docking

185
00:09:29,910 --> 00:09:28,080
but we are now already thinking about

186
00:09:30,710 --> 00:09:29,920
two orbits

187
00:09:32,070 --> 00:09:30,720
and

188
00:09:34,829 --> 00:09:32,080

today

189
00:09:40,310 --> 00:09:34,839
the capabilities of

190
00:09:41,990 --> 00:09:40,320
our vehicles and of our rockets are

191
00:09:45,110 --> 00:09:42,000
enough to do that

192
00:09:46,630 --> 00:09:45,120
so at first we launched the

193
00:09:48,829 --> 00:09:46,640
cargo vehicles

194
00:09:53,190 --> 00:09:48,839
right so you will be like the

195
00:09:55,750 --> 00:09:54,710
well

196
00:10:09,190 --> 00:09:55,760
i

197
00:10:13,590 --> 00:10:09,200
schemes and plans

198
00:10:19,190 --> 00:10:13,600
were used americans use it for germany

199
00:10:23,910 --> 00:10:21,750
within one or two orbits

200
00:10:25,350 --> 00:10:23,920
it was pretty difficult and strenuous

201
00:10:26,550 --> 00:10:25,360
for the crew

202
00:10:28,310 --> 00:10:26,560
but now

203
00:10:32,150 --> 00:10:28,320
our capabilities are completely

204
00:10:35,030 --> 00:10:32,160
different and updated and allows us to

205
00:10:38,630 --> 00:10:35,040
carry out any dynamic operations on

206
00:10:40,550 --> 00:10:38,640
orbit so we are very sure in our success

207
00:10:43,030 --> 00:10:40,560
next question please

208
00:10:45,509 --> 00:10:43,040
and the emotional questions

209
00:10:47,750 --> 00:10:45,519
um well before

210
00:10:51,509 --> 00:10:47,760
the families never came to see the

211
00:10:54,389 --> 00:10:51,519
cruise off but recently all the family

212
00:10:58,829 --> 00:10:55,269
i

213
00:11:01,829 --> 00:10:58,839

can't come to see off to the

214
00:11:03,829 --> 00:11:01,839
cosmodrome uh is it a great moral

215
00:11:04,870 --> 00:11:03,839
support for you

216
00:11:07,110 --> 00:11:04,880
um

217
00:11:08,710 --> 00:11:07,120
for people who are ready for such a

218
00:11:12,150 --> 00:11:08,720
difficult journey

219
00:11:13,670 --> 00:11:12,160
or um is it strenuous for you or is it a

220
00:11:16,710 --> 00:11:13,680
morale boost

221
00:11:18,949 --> 00:11:16,720
i know that alexander's a wife stayed in

222
00:11:21,990 --> 00:11:18,959
moscow why did she

223
00:11:23,350 --> 00:11:22,000
choose not to come do you think it's

224
00:11:26,710 --> 00:11:23,360
good to have

225
00:11:29,509 --> 00:11:26,720
spouses um seeing you off and i would

226
00:11:32,949 --> 00:11:29,519
like to hear the

227
00:11:36,069 --> 00:11:32,959
opinion of all the crew members well my

228
00:11:37,269 --> 00:11:36,079
fees are saying uh asking me to answer

229
00:11:40,870 --> 00:11:37,279
for everybody

230
00:11:44,230 --> 00:11:40,880
well i would answer for myself i'm glad

231
00:11:46,949 --> 00:11:44,240
that this tradition came to be i'm very

232
00:11:47,750 --> 00:11:46,959
happy to see my wife and my daughter

233
00:11:49,110 --> 00:11:47,760
here

234
00:11:51,190 --> 00:11:49,120
i think it's

235
00:11:54,470 --> 00:11:51,200
it's a good tradition

236
00:11:56,310 --> 00:11:54,480
sasha's uh wife did not come not because

237
00:11:59,190 --> 00:11:56,320
she didn't probably want to he didn't

238
00:12:00,150 --> 00:11:59,200

want to but she has little children

239
00:12:01,190 --> 00:12:00,160
but

240
00:12:03,350 --> 00:12:01,200
i will

241
00:12:05,269 --> 00:12:03,360
let him explain i completely agree with

242
00:12:07,590 --> 00:12:05,279
pavel it's really a privilege for me to

243
00:12:09,030 --> 00:12:07,600
have my wife three kids mother father

244
00:12:20,230 --> 00:12:09,040
and brother here and i wouldn't trade

245
00:12:20,240 --> 00:12:36,069
yes

246
00:12:40,629 --> 00:12:38,069
of course i absolutely agree with the

247
00:12:42,230 --> 00:12:40,639
commander and chris and

248
00:12:45,750 --> 00:12:42,240
i hope that it's

249
00:12:46,710 --> 00:12:45,760
it is my first uh but not last mission

250
00:12:57,190 --> 00:12:46,720
and

251
00:12:59,269 --> 00:12:57,200
to uh

252
00:13:00,710 --> 00:12:59,279
adjust to the work and rest schedule for

253
00:13:03,910 --> 00:13:00,720
us so he will be monitoring the

254
00:13:07,829 --> 00:13:03,920
situation from the mcc moscow okay thank

255
00:13:10,629 --> 00:13:07,839
you next question um first channel peter

256
00:13:13,509 --> 00:13:10,639
the reagan potter de ragan

257
00:13:15,269 --> 00:13:13,519
my first question is to pavel vinogradov

258
00:13:19,509 --> 00:13:15,279
the media

259
00:13:23,990 --> 00:13:21,269
you

260
00:13:26,790 --> 00:13:24,000
almost got into the

261
00:13:29,269 --> 00:13:26,800
guinness record book

262
00:13:37,509 --> 00:13:29,279
so how

263
00:13:40,150 --> 00:13:39,189

i don't think that

264
00:13:41,030 --> 00:13:40,160
being

265
00:13:45,590 --> 00:13:41,040
the

266
00:13:49,189 --> 00:13:45,600
oldest is a big achievement

267
00:13:55,030 --> 00:13:49,199
i would love to be 40 years old to

268
00:14:01,590 --> 00:13:58,550
