1
00:00:17,600 --> 00:02:00,709
oh

2
00:02:00,719 --> 00:02:35,430
so

3
00:02:35,440 --> 00:02:59,910
am

4
00:02:59,920 --> 00:03:12,070
down

5
00:03:12,080 --> 00:03:24,390
okay

6
00:04:10,630 --> 00:03:51,430
so

7
00:04:10,640 --> 00:05:15,029
uh

8
00:05:15,039 --> 00:06:06,629
okay

9
00:06:06,639 --> 00:07:55,670
uh

10
00:07:55,680 --> 00:08:24,230
foreign

11
00:08:24,240 --> 00:08:32,469
right

12
00:08:32,479 --> 00:08:41,029
uh

13
00:08:41,039 --> 00:09:12,310

um

14
00:09:12,320 --> 00:09:46,070
so

15
00:09:46,080 --> 00:09:57,829
know

16
00:09:57,839 --> 00:10:15,829
oh you back up

17
00:10:15,839 --> 00:10:41,350
baby

18
00:10:41,360 --> 00:12:17,430
me

19
00:13:56,710 --> 00:12:30,069
so

20
00:13:56,720 --> 00:14:19,910
hello

21
00:14:19,920 --> 00:14:35,110
um

22
00:14:38,230 --> 00:14:36,629
peggy whitson chief of the astronaut

23
00:14:40,710 --> 00:14:38,240
office once again in baikonur but in

24
00:14:42,710 --> 00:14:40,720
short contrast to recent launches a

25
00:14:45,189 --> 00:14:42,720
picture postcard day for the launch

26
00:14:47,350 --> 00:14:45,199
coming up in the wee hours wednesday

27
00:14:49,910 --> 00:14:47,360
what are your thoughts here as we embark

28
00:14:51,990 --> 00:14:49,920
on yet another mission but this time the

29
00:14:54,230 --> 00:14:52,000
mission that re-ups the crew to six and

30
00:14:56,389 --> 00:14:54,240
closes out the space shuttle here

31
00:14:59,590 --> 00:14:56,399
well this is an exciting mission mike

32
00:15:01,350 --> 00:14:59,600
fossum satoshi furukawa and sergei

33
00:15:03,110 --> 00:15:01,360
volkov are going to join the three crew

34
00:15:04,150 --> 00:15:03,120
that are already on orbit

35
00:15:06,310 --> 00:15:04,160
um

36
00:15:08,629 --> 00:15:06,320
getting us back up to akuro6 we're

37
00:15:10,870 --> 00:15:08,639
excited about it they will be actually

38
00:15:13,910 --> 00:15:10,880

in this next month preparing for the

39
00:15:15,030 --> 00:15:13,920
last shuttle flight sts-135's arrival in

40
00:15:17,350 --> 00:15:15,040
july

41
00:15:20,870 --> 00:15:17,360
and all the activities are pretty much a

42
00:15:23,350 --> 00:15:20,880
prelude to that uh shuttle uh launch

43
00:15:25,670 --> 00:15:23,360
because this uh space station crew mike

44
00:15:26,790 --> 00:15:25,680
fossum and ron garan who's already on

45
00:15:29,509 --> 00:15:26,800
orbit are going to actually be

46
00:15:31,509 --> 00:15:29,519
performing the eba during the sts-135

47
00:15:33,509 --> 00:15:31,519
mission so that's kind of a unique

48
00:15:35,189 --> 00:15:33,519
novelty for this mission in addition to

49
00:15:36,790 --> 00:15:35,199
the fact that obviously it's the last

50
00:15:38,790 --> 00:15:36,800
shuttle mission

51
00:15:40,470 --> 00:15:38,800
fossum in the last two weeks here in

52
00:15:42,790 --> 00:15:40,480
baikonur has almost been like a kid in a

53
00:15:45,189 --> 00:15:42,800
candy store you've talked to him what

54
00:15:47,269 --> 00:15:45,199
what are his thoughts his feelings uh

55
00:15:49,110 --> 00:15:47,279
just about on the eve of launch oh he's

56
00:15:51,749 --> 00:15:49,120
really ready to go he's looking forward

57
00:15:54,069 --> 00:15:51,759
to the mission uh they have a great crew

58
00:15:55,509 --> 00:15:54,079
they have great camaraderie in this crew

59
00:15:56,790 --> 00:15:55,519
and i'm looking forward to just their

60
00:15:59,030 --> 00:15:56,800
interactions with the ground i hope

61
00:16:01,590 --> 00:15:59,040
they'll enjoy them as much as we have

62
00:16:03,269 --> 00:16:01,600
during their training flow

63
00:16:05,670 --> 00:16:03,279

