
Ю. МАЛЕНЧЕНКО
U. MALENCHENKO

1
00:00:12,150 --> 00:00:08,310
dear

2
00:00:13,830 --> 00:00:12,160
commission

3
00:00:19,750 --> 00:00:13,840
our crew members are ready for the

4
00:00:19,760 --> 00:00:40,549
we trust you with this

5
00:00:40,559 --> 00:00:51,830
do you have questions

6
00:00:55,270 --> 00:00:53,590
absolutely yeah we've traded a long time

7
00:00:57,590 --> 00:00:55,280
for this so we're very ready for the

8
00:01:01,830 --> 00:00:57,600
mission um looking forward to this final

9
00:01:05,670 --> 00:01:03,990
uh really i mean after this it's the

10
00:01:08,070 --> 00:01:05,680
culmination of the training we then head

11
00:01:09,350 --> 00:01:08,080
down to quarantine for baikonur so i'm

12
00:01:10,630 --> 00:01:09,360
just really excited about the next

13
00:01:21,270 --> 00:01:10,640

couple of weeks in the build up to the

14
00:01:24,070 --> 00:01:22,870
there are lots of similarities between

15
00:01:26,230 --> 00:01:24,080
training for

16
00:01:28,469 --> 00:01:26,240
the two missions on either a soyuz or

17
00:01:30,550 --> 00:01:28,479
shuttle because both are very dynamic

18
00:01:32,310 --> 00:01:30,560
vehicles and uh

19
00:01:34,149 --> 00:01:32,320
and during our training and during our

20
00:01:36,149 --> 00:01:34,159
exam today we plan for worst case

21
00:01:37,510 --> 00:01:36,159
scenario and that way the crew is is

22
00:01:39,429 --> 00:01:37,520
very ready you know some of the

23
00:01:41,670 --> 00:01:39,439
differences are in terms of techniques

24
00:01:43,510 --> 00:01:41,680
on how that that approach is completed

25
00:02:02,230 --> 00:01:43,520
but in general both are very effective

26
00:02:06,789 --> 00:02:04,550
this integrated simulator that is

27
00:02:09,350 --> 00:02:06,799
located behind us

28
00:02:10,469 --> 00:02:09,360
is rather accurately

29
00:02:13,830 --> 00:02:10,479
modeling

30
00:02:16,390 --> 00:02:13,840
different processes that happen with a

31
00:02:19,190 --> 00:02:16,400
real transportation vehicle in space it

32
00:02:22,710 --> 00:02:19,200
models those processes

33
00:02:23,750 --> 00:02:22,720
and we practice all the main

34
00:02:26,070 --> 00:02:23,760
modes

35
00:02:29,350 --> 00:02:26,080
that are programmed in the simulator

36
00:02:31,110 --> 00:02:29,360
and they allow us to operate in space as

37
00:02:33,190 --> 00:02:31,120
if we were in the simulator very

38
00:02:35,430 --> 00:02:33,200

frequently cosmonauts

39
00:02:37,350 --> 00:02:35,440
point out that they feel as if they were

40
00:02:39,830 --> 00:02:37,360
still in the simulator

41
00:02:42,710 --> 00:02:39,840
and that is a good assessment

42
00:02:43,990 --> 00:02:42,720
for the simulator and

43
00:02:49,190 --> 00:02:44,000
high assessment for the people who

44
00:02:55,350 --> 00:02:50,869
there can be

45
00:02:58,949 --> 00:02:55,360
a huge enormous number of situations

46
00:03:02,070 --> 00:02:58,959
which they can change over 30 parameters

47
00:03:05,030 --> 00:03:02,080
and make them off nominal and using

48
00:03:06,710 --> 00:03:05,040
those parameters you can create any kind

49
00:03:10,470 --> 00:03:06,720
of situations

50
00:03:13,030 --> 00:03:10,480
you see it's as if it's music there are

51
00:03:19,270 --> 00:03:13,040
notes but the number of tunes is

52