don't know why i'm so lucky and i'm 60

269
00:14:02,470 --> 00:14:01,600
and i am completely healthy and have the

270
00:14:06,949 --> 00:14:02,480
opportunity

271
00:14:10,230 --> 00:14:06,959
to fly to space i love my profession and

272
00:14:11,030 --> 00:14:10,240
i can't imagine doing anything else

273
00:14:13,269 --> 00:14:11,040
so

274
00:14:14,710 --> 00:14:13,279
for as long as i can for as long as i

275
00:14:15,670 --> 00:14:14,720
have

276
00:14:19,350 --> 00:14:15,680
enough

277
00:14:21,430 --> 00:14:19,360
i will stay in this profession as for

278
00:14:24,310 --> 00:14:21,440
whether it's difficult or not

279
00:14:32,230 --> 00:14:27,030
it is difficult

280
00:14:39,030 --> 00:14:35,110
it's hard to compete with them but um i

281
00:14:43,590 --> 00:14:41,030
i would like to add that by vladimir is

282
00:14:45,990 --> 00:14:43,600
going to celebrate his 60 years on

283
00:14:49,350 --> 00:14:46,000
aboard the station and for now

284
00:14:53,030 --> 00:14:49,360
he will be one of the most awarded

285
00:14:55,110 --> 00:14:53,040
crew members active crew members and

286
00:14:59,670 --> 00:14:55,120
the second question

287
00:15:01,430 --> 00:14:59,680
you're an experienced military man

288
00:15:04,870 --> 00:15:01,440

so

289
00:15:07,189 --> 00:15:04,880
do your qualities and knowledge training

290
00:15:09,350 --> 00:15:07,199
from though from

291
00:15:10,310 --> 00:15:09,360
your military professional will help you

292
00:15:16,470 --> 00:15:10,320
on

293
00:15:19,350 --> 00:15:16,480
experience and strength i think the

294
00:15:21,269 --> 00:15:19,360
number one quality for a good crewmate

295
00:15:23,350 --> 00:15:21,279
is to be a team player and that's in the

296
00:15:25,509 --> 00:15:23,360
military or in space

297
00:15:27,350 --> 00:15:25,519
and that's exactly how i feel with my my

298
00:15:34,230 --> 00:15:27,360
two crewmates is that we are one team

299
00:15:38,829 --> 00:15:37,110
cosmonautical nova sticksman after news

300
00:15:41,030 --> 00:15:38,839
of cosmonautics

301
00:15:43,590 --> 00:15:41,040
congratulations um

302
00:15:45,350 --> 00:15:43,600
crew members sergey oleg you're just

303
00:15:48,710 --> 00:15:45,360
great

304
00:15:51,269 --> 00:15:48,720
my question is as follows

305
00:15:52,829 --> 00:15:51,279
we know quite a lot about

306
00:15:55,110 --> 00:15:52,839
your

307
00:15:59,110 --> 00:15:55,120
scientific program

308
00:16:01,189 --> 00:15:59,120
and we know less about uh the u.s

309
00:16:05,829 --> 00:16:01,199
experiments

310
00:16:08,310 --> 00:16:05,839
but pavel sasha you are very experienced

311
00:16:10,230 --> 00:16:08,320
and this one of you is very experienced

312
00:16:14,150 --> 00:16:10,240
one of you is not so what are you going

313
00:16:17,269 --> 00:16:14,160

to devote your free time on board

314
00:16:20,310 --> 00:16:17,279
well i don't think that my interests

315
00:16:22,710 --> 00:16:20,320
have changed from the previous missions

316
00:16:25,030 --> 00:16:22,720
i will be most uh

317
00:16:27,030 --> 00:16:25,040
of all interested in

318
00:16:28,310 --> 00:16:27,040
the atmospheric processes what is

319
00:16:29,829 --> 00:16:28,320
happening

320
00:16:33,829 --> 00:16:29,839
over

321
00:16:35,670 --> 00:16:33,839
our planet and i will try to observe

322
00:16:38,150 --> 00:16:35,680
thunderstorms that are happening in the

323
00:16:41,269 --> 00:16:38,160
upper layers of the atmosphere it's a

324
00:16:43,350 --> 00:16:41,279
very interesting phenomenon

325
00:16:47,829 --> 00:16:43,360
it has not been

326
00:16:50,870 --> 00:16:47,839
deeply studied and i will do my best to

327
00:16:53,030 --> 00:16:50,880
this is my personal goal

328
00:16:54,150 --> 00:16:53,040
and to

329
00:16:57,269 --> 00:16:54,160
expand

330
00:16:58,550 --> 00:16:57,279
this research and of course

331
00:17:03,829 --> 00:16:58,560
i will

332
00:17:06,069 --> 00:17:03,839
i can look at our planets for

333
00:17:08,949 --> 00:17:06,079
and that's what i would probably devote

334
00:17:10,630 --> 00:17:08,959
my free time to yeah i agree our channel

335
00:17:16,870 --> 00:17:10,640
canaladeen is

336
00:17:21,829 --> 00:17:19,270
half of my answer is in your question

337
00:17:23,110 --> 00:17:21,839
you said yourself i'm not an experienced

338
00:17:26,069 --> 00:17:23,120

crew member

339
00:17:28,150 --> 00:17:26,079
so i am sure that

340
00:17:29,270 --> 00:17:28,160
for the first half of the mission i will

341
00:17:32,230 --> 00:17:29,280
devote

342
00:17:36,870 --> 00:17:32,240
most of my free time preparing for the

343
00:17:40,950 --> 00:17:38,630
rob navy is from nasa television i have

344
00:17:43,750 --> 00:17:40,960
a couple of questions for chris cassidy

345
00:17:45,830 --> 00:17:43,760
uh chris first of all take us inside the

346
00:17:48,950 --> 00:17:45,840
soyuz for a moment with you and your

347
00:17:51,029 --> 00:17:48,960