obviously everybody talks about this

64
00:16:07,430 --> 00:16:05,680
bittersweet transition moment in history

65
00:16:09,350 --> 00:16:07,440
what are your thoughts as

66
00:16:11,509 --> 00:16:09,360
pretty soon we are to depend on the

67
00:16:13,829 --> 00:16:11,519
soyuz for the next foreseeable future in

68
00:16:15,829 --> 00:16:13,839
the near future exclusively for rides up

69
00:16:17,910 --> 00:16:15,839
and down well the soyuz is a very

70
00:16:19,509 --> 00:16:17,920
reliable vehicle and

71
00:16:22,230 --> 00:16:19,519
you know we have a good partnership

72
00:16:25,269 --> 00:16:22,240
worked out with our russian counterparts

73
00:16:27,749 --> 00:16:25,279
i think it'll work out we are hoping for

74
00:16:29,990 --> 00:16:27,759
you know a replacement to fill our gap

75
00:17:05,750 --> 00:16:30,000
on the u.s side as soon as possible

76
00:17:05,760 --> 00:17:29,510
oh

77
00:17:29,520 --> 00:17:51,510
um

78
00:17:51,520 --> 00:18:45,909
so

79
00:18:45,919 --> 00:19:05,190
um

80
00:19:05,200 --> 00:19:24,070
hey

81
00:19:24,080 --> 00:19:40,950
okay

82
00:19:40,960 --> 00:20:17,909
oh yeah

83
00:20:47,990 --> 00:20:20,870
foreign

84
00:20:48,000 --> 00:21:41,750
yes

85
00:21:41,760 --> 00:22:35,110
make sure

86
00:22:35,120 --> 00:23:09,430
this

87
00:23:09,440 --> 00:24:51,430
drugs

88
00:24:51,440 --> 00:25:49,269

all right

89
00:25:49,279 --> 00:26:20,470
so

90
00:26:20,480 --> 00:26:43,990
foreign

91
00:26:44,000 --> 00:27:00,470
uh

92
00:27:04,310 --> 00:27:02,149
mike safradini international space

93
00:27:06,710 --> 00:27:04,320
station program manager mike

94
00:27:08,549 --> 00:27:06,720
welcome to baikonur as always uh today

95
00:27:10,070 --> 00:27:08,559
another rollout for another upcoming

96
00:27:14,789 --> 00:27:10,080
launch

97
00:27:16,789 --> 00:27:14,799
this particular time in the wake of one

98
00:27:19,029 --> 00:27:16,799
shuttle mission on the cusp of the final

99
00:27:20,789 --> 00:27:19,039
shuttle mission coming up in a few weeks

100
00:27:22,630 --> 00:27:20,799
well there's rob as you know there's

101
00:27:24,710 --> 00:27:22,640
there's two answers to that one is the

102
00:27:26,950 --> 00:27:24,720
technical answer that uh

103
00:27:28,149 --> 00:27:26,960
this period of time in the program where

104
00:27:31,190 --> 00:27:28,159
we had

105
00:27:33,909 --> 00:27:31,200
flights

106
00:27:35,830 --> 00:27:33,919
all of those had to fit in sequence and

107
00:27:37,669 --> 00:27:35,840
then we had the the rotation of the crew

108
00:27:39,909 --> 00:27:37,679
which we're in the middle of now

109
00:27:42,310 --> 00:27:39,919
uh it was it was a technically

110
00:27:44,789 --> 00:27:42,320
challenged as things moved around

111
00:27:46,789 --> 00:27:44,799
uh so this really represents uh one of

112
00:27:48,389 --> 00:27:46,799
the last steps in this this relatively

113
00:27:51,029 --> 00:27:48,399

tight period we have this launch of the

114
00:27:52,710 --> 00:27:51,039
crew to iss and shortly thereafter we'll

115
00:27:55,909 --> 00:27:52,720
have on the 20th of

116
00:27:57,909 --> 00:27:55,919
june the departure of the atv which has

117
00:28:00,549 --> 00:27:57,919
done a great job for us on iss and here

118
00:28:02,549 --> 00:28:00,559
in the last few days on orbit taker

119
00:28:04,230 --> 00:28:02,559
it will take the iss to the highest

120
00:28:06,710 --> 00:28:04,240
orbit it's ever been in

121
00:28:09,510 --> 00:28:06,720
uh so so technically

122
00:28:11,110 --> 00:28:09,520
uh it's a it represents kind of the end

123
00:28:12,950 --> 00:28:11,120
of a kind of challenging period we've

