1
00:00:04,550 --> 00:00:03,030
good afternoon i'm gary jordan of nasa

2
00:00:07,030 --> 00:00:04,560
public affairs and thank you for joining

3
00:00:09,669 --> 00:00:07,040
us here at nasa johnson space center

4
00:00:11,910 --> 00:00:09,679
for the expedition 4748 crew news

5
00:00:14,549 --> 00:00:11,920
conference i'm here with the crew who

6
00:00:16,790 --> 00:00:14,559
was set to launch on march 18th u.s time

7
00:00:18,470 --> 00:00:16,800
march 19th kazakhstan time from the

8
00:00:21,349 --> 00:00:18,480
baikonur cosmodrome

9
00:00:24,310 --> 00:00:21,359
veteran nasa astronaut jeff williams and

10
00:00:26,390 --> 00:00:24,320
two rose cosmos cosmonauts alexei

11
00:00:29,349 --> 00:00:26,400
ovchinen and commander of the soyuz

12
00:00:31,029 --> 00:00:29,359
tma-20m spacecraft and flight engineer

13
00:00:33,430 --> 00:00:31,039

alex grapochka guys thanks for being

14
00:00:34,870 --> 00:00:33,440
here today

15
00:00:35,910 --> 00:00:34,880
a little bit about our crew before we

16
00:00:39,270 --> 00:00:35,920
move on

17
00:00:40,470 --> 00:00:39,280
jeff has a total of 362 cumulative days

18
00:00:42,950 --> 00:00:40,480
in space

19
00:00:45,110 --> 00:00:42,960
one on space shuttle flight sts-101 on

20
00:00:46,950 --> 00:00:45,120
atlantis and two flights on the soyuz

21
00:00:50,709 --> 00:00:46,960
spacecraft to the international space

22
00:00:52,229 --> 00:00:50,719
station for expedition 13 and 2122 he

23
00:00:53,910 --> 00:00:52,239
will take over as commander for

24
00:00:55,750 --> 00:00:53,920
expedition 48.