crewmates and discuss the complexity of

348
00:17:53,350 --> 00:17:51,039
this expedited six-hour sprint to the

349
00:17:55,669 --> 00:17:53,360
space station from not only a crew

350
00:17:57,430 --> 00:17:55,679
workload standpoint but also a crew

351
00:17:58,710 --> 00:17:57,440
comfort standpoint and i have a

352
00:18:01,590 --> 00:17:58,720
follow-up

353
00:18:03,990 --> 00:18:01,600
thanks rob from uh krug um technical

354
00:18:05,830 --> 00:18:04,000
point of view we're pre we feel pretty

355
00:18:07,430 --> 00:18:05,840
comfortable with this all of the uh

356
00:18:08,870 --> 00:18:07,440
procedures are very similar to what we

357
00:18:10,310 --> 00:18:08,880
do on the two day

358
00:18:11,830 --> 00:18:10,320
process so

359
00:18:13,830 --> 00:18:11,840
and we've trained it a number of times

360
00:18:15,590 --> 00:18:13,840
so that part we're very comfortable with

361
00:18:18,390 --> 00:18:15,600
but what's very challenging to practice

362
00:18:21,510 --> 00:18:18,400
on the ground is the coordination of

363
00:18:23,750 --> 00:18:21,520

getting from the essa up to the bayou at

364
00:18:24,950 --> 00:18:23,760
the appropriate time

365
00:18:31,750 --> 00:18:24,960
to

366
00:18:33,270 --> 00:18:31,760
for those of you that haven't had the

367
00:18:34,789 --> 00:18:33,280
opportunity to see

368
00:18:36,630 --> 00:18:34,799
the soyuz

369
00:18:38,549 --> 00:18:36,640
it requires a coordination between the

370
00:18:41,029 --> 00:18:38,559
three of us to close and open the hatch

371
00:18:43,190 --> 00:18:41,039
and get up to the to the bail and we and

372
00:18:44,789 --> 00:18:43,200
we have a few opportunities where we

373
00:18:46,070 --> 00:18:44,799
know we can take advantage of that and

374
00:18:48,230 --> 00:18:46,080
have some time to get up there and do

375
00:18:50,630 --> 00:18:48,240
just those things

376
00:18:53,430 --> 00:18:50,640
and for chris um you're five and a half

377
00:18:55,590 --> 00:18:53,440
months on orbit uh we'll see the arrival

378
00:18:57,990 --> 00:18:55,600
of virtually every visiting vehicle that

379
00:18:59,190 --> 00:18:58,000
services the space station plus for you

380
00:19:01,430 --> 00:18:59,200
and your crewmates a series of

381
00:19:02,549 --> 00:19:01,440
spacewalks on both the u.s and russian

382
00:19:05,110 --> 00:19:02,559
segments

383
00:19:07,590 --> 00:19:05,120
discuss if you will the complexity and

384
00:19:09,029 --> 00:19:07,600
pace of this type of work over almost a

385
00:19:10,950 --> 00:19:09,039
half year

386
00:19:13,350 --> 00:19:10,960
on what will constitute one of the most

387
00:19:15,350 --> 00:19:13,360
complicated expeditions ever

388
00:19:17,669 --> 00:19:15,360

well you're right there's a

389
00:19:19,430 --> 00:19:17,679
there's quite a few uh spacewalks and

390
00:19:21,590 --> 00:19:19,440
visiting vehicles that will occupy the

391
00:19:23,510 --> 00:19:21,600
schedule

392
00:19:25,590 --> 00:19:23,520
but the nice thing about that is our

393
00:19:27,990 --> 00:19:25,600
time for horizon instead of being five

394
00:19:29,669 --> 00:19:28,000
and a half months long becomes one week

395
00:19:31,270 --> 00:19:29,679
or two weeks until we look for the next

396
00:19:33,830 --> 00:19:31,280
major event

397
00:19:35,190 --> 00:19:33,840
so um i think with all these visiting

398
00:19:37,909 --> 00:19:35,200
vehicles

399
00:19:40,150 --> 00:19:37,919
in in english we say we're two guys in a

400
00:19:41,750 --> 00:19:40,160
truck we'll just be moving cargo back

401
00:19:43,750 --> 00:19:41,760
and forth and being unloading and

402
00:19:45,510 --> 00:19:43,760
reloading cargo and and that's fine

403
00:19:46,789 --> 00:19:45,520
because that that means fresh fruit and

404
00:19:50,390 --> 00:19:46,799
vegetables will come on board so we're

405
00:19:53,110 --> 00:19:51,590
thank you

406
00:19:54,470 --> 00:19:53,120
andrew farmer from russia today if i

407
00:19:56,070 --> 00:19:54,480
could ask this question in english

408
00:19:58,230 --> 00:19:56,080
please um

409
00:19:59,909 --> 00:19:58,240
could you explain the key experiments

410
00:20:01,750 --> 00:19:59,919
that you will be doing perhaps the most

411
00:20:03,830 --> 00:20:01,760
interesting ones for the layman down on

412
00:20:06,230 --> 00:20:03,840
earth that will take place over the next

413
00:20:07,909 --> 00:20:06,240

five and a half months and also what you

414
00:20:09,750 --> 00:20:07,919
plan to do in your down time because

415
00:20:12,070 --> 00:20:09,760
there's been a bit of a musical presence

416
00:20:15,350 --> 00:20:12,080
set in recent weeks up there so i'll be

417
00:20:17,430 --> 00:20:15,360
interested to know what you plan to do

418
00:20:19,430 --> 00:20:17,440
for me the most important

419
00:20:20,789 --> 00:20:19,440
some of the most important

420
00:20:23,270 --> 00:20:20,799
experiments that we'll be doing will be

421
00:20:25,669 --> 00:20:23,280