124
00:28:14,230 --> 00:28:12,960
had on orbit

125
00:28:15,830 --> 00:28:14,240
but also

126
00:28:17,909 --> 00:28:15,840
as you know this will be the last

127
00:28:19,510 --> 00:28:17,919
shuttle flight to iss and so this

128
00:28:21,669 --> 00:28:19,520
particular crew

129
00:28:23,669 --> 00:28:21,679
will see that historic event occur in

130
00:28:25,830 --> 00:28:23,679
the iss program of course iss wouldn't

131
00:28:29,269 --> 00:28:25,840
be here without the shuttle program

132
00:28:31,590 --> 00:28:29,279
uh we have uh we have means and ways to

133
00:28:32,630 --> 00:28:31,600
maintain the station without the without

134
00:28:34,870 --> 00:28:32,640
the shuttle

135
00:28:36,549 --> 00:28:34,880
uh she was necessary primarily for

136
00:28:38,549 --> 00:28:36,559
assembly purposes

137
00:28:40,710 --> 00:28:38,559
uh so in spite of the fact that we can

138
00:28:42,070 --> 00:28:40,720

live without the the shuttle and the

139
00:28:44,870 --> 00:28:42,080
shuttle program

140
00:28:46,710 --> 00:28:44,880
uh we'll we'll miss her uh greatly and

141
00:28:48,549 --> 00:28:46,720
this crew will see that last flight and

142
00:28:50,230 --> 00:28:48,559
so it's a kind of a

143
00:28:52,310 --> 00:28:50,240
uh

144
00:28:54,070 --> 00:28:52,320
it's maybe not a sad moment but it's a

145
00:28:56,070 --> 00:28:54,080
it's a moment where we kind of reflect

146
00:28:58,149 --> 00:28:56,080
back and go yes assembly is complete

147
00:28:59,990 --> 00:28:58,159
we're moving on with the utilization

148
00:29:02,149 --> 00:29:00,000
phase of the program which is why we we

149
00:29:04,230 --> 00:29:02,159
built the iss in the first place

150
00:29:06,310 --> 00:29:04,240
once mike fossum and satoshi furukawa

151
00:29:09,110 --> 00:29:06,320
and sergey volkov reached the station

152
00:29:10,789 --> 00:29:09,120
you have a rather sublime blend of

153
00:29:12,789 --> 00:29:10,799
veteran and first-time flyers but a

154
00:29:15,269 --> 00:29:12,799
tremendous amount of experience

155
00:29:16,950 --> 00:29:15,279
what challenges will they face during

156
00:29:19,029 --> 00:29:16,960
the bulk of their half year in orbit

157
00:29:20,630 --> 00:29:19,039
that will span into the late fall time

158
00:29:21,510 --> 00:29:20,640
frame well

159
00:29:23,430 --> 00:29:21,520
um

160
00:29:25,269 --> 00:29:23,440
this is a great time

161
00:29:27,269 --> 00:29:25,279
we're gonna the last shuttle flight

162
00:29:28,950 --> 00:29:27,279
brings up an enormous amount of crew

163
00:29:30,789 --> 00:29:28,960

supplies to uh

164
00:29:32,470 --> 00:29:30,799
to get us a year

165
00:29:33,510 --> 00:29:32,480
almost a year's worth of supplies to

166
00:29:34,549 --> 00:29:33,520
orbit

167
00:29:35,669 --> 00:29:34,559
um

168
00:29:37,110 --> 00:29:35,679
and so

169
00:29:38,870 --> 00:29:37,120
the first thing they'll have to do is

170
00:29:41,029 --> 00:29:38,880
try to to

171
00:29:43,110 --> 00:29:41,039
work with the uh with the shuttle crew

172
00:29:44,230 --> 00:29:43,120
to do the exchange of all the components

173
00:29:46,230 --> 00:29:44,240
because the shuttle crew is going to be

174
00:29:48,549 --> 00:29:46,240
small this time real the smallest crew

175
00:29:50,470 --> 00:29:48,559
we've ever flown to iss for crew and so

176
00:29:52,630 --> 00:29:50,480
the iss crew will be more busy helping

177
00:29:54,549 --> 00:29:52,640
with the transfer and it's atlantis

178
00:29:57,669 --> 00:29:54,559
which doesn't have the capability stay

179
00:29:59,430 --> 00:29:57,679
on orbit as long as the other vehicles

180
00:30:02,149 --> 00:29:59,440