25
00:00:57,910 --> 00:00:55,760
for lexi this will be his first space

26
00:00:59,670 --> 00:00:57,920
flight he was an instructor pilot and an

27
00:01:02,310 --> 00:00:59,680
air flight commander before becoming a

28
00:01:04,070 --> 00:01:02,320
cosmonaut in 2006 finished his basic

29
00:01:05,429 --> 00:01:04,080
training in 2009. we're excited to see

30
00:01:07,990 --> 00:01:05,439
your flight

31
00:01:11,830 --> 00:01:08,000
oleg has one space flight on expedition

32
00:01:13,190 --> 00:01:11,840
25 26 accumulating 159 days in space

33
00:01:14,870 --> 00:01:13,200
during his five-month stay on the

34
00:01:16,149 --> 00:01:14,880
international space station

35
00:01:17,350 --> 00:01:16,159
so why don't we start with you jeff and

36
00:01:19,670 --> 00:01:17,360
then we'll move on to the rest of the

37
00:01:20,950 --> 00:01:19,680
crew um tell us a little bit about uh

38
00:01:23,510 --> 00:01:20,960

your training over these past couple

39
00:01:25,350 --> 00:01:23,520
months well we've been training actually

40
00:01:26,789 --> 00:01:25,360
for the last couple of years as you know

41
00:01:29,190 --> 00:01:26,799
preparing for this the last couple of

42
00:01:31,910 --> 00:01:29,200
months have been focused on the mission

43
00:01:33,510 --> 00:01:31,920
specifics prior to that was the generic

44
00:01:35,190 --> 00:01:33,520
training whether it be refresher

45
00:01:36,390 --> 00:01:35,200
training or the first time going through

46
00:01:37,670 --> 00:01:36,400
it

47
00:01:39,830 --> 00:01:37,680
so the last couple of months have been

48
00:01:41,590 --> 00:01:39,840
focused on the actual specifics of the

49
00:01:43,510 --> 00:01:41,600
mission content

50
00:01:45,350 --> 00:01:43,520
these guys were in germany in december i

51
00:01:47,270 --> 00:01:45,360
was in japan

52
00:01:49,109 --> 00:01:47,280
for final training there in those

53
00:01:50,149 --> 00:01:49,119
respective places and now we're here in

54
00:01:51,670 --> 00:01:50,159
houston

55
00:01:54,950 --> 00:01:51,680
for two weeks

56
00:01:57,749 --> 00:01:54,960
as a soyuz crew getting our final

57
00:01:59,670 --> 00:01:57,759
systems updates as well as some payload

58
00:02:02,069 --> 00:01:59,680
and experiment training as well as

59
00:02:03,990 --> 00:02:02,079
taking some medical data to support

60
00:02:05,830 --> 00:02:04,000
uh some of the experiments that they'll

61
00:02:06,950 --> 00:02:05,840
they will be doing on us

62
00:02:09,430 --> 00:02:06,960
and then

63
00:02:11,110 --> 00:02:09,440

the the ever-present

64
00:02:12,550 --> 00:02:11,120
preparation for emergencies emergency

65
00:02:15,990 --> 00:02:12,560
training is one of the big things that

66
00:02:17,430 --> 00:02:16,000
we do when we're together as a crew

67
00:02:18,790 --> 00:02:17,440
after the two-week period here in

68
00:02:21,589 --> 00:02:18,800
houston

69
00:02:23,589 --> 00:02:21,599
alexa and oleg will return to russia

70
00:02:25,190 --> 00:02:23,599
i will join them a couple weeks later

71
00:02:27,510 --> 00:02:25,200
and then we'll get into our final

72
00:02:31,190 --> 00:02:27,520
training in star city just outside of

73
00:02:31,910 --> 00:02:31,200
moscow go through our final exams there

74
00:02:33,589 --> 00:02:31,920
get

75
00:02:34,949 --> 00:02:33,599
signed off by the russian commission

76
00:02:36,949 --> 00:02:34,959
that we're ready for flight and then

77
00:02:38,949 --> 00:02:36,959
we'll of course take our trip down to

78
00:02:42,070 --> 00:02:38,959
baikonur and do the final preparations

79
00:02:44,550 --> 00:02:42,080
and leading up to the launch date

80
00:02:46,229 --> 00:02:44,560
on the 18th houston time as you said so

81
00:02:48,309 --> 00:02:46,239
we're looking forward to that

82
00:02:49,350 --> 00:02:48,319
we've had a great experience training

83
00:02:51,750 --> 00:02:49,360
together

84
00:02:52,630 --> 00:02:51,760
alexa and i were previously on a backup

85
00:02:55,670 --> 00:02:52,640
crew

86
00:02:57,910 --> 00:02:55,680
for the one-year flight a year ago

87
00:02:59,750 --> 00:02:57,920
olek was on the backup crew for this

88
00:03:02,070 --> 00:02:59,760

past september launch

89
00:03:03,910 --> 00:03:02,080
and then when he completed that

90
00:03:06,869 --> 00:03:03,920
we joined together as a crew preparing

91
00:03:08,550 --> 00:03:06,879
for this march launch so it's a it's uh

92
00:03:10,869 --> 00:03:08,560
been a very good experience for us and

93
00:03:12,149 --> 00:03:10,879
we're looking forward to flying uh

94
00:03:15,589 --> 00:03:12,159
together here

95
00:03:17,110 --> 00:03:15,599
uh for a six month stay on space station

96
00:03:20,630 --> 00:03:17,120
with that i'd like to give

97
00:03:23,509 --> 00:03:20,640
a a chance to uh to give his perspective

98
00:03:25,350 --> 00:03:23,519
on uh anticipation of a first flight uh

99
00:03:27,430 --> 00:03:25,360
before he does that i i will say that

100
00:03:30,229 --> 00:03:27,440
one of the things i'm looking forward to

101
00:03:32,710 --> 00:03:30,239
the most is uh is watching him go

102
00:03:33,509 --> 00:03:32,720
through the experience of first launch

103
00:03:36,949 --> 00:03:33,519
and

104
00:03:38,550 --> 00:03:36,959
then the first flight in space station

105
00:03:39,670 --> 00:03:38,560
that's always one of the more enjoyable

106
00:03:41,110 --> 00:03:39,680
things

107
00:04:59,990 --> 00:03:41,120
to do if you've been there and done it

108
00:05:04,790 --> 00:05:02,710
well this will be my first flight

109
00:05:05,749 --> 00:05:04,800
and i have been getting ready for nine

110
00:05:07,590 --> 00:05:05,759
years

111
00:05:09,350 --> 00:05:07,600
and i'm really looking forward to this

112
00:05:12,550 --> 00:05:09,360
flight and i'm hoping it will be my

113
00:05:13,510 --> 00:05:12,560

first but not last flight

114
00:05:16,070 --> 00:05:13,520
and

115
00:05:19,110 --> 00:05:16,080
i'm hoping that all my hopes will be

116
00:05:20,710 --> 00:05:19,120
fulfilled and i will fulfill everybody's

117
00:05:23,430 --> 00:05:20,720
expectations

118
00:05:25,830 --> 00:05:23,440
we have been training for two years

119
00:05:28,950 --> 00:05:25,840
training on the russian segment systems

120
00:05:30,870 --> 00:05:28,960
in russia and on the u.s segment systems

121
00:05:32,950 --> 00:05:30,880
in the united states

122
00:05:34,070 --> 00:05:32,960
and also we have been getting ready to

123
00:05:36,950 --> 00:05:34,080
work

124
00:05:38,710 --> 00:05:36,960
on the european part of the station and

125
00:05:40,710 --> 00:05:38,720
we will we have been

126
00:05:43,909 --> 00:05:40,720
training in germany for that

127
00:05:45,749 --> 00:05:43,919
and in japan we have been training to

128
00:05:47,510 --> 00:05:45,759
be ready to work on the japanese

129
00:05:48,550 --> 00:05:47,520
hardware so

130
00:05:51,430 --> 00:05:48,560
the crew

131
00:05:53,909 --> 00:05:51,440
is completely ready

132
00:05:57,270 --> 00:05:53,919
excellent now oleg you had your space

133
00:06:02,790 --> 00:05:57,280
flight in 2010 um how will you take that

134
00:06:07,350 --> 00:06:05,670
so as jeff said this is my second flight

135
00:06:09,189 --> 00:06:07,360
should be my second flight

136
00:06:10,710 --> 00:06:09,199
and in the paris on this first flight i

137
00:06:11,909 --> 00:06:10,720
see that there are

138
00:06:13,830 --> 00:06:11,919

some

139
00:06:16,150 --> 00:06:13,840
many more

140
00:06:17,350 --> 00:06:16,160
numbers of scientific experiments that

141
00:06:18,469 --> 00:06:17,360
we

142
00:06:21,749 --> 00:06:18,479
should

143
00:06:23,909 --> 00:06:21,759
do on board from russian side and

144
00:06:25,909 --> 00:06:23,919
from american side and there are some

145
00:06:26,629 --> 00:06:25,919
experiments that the whole crew involved

146
00:06:31,189 --> 00:06:26,639
in

147
00:06:34,150 --> 00:06:31,199
work as one team

148
00:06:35,430 --> 00:06:34,160
we will not spend our time for nothing

149
00:06:37,270 --> 00:06:35,440
excellent we're excited to see your

150
00:06:38,710 --> 00:06:37,280
flight and jeff i know that you

151
00:06:40,710 --> 00:06:38,720
mentioned that you'll be focusing on

152
00:06:42,150 --> 00:06:40,720
history for your communication on the

153
00:06:44,070 --> 00:06:42,160
international space station we actually

154
00:06:46,550 --> 00:06:44,080
have some special guests with us today

155
00:06:48,309 --> 00:06:46,560
from the houston history alliance

156
00:06:51,029 --> 00:06:48,319
we also have some special guests from

157
00:06:52,710 --> 00:06:51,039
the emerge employee resource group uh

158
00:06:54,150 --> 00:06:52,720
they are the young professionals here

159
00:06:56,309 --> 00:06:54,160
and also we have some interns and of

160
00:06:57,749 --> 00:06:56,319
course our media guests

161
00:06:59,990 --> 00:06:57,759
so with that we're gonna start opening

162
00:07:01,510 --> 00:07:00,000
it up for questions uh just a reminder

163
00:07:04,469 --> 00:07:01,520

that if you call into the phone bridge

164
00:07:06,629 --> 00:07:04,479
to please press star 1 to ask a question

165
00:07:08,230 --> 00:07:06,639
and star 2 withdraw that question if it

166
00:07:09,749 --> 00:07:08,240
has been answered and if you're

167
00:07:11,990 --> 00:07:09,759
following along on social media we're

168
00:07:13,270 --> 00:07:12,000
using the hashtag asknasa

169
00:07:15,510 --> 00:07:13,280
so why don't we start with some of the

170
00:07:16,950 --> 00:07:15,520
media that we have in the audience

171
00:07:18,790 --> 00:07:16,960
if you'd like to start please state your

172
00:07:21,430 --> 00:07:18,800
name and affiliation

173
00:07:22,790 --> 00:07:21,440
i'm mark for aviation week in space

174
00:07:25,029 --> 00:07:22,800
technology

175
00:07:26,150 --> 00:07:25,039
and uh i'll start with jeff that's all

176
00:07:29,350 --> 00:07:26,160
right

177
00:07:30,870 --> 00:07:29,360
there's so much interest in furthering

178
00:07:32,710 --> 00:07:30,880
the development of the station for a

179
00:07:35,430 --> 00:07:32,720
commercial crew

180
00:07:38,309 --> 00:07:35,440
i know it's a little bit fluid

181
00:07:41,110 --> 00:07:38,319
but can you kind of describe what what

182
00:07:43,189 --> 00:07:41,120
you're prepared to do in terms of

183
00:07:45,350 --> 00:07:43,199
furthering work on the outside and maybe

184
00:07:47,270 --> 00:07:45,360
inside to

185
00:07:49,270 --> 00:07:47,280
get the first and maybe

186
00:07:50,469 --> 00:07:49,280
further than that first docking module

187
00:07:52,869 --> 00:07:50,479
may be more

188
00:07:55,589 --> 00:07:52,879

applied during your time

189
00:07:58,390 --> 00:07:55,599
of course the primary tasks that we have

190
00:08:00,790 --> 00:07:58,400
in the plan right now and the the date

191
00:08:04,390 --> 00:08:00,800
is a little bit fluid i think

192
00:08:07,189 --> 00:08:04,400
but it will be the arrival of the first

193
00:08:08,150 --> 00:08:07,199
docking adapter for commercial crew

194
00:08:10,390 --> 00:08:08,160
which