00:03:25,430 --> 00:03:21,110
we have been

53
00:03:26,949 --> 00:03:25,440
training for about 18 months together

54
00:03:29,589 --> 00:03:26,959
and we have

55
00:03:30,949 --> 00:03:29,599
gone through the backup crew

56
00:03:33,509 --> 00:03:30,959
training

57
00:03:38,630 --> 00:03:33,519
so we have worked together and

58
00:03:42,309 --> 00:03:40,949
um i think there's two things that are

59
00:03:44,470 --> 00:03:42,319
really hard about the training firstly

60
00:03:46,149 --> 00:03:44,480
it's a long period two and a half years

61
00:03:47,910 --> 00:03:46,159
and you have to retain a lot of

62
00:03:49,750 --> 00:03:47,920
information over that period sometimes

63
00:03:51,270 --> 00:03:49,760

you'll only get one lesson prior to

64
00:03:53,429 --> 00:03:51,280
actually seeing it on board the space

65
00:03:55,190 --> 00:03:53,439
station so knowing what to retain and

66
00:03:56,710 --> 00:03:55,200
how to retain that information is is

67
00:03:58,710 --> 00:03:56,720
quite an art

68
00:04:00,309 --> 00:03:58,720
and secondly of course everything we do

69
00:04:04,470 --> 00:04:00,319
here is in russian so learning russian

70
00:04:04,480 --> 00:04:14,229
enough to work in the soyuz yes

71
00:04:18,069 --> 00:04:16,069
yes i mean we've got lots of experiments

72
00:04:20,069 --> 00:04:18,079
planned um both in the russian segment

73
00:04:22,390 --> 00:04:20,079
and in the usos segment in fact there's

74
00:04:25,270 --> 00:04:22,400
over 250 experiments that we'll be

75
00:04:26,950 --> 00:04:25,280
performing throughout the six-month tour

76
00:04:29,030 --> 00:04:26,960
and of course many of those are on our

77
00:04:31,110 --> 00:04:29,040
human body ourselves

78
00:04:33,350 --> 00:04:31,120
one in particular for example is immuno

79
00:04:34,469 --> 00:04:33,360
2 which investigates the body's immune

80
00:04:36,629 --> 00:04:34,479
system

81
00:04:38,150 --> 00:04:36,639
and how that changes with aging process

82
00:04:40,310 --> 00:04:38,160
and of course that will affect people on

83
00:04:49,670 --> 00:04:40,320
earth as well have benefit for our aging

84
00:04:52,070 --> 00:04:50,870
none whatsoever i think that's one of

85
00:04:53,990 --> 00:04:52,080
the great things about the training

86
00:04:56,390 --> 00:04:54,000
process is any concerns that you may

87
00:04:57,670 --> 00:04:56,400
have really are dealt with as we've gone

88
00:04:59,110 --> 00:04:57,680

through this two and a half year

89
00:05:01,270 --> 00:04:59,120
training process and by the time we get

90
00:05:15,510 --> 00:05:01,280
to today you know the final exam uh

91
00:05:20,070 --> 00:05:17,590
you know through the training process

92
00:05:22,710 --> 00:05:20,080
even if someone hasn't flown before they

93
00:05:25,029 --> 00:05:22,720
are 100 ready because one the training

94
00:05:27,350 --> 00:05:25,039
process accounts for that and

95
00:05:29,590 --> 00:05:27,360
and also the the new flyer can can

96
00:05:47,430 --> 00:05:29,600
relate to people who have experience and

97
00:05:53,270 --> 00:05:50,950
our prime goal right now is to ascend

98
00:05:55,670 --> 00:05:53,280
into orbit and dock to the station and

99
00:05:57,670 --> 00:05:55,680
our program is very diverse

100
00:05:59,430 --> 00:05:57,680