um and so the first thing the very first

181
00:30:04,070 --> 00:30:02,159
thing they'll have to do is is

182
00:30:05,750 --> 00:30:04,080
add extra tasks to help us do all the

183
00:30:06,710 --> 00:30:05,760
transfers we need to do to get all of

184
00:30:08,950 --> 00:30:06,720
those

185
00:30:10,389 --> 00:30:08,960
supplies out of the mplm and all of the

186
00:30:12,230 --> 00:30:10,399
components we want to take home in the

187
00:30:14,630 --> 00:30:12,240
mpl and the npl and back in the payload

188
00:30:16,389 --> 00:30:14,640

bay but after that they're going to

189
00:30:19,269 --> 00:30:16,399
honestly we're going to transition our

190
00:30:21,110 --> 00:30:19,279
whole process to more of a utilization

191
00:30:23,190 --> 00:30:21,120
capability and so they're going to help

192
00:30:24,630 --> 00:30:23,200
us with this transition

193
00:30:27,830 --> 00:30:24,640
where we're going to start thinking more

194
00:30:30,070 --> 00:30:27,840
of allocating time to utilization and

195
00:30:32,630 --> 00:30:30,080
all the systems work will have to fit

196
00:30:34,149 --> 00:30:32,640
within what's left whereas up into this

197
00:30:35,830 --> 00:30:34,159
point we've we've been operating a

198
00:30:37,909 --> 00:30:35,840
little differently all the systems was

199
00:30:39,750 --> 00:30:37,919
the priority and the utilization got

200
00:30:41,669 --> 00:30:39,760
what was left and so this is a major

201
00:30:43,110 --> 00:30:41,679
transition for us as a program and the

202
00:30:44,630 --> 00:30:43,120
crew will

203
00:30:46,630 --> 00:30:44,640
will be a big part of helping us through

204
00:30:47,909 --> 00:30:46,640
that of course the last thing is i i

205
00:30:50,149 --> 00:30:47,919
expect

206
00:30:52,230 --> 00:30:50,159
i'm cautiously optimistic by the end of

207
00:30:54,149 --> 00:30:52,240
their increment they will see the first

208
00:30:55,590 --> 00:30:54,159
commercial vehicle fly

209
00:30:56,710 --> 00:30:55,600
to iss

210
00:30:58,549 --> 00:30:56,720
and

211
00:31:00,470 --> 00:30:58,559
while the training associated with that

212
00:31:02,470 --> 00:31:00,480
is not

213
00:31:04,310 --> 00:31:02,480

particularly

214
00:31:07,190 --> 00:31:04,320
over the top challenging in terms of

215
00:31:10,230 --> 00:31:07,200
crew time and and capability it will be

216
00:31:13,669 --> 00:31:10,240
a first and uh and with like all firsts

217
00:31:14,870 --> 00:31:13,679
it can it can have its surprises and so

218
00:31:16,470 --> 00:31:14,880
they'll spend a lot of time getting

219
00:31:18,310 --> 00:31:16,480
ready for that

220
00:31:19,669 --> 00:31:18,320
and then of course implementing the

221
00:31:21,509 --> 00:31:19,679
actual uh

222
00:31:23,190 --> 00:31:21,519
docking when it when it does occur late

223
00:31:25,509 --> 00:31:23,200
in their increment

224
00:31:28,789 --> 00:31:25,519
and the final question to that mike is

225
00:31:30,549 --> 00:31:28,799
uh people are naturally interested in

226
00:31:32,710 --> 00:31:30,559
how the timetable is going for the

227
00:31:35,750 --> 00:31:32,720
development of spacex's dragon and

228
00:31:36,870 --> 00:31:35,760
orbital sciences cygnus spacecraft and

229
00:31:38,710 --> 00:31:36,880
whether or not

230
00:31:40,230 --> 00:31:38,720
frankly you feel confident that they're

231
00:31:41,750 --> 00:31:40,240
going to come online to pick up the

232
00:31:42,870 --> 00:31:41,760
baton here

233
00:31:44,630 --> 00:31:42,880
well

234
00:31:47,430 --> 00:31:44,640
there's coming online and there's coming

235
00:31:49,350 --> 00:31:47,440
online in time

236