195
00:08:13,350 --> 00:08:10,400
we will install on the front end of the

196
00:08:15,589 --> 00:08:13,360
space station on pma1

197
00:08:17,670 --> 00:08:15,599
and that will involve one eva to

198
00:08:19,670 --> 00:08:17,680
integrate it to install it and then

199
00:08:21,510 --> 00:08:19,680
integrate it and so that we can do the

200
00:08:22,629 --> 00:08:21,520
checkout of it to prepare

201
00:08:23,510 --> 00:08:22,639
then for

202
00:08:25,589 --> 00:08:23,520
the

203
00:08:27,749 --> 00:08:25,599
first launch of a commercial crew

204
00:08:30,710 --> 00:08:27,759
vehicle which of course will

205
00:08:32,870 --> 00:08:30,720
happen after our expedition but that's

206
00:08:35,509 --> 00:08:32,880
the major event that we have on our

207
00:08:38,469 --> 00:08:35,519
plate during our stay they're currently

208
00:08:41,029 --> 00:08:38,479
in the plan to support commercial crew

209
00:08:43,110 --> 00:08:41,039
of course that's a

210
00:08:44,470 --> 00:08:43,120
significant milestone as we all

211
00:08:45,509 --> 00:08:44,480
anticipate

212
00:08:46,870 --> 00:08:45,519
uh

213
00:08:50,710 --> 00:08:46,880

the

214
00:08:52,470 --> 00:08:50,720
of commercial crew vehicles

215
00:08:54,870 --> 00:08:52,480
uh according to the current plan from

216
00:08:57,670 --> 00:08:54,880
the two companies which will

217
00:08:59,269 --> 00:08:57,680
significantly expand the capability

218
00:09:00,949 --> 00:08:59,279
that we have to

219
00:09:03,910 --> 00:09:00,959
for access to low earth orbit and

220
00:09:05,750 --> 00:09:03,920
specifically the space station

221
00:09:09,590 --> 00:09:05,760
it

222
00:09:11,670 --> 00:09:09,600
sometimes we we tend to

223
00:09:13,910 --> 00:09:11,680
hear that the the impression out there

224
00:09:16,310 --> 00:09:13,920
is that we're dependent on the russian

225
00:09:18,949 --> 00:09:16,320
side for access and certainly there's

226
00:09:20,949 --> 00:09:18,959
some truth in that but i like to

227
00:09:23,750 --> 00:09:20,959
put it in a little bit different way and

228
00:09:25,829 --> 00:09:23,760
that the russian side has been

229
00:09:27,350 --> 00:09:25,839
great partners with us on the iss

230
00:09:29,269 --> 00:09:27,360
program

231
00:09:31,509 --> 00:09:29,279
and we chose to retire the shuttle and

232
00:09:33,910 --> 00:09:31,519
there was rationale to do that and it's

233
00:09:36,150 --> 00:09:33,920
taken some time to develop the next

234
00:09:38,870 --> 00:09:36,160
generation of vehicles to get there so

235
00:09:41,509 --> 00:09:38,880
that has resulted in a gap

236
00:09:43,829 --> 00:09:41,519
but the soyuz

237
00:09:44,949 --> 00:09:43,839
as in terms of the space station program

238
00:09:48,389 --> 00:09:44,959

has been

239
00:09:52,389 --> 00:09:48,399
in the program since the beginning

240
00:09:54,230 --> 00:09:52,399
and so the russians have um have as i

241
00:09:56,710 --> 00:09:54,240
said been very good partners in that to

242
00:09:58,150 --> 00:09:56,720
step up to the plate to fill the gap

243
00:09:59,430 --> 00:09:58,160
that we didn't anticipate in the

244
00:10:01,110 --> 00:09:59,440
beginning

245
00:10:03,430 --> 00:10:01,120
also i would say

246
00:10:04,790 --> 00:10:03,440
that when we do begin flying commercial

247
00:10:07,350 --> 00:10:04,800
crew vehicles

248
00:10:09,910 --> 00:10:07,360
that it's not going to be now where

249
00:10:11,750 --> 00:10:09,920
the u.s side is doing

250
00:10:13,190 --> 00:10:11,760
one thing and the russian side is doing

251
00:10:14,949 --> 00:10:13,200
another

252
00:10:16,790 --> 00:10:14,959
they the two vehicles

253
00:10:19,430 --> 00:10:16,800
are two types of vehicles maybe three

254
00:10:21,990 --> 00:10:19,440
vehicles will complement one another to

255
00:10:23,430 --> 00:10:22,000
sustain the the iss program out to the

256
00:10:24,870 --> 00:10:23,440
end of its

257
00:10:25,750 --> 00:10:24,880
life

258
00:10:27,670 --> 00:10:25,760
and

259
00:10:29,590 --> 00:10:27,680
i think it's

260
00:10:32,230 --> 00:10:29,600
probably fair to say to assume that

261
00:10:34,949 --> 00:10:32,240
there will continue to be one u.s crew

262
00:10:37,509 --> 00:10:34,959
member on every soyuz and one russian

263
00:10:39,350 --> 00:10:37,519

cosmonaut on every u.s commercial

264
00:10:41,030 --> 00:10:39,360
vehicle after that and from an

265
00:10:42,069 --> 00:10:41,040
operational point of view we need to do

266
00:10:44,710 --> 00:10:42,079
that

267
00:10:46,550 --> 00:10:44,720
for the case when we

268
00:10:47,750 --> 00:10:46,560
as a contingency we need to go down to

269
00:10:48,630 --> 00:10:47,760
one

270
00:10:49,990 --> 00:10:48,640
uh

271
00:10:52,310 --> 00:10:50,000
crude

272
00:10:54,230 --> 00:10:52,320
one vehicle crew on board space station

273
00:10:57,430 --> 00:10:54,240
in other words three or four people

274
00:10:59,190 --> 00:10:57,440
we have to have the expertise required

275
00:11:02,150 --> 00:10:59,200
for the systems on both sides of the

276
00:11:03,430 --> 00:11:02,160
both ends of the space station

277
00:11:04,550 --> 00:11:03,440
good question any more from the media

278
00:11:07,590 --> 00:11:04,560
yes sir

279
00:11:09,269 --> 00:11:07,600
um robert perrault with collectspace.com

280
00:11:11,430 --> 00:11:09,279
um i uh

281
00:11:13,910 --> 00:11:11,440
for jeff i i understand

282
00:11:16,069 --> 00:11:13,920
while you're on board the beam uh

283
00:11:18,230 --> 00:11:16,079
inflatable module we will be expanded

284
00:11:20,069 --> 00:11:18,240
can you describe the process from the

285
00:11:22,069 --> 00:11:20,079
crew side of what you will do to monitor

286
00:11:23,829 --> 00:11:22,079
that process as well as

287
00:11:26,470 --> 00:11:23,839
entering it and how often you'll have

288
00:11:28,949 --> 00:11:26,480

access to that um to that module

289
00:11:31,750 --> 00:11:28,959
yeah we're uh very excited anticipating

290
00:11:34,150 --> 00:11:31,760
the the beam coming up on spacex

291
00:11:36,310 --> 00:11:34,160
and deploying it as an experiment that's

292
00:11:38,310 --> 00:11:36,320
one of the major categories

293
00:11:40,710 --> 00:11:38,320
of utilization of the space station is

294
00:11:44,870 --> 00:11:40,720
the development of new technologies

295
00:11:46,470 --> 00:11:44,880
and in a sense opening up the door to to

296
00:11:48,470 --> 00:11:46,480
commercial

297
00:11:51,110 --> 00:11:48,480
ventures in space and beam represents

298
00:11:53,829 --> 00:11:51,120
both of those aspects so it'll come up

299
00:11:56,949 --> 00:11:53,839
on spacex it'll be

300
00:11:58,870 --> 00:11:56,959
removed from the spacex vehicle and

301
00:12:02,949 --> 00:11:58,880
birthed to the

302
00:12:05,430 --> 00:12:02,959
tranquility the node 3 aft berthing port

303
00:12:07,590 --> 00:12:05,440
and it will sit there for a time that

304
00:12:10,790 --> 00:12:07,600
that operation obviously will occur with

305
00:12:13,269 --> 00:12:10,800
when spacex's birth to the space station

306
00:12:15,269 --> 00:12:13,279
the actual deployment of of beam i think

307
00:12:18,389 --> 00:12:15,279
according to the current plan will be

308
00:12:20,629 --> 00:12:18,399
after that spacex vehicle departs

309
00:12:21,829 --> 00:12:20,639
and returns to earth

310
00:12:26,470 --> 00:12:21,839
but

311
00:12:31,269 --> 00:12:28,470
does just what you alluded to it's an

312
00:12:34,550 --> 00:12:31,279
inflatable module so its volume is

313
00:12:37,269 --> 00:12:34,560

smaller than when it launches

314
00:12:39,190 --> 00:12:37,279
than when it's utilized in space so it

315
00:12:40,870 --> 00:12:39,200
takes less room and and that technology

316
00:12:44,069 --> 00:12:40,880
has some great promise for

317
00:12:45,750 --> 00:12:44,079
for the launching of future spacecraft

318
00:12:47,509 --> 00:12:45,760
on rockets with smaller volume and

319
00:12:49,590 --> 00:12:47,519
expanding it to a full volume to be able

320
00:12:51,269 --> 00:12:49,600
to utilize those volumes in different

321
00:12:53,430 --> 00:12:51,279
ways

322
00:12:55,750 --> 00:12:53,440
uh on future spacecraft

323
00:12:57,990 --> 00:12:55,760
so basically after uh spacex leaves and

324
00:12:59,990 --> 00:12:58,000
we get uh to the the time in the plan

325
00:13:02,389 --> 00:13:00,000
where we're gonna deploy beam

326
00:13:04,230 --> 00:13:02,399
it will be deployed with an internal

327
00:13:07,350 --> 00:13:04,240
mechanical structure

328
00:13:09,190 --> 00:13:07,360
um out to its full volume

329
00:13:10,710 --> 00:13:09,200
there will be vacuum on the inside

330
00:13:13,590 --> 00:13:10,720
there's vacuum on the outside so that

331
00:13:15,990 --> 00:13:13,600
deployment physically can occur and then

332
00:13:18,230 --> 00:13:16,000
after that it will be pressurized with

333
00:13:20,870 --> 00:13:18,240
air tanks that are inherent internal to

334
00:13:22,790 --> 00:13:20,880
the beam module itself

335
00:13:24,150 --> 00:13:22,800
after it's pressurized we will equalize

336
00:13:27,590 --> 00:13:24,160
the pressure between the station and

337
00:13:29,190 --> 00:13:27,600
beam ingress installs some sensors

338
00:13:31,110 --> 00:13:29,200

for the data collection for the time

339
00:13:32,069 --> 00:13:31,120
that it's there

340
00:13:33,910 --> 00:13:32,079
and then

341
00:13:36,230 --> 00:13:33,920
the nominal configuration though will be

342
00:13:38,790 --> 00:13:36,240
hatches closed although there will be

343
00:13:41,110 --> 00:13:38,800
air transfer ventilation between beam

344
00:13:43,430 --> 00:13:41,120
and the space station the hatches will

345
00:13:46,230 --> 00:13:43,440
nominally be closed and then it will sit

346
00:13:49,269 --> 00:13:46,240
there for its period of time the data

347
00:13:51,509 --> 00:13:49,279
will be collected collected and

348
00:13:54,790 --> 00:13:51,519
they will see how the performance of

349
00:13:55,670 --> 00:13:54,800
that new technology turns out to be

350
00:13:56,790 --> 00:13:55,680
so

351
00:13:59,269 --> 00:13:56,800
hi

352
00:14:01,509 --> 00:13:59,279
ed mcmurray with the kuhf radio here in

353
00:14:03,750 --> 00:14:01,519
houston i wanted to ask each of you what

354
00:14:05,750 --> 00:14:03,760
your specific jobs will be in this

355
00:14:07,750 --> 00:14:05,760
mission and with the

356
00:14:09,990 --> 00:14:07,760
docking apparatus being part of the

357
00:14:12,310 --> 00:14:10,000
mission will any of you be doing space

358
00:14:13,590 --> 00:14:12,320
walks

359
00:14:15,990 --> 00:14:13,600
uh

360
00:14:19,350 --> 00:14:16,000
and i will say that each of us are

361
00:14:21,030 --> 00:14:19,360
trained in many aspects of uh space

362
00:14:22,389 --> 00:14:21,040
station operations

363
00:14:24,150 --> 00:14:22,399

um so

364
00:14:26,949 --> 00:14:24,160
there will be a common set of things

365
00:14:28,069 --> 00:14:26,959
that we're all doing

366
00:14:30,069 --> 00:14:28,079
based on

367
00:14:31,829 --> 00:14:30,079
how we're scheduled for day to day so

368