on the human body and how can those how

422
00:20:27,270 --> 00:20:25,679
can we make people safe and more healthy

423
00:20:28,149 --> 00:20:27,280
on the ground for instance with bone

424
00:20:30,230 --> 00:20:28,159
health

425
00:20:31,990 --> 00:20:30,240
those are several experiments that i

426
00:20:33,590 --> 00:20:32,000
will personally be participating and i

427
00:20:35,110 --> 00:20:33,600
think is very important and as far as

428
00:20:36,789 --> 00:20:35,120
the second part of your question

429
00:20:39,350 --> 00:20:36,799
unfortunately all the musical talent

430
00:20:40,710 --> 00:20:39,360
left earth in december and i only sing

431
00:20:42,390 --> 00:20:40,720
in the shower and we don't have a shower

432
00:20:47,029 --> 00:20:42,400
on the space station so there'll be no

433
00:20:51,110 --> 00:20:48,789
well you will still have to sing happy

434
00:20:54,390 --> 00:20:51,120
birthday for the commander but we'll see

435
00:20:54,400 --> 00:21:03,990
next question please

436
00:21:08,630 --> 00:21:07,270
well you have changed your schedule for

437
00:21:11,990 --> 00:21:08,640
the day

438
00:21:14,630 --> 00:21:12,000

uh work and reschedule completely

439
00:21:17,830 --> 00:21:14,640
tell me whether it was

440
00:21:20,310 --> 00:21:17,840
difficult or not and i see smiles from

441
00:21:22,870 --> 00:21:20,320
the support team and from the crews

442
00:21:23,990 --> 00:21:22,880
well i think first of all

443
00:21:25,990 --> 00:21:24,000
in the first

444
00:21:28,549 --> 00:21:26,000
two or three days

445
00:21:31,350 --> 00:21:28,559
when we were transitioning to that new

446
00:21:34,149 --> 00:21:31,360
schedule and sleeping schedule were the

447
00:21:37,590 --> 00:21:34,159
most difficult and of course uh it was

448
00:21:39,750 --> 00:21:37,600
most difficult for our support team

449
00:21:42,870 --> 00:21:39,760
and support specialists because they

450
00:21:45,990 --> 00:21:42,880
have to work not only when we

451
00:21:49,830 --> 00:21:46,000
are asleep and but also when we are not

452
00:21:54,710 --> 00:21:49,840
asleep so we have a strong feeling that

453
00:21:59,909 --> 00:21:57,830
it is and just another test for this new

454
00:22:02,230 --> 00:21:59,919
expedited launch

455
00:22:05,510 --> 00:22:02,240
and i don't know

456
00:22:06,950 --> 00:22:05,520
that maybe later on our medical

457
00:22:07,909 --> 00:22:06,960
specialists

458
00:22:15,430 --> 00:22:07,919
will

459
00:22:20,710 --> 00:22:17,830
and decide whether it's worth it but of

460
00:22:24,549 --> 00:22:20,720
course it's not an easy to change the

461
00:22:30,070 --> 00:22:27,270
it's not that we're sleeping badly but

462
00:22:32,310 --> 00:22:30,080
uh our crew surgeons are monitoring us

463
00:22:35,350 --> 00:22:32,320

all the time but i think that it's

464
00:22:39,110 --> 00:22:35,360
rather strenuous not only for

465
00:22:42,070 --> 00:22:39,120
um our support specialists but for um

466
00:22:45,590 --> 00:22:42,080
everybody and maybe we will be able to

467
00:22:46,390 --> 00:22:45,600
find a new approach to

468
00:22:47,510 --> 00:22:46,400
this

469
00:22:50,630 --> 00:22:47,520
complete

470
00:22:52,870 --> 00:22:50,640
overhaul of a schedule

471
00:22:55,669 --> 00:22:52,880
which told you a very

472
00:22:59,350 --> 00:22:55,679
mild version of the story

473
00:23:02,950 --> 00:22:59,360
for you to understand uh they

474
00:23:04,549 --> 00:23:02,960
go to bed at nine and wake up at

475
00:23:06,789 --> 00:23:04,559
5 00 pm

476
00:23:09,830 --> 00:23:06,799
and

477
00:23:11,270 --> 00:23:09,840
have breakfast at 6 00 p.m so it's

478
00:23:13,510 --> 00:23:11,280
completely

479
00:23:15,190 --> 00:23:13,520
crazy spanish schedule um well i have

480
00:23:16,870 --> 00:23:15,200
two questions the first one i know we've

481
00:23:19,990 --> 00:23:16,880
been talking a little bit about this six

482
00:23:22,149 --> 00:23:20,000
hour ride and uh how ready you are but i

483
00:23:25,990 --> 00:23:22,159
would like to focus on the challenges

484
00:23:28,310 --> 00:23:26,000
that uh these six hours uh mean to you

485
00:23:29,909 --> 00:23:28,320
and if you can just point out a few of

486
00:23:30,950 --> 00:23:29,919
the challenges the main challenges that

487
00:23:33,830 --> 00:23:30,960
that

488
00:23:35,029 --> 00:23:33,840

a six hour ride mean instead of how cool

489
00:23:36,390 --> 00:23:35,039
it's going to be that you're gonna get

490
00:23:37,430 --> 00:23:36,400
there faster

491
00:23:38,950 --> 00:23:37,440
and um

492
00:23:40,789 --> 00:23:38,960
how does it feel to know that you guys

493
00:23:43,269 --> 00:23:40,799
are going to be making history being the

494
00:23:50,070 --> 00:23:43,279
first man interpolation expedition going

495
00:23:55,830 --> 00:23:52,549
we are the first crew that is going to

496
00:23:57,190 --> 00:23:55,840
use the expedited

497
00:24:00,950 --> 00:23:57,200