00:31:51,190 --> 00:31:49,360
these both of these companies are doing

237
00:31:52,950 --> 00:31:51,200
a tremendous job building their

238
00:31:53,909 --> 00:31:52,960

spacecraft we interact with them every

239
00:31:55,430 --> 00:31:53,919
day

240
00:31:56,870 --> 00:31:55,440
they've got a lot of bright young

241
00:31:58,470 --> 00:31:56,880
engineers

242
00:32:01,269 --> 00:31:58,480
well-equipped

243
00:32:04,070 --> 00:32:01,279
and very dedicated who are building

244
00:32:05,990 --> 00:32:04,080
what appear to be tremendous spacecraft

245
00:32:09,190 --> 00:32:06,000
however even the most experienced

246
00:32:10,789 --> 00:32:09,200
companies uh will will project a date

247
00:32:12,230 --> 00:32:10,799
when a new

248
00:32:14,149 --> 00:32:12,240
system will come online you see it in

249
00:32:15,830 --> 00:32:14,159
the aircraft industry is the one i can

250
00:32:18,549 --> 00:32:15,840
think of off top of my head that we hear

251
00:32:20,389 --> 00:32:18,559
the most of but miss their dates so

252
00:32:23,669 --> 00:32:20,399
while i expect this to slip to the right

253
00:32:25,830 --> 00:32:23,679
some i do expect them to to come to iss

254
00:32:28,870 --> 00:32:25,840
in the in the near future and one of the

255
00:32:30,870 --> 00:32:28,880
reasons why we flew sts-135 was to give

256
00:32:33,190 --> 00:32:30,880
us the additional supplies on orbit in

257
00:32:35,029 --> 00:32:33,200
case they do tend to slip to the right a

258
00:32:36,549 --> 00:32:35,039
little bit today they're both shooting

259
00:32:38,310 --> 00:32:36,559
for the end of

260
00:32:39,509 --> 00:32:38,320
this calendar year

261
00:32:43,509 --> 00:32:39,519
and

262
00:32:45,509 --> 00:32:43,519
optimistic they'll make that however we

263
00:32:47,669 --> 00:32:45,519

have about a year's worth of margin in

264
00:32:49,750 --> 00:32:47,679
case they they hit snags along the way

265
00:32:51,990 --> 00:32:49,760
normal kinds of things you you see in

266
00:32:53,669 --> 00:32:52,000
developing new spacecraft which we you

267
00:32:55,990 --> 00:32:53,679
can expect

268
00:32:57,830 --> 00:32:56,000
so i i do expect them to be there they

269
00:32:59,110 --> 00:32:57,840
may or may not be there on the the

270
00:33:00,789 --> 00:32:59,120
current schedule

271
00:33:02,630 --> 00:33:00,799
but we've got the margin in the systems

272
00:33:04,950 --> 00:33:02,640
to let them to take the time they need

273
00:33:07,909 --> 00:33:04,960
to to do it right and

274
00:33:09,190 --> 00:33:07,919
ultimately get to iss on a regular basis

275
00:33:11,110 --> 00:33:09,200
and finally of course we're here in

276
00:33:13,269 --> 00:33:11,120
baikonur because the soyuz ready to

277
00:33:15,669 --> 00:33:13,279
launch

278
00:33:17,509 --> 00:33:15,679
once again our ticket to fly for the

279
00:33:19,430 --> 00:33:17,519
near future anyway up and down to

280
00:33:21,269 --> 00:33:19,440
station

281
00:33:22,789 --> 00:33:21,279
a new head of roast cosmos there is

282
00:33:26,149 --> 00:33:22,799
change in the air

283
00:33:28,070 --> 00:33:26,159
how how are you viewing that change this

284
00:33:29,990 --> 00:33:28,080
transition period in terms of the

285
00:33:31,029 --> 00:33:30,000
protection sustenance and safety of the

286
00:33:32,310 --> 00:33:31,039
iss

287
00:33:34,389 --> 00:33:32,320
well

288
00:33:36,870 --> 00:33:34,399

you know as in any

289
00:33:39,909 --> 00:33:36,880
system the the head of the system can

290
00:33:41,350 --> 00:33:39,919
can make cause changes effect changes

291
00:33:43,190 --> 00:33:41,360
but down and then you have a technical