00:14:33,269 --> 00:14:31,839
the operation of the space station some

369
00:14:34,710 --> 00:14:33,279
of the maintenance of the space station

370
00:14:37,430 --> 00:14:34,720
some of the execution of routine

371
00:14:40,470 --> 00:14:37,440
activities will all be responsible for

372
00:14:43,030 --> 00:14:40,480
that um of course we have some specialty

373
00:14:46,310 --> 00:14:43,040
areas um i

374
00:14:48,389 --> 00:14:46,320
um will be responsible for example all

375
00:14:51,350 --> 00:14:48,399
of the systems on the u.s segment uh

376
00:14:52,949 --> 00:14:51,360
whereas uh alexander like will have

377
00:14:54,230 --> 00:14:52,959
greater responsibility on the russian

378
00:15:00,230 --> 00:14:54,240
segment because that's where we have

379
00:15:05,189 --> 00:15:02,069
so

380
00:15:07,030 --> 00:15:05,199
that's a general answer um as was as

381
00:15:09,110 --> 00:15:07,040
gary mentioned in the beginning i will

382
00:15:12,069 --> 00:15:09,120
take over command for expedition 48 from

383
00:15:14,310 --> 00:15:12,079
tim copra and for 47 of course we'll be

384
00:15:15,750 --> 00:15:14,320
augmenting tim corporate tim peake and

385
00:15:17,030 --> 00:15:15,760
yuri

386
00:15:19,509 --> 00:15:17,040
malenchenko

387
00:15:21,030 --> 00:15:19,519
who are currently on board uh tim copra

388
00:15:22,550 --> 00:15:21,040

will be the commander so that'll be his

389
00:15:25,269 --> 00:15:22,560
responsibility and then he'll hand it

390
00:15:27,030 --> 00:15:25,279
over to me for expedition 48

391
00:15:29,910 --> 00:15:27,040
in terms of the docking adapter it

392
00:15:33,990 --> 00:15:29,920
depends upon when that comes whether it

393
00:15:35,829 --> 00:15:34,000
arrives uh during expedition 47 or 48

394
00:15:37,189 --> 00:15:35,839
there will be as i said one spacewalk

395
00:15:39,990 --> 00:15:37,199
associated with

396
00:15:41,829 --> 00:15:40,000
the integration of that docking adapter

397
00:15:43,590 --> 00:15:41,839
and it will be a combination of a couple

398
00:15:45,350 --> 00:15:43,600
of us in the u.s segment it hasn't been

399
00:15:48,389 --> 00:15:45,360
determined uh who will be on that

400
00:15:49,829 --> 00:15:48,399
spacewalk but it will be if it's in 47

401
00:15:52,069 --> 00:15:49,839
it'll be

402
00:15:54,790 --> 00:15:52,079
two of the three of us tim culprit tim

403
00:15:57,350 --> 00:15:54,800
peake or myself

404
00:16:00,949 --> 00:15:57,360
if it's during 48 it will be two of the

405
00:16:02,389 --> 00:16:00,959
three of of uh kate rubin's

406
00:16:05,509 --> 00:16:02,399
takuya

407
00:16:08,389 --> 00:16:05,519
from jackson and or myself so that

408
00:16:09,269 --> 00:16:08,399
that's yet to be determined

409
00:16:11,990 --> 00:16:09,279
so

410
00:16:16,069 --> 00:16:14,550
uh two weeks before uh the end of your

411
00:16:18,389 --> 00:16:16,079
scheduled expedition you're supposed to

412
00:16:20,790 --> 00:16:18,399
or you're expected to pass

413
00:16:25,590 --> 00:16:20,800

it's half kelly's 520 day commutative

414
00:16:29,749 --> 00:16:27,670
does this represent change or relaxation

415
00:16:31,749 --> 00:16:29,759
of nasa policy regarding

416
00:16:33,670 --> 00:16:31,759
uh cumulative

417
00:16:35,670 --> 00:16:33,680
exposure to radiation for long-duration

418
00:16:38,389 --> 00:16:35,680
missions

419
00:16:41,189 --> 00:16:38,399
no it doesn't represent a change at all

420
00:16:42,470 --> 00:16:41,199
uh we have standards that have been

421
00:16:44,310 --> 00:16:42,480
applied and

422
00:16:46,550 --> 00:16:44,320
i haven't followed the history of those

423
00:16:48,470 --> 00:16:46,560
things but they haven't been changed for

424
00:16:50,629 --> 00:16:48,480
this they were looked at a little bit

425
00:16:53,509 --> 00:16:50,639
closer for the one-year flight and as

426
00:16:56,069 --> 00:16:53,519
you you know i backed up scott and he

427
00:16:56,949 --> 00:16:56,079
and i met the requirements

428
00:16:58,389 --> 00:16:56,959
uh

429
00:17:00,069 --> 00:16:58,399
to be able to execute the one-year

430
00:17:02,710 --> 00:17:00,079
mission without exceeding our lifetime

431
00:17:07,829 --> 00:17:05,429
and of course so now with this six month

432
00:17:10,390 --> 00:17:07,839
flight for myself um

433
00:17:13,029 --> 00:17:10,400
and accumulating the days that it will i

434
00:17:15,829 --> 00:17:13,039
still do not exceed the lifetime issue

435
00:17:17,350 --> 00:17:15,839
so no changes at all

436
00:17:19,350 --> 00:17:17,360
excellent

437
00:17:22,069 --> 00:17:19,360
uh megan do we have any questions on

438
00:17:23,909 --> 00:17:22,079

social media yes we have a question from

439
00:17:26,309 --> 00:17:23,919
peter robinson on the international

440
00:17:27,750 --> 00:17:26,319
space station facebook page will you be

441
00:17:29,669 --> 00:17:27,760
taking some of your own personal

442
00:17:31,669 --> 00:17:29,679
belongings to the station and what will

443
00:17:38,230 --> 00:17:31,679
you be doing on your off-duty days for

444
00:17:42,230 --> 00:17:40,470
ever because cosmonaut astronaut

445
00:17:45,110 --> 00:17:42,240
can take his

446
00:17:47,750 --> 00:17:45,120
own things with him but

447
00:17:49,830 --> 00:17:47,760
the amount is strongly limited

448
00:17:51,990 --> 00:17:49,840
as far as i know it's about one kilo per

449
00:17:55,350 --> 00:17:52,000
person i can take on board

450
00:17:57,110 --> 00:17:55,360
usually it's some

451
00:18:00,710 --> 00:17:57,120
family photos so

452
00:18:04,789 --> 00:18:00,720
some pictures some souvenirs maybe

453
00:18:12,630 --> 00:18:06,789
alexa any items that you're going to be

454
00:18:12,640 --> 00:18:26,710
photography

455
00:18:26,720 --> 00:18:41,029
is

456
00:18:45,029 --> 00:18:43,750
yes just like olek i'm going to take

457
00:18:47,990 --> 00:18:45,039
photographs

458
00:18:51,510 --> 00:18:48,000
of my relatives and loved ones plus i

459
00:18:53,350 --> 00:18:51,520
will take a toy taken from my daughter

460
00:18:56,870 --> 00:18:53,360
and it will serve at first as an

461
00:18:59,669 --> 00:18:56,880
indicator of 0g and later it will serve

462
00:19:03,750 --> 00:18:59,679
as a reminder daughter and when i come

463
00:19:06,470 --> 00:19:04,789

amazing

464
00:19:08,630 --> 00:19:06,480
megan any more social media questions

465
00:19:10,710 --> 00:19:08,640
yes we have one on twitter from laura

466
00:19:12,549 --> 00:19:10,720
austin who would you credit on having

467
00:19:18,150 --> 00:19:12,559
the greatest influence on you being what

468
00:19:20,470 --> 00:19:19,270
well

469
00:19:22,390 --> 00:19:20,480
let's see

470
00:19:24,950 --> 00:19:22,400
there's a short list for me

471
00:19:27,029 --> 00:19:24,960
certainly my father inspired me growing

472
00:19:28,150 --> 00:19:27,039
up he was a school teacher he taught

473
00:19:29,430 --> 00:19:28,160
history

474
00:19:31,270 --> 00:19:29,440
later when i went through high school he

475
00:19:32,230 --> 00:19:31,280
was a guidance counselor he opened me up

476
00:19:36,950 --> 00:19:32,240
to

477
00:19:38,630 --> 00:19:36,960
and in the academies specifically and i

478
00:19:40,549 --> 00:19:38,640
ended up going to to the military

479
00:19:42,390 --> 00:19:40,559
academy at west point

480
00:19:44,630 --> 00:19:42,400
so that

481
00:19:47,110 --> 00:19:44,640
i would certainly include him on that

482
00:19:49,350 --> 00:19:47,120
list i had a sixth grade science teacher

483
00:19:52,470 --> 00:19:49,360
uh which significantly uh who

484
00:19:55,190 --> 00:19:52,480
significantly influenced me uh during

485
00:19:57,350 --> 00:19:55,200
those years sixth and seventh grade uh

486
00:19:59,270 --> 00:19:57,360
to inspire me in science so i would i

487
00:20:03,430 --> 00:19:59,280
would also include him and there's

488
00:20:03,440 --> 00:20:46,830

alex say any any idols

489
00:20:49,990 --> 00:20:48,710
foreign

490
00:20:52,470 --> 00:20:50,000
well what

491
00:20:53,909 --> 00:20:52,480
prompted me to become a cosmonaut i

492
00:20:55,909 --> 00:20:53,919
think it was

493
00:20:59,350 --> 00:20:55,919
other russian cosmonauts

494
00:21:02,470 --> 00:20:59,360
because during every launch and landing

495
00:21:03,990 --> 00:21:02,480
there was a wide coverage on russian tv

496
00:21:06,950 --> 00:21:04,000
and newspapers

497
00:21:09,830 --> 00:21:06,960
and it was presented in such a way that

498
00:21:12,390 --> 00:21:09,840
i really wanted to become a cosmonaut

499
00:21:16,070 --> 00:21:12,400
and i made my decision when i was about

500
00:21:17,270 --> 00:21:16,080
seven or eight years old

501
00:21:18,789 --> 00:21:17,280
very cool

502
00:21:20,149 --> 00:21:18,799
well jeff with your father being a

503
00:21:21,990 --> 00:21:20,159
history teacher i think we'll turn it

504
00:21:25,590 --> 00:21:22,000
over to the houston history alliance i'm

505
00:21:28,230 --> 00:21:27,350
who's first this man in the back another

506
00:21:30,549 --> 00:21:28,240
question

507
00:21:32,310 --> 00:21:30,559
i'm debbie harwell i'm on the board for

508
00:21:34,070 --> 00:21:32,320
the houston history alliance and i'm the

509
00:21:35,750 --> 00:21:34,080
managing editor of houston history

510
00:21:40,470 --> 00:21:35,760
magazine

511
00:21:42,710 --> 00:21:40,480
in uh 2008 we did an um issue with nasa

512
00:21:45,350 --> 00:21:42,720
on the history of the first

513
00:21:47,270 --> 00:21:45,360

20 years of the space program and

514
00:21:49,110 --> 00:21:47,280
chris craft said at that time that he

515
00:21:50,310 --> 00:21:49,120
thought that apollo 8 was the most

516
00:21:53,190 --> 00:21:50,320
significant

517
00:21:55,029 --> 00:21:53,200
mission that nasa had done and i was

518
00:22:01,270 --> 00:21:55,039
just curious to know what you think was

519
00:22:05,270 --> 00:22:03,029
well i suppose it would depend upon how

520
00:22:07,270 --> 00:22:05,280
you you approach that question and how

521
00:22:08,950 --> 00:22:07,280
you define the significance obviously i

522
00:22:10,630 --> 00:22:08,960
think that

523
00:22:12,950 --> 00:22:10,640
that was a significant mission i mean

524
00:22:15,190 --> 00:22:12,960
they they they added objectives to that

525
00:22:17,830 --> 00:22:15,200
mission that were not envisioned uh

526
00:22:19,510 --> 00:22:17,840
initially they they what was envisioned

527
00:22:22,549 --> 00:22:19,520
initially to be accomplished over i

528
00:22:24,230 --> 00:22:22,559
think several missions as i recall they

529
00:22:25,830 --> 00:22:24,240
put together in one mission that was

530
00:22:28,310 --> 00:22:25,840
actually going to the moon and orbiting

531
00:22:30,549 --> 00:22:28,320
the moon and all that as you know better

532
00:22:32,310 --> 00:22:30,559
than i do probably

533
00:22:33,830 --> 00:22:32,320
the most significant mission i think in

534
00:22:35,350 --> 00:22:33,840
from a world's perspective point of view

535
00:22:36,950 --> 00:22:35,360
from a historic perspective would be

536
00:22:39,830 --> 00:22:36,960
apollo 11.