plan

498
00:24:05,590 --> 00:24:00,960
launch and docking but in 69

499
00:24:08,950 --> 00:24:05,600
68 and the 70s there were missions

500
00:24:12,549 --> 00:24:08,960
like for example the germany program

501
00:24:17,029 --> 00:24:12,559
soviet uh space crafts docked according

502
00:24:22,070 --> 00:24:19,990
as for the advantages of this

503
00:24:24,310 --> 00:24:22,080
plan

504
00:24:27,590 --> 00:24:24,320
one of the advantages is that the crew

505
00:24:28,950 --> 00:24:27,600
does not have have enough time to be

506
00:24:32,710 --> 00:24:28,960
negatively

507
00:24:35,269 --> 00:24:32,720
influenced by zero g

508
00:24:38,710 --> 00:24:35,279
of course it will show itself and we

509
00:24:41,909 --> 00:24:38,720
will have the side effects um but

510
00:24:56,149 --> 00:24:41,919
uh within the first four or five hours

511
00:25:01,669 --> 00:24:58,470
for example expedited delivery of

512
00:25:06,470 --> 00:25:03,990
drugs

513
00:25:08,789 --> 00:25:06,480

or some other equipment and experiments

514
00:25:11,269 --> 00:25:08,799
that need to be started as soon as

515
00:25:13,190 --> 00:25:11,279
possible and of course you can't even

516
00:25:15,510 --> 00:25:13,200
overestimate

517
00:25:17,750 --> 00:25:15,520
the benefits of such expedited launch

518
00:25:19,669 --> 00:25:17,760
for the signs and

519
00:25:21,350 --> 00:25:19,679
researchers who are working on the

520
00:25:27,990 --> 00:25:21,360
biological

521
00:25:34,230 --> 00:25:31,510
within such a very short period of time

522
00:25:36,470 --> 00:25:34,240
probably the ice cream will not melt and

523
00:25:38,950 --> 00:25:36,480
the crew can get it

524
00:25:42,310 --> 00:25:38,960
thank you my second question is more of

525
00:25:44,549 --> 00:25:42,320
a general question for our audience um

526
00:25:47,430 --> 00:25:44,559
if you had to explain to a general

527
00:25:48,789 --> 00:25:47,440
audience what baikonur means

528
00:25:51,430 --> 00:25:48,799
in uh

529
00:25:53,990 --> 00:25:51,440
the exploration of the of this space

530
00:25:55,750 --> 00:25:54,000
what this cosmodrome means uh how would

531
00:25:57,110 --> 00:25:55,760
you explain it just please forget about

532
00:26:00,070 --> 00:25:57,120
the big words

533
00:26:04,870 --> 00:26:00,080
and explain it to to a person that

534
00:26:11,269 --> 00:26:08,830
is everything for piloted space uh

535
00:26:13,269 --> 00:26:11,279
exploration that was the first uh

536
00:26:15,990 --> 00:26:13,279
cosmodrome from where we launched

537
00:26:18,950 --> 00:26:16,000
gagarin and tito

538
00:26:22,549 --> 00:26:18,960

this is enough to show

539
00:26:25,909 --> 00:26:22,559
what our what how we feel about baikonur

540
00:26:28,390 --> 00:26:25,919
it's almost like a sacred place for us

541
00:26:30,630 --> 00:26:28,400
this is the gateway to

542
00:26:33,350 --> 00:26:30,640
space exploration i don't have anything

543
00:26:37,830 --> 00:26:35,830
for example our backup crew sergey

544
00:26:40,549 --> 00:26:37,840
ryazanskiy is

545
00:26:41,590 --> 00:26:40,559
grandfather was one of the constructor

546
00:26:45,269 --> 00:26:41,600
general

547
00:26:48,230 --> 00:26:45,279
who started working at baikonur

548
00:26:50,310 --> 00:26:48,240
and sergey is here now with us maybe he

549
00:26:51,190 --> 00:26:50,320
can say a couple of words

550
00:26:56,710 --> 00:26:51,200
about

551
00:27:00,070 --> 00:26:58,310
of course is

552
00:27:03,269 --> 00:27:00,080
a part of

553
00:27:05,750 --> 00:27:03,279
a great history it's a big part of

554
00:27:08,310 --> 00:27:05,760
of all of us and it's a great honor for

555
00:27:10,870 --> 00:27:08,320
us to continue the history of space

556
00:27:13,590 --> 00:27:10,880
exploration of way to which my family is

557
00:27:16,470 --> 00:27:13,600
also a part and it's a big part of the

558
00:27:19,510 --> 00:27:16,480
history of our country

559
00:27:23,590 --> 00:27:19,520
well since uh the backup crew has the

560
00:27:25,750 --> 00:27:23,600
microphone let's ask questions

561
00:27:27,909 --> 00:27:25,760
let's ask them questions and we would

562
00:27:29,669 --> 00:27:27,919
not like to overlook them because

563
00:27:32,149 --> 00:27:29,679

they're our future

564
00:27:33,350 --> 00:27:32,159
and i would like to ask sergey and

565
00:27:35,190 --> 00:27:33,360
michael

566
00:27:37,750 --> 00:27:35,200
people who will be

567
00:27:40,149 --> 00:27:37,760
who are and vicano for the first time

568
00:27:43,190 --> 00:27:40,159
i'm not talking about um

569
00:27:47,029 --> 00:27:43,200
oleg because he's an experienced one

570
00:27:49,909 --> 00:27:47,039
but how do you feel about the cosmodrome

571
00:27:52,310 --> 00:27:49,919
i know that michael was so excited about

572
00:27:54,389 --> 00:27:52,320
everything uh tell us

573
00:27:55,350 --> 00:27:54,399
what you thought what you were impressed

574
00:27:58,549 --> 00:27:55,360
by

575