292
00:33:44,310 --> 00:33:43,200
team here that's been doing soyuz

293
00:33:47,590 --> 00:33:44,320
launches

294
00:33:49,269 --> 00:33:47,600
safely for many many many years and and

295
00:33:51,350 --> 00:33:49,279
what i see around me is a very focused

296
00:33:54,070 --> 00:33:51,360
team

297
00:33:56,230 --> 00:33:54,080
what i have heard of about the the

298
00:33:58,470 --> 00:33:56,240
inputs from the from the new leader uh

299
00:34:00,310 --> 00:33:58,480
vladimir putin is uh

300
00:34:02,389 --> 00:34:00,320
is all good i mean he's he's keeping the

301
00:34:03,990 --> 00:34:02,399
team focused he's not

302
00:34:05,750 --> 00:34:04,000
talking about dramatic changes to the

303
00:34:07,590 --> 00:34:05,760
guys down and in here

304
00:34:10,069 --> 00:34:07,600
that do the day-to-day work so i would

305
00:34:11,510 --> 00:34:10,079
expect this this flight to be just like

306
00:34:15,030 --> 00:34:11,520
every other flight

307
00:34:17,430 --> 00:34:15,040
the soyuz is incredibly robust design

308
00:34:19,109 --> 00:34:17,440
the team that does this work gets her

309
00:34:20,950 --> 00:34:19,119
ready for launch and launches and

310
00:34:24,470 --> 00:34:20,960
operates her to docking

311
00:34:26,310 --> 00:34:24,480
is a is a talented dedicated team and so

312
00:34:27,750 --> 00:34:26,320
i expect this flight to be like every

313
00:34:29,270 --> 00:34:27,760

other one we've enjoyed

314
00:34:33,510 --> 00:34:29,280
with the possible exceptions the weather

315
00:34:37,270 --> 00:34:35,510
bill gerstenmaier nasa's associate

316
00:34:38,869 --> 00:34:37,280
administrator for space operations here

317
00:34:40,950 --> 00:34:38,879
in baikonur bill

318
00:34:43,430 --> 00:34:40,960
another rollout today is another crew is

319
00:34:45,829 --> 00:34:43,440
on the verge of augmenting the space

320
00:34:47,669 --> 00:34:45,839
station back to six crew members

321
00:34:49,190 --> 00:34:47,679
your thoughts today as you saw the roll

322
00:34:51,190 --> 00:34:49,200
out to the pad

323
00:34:54,310 --> 00:34:51,200
and your thoughts on the criticality of

324
00:34:56,069 --> 00:34:54,320
this launch at this time of transition

325
00:34:57,829 --> 00:34:56,079
yeah i guess again

326
00:35:00,230 --> 00:34:57,839
my initial thoughts were the weather was

327
00:35:01,349 --> 00:35:00,240
just phenomenal today it was a very

328
00:35:02,790 --> 00:35:01,359
pretty day

329
00:35:04,870 --> 00:35:02,800
for the roll out

330
00:35:06,550 --> 00:35:04,880
again the vehicle looked in tremendous

331
00:35:08,470 --> 00:35:06,560
shape and ready to go fly which is a

332
00:35:11,109 --> 00:35:08,480
real tribute to our russian partners of

333
00:35:11,990 --> 00:35:11,119
continuing to support the iss as we

334
00:35:14,390 --> 00:35:12,000
added

335
00:35:17,270 --> 00:35:14,400
the additional soyuz to keep the crew

336
00:35:18,870 --> 00:35:17,280
compliment at six i also think about the

337
00:35:20,870 --> 00:35:18,880
crew on board space station that are

338
00:35:23,510 --> 00:35:20,880

currently at three with ron being our

339
00:35:24,870 --> 00:35:23,520
single person on the iss and i think

340
00:35:26,950 --> 00:35:24,880
it'll be exciting to get another crew

341
00:35:29,109 --> 00:35:26,960
member to get mike up there with him to

342
00:35:30,790 --> 00:35:29,119
continue with utilization so i look very

343
00:35:32,950 --> 00:35:30,800
much forward to this next phase when we

344
00:35:34,710 --> 00:35:32,960
get two u.s crew members back on orbit

345
00:35:36,870 --> 00:35:34,720
and we pick up that pace of utilization

346