537
00:22:42,230 --> 00:22:39,840
that's when the whole world was watching

538
00:22:43,669 --> 00:22:42,240

ironically shortly after that the

539
00:22:45,590 --> 00:22:43,679
much of the world stopped paying

540
00:22:49,029 --> 00:22:45,600
attention

541
00:22:51,270 --> 00:22:49,039
and we know that as well too

542
00:22:53,029 --> 00:22:51,280
and that's uh that's a lesson in history

543
00:22:55,510 --> 00:22:53,039
in itself there were some motivations i

544
00:22:56,870 --> 00:22:55,520
think that that focused the world on

545
00:22:58,630 --> 00:22:56,880
apollo 11

546
00:23:01,510 --> 00:22:58,640
the moon landing and those motivations

547
00:23:03,909 --> 00:23:01,520
went away afterwards

548
00:23:05,669 --> 00:23:03,919
so i mean i could go on and on about

549
00:23:06,830 --> 00:23:05,679
that but i'll leave it at that so we can

550
00:23:09,669 --> 00:23:06,840
get to the next

551
00:23:12,230 --> 00:23:09,679
question any more from the in the back

552
00:23:13,590 --> 00:23:12,240
yes hi shawn sonders from natural

553
00:23:15,590 --> 00:23:13,600
science

554
00:23:17,510 --> 00:23:15,600
what's the toy you're taking for your

555
00:23:19,430 --> 00:23:17,520
dog for your daughter and we'll be

556
00:23:42,789 --> 00:23:19,440
videotaping it so we can enjoy how i

557
00:23:47,510 --> 00:23:44,950
my daughter is eight and a half years

558
00:23:48,470 --> 00:23:47,520
old right now and she is very fond of

559
00:23:50,390 --> 00:23:48,480
toys

560
00:23:52,549 --> 00:23:50,400
in the shape of owls

561
00:23:56,549 --> 00:23:52,559
so we have a whole collection of owls

562
00:23:58,870 --> 00:23:56,559
and i'm will be taking one of them

563
00:24:01,110 --> 00:23:58,880

and jana who is her name

564
00:24:03,110 --> 00:24:01,120
is very enthusiastic about all of that

565
00:24:05,510 --> 00:24:03,120
every time i have been to their

566
00:24:06,950 --> 00:24:05,520
apartment she spent some time showing me

567
00:24:07,990 --> 00:24:06,960
all of her new

568
00:24:10,950 --> 00:24:08,000
uh

569
00:24:15,269 --> 00:24:13,269
yes sir hey andy well from san diego

570
00:24:18,070 --> 00:24:15,279
college the east history alliance

571
00:24:19,750 --> 00:24:18,080
i grew up i remember apollo 11 as a kid

572
00:24:21,669 --> 00:24:19,760
just couldn't wait had pictures of

573
00:24:24,310 --> 00:24:21,679
astronauts on the wall and that impacted

574
00:24:26,070 --> 00:24:24,320
me enormously i'm curious in your career

575
00:24:27,909 --> 00:24:26,080
at nasa what do you think has been the

576
00:24:29,510 --> 00:24:27,919
greatest impact

577
00:24:32,310 --> 00:24:29,520
for the future generations for those you

578
00:24:34,149 --> 00:24:32,320
see coming up

579
00:24:35,430 --> 00:24:34,159
uh

580
00:24:37,350 --> 00:24:35,440
well

581
00:24:39,590 --> 00:24:37,360
it has just worked out in my career that

582
00:24:41,510 --> 00:24:39,600
the in the the assignments that i've

583
00:24:42,870 --> 00:24:41,520
gotten that it's been focused on space

584
00:24:44,070 --> 00:24:42,880
station

585
00:24:45,590 --> 00:24:44,080
uh

586
00:24:47,350 --> 00:24:45,600
and one of the reasons that i want to

587
00:24:50,070 --> 00:24:47,360
maybe

588
00:24:50,870 --> 00:24:50,080

delve into the historic aspect of it and

589
00:24:53,110 --> 00:24:50,880
it would

590
00:24:54,789 --> 00:24:53,120
i mean it won't be a big focus on

591
00:24:57,110 --> 00:24:54,799
history what i want to try to do is

592
00:25:01,190 --> 00:24:57,120
remind the world of the significance of

593
00:25:04,230 --> 00:25:01,200
the history of the space station

594
00:25:06,470 --> 00:25:04,240
when it was first thought about

595
00:25:09,750 --> 00:25:06,480
which goes way back decades back right

596
00:25:12,310 --> 00:25:09,760
and then when it was finally

597
00:25:13,750 --> 00:25:12,320
announced in 1984 space station freedom

598
00:25:15,350 --> 00:25:13,760
and then when it morphed in the early

599
00:25:18,310 --> 00:25:15,360
90s from space station freedom which by

600
00:25:20,310 --> 00:25:18,320
the way was canceled prior to iss

601
00:25:22,789 --> 00:25:20,320
and and then it became the international

602
00:25:24,710 --> 00:25:22,799
space station with a new partnership of

603
00:25:26,630 --> 00:25:24,720
russia

604
00:25:29,190 --> 00:25:26,640
and then going through the technical

605
00:25:31,830 --> 00:25:29,200
challenges of of developing the

606
00:25:34,390 --> 00:25:31,840
operations during phase one the shuttle

607
00:25:36,630 --> 00:25:34,400
mirror program uh impress so that we

608
00:25:38,870 --> 00:25:36,640
would learn how to work with each other

609
00:25:41,190 --> 00:25:38,880
systems and and get to know one another

610
00:25:43,110 --> 00:25:41,200
to prepare us for the iss and then

611
00:25:44,950 --> 00:25:43,120
building the iss over many years with

612
00:25:47,510 --> 00:25:44,960
many challenges to include

613
00:25:49,350 --> 00:25:47,520

uh the uh the consequences of the the

614
00:25:50,789 --> 00:25:49,360
columbia accident and the loss of that

615
00:25:52,950 --> 00:25:50,799
crew

616
00:25:55,990 --> 00:25:52,960
and the partnership working together to

617
00:25:57,269 --> 00:25:56,000
do all of that and to to assemble this

618
00:25:58,630 --> 00:25:57,279
the the

619
00:25:59,350 --> 00:25:58,640
to me the

620
00:26:02,549 --> 00:25:59,360
it

621
00:26:04,470 --> 00:26:02,559
achievement of the space station program

622
00:26:07,350 --> 00:26:04,480
is the space station itself

623
00:26:10,070 --> 00:26:07,360
um and that's what i want to try to

624
00:26:12,390 --> 00:26:10,080
in some way maybe enrich the awareness

625
00:26:15,190 --> 00:26:12,400
of the public not so much because of the

626
00:26:20,549 --> 00:26:15,200
history but because of what that history

627
00:26:23,830 --> 00:26:22,149
way in the back yes

628
00:26:25,990 --> 00:26:23,840
hi my name is amy rogers i'm with the

629
00:26:27,430 --> 00:26:26,000
1920 air travel museum over at william

630
00:26:29,190 --> 00:26:27,440
pihabi airport

631
00:26:30,789 --> 00:26:29,200
where our focus is on aviation and

632
00:26:33,750 --> 00:26:30,799
aerospace history

633
00:26:35,990 --> 00:26:33,760
a major part of our mission is to

634
00:26:37,510 --> 00:26:36,000
educate and inspire the next generation

635
00:26:40,070 --> 00:26:37,520
of aviators and

636
00:26:40,950 --> 00:26:40,080
aerospace professionals so we have found

637
00:26:42,630 --> 00:26:40,960
that

638
00:26:44,470 --> 00:26:42,640

by having all of the history available

639
00:26:46,149 --> 00:26:44,480
in the museum

640
00:26:48,630 --> 00:26:46,159
hasn't always been enough and so we've

641
00:26:51,110 --> 00:26:48,640
been finding ways to reach out to people

642
00:26:52,549 --> 00:26:51,120
like yourself to come out and speak to

643
00:26:54,470 --> 00:26:52,559
the children we found that that's been

644
00:26:55,990 --> 00:26:54,480
the most impactful

645
00:26:58,630 --> 00:26:56,000
would you agree that

646
00:27:01,590 --> 00:26:58,640
the best way to really inspire the next

647
00:27:03,430 --> 00:27:01,600
generation is have them hear the history

648
00:27:05,190 --> 00:27:03,440
but from the mouths of the individuals

649
00:27:06,870 --> 00:27:05,200
that have actually lived in are doing it

650
00:27:09,029 --> 00:27:06,880
now

651
00:27:11,110 --> 00:27:09,039
certainly i agree that that is uh

652
00:27:13,590 --> 00:27:11,120
inspiring experience and i think we can

653
00:27:15,909 --> 00:27:13,600
all relate to that when we grew up each

654
00:27:18,230 --> 00:27:15,919
of us here in the room when we grew up

655
00:27:20,710 --> 00:27:18,240
hearing the accounts

656
00:27:23,110 --> 00:27:20,720
from people that were involved in some

657
00:27:25,110 --> 00:27:23,120
endeavor that was an inspiration i bet

658
00:27:27,669 --> 00:27:25,120
everybody in here can

659
00:27:29,669 --> 00:27:27,679
go back and remember the significance of

660
00:27:31,029 --> 00:27:29,679
that in our each individual life so

661
00:27:33,669 --> 00:27:31,039
certainly

662
00:27:35,350 --> 00:27:33,679
and we all try to do it i know in russia

663
00:27:36,950 --> 00:27:35,360

the cosmonauts also

664
00:27:38,870 --> 00:27:36,960
speak often to

665
00:27:40,789 --> 00:27:38,880
to children or to young people

666
00:27:43,190 --> 00:27:40,799
universities or whatnot

667
00:27:45,110 --> 00:27:43,200
olek went to bauman university in moscow

668
00:27:47,590 --> 00:27:45,120
i have spoken there with a group of

669
00:27:48,950 --> 00:27:47,600
astronauts and cosmonauts in the past so

670
00:27:50,470 --> 00:27:48,960
certainly that's an important thing to

671
00:27:53,269 --> 00:27:50,480
do unfortunately it's

672
00:27:54,950 --> 00:27:53,279
it's a very difficult to touch all those

673
00:27:57,909 --> 00:27:54,960
people we'd like to touch in that

674
00:28:01,990 --> 00:27:59,669
i know you guys have a million questions

675
00:28:04,070 --> 00:28:02,000
but uh why don't we move on to uh our

676
00:28:07,190 --> 00:28:04,080
emerge group and the interns any

677
00:28:10,310 --> 00:28:08,549
i have a question

678
00:28:12,710 --> 00:28:10,320
my name is isha patel and thank you so

679
00:28:14,310 --> 00:28:12,720
much for being here um as you mentioned

680
00:28:16,710 --> 00:28:14,320
earlier a lot of your crew time is

681
00:28:18,310 --> 00:28:16,720
dedicated to utilization

682
00:28:25,510 --> 00:28:18,320
are there any science projects you guys

683
00:28:31,669 --> 00:28:27,750
alex say why don't you talk about fluid

684
00:28:51,510 --> 00:28:33,110
not that you're looking forward to it

685
00:29:11,110 --> 00:28:53,669
well the first thing that i am really

686
00:29:15,269 --> 00:29:12,470
shift

687
00:29:17,990 --> 00:29:15,279
and during our flight we are going to be

688
00:29:20,149 --> 00:29:18,000

performing several experiments

689
00:29:21,830 --> 00:29:20,159
and one of them i'm going to be

690
00:29:42,230 --> 00:29:21,840
performing with jeff

691
00:29:45,350 --> 00:29:44,230
and this is an experiment

692
00:29:48,710 --> 00:29:45,360
that is

693
00:29:51,269 --> 00:29:48,720
directed to study the human body

694
00:30:02,630 --> 00:29:51,279
and both the us and russian sides are

695
00:30:08,149 --> 00:30:04,710
and this experiment was just recently

696
00:30:11,669 --> 00:30:08,159
started and its main purpose is to

697
00:30:11,679 --> 00:30:18,230
results

698
00:30:18,240 --> 00:30:36,950
from

699
00:30:39,830 --> 00:30:37,990
and

700
00:30:41,669 --> 00:30:39,840
it is to be hoped that the results of

701
00:30:44,630 --> 00:30:41,679
this experiment will

702
00:30:48,149 --> 00:30:44,640
allow the medical specialists to draw

703
00:30:50,870 --> 00:30:48,159
conclusions that will be beneficial for

704
00:30:53,830 --> 00:30:50,880
application to long-term space flights

705
00:30:55,190 --> 00:30:53,840
to distant planets and asteroids and

706
00:30:58,630 --> 00:30:55,200
they will allow

707
00:31:01,509 --> 00:30:58,640
astronauts to return to earth

708
00:31:11,909 --> 00:31:01,519
without any physical or other impacts to

709
00:31:17,590 --> 00:31:14,149
so the main thrust of this experiment is

710
00:31:21,110 --> 00:31:17,600