00:28:01,430 --> 00:27:58,559
when you saw baikonur

576
00:28:05,750 --> 00:28:03,190
okay i'd like to i guess start we've

577
00:28:08,230 --> 00:28:05,760
been here for almost two weeks now and

578
00:28:10,310 --> 00:28:08,240
uh every day there's been something new

579
00:28:12,230 --> 00:28:10,320
something exciting for me to see

580
00:28:14,470 --> 00:28:12,240
um every day there's also been new

581
00:28:17,909 --> 00:28:14,480
traditions that i've got to experience

582
00:28:20,710 --> 00:28:17,919
that uh helped tie

583
00:28:22,070 --> 00:28:20,720
the astronauts cosmonauts of today with

584
00:28:24,310 --> 00:28:22,080
those that have gone before us and those

585
00:28:27,190 --> 00:28:24,320
that will follow us and on a personal

586
00:28:29,430 --> 00:28:27,200
note probably the most impressive thing

587
00:28:31,750 --> 00:28:29,440
that i've got to watch is the as the

588
00:28:33,350 --> 00:28:31,760

sawyers roll out and uh

589
00:28:35,190 --> 00:28:33,360
and watching it uh

590
00:28:38,070 --> 00:28:35,200
stood up on the launch pad absolutely

591
00:28:44,470 --> 00:28:41,510
and of course for us being here

592
00:28:45,510 --> 00:28:44,480
is a continuation of our training

593
00:28:48,549 --> 00:28:45,520
and

594
00:28:50,149 --> 00:28:48,559
it is interesting it is great it is

595
00:28:52,870 --> 00:28:50,159
exciting

596
00:28:54,549 --> 00:28:52,880
course or study that will culminate in

597
00:28:56,789 --> 00:28:54,559
september

598
00:28:59,350 --> 00:28:56,799
well michael explained everything

599
00:29:01,350 --> 00:28:59,360
in a more

600
00:29:03,510 --> 00:29:01,360
detailed way

601
00:29:06,549 --> 00:29:03,520
when he spoke about traditions and i

602
00:29:08,870 --> 00:29:06,559
know that you had an unplanned stop when

603
00:29:11,029 --> 00:29:08,880
you went to the city to

604
00:29:14,870 --> 00:29:11,039
the museum could you tell us more about

605
00:29:19,750 --> 00:29:17,029
besides the usual

606
00:29:22,070 --> 00:29:19,760
places and sites that

607
00:29:24,070 --> 00:29:22,080
cosmonas and astronauts usually visit we

608
00:29:26,950 --> 00:29:24,080
went to

609
00:29:29,590 --> 00:29:26,960
the monuments to my grandfather it was

610
00:29:32,870 --> 00:29:29,600
very important for my father and it was

611
00:29:35,909 --> 00:29:32,880
on my request and of course it was i was

612
00:29:39,029 --> 00:29:35,919
greatly pleased and i'm thankful that

613
00:29:43,909 --> 00:29:39,039

the crew visited it with me

614
00:29:47,750 --> 00:29:45,750
hello i could ask one question generally

615
00:29:49,830 --> 00:29:47,760
about space exploration

616
00:29:52,070 --> 00:29:49,840
ross cosmos recently announced its plan

617
00:29:53,990 --> 00:29:52,080
for the next two decades and then it

618
00:29:56,070 --> 00:29:54,000
it's said that it would like to put men

619
00:29:58,630 --> 00:29:56,080
back on the moon as astronauts and

620
00:30:01,750 --> 00:29:58,640
cosmonauts does that excite you and um

621
00:30:06,389 --> 00:30:03,590
well first of all of course it's

622
00:30:09,110 --> 00:30:07,669
and

623
00:30:11,830 --> 00:30:09,120
most likely

624
00:30:15,590 --> 00:30:11,840
humankind is not going to stay and just

625
00:30:19,110 --> 00:30:15,600
orbits the earth so we are going to

626
00:30:21,510 --> 00:30:19,120
mars and to the moon it's hard for me to

627
00:30:23,909 --> 00:30:21,520
comment on the plans on ross cosmos i

628
00:30:26,389 --> 00:30:23,919
think everybody knows them and there is

629
00:30:27,269 --> 00:30:26,399
nothing really new that i can say here

630
00:30:29,990 --> 00:30:27,279
but

631
00:30:33,110 --> 00:30:30,000
of course we have joint

632
00:30:38,230 --> 00:30:33,120
plans between roscosmos and nasa

633
00:30:42,710 --> 00:30:38,240
roscosmos and european space agency

634
00:30:44,310 --> 00:30:42,720
uh the plans are quite ambitious and

635
00:30:48,310 --> 00:30:44,320
we are planning on building a new

636
00:30:50,950 --> 00:30:48,320
vehicle in russia there are a few new

637
00:30:53,190 --> 00:30:50,960
spacecrafts

638
00:30:56,230 --> 00:30:53,200

in the united states for example

639
00:30:58,630 --> 00:30:56,240
and the plans are very extensive and i'm

640
00:30:59,509 --> 00:30:58,640
view and i'm absolutely sure that they

641
00:31:04,710 --> 00:30:59,519
will

642
00:31:08,710 --> 00:31:04,720
flying more and

643
00:31:14,789 --> 00:31:11,509
can it translate please actually uh ross

644
00:31:18,470 --> 00:31:14,799
cosmos plans are not a big secret at all

645
00:31:20,870 --> 00:31:18,480
uh i guess everybody knows it but as uh

646
00:31:21,669 --> 00:31:20,880
in general ask answering your question

647
00:31:25,350 --> 00:31:21,679
is

648
00:31:27,990 --> 00:31:25,360
of course i hope and i'm sure that the

649
00:31:31,269 --> 00:31:28,000
uh humanity will not stay

650
00:31:33,669 --> 00:31:31,279
flying around the earth circling the

651