we have a lot of dynamic operations

101
00:06:02,309 --> 00:05:59,440
we're going to

102
00:06:04,790 --> 00:06:02,319
see a lot of transportation

103
00:06:06,710 --> 00:06:04,800
and cargo vehicles arrive

104
00:06:09,189 --> 00:06:06,720
that we need to

105
00:06:10,390 --> 00:06:09,199
uh dock and

106
00:06:12,390 --> 00:06:10,400
undock

107
00:06:14,710 --> 00:06:12,400
for the russian segment program we're

108
00:06:17,029 --> 00:06:14,720
going to have two cargo vehicles arrived

109
00:06:20,230 --> 00:06:17,039
during our stay then also there will be

110
00:06:23,189 --> 00:06:20,240
a russian eva planned

111
00:06:25,909 --> 00:06:23,199
and we have about 10 tasks then we that

112
00:06:29,350 --> 00:06:25,919
we need to perform a very diverse

113
00:06:32,150 --> 00:06:29,360

science program over 50 experiments

114
00:06:34,070 --> 00:06:32,160
up for the program of the russian

115
00:06:35,110 --> 00:06:34,080
segment and we're going to work on that

116
00:06:36,550 --> 00:06:35,120
and

117
00:06:38,309 --> 00:06:36,560
my russian

118
00:06:41,110 --> 00:06:38,319
cosmetic colleagues and myself are going

119
00:06:45,110 --> 00:06:41,120
to work to achieve these goals

120
00:06:48,469 --> 00:06:47,110
are also diverse they have a lot of

121
00:06:51,510 --> 00:06:48,479
tasks

122
00:06:54,390 --> 00:06:51,520
and the expedition is going to be very

123
00:06:56,390 --> 00:06:54,400
intense and very busy

124
00:06:57,950 --> 00:06:56,400
we're going to be about six months on

125
00:07:15,110 --> 00:06:57,960
board over

126
00:07:20,390 --> 00:07:17,909
um subjects

127
00:07:22,469 --> 00:07:20,400
when a person goes to space for the

128
00:07:24,150 --> 00:07:22,479
first time

129
00:07:25,510 --> 00:07:24,160
they will be

130
00:07:27,189 --> 00:07:25,520
looking very

131
00:07:30,550 --> 00:07:27,199
attentively around what's going on

132
00:07:32,790 --> 00:07:30,560
around them and something

133
00:07:35,029 --> 00:07:32,800
comes up that

134
00:07:37,830 --> 00:07:35,039
they're unclear how to react to we can

135
00:07:40,469 --> 00:07:37,840
discuss it and

136
00:07:44,710 --> 00:07:40,479
no rush things in space

137
00:07:47,830 --> 00:07:44,720
happen very slowly the velocity is

138
00:07:50,390 --> 00:07:47,840

high but everything happens slowly so

139
00:07:52,629 --> 00:07:50,400
there will be no rush

140
00:07:55,430 --> 00:07:52,639
ah gosh i i mean i think the whole

141
00:07:56,790 --> 00:07:55,440
experience is is a huge privilege and

142
00:07:58,710 --> 00:07:56,800
it's going to be tremendously exciting

143
00:08:00,629 --> 00:07:58,720
but seeing that first view of planet

144
00:08:12,710 --> 00:08:00,639
earth from space is probably going to be

145
00:08:12,720 --> 00:08:50,710
okay

146
00:08:50,720 --> 00:08:59,829
uh

147
00:09:05,829 --> 00:09:01,910
dear commission

148
00:09:07,670 --> 00:09:05,839
members crew members of expedition 4647

149
00:09:10,070 --> 00:09:07,680
already

150
00:09:20,870 --> 00:09:10,080
good job

151
00:09:20,880 --> 00:09:31,350
put

152
00:09:31,360 --> 00:09:43,670
tim your turn

153
00:09:43,680 --> 00:09:47,350
do you have any questions

154
00:09:51,350 --> 00:09:49,910
of course i am comfortable working with

155
00:09:53,829 --> 00:09:51,360
this crew

156