to study the impact of space flight on

711
00:31:24,470 --> 00:31:22,789
excellent

712
00:31:27,190 --> 00:31:24,480
any more questions from the media that

713
00:31:27,200 --> 00:31:30,310

yes sir

714
00:31:35,350 --> 00:31:32,549
from aviation week in space technology

715
00:31:37,190 --> 00:31:35,360
and this is uh for the causing us will

716
00:31:41,350 --> 00:31:37,200
there be any crack work for the

717
00:31:43,430 --> 00:31:41,360
multi-purpose laboratory module that

718
00:32:13,029 --> 00:31:43,440
as far as i know is still to go to the

719
00:32:18,630 --> 00:32:14,950
uh so far there is no specific

720
00:32:21,430 --> 00:32:18,640
preparation for the mplm but i'm really

721
00:32:22,389 --> 00:32:21,440
hoping that in a year or two

722
00:32:24,710 --> 00:32:22,399
we will

723
00:32:29,029 --> 00:32:24,720
have the preparation started because we

724
00:32:30,870 --> 00:32:29,039
are expecting this module on the station

725
00:32:34,630 --> 00:32:30,880
very good anymore

726
00:32:37,029 --> 00:32:34,640
yes sir hi ed with kuhf again uh jeff

727
00:32:39,190 --> 00:32:37,039
you talked about looking forward to

728
00:32:40,630 --> 00:32:39,200
seeing a crew member make the first

729
00:32:42,630 --> 00:32:40,640
launch you know go through that

730
00:32:44,070 --> 00:32:42,640
experience you've been through four can

731
00:32:46,549 --> 00:32:44,080
you talk a little about

732
00:32:48,310 --> 00:32:46,559
you know compare the first second third

733
00:32:50,789 --> 00:32:48,320
launch fourth launch that you've been

734
00:32:54,950 --> 00:32:52,149
well the first launch of course was on

735
00:32:56,789 --> 00:32:54,960
the space shuttle for me and uh it was

736
00:32:58,230 --> 00:32:56,799
everything i had hoped for and more and

737
00:33:01,350 --> 00:32:58,240
i still remember it as if it was

738
00:33:06,230 --> 00:33:03,269

i was the only rookie on that crew so

739
00:33:07,990 --> 00:33:06,240
everybody else had given me lots of

740
00:33:10,310 --> 00:33:08,000
advice and tips and they were available

741
00:33:12,310 --> 00:33:10,320
for to answer my questions as we trained

742
00:33:14,470 --> 00:33:12,320
for that for a better part of a couple

743
00:33:16,389 --> 00:33:14,480
years

744
00:33:18,230 --> 00:33:16,399
and it was just a great experience it

745
00:33:20,470 --> 00:33:18,240
but it was 10 days long

746
00:33:22,389 --> 00:33:20,480
in in the flight so it

747
00:33:23,669 --> 00:33:22,399
it was one of those cases where you

748
00:33:25,190 --> 00:33:23,679
landed and then you turned around and

749
00:33:27,909 --> 00:33:25,200
you say what just happened to me because

750
00:33:30,389 --> 00:33:27,919
it went so fast

751
00:33:32,710 --> 00:33:30,399
the second launch was my first one on

752
00:33:34,590 --> 00:33:32,720
the soyuz so it was a different vehicle

753
00:33:36,230 --> 00:33:34,600
completely different environment

754
00:33:38,149 --> 00:33:36,240
tocopodusky

755
00:33:40,070 --> 00:33:38,159
was only in russian language so it was

756
00:33:44,389 --> 00:33:40,080
uh had that

757
00:33:47,430 --> 00:33:44,399
very historic operation in kazakhstan

758
00:33:49,750 --> 00:33:48,149
and

759
00:33:52,470 --> 00:33:49,760
even to this day i'm still overwhelmed

760
00:33:53,750 --> 00:33:52,480
with the irony of having of doing what

761
00:33:55,750 --> 00:33:53,760
we're doing

762
00:33:59,110 --> 00:33:55,760
and have it done then

763
00:34:01,430 --> 00:33:59,120

growing up in my early career as a

764
00:34:04,149 --> 00:34:01,440
us army officer in the fulda gap you

765
00:34:05,909 --> 00:34:04,159
know in the height of the cold war

766
00:34:07,830 --> 00:34:05,919
and now you know we've been working as

767
00:34:09,190 --> 00:34:07,840
partners and working well as partners

768
00:34:11,990 --> 00:34:09,200
for many years

769
00:34:14,629 --> 00:34:12,000
um so soyuz was a different vehicle uh

770
00:34:17,669 --> 00:34:14,639
but it was it was it's a rocket and both

771
00:34:19,349 --> 00:34:17,679
of them are rockets but instead of seven

772
00:34:20,790 --> 00:34:19,359
people

773
00:34:24,069 --> 00:34:20,800
and

774
00:34:25,430 --> 00:34:24,079
payload were

775
00:34:27,190 --> 00:34:25,440
three people

776
00:34:29,510 --> 00:34:27,200
and a few hundred pounds of payload and

777
00:34:31,030 --> 00:34:29,520
i i characterized it as triplets in a

778
00:34:33,270 --> 00:34:31,040
womb

779
00:34:35,030 --> 00:34:33,280
in the soyuz

780
00:34:36,710 --> 00:34:35,040
so it was uh it was a very good

781
00:34:38,790 --> 00:34:36,720
experience as well

782
00:34:41,430 --> 00:34:38,800
uh the last uh

783
00:34:43,349 --> 00:34:41,440
flight was of course a repeat of that

784
00:34:44,950 --> 00:34:43,359
and when you repeat something you have

785
00:34:47,589 --> 00:34:44,960
the advantage to actually you're not

786
00:34:50,310 --> 00:34:47,599
surprised by things so you're able to

787
00:34:51,669 --> 00:34:50,320
observe and take in more details of the

788
00:34:53,430 --> 00:34:51,679

experience and i

789
00:34:55,909 --> 00:34:53,440
think that that was my experience with

790
00:34:57,190 --> 00:34:55,919
the last soyuz flight

791
00:34:58,950 --> 00:34:57,200
and

792
00:35:00,710 --> 00:34:58,960
on that crew i was

793
00:35:03,910 --> 00:35:00,720
even though i was the american i was the

794
00:35:04,630 --> 00:35:03,920
experienced soyuz crew member

795
00:35:08,710 --> 00:35:04,640
so

796
00:35:11,349 --> 00:35:08,720
along with that to help the other guys

797
00:35:13,270 --> 00:35:11,359
get through the experience and so i look

798
00:35:15,190 --> 00:35:13,280
forward to this coming one along those

799
00:35:17,510 --> 00:35:15,200
lines of

800
00:35:20,150 --> 00:35:17,520
having done it before being able to

801
00:35:21,829 --> 00:35:20,160
to observe and take in a few more

802
00:35:24,950 --> 00:35:21,839
details to be able to characterize the

803
00:35:26,870 --> 00:35:24,960
experience in a fuller way

804
00:35:28,630 --> 00:35:26,880
yes sir

805
00:35:30,550 --> 00:35:28,640
collectspace.com again

806
00:35:32,950 --> 00:35:30,560
for oleg um

807
00:35:35,990 --> 00:35:32,960
you're flying on the last tmam

808
00:35:37,589 --> 00:35:36,000
class uh soyuz but you you and your crew

809
00:35:39,910 --> 00:35:37,599
were i think originally

810
00:35:42,150 --> 00:35:39,920
um scheduled for

811
00:35:44,230 --> 00:35:42,160
the first ms

812
00:35:46,310 --> 00:35:44,240
vehicle i wonder if you could tell share

813
00:35:48,950 --> 00:35:46,320

what some of the differences between

814
00:35:50,790 --> 00:35:48,960
this retiring class of soyuz and what

815
00:36:21,030 --> 00:35:50,800
the next one brings

816
00:36:27,109 --> 00:36:23,670
uh yes there is a difference and my

817
00:36:29,750 --> 00:36:27,119
first flight was on soyuz tmam

818
00:36:32,310 --> 00:36:29,760
and the main difference is in a more

819
00:36:37,910 --> 00:36:32,320
powerful computer which completely

820
00:36:37,920 --> 00:36:57,430
at least i use the ms

821
00:37:02,790 --> 00:37:00,310
so the difference between soyuz ms and

822
00:37:05,589 --> 00:37:02,800
soyuz tmam is

823
00:37:16,470 --> 00:37:05,599
in the satellite navigation system and

824
00:37:26,150 --> 00:37:18,630
and also those thrusters there are

825
00:37:29,990 --> 00:37:27,829
related to

826
00:37:31,190 --> 00:37:30,000
robert's question about soyuz ms as well

827
00:37:33,829 --> 00:37:31,200
would uh

828
00:37:36,150 --> 00:37:33,839
would you be able to expand on

829
00:37:37,589 --> 00:37:36,160
some of the delays that caused some of

830
00:37:47,670 --> 00:37:37,599
the reasons for the delay of the

831
00:37:47,680 --> 00:37:55,109
certified

832
00:38:00,150 --> 00:37:57,829
well as far as i understand the delay

833
00:38:03,349 --> 00:38:00,160
was due to paperwork

834
00:38:09,109 --> 00:38:03,359
to certify the integration of the launch

835
00:38:12,230 --> 00:38:11,190
of course that was a result of the

836
00:38:16,470 --> 00:38:12,240
progress

837
00:38:16,480 --> 00:38:28,790
night

838
00:38:33,750 --> 00:38:31,109

yes and also there is a requirement that

839
00:38:36,230 --> 00:38:33,760
there are two successful progress

840
00:38:38,150 --> 00:38:36,240
launches and dockings the progress is

841
00:38:40,790 --> 00:38:38,160
with a new modification

842
00:39:13,349 --> 00:38:40,800
and after that you can have a

843
00:39:18,870 --> 00:39:16,150
and initially our crew was planned to

844
00:39:23,829 --> 00:39:18,880
launch on the new soyuz

845
00:39:26,230 --> 00:39:23,839
in march but um now the soyuz ms launch

846
00:39:27,510 --> 00:39:26,240
was um delayed

847
00:39:29,270 --> 00:39:27,520
up to the

848
00:39:31,670 --> 00:39:29,280
end of may or

849
00:39:35,030 --> 00:39:31,680
to start of june so that's when we will

850
00:39:39,190 --> 00:39:35,040
have the first piloted

851
00:39:41,750 --> 00:39:39,200
soyuz vehicle soyuz ms launch

852
00:39:42,470 --> 00:39:41,760
the good news for these guys especially

853
00:39:47,030 --> 00:39:42,480
as

854
00:39:49,349 --> 00:39:47,040
moving off the ms back in the tmam

855
00:39:50,710 --> 00:39:49,359
reduced the training for them so they

856
00:40:02,310 --> 00:39:50,720
were able to have a little vacation

857
00:40:05,349 --> 00:40:04,309
in the meantime megan any social media

858
00:40:07,510 --> 00:40:05,359
questions

859
00:40:09,109 --> 00:40:07,520
we have one from karen on twitter which

860
00:40:10,630 --> 00:40:09,119
space station feature or piece of

861
00:40:16,230 --> 00:40:10,640
equipment are you most looking forward

862
00:40:19,430 --> 00:40:17,589
well there's a lot of good equipment on

863
00:40:21,030 --> 00:40:19,440

space station

864
00:40:23,190 --> 00:40:21,040
i'll speak personally from a personal

865
00:40:24,550 --> 00:40:23,200
point of view one of my hobbies up there

866
00:40:26,230 --> 00:40:24,560
in the little free time that we were

867
00:40:27,349 --> 00:40:26,240
able to squeeze in is taking pictures of

868
00:40:29,030 --> 00:40:27,359
the earth and

869
00:40:30,950 --> 00:40:29,040
we have new photography equipment up

870
00:40:33,430 --> 00:40:30,960
there since i left last

871
00:40:57,270 --> 00:40:33,440
so i look forward to to using that new

872
00:41:01,670 --> 00:40:59,910
so far i don't have such a piece of

873
00:41:04,309 --> 00:41:01,680
hardware that i'm really looking forward

874
00:41:07,990 --> 00:41:04,319
to use but as soon as i know i will let

875
00:41:13,030 --> 00:41:10,630
and as jeff said the most interesting

876
00:41:16,309 --> 00:41:13,040
pastime on the station is earth

877
00:41:28,790 --> 00:41:16,319
observing for every crew member so

878
00:41:32,950 --> 00:41:30,870
i know that

879
00:41:35,190 --> 00:41:32,960
new lenses have been delivered for

880
00:41:37,109 --> 00:41:35,200
cameras and i'm looking forward to this

881
00:41:38,950 --> 00:41:37,119
experience of taking pictures with the

882
00:41:40,550 --> 00:41:38,960
new lenses

883
00:41:42,069 --> 00:41:40,560
and some of the astronaut photography is

884
00:41:43,589 --> 00:41:42,079
some of the some of the most beautiful

885
00:41:45,670 --> 00:41:43,599
things we see from the from the

886
00:41:48,230 --> 00:41:45,680