00:35:39,109 --> 00:35:36,880
back on space station

347
00:35:42,150 --> 00:35:39,119
you know you look at the rollout today

348
00:35:44,310 --> 00:35:42,160
uh you look at the the operation which

349
00:35:45,270 --> 00:35:44,320
has replicated itself for five decades

350
00:35:47,270 --> 00:35:45,280
now

351
00:35:48,950 --> 00:35:47,280
and at this time

352
00:35:50,550 --> 00:35:48,960
where so many vehicles have come and

353
00:35:52,310 --> 00:35:50,560
gone and this choreography that we've

354
00:35:54,069 --> 00:35:52,320
talked about before

355
00:35:57,270 --> 00:35:54,079
shuttle missions

356
00:35:59,030 --> 00:35:57,280
cargo vehicles flying back and forth

357
00:36:00,390 --> 00:35:59,040
the city in the sky that people call the

358
00:36:02,550 --> 00:36:00,400
international space station this has

359
00:36:04,630 --> 00:36:02,560
been a fairly remarkable first half of

360
00:36:06,390 --> 00:36:04,640
the year has it not yeah i think when i

361
00:36:08,150 --> 00:36:06,400
just look at the vehicle traffic that's

362
00:36:09,910 --> 00:36:08,160
occurred this first portion of the year

363
00:36:11,510 --> 00:36:09,920

it's it's pretty amazing

364
00:36:14,310 --> 00:36:11,520
you know the last shuttle flight was

365
00:36:16,390 --> 00:36:14,320
very demanding with the four spacewalks

366
00:36:19,030 --> 00:36:16,400
adding the ams to space station was a

367
00:36:20,790 --> 00:36:19,040
big deal um still the the progresses

368
00:36:23,190 --> 00:36:20,800
that are coming and going the atv that's

369
00:36:25,589 --> 00:36:23,200
currently docked there's just recently a

370
00:36:28,230 --> 00:36:25,599
fairly large uh maneuver to reboost the

371
00:36:30,470 --> 00:36:28,240
space station with the atv that entire

372
00:36:32,150 --> 00:36:30,480
choreography and and working all this

373
00:36:34,710 --> 00:36:32,160
out just kind of

374
00:36:36,390 --> 00:36:34,720
passes underneath the horizon and folks

375
00:36:37,910 --> 00:36:36,400
don't see what's really going on or

376
00:36:39,750 --> 00:36:37,920
appreciate the complexity of what's

377
00:36:41,990 --> 00:36:39,760
happening in space but the teams have

378
00:36:44,230 --> 00:36:42,000
done a tremendous job of staying focused

379
00:36:46,069 --> 00:36:44,240
kind of keeping things moving forward

380
00:36:47,430 --> 00:36:46,079
really planning to do the utilization

381
00:36:49,190 --> 00:36:47,440
and operations

382
00:36:50,870 --> 00:36:49,200
i think it's also interesting in the

383
00:36:52,790 --> 00:36:50,880
soyuz even though it looks like it's a

384
00:36:54,390 --> 00:36:52,800
repetitive kind of thing we're seeing

385
00:36:56,870 --> 00:36:54,400
the new generation of soyuz vehicles

386
00:36:58,630 --> 00:36:56,880
come online the digital soyuz so even

387
00:37:00,150 --> 00:36:58,640
though it looks to us from the outside

388
00:37:02,470 --> 00:37:00,160

it's just kind of the same vehicle

389
00:37:04,230 --> 00:37:02,480
things appear repetitive that's not the

390
00:37:06,150 --> 00:37:04,240
case at all the russians are continuing

391
00:37:07,750 --> 00:37:06,160
to upgrade continuing to modernize

392
00:37:09,990 --> 00:37:07,760
continue to look at the ways the

393
00:37:11,430 --> 00:37:10,000
vehicles operate and make improvements

394
00:37:13,030 --> 00:37:11,440
so i think that's important for us to

395
00:37:15,589 --> 00:37:13,040
remember in the space flight community

396
00:37:17,430 --> 00:37:15,599
that we stay sharp and we stay good by

397
00:37:19,670 --> 00:37:17,440
putting some new changes in continuing

398
00:37:21,589 --> 00:37:19,680