00:09:59,190 --> 00:09:53,839
they're very well trained they're very

157
00:10:03,590 --> 00:10:01,750
we're ready not just for training

158
00:10:05,590 --> 00:10:03,600
we're ready for the flight we've been

159
00:10:08,310 --> 00:10:05,600
training together for a long time

160
00:10:12,069 --> 00:10:08,320
everything is fine we're going to do our

161
00:10:12,079 --> 00:10:17,509
thank you

162
00:10:21,269 --> 00:10:18,550
do you think it's going to be

163
00:10:23,590 --> 00:10:21,279

complicated well it's going to look like

164
00:10:26,069 --> 00:10:23,600
any other working day on board of the

165
00:10:29,509 --> 00:10:26,079
station the difference is we're going to

166
00:10:33,509 --> 00:10:29,519
have phenomenal uh situations that are

167
00:10:37,350 --> 00:10:33,519
going to be built into the script

168
00:10:39,670 --> 00:10:37,360
we will have to be very attentive and

169
00:10:42,150 --> 00:10:39,680
to make sure we don't miss at the start

170
00:10:46,389 --> 00:10:42,160
of the phenomenal situation

171
00:10:55,190 --> 00:10:46,399
it's going to be a very intense busy day

172
00:11:00,069 --> 00:10:56,389
the crew

173
00:11:03,590 --> 00:11:00,079
is ready for any situations

174
00:11:05,910 --> 00:11:03,600
as far as the electrical power system is

175
00:11:09,110 --> 00:11:05,920
concerned or other systems

176
00:11:11,190 --> 00:11:09,120
um there are usually a design of nominal

177
00:11:14,069 --> 00:11:11,200
situations they're

178
00:11:17,509 --> 00:11:14,079
predictable the crew members are well

179
00:11:19,430 --> 00:11:17,519
trained to perform the procedures to

180
00:11:22,389 --> 00:11:19,440
deal with the situations either

181
00:11:24,389 --> 00:11:22,399
independently or jointly with the ground

182
00:11:27,269 --> 00:11:24,399
mission control there are some of

183
00:11:30,150 --> 00:11:27,279
nominal situations that have not they're

184
00:11:33,030 --> 00:11:30,160
not predictable that need to be analyzed

185
00:11:37,030 --> 00:11:35,829
that requires a deeper level of

186
00:11:40,829 --> 00:11:37,040
knowledge

187
00:11:43,829 --> 00:11:40,839
and talking to the ground

188
00:11:47,509 --> 00:11:43,839

specialists the ground specialists work

189
00:11:52,870 --> 00:11:50,150
prepare a solution it's your sixth

190
00:11:57,509 --> 00:11:55,110
this flight is planned a very

191
00:12:02,790 --> 00:11:57,519
interesting one

192
00:12:07,990 --> 00:12:05,350
as far as its complexity level it's

193
00:12:09,590 --> 00:12:08,000
above average

194
00:12:11,670 --> 00:12:09,600
you're talking about the electrical

195
00:12:14,389 --> 00:12:11,680
power system malfunction

196
00:12:17,590 --> 00:12:14,399
it didn't result in any specific

197
00:12:22,150 --> 00:12:17,600
consequence that would uh

198
00:12:24,550 --> 00:12:22,160
complicate the stay of the crew on board

199
00:12:27,030 --> 00:12:24,560
it is a serious situation but it was

200
00:12:30,790 --> 00:12:27,040
dealt with quickly

201
00:12:32,310 --> 00:12:30,800
and it didn't deteriorate um

202
00:12:37,269 --> 00:12:32,320
the

203
00:12:39,590 --> 00:12:37,279
what

204
00:12:42,949 --> 00:12:39,600
experience

205
00:12:45,030 --> 00:12:42,959
you want to do on a campus

206
00:12:46,230 --> 00:12:45,040
well we want to do our our job while