international space station for sure

887
00:41:49,910 --> 00:41:48,240
any more any more social media questions

888
00:41:51,829 --> 00:41:49,920

from michael on twitter how do you

889
00:41:55,750 --> 00:41:51,839
listen to music on the space station do

890
00:42:00,390 --> 00:41:57,750
we each have the opportunity to select

891
00:42:02,390 --> 00:42:00,400
music pre-flight and put it on a

892
00:42:04,630 --> 00:42:02,400
a device where we you know portable

893
00:42:06,230 --> 00:42:04,640
device on board so that'll fly up with

894
00:42:07,910 --> 00:42:06,240
us on soyuz

895
00:42:09,910 --> 00:42:07,920
so we'll have it on board

896
00:42:11,190 --> 00:42:09,920
we also have opportunity you know if we

897
00:42:12,550 --> 00:42:11,200
have requests while we're up there to

898
00:42:14,230 --> 00:42:12,560
get

899
00:42:17,829 --> 00:42:14,240
other music as well as other

900
00:42:20,230 --> 00:42:17,839
entertainment uplinked to us so

901
00:42:41,910 --> 00:42:20,240
we're well supported in along those

902
00:42:47,510 --> 00:42:45,109
also we have a special server on board

903
00:42:49,430 --> 00:42:47,520
which is loaded with movies and

904
00:42:57,430 --> 00:42:49,440
different kinds of music

905
00:43:00,630 --> 00:42:59,270
okay let's pass it on to the uh houston

906
00:43:02,150 --> 00:43:00,640
history alliance i'm sure you guys have

907
00:43:04,069 --> 00:43:02,160
more questions

908
00:43:07,430 --> 00:43:04,079
yes ma'am hi i'm cecilia

909
00:43:09,670 --> 00:43:07,440
houston alliance so uh generation before

910
00:43:11,670 --> 00:43:09,680
all of you the the space people involved

911
00:43:13,109 --> 00:43:11,680
with the space program was it was

912
00:43:15,030 --> 00:43:13,119
with your respective space programs

913
00:43:17,190 --> 00:43:15,040

we're really focused on competition

914
00:43:18,710 --> 00:43:17,200
and within your careers you've seen it

915
00:43:20,870 --> 00:43:18,720
transition from competition to

916
00:43:26,790 --> 00:43:20,880
collaboration i'd like to hear about

917
00:43:30,390 --> 00:43:29,109
uh in terms of the partnership as a

918
00:43:32,950 --> 00:43:30,400
you're going all the way back to the

919
00:43:34,230 --> 00:43:32,960
space race of the 60s right yeah

920
00:43:37,270 --> 00:43:34,240
obviously that was driven by the

921
00:43:39,109 --> 00:43:37,280
geopolitics at the time um

922
00:43:41,030 --> 00:43:39,119
and the circumstances that have been set

923
00:43:43,750 --> 00:43:41,040
up with the uh

924
00:43:46,710 --> 00:43:43,760
in the cold war and all that and

925
00:43:51,030 --> 00:43:49,109
that chapter of history

926
00:43:52,309 --> 00:43:51,040
um

927
00:43:54,790 --> 00:43:52,319
actually you can go all the way back to

928
00:43:56,550 --> 00:43:54,800
the mid 70s in in

929
00:43:59,270 --> 00:43:56,560
even during the apollo

930
00:44:01,190 --> 00:43:59,280
moon missions was invading had been

931
00:44:03,750 --> 00:44:01,200
proposed a joint mission with the at the

932
00:44:05,510 --> 00:44:03,760
time soviet union with apollo soyuz and

933
00:44:08,150 --> 00:44:05,520
that was very successful

934
00:44:09,990 --> 00:44:08,160
uh and it was very significant also from

935
00:44:12,550 --> 00:44:10,000
a world's point of view in fact i was in

936
00:44:15,910 --> 00:44:12,560
moscow in july for the 40th anniversary

937
00:44:19,750 --> 00:44:15,920
of apollo soyuz or as it's referred to

938
00:44:24,470 --> 00:44:22,790

and it was it was big news in russia in

939
00:44:26,950 --> 00:44:24,480
fact i'd like to tell the story when i

940
00:44:30,150 --> 00:44:26,960
was departing russia in july going

941
00:44:32,550 --> 00:44:30,160
through the russian customs

942
00:44:34,150 --> 00:44:32,560
passport control

943
00:44:36,550 --> 00:44:34,160
on our official passport we have a

944
00:44:37,430 --> 00:44:36,560
little nasa sticker and

945
00:44:38,870 --> 00:44:37,440
the

946
00:44:41,030 --> 00:44:38,880
passport agent

947
00:44:43,190 --> 00:44:41,040
in russia asked me were you here for

948
00:44:44,710 --> 00:44:43,200
soyuz apollo anniversary

949
00:44:47,030 --> 00:44:44,720
so it was in the news everybody was

950
00:44:48,470 --> 00:44:47,040
aware of it so

951
00:44:50,630 --> 00:44:48,480
that gives you an idea of the

952
00:44:52,950 --> 00:44:50,640
perspective of the public

953
00:44:55,109 --> 00:44:52,960
particularly in russia and we get the

954
00:44:57,270 --> 00:44:55,119
same kind of support in our experience

955
00:44:58,870 --> 00:44:57,280
in the international space station so

956
00:45:00,950 --> 00:44:58,880
obviously we all think and you've heard

957
00:45:03,270 --> 00:45:00,960
this from crew members before

958
00:45:04,870 --> 00:45:03,280
we hope that the

959
00:45:07,190 --> 00:45:04,880
the international space station can

960
00:45:08,150 --> 00:45:07,200
serve as an example to the world to

961
00:45:09,750 --> 00:45:08,160
tamper

962
00:45:12,790 --> 00:45:09,760
uh some of the other

963
00:45:15,430 --> 00:45:12,800

uh geopolitical um stresses and

964
00:45:17,829 --> 00:45:15,440
conflicts and and whatnot that go on in

965
00:45:19,109 --> 00:45:17,839
different degrees in history and and

966
00:45:21,430 --> 00:45:19,119
help

967
00:45:22,790 --> 00:45:21,440
set an example to the world to uh to

968
00:45:24,710 --> 00:45:22,800
cooperate

969
00:45:27,349 --> 00:45:24,720
as opposed to

970
00:45:28,550 --> 00:45:27,359
uh causing conflict

971
00:45:29,910 --> 00:45:28,560
a little bit of that when you were

972
00:45:31,510 --> 00:45:29,920
discussing you know talking about

973
00:45:33,589 --> 00:45:31,520
transition within your career during

974
00:45:35,109 --> 00:45:33,599
west point and being an army officer and

975
00:45:36,790 --> 00:45:35,119
then going on to the space program i

976
00:45:39,190 --> 00:45:36,800
mean that must have been for you a

977
00:45:40,710 --> 00:45:39,200
really interesting cultural change for

978
00:45:41,990 --> 00:45:40,720
you

979
00:45:43,750 --> 00:45:42,000
of course it was

980
00:45:45,589 --> 00:45:43,760
very interesting and like i said earlier

981
00:45:47,270 --> 00:45:45,599
i'm still overwhelmed with the irony of

982
00:45:49,589 --> 00:45:47,280
history of

983
00:45:50,390 --> 00:45:49,599
of personally being able to experience

984
00:45:51,270 --> 00:45:50,400
that

985
00:45:53,190 --> 00:45:51,280
and

986
00:45:55,349 --> 00:45:53,200
i will always say it's much better this

987
00:45:57,510 --> 00:45:55,359
way than the previous way right we'd

988
00:46:00,390 --> 00:45:57,520

rather be

989
00:46:02,630 --> 00:46:00,400
be making efforts together in a

990
00:46:05,109 --> 00:46:02,640
constructive way rather than efforts

991
00:46:08,790 --> 00:46:05,119
against one another that's potentially

992
00:46:12,870 --> 00:46:10,470
excellent and it sounds like we have

993
00:46:21,349 --> 00:46:12,880
some callers in on the phone bridge

994
00:46:28,069 --> 00:46:22,790
might have been disconnected do we have

995
00:46:31,990 --> 00:46:28,950
okay

996
00:46:33,190 --> 00:46:32,000
um houston history alliance

997
00:46:34,630 --> 00:46:33,200
is man

998
00:46:36,870 --> 00:46:34,640
uh the international space station

999
00:46:39,109 --> 00:46:36,880
represents international cooperation do

1000
00:46:40,790 --> 00:46:39,119
you see this cooperation continuing and

1001
00:46:44,150 --> 00:46:40,800
maybe even some of the components of the

1002
00:46:46,230 --> 00:46:44,160
space station design continuing with

1003
00:46:49,670 --> 00:46:46,240
russia and the u.s going to say to the

1004
00:46:51,430 --> 00:46:49,680
moon or to mars or to an asteroid

1005
00:46:53,910 --> 00:46:51,440
certainly i think it's highly probable

1006
00:46:56,069 --> 00:46:53,920
that future programs will be

1007
00:46:57,510 --> 00:46:56,079
will use the the experience and the

1008
00:46:59,190 --> 00:46:57,520
example of the international space

1009
00:47:00,790 --> 00:46:59,200
station to build on there and there are

1010
00:47:02,870 --> 00:47:00,800
several reasons for that

1011
00:47:04,950 --> 00:47:02,880
obviously there's a technology that

1012
00:47:07,030 --> 00:47:04,960
developed for the space station

1013
00:47:08,870 --> 00:47:07,040

and now in the

1014
00:47:12,150 --> 00:47:08,880
utilization of the space station proven

1015
00:47:13,990 --> 00:47:12,160
out to support future exploration

1016
00:47:15,589 --> 00:47:14,000
and there's continuous dialogue going on

1017
00:47:17,349 --> 00:47:15,599
among the partnership and there's

1018
00:47:19,910 --> 00:47:17,359
dialogue even beyond the partnership

1019
00:47:21,990 --> 00:47:19,920
with other nations

1020
00:47:23,750 --> 00:47:22,000
you know to look at the potential

1021
00:47:24,870 --> 00:47:23,760
possible partnership and future

1022
00:47:26,950 --> 00:47:24,880
endeavors

1023
00:47:28,950 --> 00:47:26,960
if you go back and look at history again

1024
00:47:31,190 --> 00:47:28,960
and you look at the moon race

1025
00:47:33,109 --> 00:47:31,200
that those were single nations

1026
00:47:35,829 --> 00:47:33,119
uh right and as soon as apollo 11

1027
00:47:39,829 --> 00:47:35,839
happened as i alluded to earlier the the

1028
00:47:41,829 --> 00:47:39,839
support kind of diminished rapidly

1029
00:47:45,349 --> 00:47:41,839
so there was the geopolitical

1030
00:47:47,990 --> 00:47:45,359
circumstances driving that the the this

1031
00:47:51,109 --> 00:47:48,000
largely symbolic

1032
00:47:53,510 --> 00:47:51,119
victory was won and uh so the the

1033
00:47:55,990 --> 00:47:53,520
technical objectives

1034
00:47:57,510 --> 00:47:56,000
uh weren't there

1035
00:47:59,510 --> 00:47:57,520
to sustain

1036
00:48:01,589 --> 00:47:59,520
well i'll back up a little bit and i'll

1037
00:48:02,870 --> 00:48:01,599
give you a personal viewpoint based on

1038
00:48:04,710 --> 00:48:02,880

my experience of working through the

1039
00:48:07,109 --> 00:48:04,720
space station

1040
00:48:09,270 --> 00:48:07,119
i believe if we were not partners with

1041
00:48:11,109 --> 00:48:09,280
russia specifically

1042
00:48:13,190 --> 00:48:11,119
in the international space station

1043
00:48:15,030 --> 00:48:13,200
neither of our countries would be flying

1044
00:48:17,750 --> 00:48:15,040
people in space today

1045
00:48:19,829 --> 00:48:17,760
that's my personal belief

1046
00:48:21,349 --> 00:48:19,839
and if you if you examine the history

1047
00:48:23,910 --> 00:48:21,359
you it's very

1048
00:48:25,109 --> 00:48:23,920
logical to come to that conclusion that

1049
00:48:27,829 --> 00:48:25,119
being said

1050
00:48:30,069 --> 00:48:27,839
it's very likely that future endeavors

1051
00:48:31,750 --> 00:48:30,079
especially big endeavors

1052
00:48:33,990 --> 00:48:31,760
uh whether it be going back to the moon

1053
00:48:37,109 --> 00:48:34,000
or cis lunar as we like to call it you

1054
00:48:40,470 --> 00:48:37,119
know in the in the lunar system of

1055
00:48:42,230 --> 00:48:40,480
different potential mission profiles and

1056
00:48:44,390 --> 00:48:42,240
of course mars is always out there right

1057
00:48:46,309 --> 00:48:44,400
we're always talking about mars or even

1058
00:48:48,549 --> 00:48:46,319