to upgrade modernize in small areas and

399
00:37:23,190 --> 00:37:21,599
keep moving forward so so just as the

400
00:37:24,950 --> 00:37:23,200
russians are making small incremental

401
00:37:26,470 --> 00:37:24,960
changes that aren't very obvious to us

402
00:37:28,230 --> 00:37:26,480
those are very important to the overall

403
00:37:29,990 --> 00:37:28,240
health of the station and you see the

404
00:37:31,910 --> 00:37:30,000
same thing on board station you know

405
00:37:33,109 --> 00:37:31,920
mike is redoing a bunch of components on

406
00:37:34,790 --> 00:37:33,119
station we're going to increase our

407
00:37:36,790 --> 00:37:34,800
bandwidth next year so we can bring more

408
00:37:39,109 --> 00:37:36,800
data down et cetera so

409
00:37:40,710 --> 00:37:39,119
these look like static activities but

410
00:37:42,470 --> 00:37:40,720
they are really not they're continuing

411
00:37:44,790 --> 00:37:42,480
to grow and continue to expand and

412
00:37:46,950 --> 00:37:44,800
continue to get more capabilities so

413
00:37:50,390 --> 00:37:46,960

again it's a pretty amazing period this

414
00:37:52,310 --> 00:37:50,400
first portion of 2011 as we as we kind

415
00:37:54,950 --> 00:37:52,320
of really execute all the things that we

416
00:37:56,790 --> 00:37:54,960
talked about doing in the years past

417
00:37:58,630 --> 00:37:56,800
and the multinational facet of space

418
00:38:00,390 --> 00:37:58,640
station again receives an

419
00:38:02,710 --> 00:38:00,400
exclamation point with the arrival of

420
00:38:04,550 --> 00:38:02,720
satoshi furukawa the japanese are

421
00:38:05,670 --> 00:38:04,560
extremely excited about his presence on

422
00:38:07,190 --> 00:38:05,680
board and

423
00:38:08,470 --> 00:38:07,200
again if you look at the complexion of

424
00:38:10,230 --> 00:38:08,480
how station

425
00:38:12,630 --> 00:38:10,240
from crew to crew from mission to

426
00:38:14,950 --> 00:38:12,640
mission uh it it is a fairly remarkable

427
00:38:17,109 --> 00:38:14,960
activity yeah it's pretty amazing you

428
00:38:18,870 --> 00:38:17,119
know when i came down here and all the

429
00:38:21,510 --> 00:38:18,880
japanese journalists were here for

430
00:38:23,910 --> 00:38:21,520
satoshi's flight it's pretty exciting

431
00:38:26,390 --> 00:38:23,920
seeing the excitement of them who come

432
00:38:27,910 --> 00:38:26,400
down here to see the launch to kind of

433
00:38:29,589 --> 00:38:27,920
see it through their eyes you know i've

434
00:38:31,750 --> 00:38:29,599
had the luxury and privilege of being

435
00:38:33,750 --> 00:38:31,760
here for many times to see the launches

436
00:38:35,510 --> 00:38:33,760
so in a way i kind of

437
00:38:37,030 --> 00:38:35,520
see them as almost a normal event but

438
00:38:39,030 --> 00:38:37,040

then when i see the reactions of the

439
00:38:40,870 --> 00:38:39,040
japanese journalists and the families

440
00:38:42,790 --> 00:38:40,880
and the japanese management to this

441
00:38:44,630 --> 00:38:42,800
activity i see it through a different

442
00:38:46,310 --> 00:38:44,640
light and i see that excitement again

443
00:38:48,470 --> 00:38:46,320
come back about what we're doing and it

444
00:38:49,990 --> 00:38:48,480
reminds me of of how special what we're

445
00:38:52,150 --> 00:38:50,000
doing in space and these launch

446
00:38:53,670 --> 00:38:52,160
activities really are so the chance to

447
00:38:55,349 --> 00:38:53,680
have work with international partners

448
00:38:57,190 --> 00:38:55,359
and bring them in and get to see their

449
00:38:58,550 --> 00:38:57,200
new excitement in this activity is