207
00:12:48,389 --> 00:12:46,240
we're on board we have lots of

208
00:12:50,470 --> 00:12:48,399
experiments uh there may be some space

209
00:12:52,389 --> 00:12:50,480
walks during our mission and several new

210
00:12:56,389 --> 00:12:52,399
vehicles will be docking so we'll have a

211
00:13:02,710 --> 00:12:59,430
do you speak russian

212
00:13:04,389 --> 00:13:02,720
yes we can work cards

213
00:13:06,550 --> 00:13:04,399

when we are

214
00:13:09,750 --> 00:13:06,560
going to live there

215
00:13:12,069 --> 00:13:09,760
it's a very good experience

216
00:13:15,509 --> 00:13:12,079
we will be able to

217
00:13:18,389 --> 00:13:15,519
i see earth we can operate um the

218
00:13:21,269 --> 00:13:18,399
robotic arm we can go out um during an

219
00:13:23,269 --> 00:13:21,279
eva we can spend our time well

220
00:13:26,230 --> 00:13:23,279
your colleagues are now growing flowers

221
00:13:27,670 --> 00:13:26,240
on board and they recently grew cabbage

222
00:13:28,790 --> 00:13:27,680
do you have something interesting like

223
00:13:31,190 --> 00:13:28,800
that

224
00:13:44,710 --> 00:13:31,200
cabbage do you plan do you have a plant

225
00:13:50,150 --> 00:13:47,750
absolutely we have a fabulous soyuz crew

226
00:13:51,670 --> 00:13:50,160
and we'll join a great crew on board

227
00:13:53,590 --> 00:13:51,680
yuri malenchenko

228
00:13:55,030 --> 00:13:53,600
very experienced cosmonaut this will be

229
00:13:57,509 --> 00:13:55,040
his sixth flight he's flown on the

230
00:13:59,350 --> 00:13:57,519
shuttle before he's commanded the soyuz

231
00:14:01,110 --> 00:13:59,360
many times as well as both the space

232
00:14:02,949 --> 00:14:01,120
station and

233
00:14:04,389 --> 00:14:02,959
and the mirror space station so we're

234
00:14:05,509 --> 00:14:04,399
we're quite fortunate to have such an

235
00:14:08,550 --> 00:14:05,519
experienced

236
00:14:10,949 --> 00:14:08,560
um cosmonaut with us on board uh tim

237
00:14:12,870 --> 00:14:10,959
peake a very experienced experimental

238
00:14:15,430 --> 00:14:12,880

test pilot and he's joined us this will

239
00:14:17,509 --> 00:14:15,440
be his first flight and uh we've had a

240
00:14:19,110 --> 00:14:17,519
great time training together it's been a

241
00:14:27,110 --> 00:14:19,120
great experience over the last couple of

242
00:14:36,790 --> 00:14:28,870
i may ask you another question you have

243
00:14:43,030 --> 00:14:41,189
this cba is going to be um

244
00:14:46,310 --> 00:14:43,040
for the purpose of the russian

245
00:14:47,030 --> 00:14:46,320
segment program the main part of the eva

246
00:14:50,230 --> 00:14:47,040
is

247
00:14:52,949 --> 00:14:50,240
going to have five tasks science

248
00:14:55,590 --> 00:14:52,959
research and technology research uh

249
00:14:57,509 --> 00:14:55,600
verifying various technologies

250
00:15:00,230 --> 00:14:57,519
moreover we're going to install

251
00:15:02,230 --> 00:15:00,240
additional handrails that are going to

252
00:15:04,470 --> 00:15:02,240
be used in the future for crew

253
00:15:05,910 --> 00:15:04,480
translation on the outside of the

254
00:15:08,150 --> 00:15:05,920
station we're going to take photographs

255
00:15:10,230 --> 00:15:08,160
of the mli and the outside surface of

256
00:15:14,949 --> 00:15:10,240