00:31:37,190 --> 00:31:33,679
earth orbit only i'm sure that we will

652
00:31:39,909 --> 00:31:37,200
fly further to the moon or mars

653
00:31:40,950 --> 00:31:39,919
and everything and um

654
00:31:41,830 --> 00:31:40,960
we are

655
00:31:44,830 --> 00:31:41,840
getting

656
00:31:48,950 --> 00:31:44,840
uh some new ships prepared

657
00:31:51,990 --> 00:31:48,960
um designed here in russia and in the

658
00:31:53,269 --> 00:31:52,000
u.s and we have a lot of cooperation

659
00:31:56,630 --> 00:31:53,279
with our

660
00:31:59,430 --> 00:31:56,640
partners in the usa and

661
00:32:02,310 --> 00:31:59,440
european partners we have

662
00:32:04,870 --> 00:32:02,320
many um

663
00:32:09,590 --> 00:32:04,880

coordination with our partners and a lot

664
00:32:10,789 --> 00:32:09,600
of plants together uh to move forward

665
00:32:14,710 --> 00:32:10,799
beyond

666
00:32:19,669 --> 00:32:17,029
i would like to just point out that crew

667
00:32:22,389 --> 00:32:19,679
members carry out tasks that they're

668
00:32:26,230 --> 00:32:22,399
given but the tasks

669
00:32:29,750 --> 00:32:26,240
um are going to be decided by

670
00:32:33,190 --> 00:32:29,760
well by the needs and

671
00:32:36,149 --> 00:32:33,200
what if they had to fly for 12 months

672
00:32:38,789 --> 00:32:36,159
and i i would say that they would be

673
00:32:40,950 --> 00:32:38,799
ready to fly for 12 months say all of

674
00:32:44,310 --> 00:32:40,960
you that what the management decides are

675
00:32:46,710 --> 00:32:44,320
not interfered into planning uh the

676
00:32:49,669 --> 00:32:46,720
space exploration programs they're just

677
00:32:53,269 --> 00:32:49,679
fulfilling the tasks that they're given

678
00:32:55,350 --> 00:32:53,279
and for example right now the one year

679
00:32:57,110 --> 00:32:55,360
flight is ongoing

680
00:32:59,269 --> 00:32:57,120
and if

681
00:33:02,870 --> 00:32:59,279
i'm sure that if the crew this present

682
00:33:06,630 --> 00:33:02,880
crew was given the task to fly for one

683
00:33:09,590 --> 00:33:06,640
year they will be ready to do so so

684
00:33:12,549 --> 00:33:09,600
let me repeat again that cosmos are just

685
00:33:15,990 --> 00:33:12,559
doing and fulfilling the tasks

686
00:33:20,149 --> 00:33:16,000
provided by the people who are actually

687
00:33:25,509 --> 00:33:22,230
thank you very much that was the last

688
00:33:32,470 --> 00:33:25,519

question let's thank the crew let's

689
00:33:37,029 --> 00:33:35,269
traditional picture

690
00:33:44,950 --> 00:33:37,039
yes that's

691
00:33:50,310 --> 00:33:47,029
okay let's

692
00:33:59,029 --> 00:33:50,320
um leave only the prime crew

693
00:33:59,039 --> 00:34:09,510
five

694
00:34:09,520 --> 00:34:32,389
that's it good luck

695
00:34:36,710 --> 00:34:33,909
i think the crews are really well

696
00:34:38,149 --> 00:34:36,720
prepared for what's coming up for them

697
00:34:40,310 --> 00:34:38,159
like you said they have a tremendous

698
00:34:43,909 --> 00:34:40,320
amount of activity during this flight

699
00:34:45,669 --> 00:34:43,919
lots of visiting vehicles atv htv

700
00:34:46,629 --> 00:34:45,679
potentially an orbital demonstration

701
00:34:49,349 --> 00:34:46,639
flight

702
00:34:51,270 --> 00:34:49,359
just a tremendously busy period then

703
00:34:52,790 --> 00:34:51,280
also the space walks have been planned

704
00:34:54,389 --> 00:34:52,800
this summer and they're prepared for

705
00:34:56,629 --> 00:34:54,399
those and and also prepared for the

706
00:34:58,069 --> 00:34:56,639
russian spacewalks coming up so again i

707
00:35:00,150 --> 00:34:58,079
think they're overall really well

708
00:35:01,910 --> 00:35:00,160
prepared for all this activity but i

709
00:35:03,829 --> 00:35:01,920
think the other thing that kind of goes

710
00:35:05,109 --> 00:35:03,839
below the scenes is really the science

711
00:35:07,109 --> 00:35:05,119
that they're doing that they are really

712
00:35:08,790 --> 00:35:07,119
set up to do some really quality science

713
00:35:10,870 --> 00:35:08,800

and some really quality research during

714
00:35:12,950 --> 00:35:10,880
this expedition so not only will there

715
00:35:14,550 --> 00:35:12,960
be all this visiting vehicle traffic but

716
00:35:16,230 --> 00:35:14,560
really the purpose of all these vehicles

717
00:35:18,550 --> 00:35:16,240
is to bring quality science to them so

718
00:35:19,829 --> 00:35:18,560
they can get the latest equipment up on

719
00:35:22,390 --> 00:35:19,839
orbit so they can get the latest

720
00:35:24,150 --> 00:35:22,400
research and really really keep

721
00:35:25,670 --> 00:35:24,160
turning out the production and really

722
00:35:27,829 --> 00:35:25,680
bringing the research level up to a new

723
00:35:29,589 --> 00:35:27,839
high level here on station so a busy

724
00:35:31,670 --> 00:35:29,599
increment in many ways lots of traffic

725
00:35:47,829 --> 00:35:31,680