other destinations

1059
00:48:50,230 --> 00:48:48,559
if you look at the scope of doing that

1060
00:48:52,790 --> 00:48:50,240
and you look at the history as i

1061
00:48:53,589 --> 00:48:52,800
described i can't imagine ever doing

1062
00:48:54,950 --> 00:48:53,599
that

1063
00:48:59,109 --> 00:48:54,960

to completion

1064
00:49:02,950 --> 00:49:00,470
excellent

1065
00:49:04,870 --> 00:49:02,960
yes ma'am um i'm part of the

1066
00:49:07,430 --> 00:49:04,880
professionals resource group here on

1067
00:49:09,910 --> 00:49:07,440
site um and a couple of our friends and

1068
00:49:11,829 --> 00:49:09,920
members of our uh employee resource

1069
00:49:13,589 --> 00:49:11,839
group are applying to be astronauts and

1070
00:49:14,870 --> 00:49:13,599
i was wondering if you had any tips for

1071
00:49:16,710 --> 00:49:14,880
them as they

1072
00:49:19,270 --> 00:49:16,720
apply and then go through the interview

1073
00:49:24,069 --> 00:49:21,270
keep working hard at what you're doing

1074
00:49:28,470 --> 00:49:26,390
keep persevering with that goal

1075
00:49:32,470 --> 00:49:28,480
keep doing the best job you can at what

1076
00:49:36,309 --> 00:49:32,480
you're doing continue to seek education

1077
00:49:39,990 --> 00:49:38,549
and then keep applying

1078
00:49:41,430 --> 00:49:40,000
and persevere

1079
00:49:43,349 --> 00:49:41,440
don't get distracted with the

1080
00:49:45,829 --> 00:49:43,359
application process don't get dis

1081
00:49:47,589 --> 00:49:45,839
disappointed if you fail to get selected

1082
00:49:51,270 --> 00:49:47,599
once or twice or

1083
00:49:55,349 --> 00:49:51,280
in my case multiple times over 10 years

1084
00:49:59,510 --> 00:49:57,829
when if and when the door opens you

1085
00:50:02,150 --> 00:49:59,520
won't know why it opened anyway because

1086
00:50:03,990 --> 00:50:02,160
none of us do none of us know why we got

1087
00:50:06,950 --> 00:50:04,000
the opportunity i'm but i'm very

1088
00:50:15,109 --> 00:50:10,309

so keep doing what you're doing

1089
00:50:20,150 --> 00:50:17,670
it's a workhorse vehicle of human space

1090
00:50:21,589 --> 00:50:20,160
flight but because it is so automated

1091
00:50:23,670 --> 00:50:21,599
now

1092
00:50:25,270 --> 00:50:23,680
what's the best part about flying it

1093
00:50:26,630 --> 00:50:25,280
what are you gonna have the most fun at

1094
00:50:28,069 --> 00:50:26,640
doing and that's really a question for

1095
00:50:30,150 --> 00:50:28,079
the kids that are watching this or on

1096
00:50:31,510 --> 00:50:30,160
facebook so what's the best part about

1097
00:50:36,470 --> 00:50:31,520
flying where are you gonna have the most

1098
00:50:39,430 --> 00:50:38,309
i can say my impressions from my first

1099
00:50:41,910 --> 00:50:39,440
flight

1100
00:50:45,829 --> 00:50:41,920
the most fun when we launched i felt

1101
00:50:48,309 --> 00:50:45,839
about 20 billion horses behind my back

1102
00:50:50,950 --> 00:50:48,319
for 10 minutes yeah

1103
00:50:53,750 --> 00:50:50,960
and when when

1104
00:50:56,870 --> 00:50:53,760
don't make us stop working

1105
00:50:59,349 --> 00:50:56,880
we were put on orbit and i felt really

1106
00:51:01,270 --> 00:50:59,359
0g and i completely understood that this

1107
00:51:03,349 --> 00:51:01,280
conditions i will spend

1108
00:51:05,589 --> 00:51:03,359
next half a year

1109
00:51:07,030 --> 00:51:05,599
so it was very uncommon for me when i

1110
00:51:09,349 --> 00:51:07,040
first time

1111
00:51:11,109 --> 00:51:09,359
look at the window and i saw

1112
00:51:13,270 --> 00:51:11,119
round earth

1113
00:51:15,589 --> 00:51:13,280

black sky and stars above them i

1114
00:51:17,990 --> 00:51:15,599
understood really in space

1115
00:51:21,190 --> 00:51:18,000
this is what's really exciting for me

1116
00:51:23,349 --> 00:51:21,200
but it was very short period because

1117
00:51:24,950 --> 00:51:23,359
crew has a lot of things to do after

1118
00:51:26,230 --> 00:51:24,960
just launching

1119
00:51:28,309 --> 00:51:26,240
but the first impression was the

1120
00:51:29,190 --> 00:51:28,319
strongest

1121
00:51:31,270 --> 00:51:29,200
excellent

1122
00:51:33,589 --> 00:51:31,280
i would like to ask garlic

1123
00:51:37,030 --> 00:51:33,599
to complete that question just since you

1124
00:51:38,150 --> 00:51:37,040
asked fun on soyuz to describe your

1125
00:51:41,910 --> 00:51:38,160
landing

1126
00:51:46,150 --> 00:51:44,309
this was the final exciting part of us

1127
00:51:49,109 --> 00:51:46,160
because we landed

1128
00:51:50,790 --> 00:51:49,119
march 16 was real

1129
00:51:52,790 --> 00:51:50,800
strong wind

1130
00:51:58,950 --> 00:51:52,800
real-time real

1131
00:52:06,710 --> 00:52:02,069
soft blending sure yeah we will end it

1132
00:52:08,790 --> 00:52:06,720
on the on the ground and then we are

1133
00:52:10,950 --> 00:52:08,800
we were followed by parachute for 100

1134
00:52:13,910 --> 00:52:10,960
meters about

1135
00:52:17,510 --> 00:52:13,920
and we are attaining a side council

1136
00:52:25,109 --> 00:52:19,190
yeah i just meant

1137
00:52:30,150 --> 00:52:27,990
was in gravity after

1138
00:52:33,190 --> 00:52:30,160

being in zero conditions after a long

1139
00:52:36,309 --> 00:52:33,200
period when we was just

1140
00:52:38,150 --> 00:52:36,319
going down in air but after landing we

1141
00:52:43,349 --> 00:52:38,160
were rotated for 100 meters just to

1142
00:52:43,359 --> 00:52:48,150
yes that's the cause of landing

1143
00:52:51,750 --> 00:52:49,750
hi alex rubin biomedical flight

1144
00:52:54,309 --> 00:52:51,760
controller i have a question for jeff

1145
00:52:56,710 --> 00:52:54,319
actually with the recent federal budget

1146
00:52:58,549 --> 00:52:56,720
passing and nasa receiving more money

1147
00:53:00,870 --> 00:52:58,559
than they actually requested do you

1148
00:53:03,030 --> 00:53:00,880
think that this indicates a new interest

1149
00:53:04,790 --> 00:53:03,040
in science and technology and how do you

1150
00:53:06,549 --> 00:53:04,800
think it will affect nasa operations

1151
00:53:09,190 --> 00:53:06,559
going forward

1152
00:53:12,150 --> 00:53:09,200
i don't know exactly what it indicates

1153
00:53:13,990 --> 00:53:12,160
however i think it's great news

1154
00:53:17,270 --> 00:53:14,000
especially as i recall and i haven't

1155
00:53:18,390 --> 00:53:17,280
read a lot of details on it but as i as

1156
00:53:20,790 --> 00:53:18,400
far as i know

1157
00:53:22,870 --> 00:53:20,800
it had to do with the development of

1158
00:53:25,670 --> 00:53:22,880
future capability right beyond the space

1159
00:53:27,510 --> 00:53:25,680
station and maybe

1160
00:53:29,670 --> 00:53:27,520
investing in

1161
00:53:33,109 --> 00:53:29,680
the systems that are required to support

1162
00:53:35,510 --> 00:53:33,119
human life in space and whether that be

1163
00:53:38,150 --> 00:53:35,520

proven out on the space station or it be

1164
00:53:39,430 --> 00:53:38,160
developed for the launch in a different

1165
00:53:41,190 --> 00:53:39,440
spacecraft

1166
00:53:43,109 --> 00:53:41,200
that's good news

1167
00:53:44,390 --> 00:53:43,119
we that's one of the

1168
00:53:46,870 --> 00:53:44,400
primary

1169
00:53:49,109 --> 00:53:46,880
uh achievements i think of the space

1170
00:53:52,309 --> 00:53:49,119
station program is actually

1171
00:53:54,630 --> 00:53:52,319
developing the technology launching it

1172
00:53:56,630 --> 00:53:54,640
operating it having it break

1173
00:53:59,270 --> 00:53:56,640
having it not work the way designed and

1174
00:54:01,190 --> 00:53:59,280
then uh responding to it and adjusting

1175
00:54:02,390 --> 00:54:01,200
things and improving it and then

1176
00:54:06,069 --> 00:54:02,400
learning from

1177
00:54:08,549 --> 00:54:06,079
maybe design flaws to redesign things so

1178
00:54:11,349 --> 00:54:08,559
that uh element of the of the just

1179
00:54:13,349 --> 00:54:11,359
released budget is is of very good news

1180
00:54:16,390 --> 00:54:13,359
from that perspective

1181
00:54:18,870 --> 00:54:16,400
we have time for about one more yes sir

1182
00:54:20,470 --> 00:54:18,880
houston history magazine i'm also a

1183
00:54:22,829 --> 00:54:20,480
chinese studies major at the university

1184
00:54:25,349 --> 00:54:22,839
of houston and i wanted to ask you jeff

1185
00:54:27,829 --> 00:54:25,359
um regarding something like the chinese

1186
00:54:29,750 --> 00:54:27,839
exclusion policy how have such policies

1187
00:54:32,710 --> 00:54:29,760
helped or hindered the nation's space

1188
00:54:33,990 --> 00:54:32,720

exploration efforts

1189
00:54:36,150 --> 00:54:34,000
i don't know if i can answer that

1190
00:54:37,829 --> 00:54:36,160
question

1191
00:54:39,589 --> 00:54:37,839
i know that there's been some dialogue

1192
00:54:41,750 --> 00:54:39,599
going on

1193
00:54:42,870 --> 00:54:41,760
at least from a

1194
00:54:45,109 --> 00:54:42,880
technology

1195
00:54:47,349 --> 00:54:45,119
viewpoint or programmatic viewpoint

1196
00:54:48,470 --> 00:54:47,359
certainly as i said before future

1197
00:54:49,829 --> 00:54:48,480
programs

1198
00:54:52,710 --> 00:54:49,839
are very likely to be in an

1199
00:54:55,349 --> 00:54:52,720
international context what that means in

1200
00:54:58,470 --> 00:54:55,359
direct regard to china i'm not i'm not

1201
00:54:59,430 --> 00:54:58,480
sure i can't really speak to

1202
00:55:00,789 --> 00:54:59,440
okay

1203
00:55:02,789 --> 00:55:00,799
well i think that's about all the time

1204
00:55:04,230 --> 00:55:02,799
that we have we got some great questions

1205
00:55:05,829 --> 00:55:04,240
today so i'd like to thank everybody for

1206
00:55:07,109 --> 00:55:05,839
their questions here in the room and on

1207
00:55:08,549 --> 00:55:07,119
social media

1208
00:55:10,309 --> 00:55:08,559
i'd like to thank our guests for joining

1209
00:55:11,990 --> 00:55:10,319
us today the houston history alliance

1210
00:55:14,069 --> 00:55:12,000
the emerge group our interns and of

1211
00:55:17,510 --> 00:55:14,079
course our media and finally thanks to

1212
00:55:20,470 --> 00:55:17,520
the expedition 4748 crew jeff williams

1213
00:55:22,150 --> 00:55:20,480

lxa of chenin and oleg's great polka

1214
00:55:24,230 --> 00:55:22,160
guys thanks for being with us

1215
00:55:25,990 --> 00:55:24,240
uh with that if the crew did not get to

1216
00:55:27,589 --> 00:55:26,000
answer your question on social media

1217
00:55:29,190 --> 00:55:27,599
don't worry we'll still be taking

1218
00:55:32,309 --> 00:55:29,200
questions throughout the rest of the day

1219
00:55:33,910 --> 00:55:32,319
that's still the hashtag asknasa

1220
00:55:35,510 --> 00:55:33,920
in the meantime you can follow updates

1221
00:55:38,950 --> 00:55:35,520
on social media you can go to our

1222
00:55:41,430 --> 00:55:38,960
international space station webpages on

1223
00:55:44,150 --> 00:55:41,440
facebook twitter and instagram you can

1224
00:55:45,990 --> 00:55:44,160
also follow jeff his handle is astro

1225
00:55:47,270 --> 00:55:46,000
jeff on twitter

1226
00:55:50,309 --> 00:55:47,280
and you can go to our website

1227
00:55:54,470 --> 00:55:51,910
station so we're looking forward to the

1228
00:55:56,950 --> 00:55:54,480
cruise launch on march 18th u.s time