the station

257
00:15:18,550 --> 00:15:14,959
is this a long uh duration six months

258
00:15:19,990 --> 00:15:18,560
well that's a long time yes but

259
00:15:23,670 --> 00:15:20,000
we're going to be

260
00:15:28,629 --> 00:15:23,680
there

261
00:15:33,590 --> 00:15:31,189
which has much fewer responsibilities

262
00:15:35,110 --> 00:15:33,600
than the commander or the left-hand seat

263
00:15:36,550 --> 00:15:35,120

once on board the station for our

264
00:15:39,189 --> 00:15:36,560
six-month mission

265
00:15:41,509 --> 00:15:39,199
all crew members are trained up to a

266
00:15:43,990 --> 00:15:41,519
fairly similar level so that will

267
00:15:46,310 --> 00:15:44,000
include the possibility of visiting

268
00:15:48,629 --> 00:15:46,320
vehicles using the robotic arm

269
00:15:50,470 --> 00:15:48,639
completing spacewalks eva if they're

270
00:15:52,389 --> 00:15:50,480
scheduled during our mission and of

271
00:15:54,470 --> 00:15:52,399
course conducting all of the scientific

272
00:16:03,910 --> 00:15:54,480
experiments that we have planned for the

273
00:16:08,470 --> 00:16:06,069
colleagues please stay

274
00:16:09,990 --> 00:16:08,480
here together the

275
00:16:23,749 --> 00:16:10,000
head of the center will come here in a

276
00:16:23,759 --> 00:16:53,749
okay

277
00:17:00,310 --> 00:16:56,870
today is the main day the crew members

278
00:17:04,390 --> 00:17:00,320
have undergone a long uh training

279
00:17:07,350 --> 00:17:04,400
as well as on the russian segment uh and

280
00:17:10,470 --> 00:17:07,360
uh in nasa in the u.s and in the

281
00:17:12,230 --> 00:17:10,480
european space agency jaxa

282
00:17:13,829 --> 00:17:12,240
in japan

283
00:17:16,870 --> 00:17:13,839
and the crew members have shown very

284
00:17:21,909 --> 00:17:19,510
prior to the integrated simulation

285
00:17:23,510 --> 00:17:21,919
uh training the crew members have passed

286
00:17:24,870 --> 00:17:23,520
the exam uh

287
00:17:26,309 --> 00:17:24,880
for manual

288
00:17:29,110 --> 00:17:26,319

modes uh

289
00:17:39,029 --> 00:17:29,120
docking and docking descent and the past

290
00:17:44,029 --> 00:17:41,909
dear chairman of the exam commission the

291
00:17:47,350 --> 00:17:44,039
crew member backup crew members of the

292
00:17:49,830 --> 00:17:47,360
4647 crew members are ready for

293
00:17:51,270 --> 00:17:49,840
the examination

294
00:18:09,190 --> 00:17:51,280
good morning

295
00:18:13,590 --> 00:18:11,750
yeah our job is to essentially do

296
00:18:15,510 --> 00:18:13,600
everything that the primary crew does

297
00:18:17,590 --> 00:18:15,520
and service their backup

298
00:18:20,070 --> 00:18:17,600
and clear and i have been training here

299
00:18:22,230 --> 00:18:20,080
for about two and a half years

300
00:18:36,470 --> 00:18:22,240
the training program includes station

301
00:18:39,510 --> 00:18:37,510
i worked

302
00:18:44,150 --> 00:18:39,520
as a biologist and i'm very interested

303
00:18:47,990 --> 00:18:44,160
in the science experiments i'm hoping to

304
00:18:49,990 --> 00:18:48,000
perform some experiments with the

305
00:18:51,190 --> 00:18:50,000
protein cells it would be very

306
00:18:53,430 --> 00:18:51,200
interesting

307
00:19:09,029 --> 00:18:53,440
to see how biological organisms behave