lots of evas but also lots of quality

726
00:35:52,150 --> 00:35:49,910
a lot of attention has been drawn to the

727
00:35:54,470 --> 00:35:52,160
unique single day launch to docking that

728
00:35:56,230 --> 00:35:54,480
these guys are involved with

729
00:35:58,390 --> 00:35:56,240
it's been rehearsed obviously with

730
00:36:00,870 --> 00:35:58,400
unmanned progress vehicles up to this

731
00:36:03,430 --> 00:36:00,880
point now it's time to try it on a crude

732
00:36:05,030 --> 00:36:03,440
vehicle uh what are your thoughts on the

733
00:36:06,069 --> 00:36:05,040
whole concept of

734
00:36:08,230 --> 00:36:06,079
this

735
00:36:10,470 --> 00:36:08,240
express lane to the space station six

736
00:36:11,750 --> 00:36:10,480
hours from launch pad to home so it's

737
00:36:13,109 --> 00:36:11,760
funny because you people here on the

738
00:36:15,190 --> 00:36:13,119

earth will look at this and say wow

739
00:36:16,390 --> 00:36:15,200
that's really quick in reality it's not

740
00:36:19,990 --> 00:36:16,400
very far to the space station a little

741
00:36:21,829 --> 00:36:20,000
over 200 statute miles so uh you'd think

742
00:36:23,510 --> 00:36:21,839
in six hours it's not that hard on on

743
00:36:24,230 --> 00:36:23,520
the surface of the earth to go that that

744
00:36:26,230 --> 00:36:24,240
far

745
00:36:27,589 --> 00:36:26,240
um in space though with the velocities

746
00:36:29,349 --> 00:36:27,599
we're talking about that's quite an

747
00:36:31,670 --> 00:36:29,359
achievement a lot of the heavy lifting

748
00:36:33,510 --> 00:36:31,680
the really hard work is done prior to

749
00:36:35,349 --> 00:36:33,520
the launch actually to make sure that

750
00:36:37,190 --> 00:36:35,359
that we position the space station we

751
00:36:39,829 --> 00:36:37,200
time it so that on the day of launch

752
00:36:42,069 --> 00:36:39,839
when when uh when the orbit of the space

753
00:36:43,750 --> 00:36:42,079
station passes over the launch site the

754
00:36:45,270 --> 00:36:43,760
angle between where they are and where

755
00:36:47,990 --> 00:36:45,280
the space station is small enough for us

756
00:36:49,349 --> 00:36:48,000
to capture it in in for orbit so a lot

757
00:36:51,510 --> 00:36:49,359
of the work is done by the ballistics

758
00:36:53,349 --> 00:36:51,520
teams you know weeks and months before

759
00:36:55,109 --> 00:36:53,359
the launch

760
00:36:57,030 --> 00:36:55,119
when it actually occurs the crew is

761
00:37:00,150 --> 00:36:57,040
ready to go that the teams are all ready

762
00:37:02,470 --> 00:37:00,160
to go um it'll be a great experience

763
00:37:04,069 --> 00:37:02,480

there's lots of variables associated

764
00:37:05,910 --> 00:37:04,079
with this of course the team being able

765
00:37:07,750 --> 00:37:05,920
to track the vehicle and and get the

766
00:37:09,670 --> 00:37:07,760
data up to the soyuz to perform the

767
00:37:11,589 --> 00:37:09,680
burns that they need to as they need to

768
00:37:12,950 --> 00:37:11,599
occur the crew being able to monitor

769
00:37:15,270 --> 00:37:12,960
everything and of course there's always

770
00:37:17,109 --> 00:37:15,280
space adaptation sickness so the crew

771
00:37:18,470 --> 00:37:17,119
has to not not only monitor the vehicle

772
00:37:20,550 --> 00:37:18,480
but but their own

773
00:37:22,950 --> 00:37:20,560
physiological health and make sure all

774
00:37:24,790 --> 00:37:22,960
systems are acceptable to to dock in

775
00:37:27,109 --> 00:37:24,800
such a short period of time if none of

776
00:37:29,109 --> 00:37:27,119
that is working just perfectly we have

777
00:37:30,870 --> 00:37:29,119
the option to wave off and and go into

778
00:37:32,630 --> 00:37:30,880
our normal two-day

779
00:37:35,190 --> 00:37:32,640
rendezvous sequence and

780
00:37:37,270 --> 00:37:35,200
and we've been doing that for 26 years

781
00:37:40,230 --> 00:37:37,280
actually i read an article this morning

782
00:37:42,790 --> 00:37:40,240
about uh from the ballistics the expert

783
00:37:44,550 --> 00:37:42,800
who designed this for rendezvous and he

784
00:37:47,990 --> 00:37:44,560
talked about making a decision back in

785
00:37:50,069 --> 00:37:48,000
1986 and so between 1986 and today

786
00:37:52,870 --> 00:37:50,079
they've been doing this for the uh the

787
00:37:54,950 --> 00:37:52,880
normal two day 34 orbit rendezvous

788
00:37:56,470 --> 00:37:54,960

but they're all ready to go and and try

789
00:37:58,390 --> 00:37:56,480
this forward for the first time with the

790
00:37:59,990 --> 00:37:58,400
crew we've been doing it with unmanned

791
00:38:02,310 --> 00:38:00,000
vehicles but this will be the first time

792
00:38:04,470 --> 00:38:02,320
with the crew lots of uh

793
00:38:05,829 --> 00:38:04,480
things to learn and understand and we'll

794
00:38:07,910 --> 00:38:05,839
learn from those things and and then

795
00:38:09,030 --> 00:38:07,920
make a decision about subsequent crude