



1  
00:00:00,880 --> 00:00:05,670  
and the vehicle now on internal power

2  
00:00:10,150 --> 00:00:08,070  
like you one everything there goes the

3  
00:00:12,150 --> 00:00:10,160  
first umbilical tower marking just about

4  
00:00:14,310 --> 00:00:12,160  
t minus 35

5  
00:00:26,710 --> 00:00:14,320  
should be under 30 seconds away from

6  
00:00:32,389 --> 00:00:29,990  
initiated auto sequence initiated

7  
00:00:35,110 --> 00:00:32,399  
command issues for ignition

8  
00:00:38,069 --> 00:00:35,120  
second arm retracting launch command

9  
00:00:40,630 --> 00:00:38,079  
issued you can see the engines firing

10  
00:00:43,270 --> 00:00:40,640  
ramping up

11  
00:00:45,110 --> 00:00:43,280  
edges of maximum thrust the turbo pumps

12  
00:00:48,709 --> 00:00:45,120  
are at flight speed

13  
00:00:54,150 --> 00:00:51,510

and liftoff jeff williams alexia opting

14

00:01:04,710 --> 00:00:54,160

and oleg skripochka launching to the

15

00:01:10,149 --> 00:01:06,469

the first stage of the

16

00:01:12,070 --> 00:01:10,159

soyuz booster delivering 930 000 pounds

17

00:01:17,350 --> 00:01:12,080

of thrust from the four strap-on

18

00:01:20,710 --> 00:01:18,789

first stage going to be burning liquid

19

00:01:22,630 --> 00:01:20,720

fuel for the first two minutes and six

20

00:01:28,390 --> 00:01:22,640

seconds into the flight

21

00:01:33,510 --> 00:01:30,950

see the crew on board again alexiochine

22

00:01:35,830 --> 00:01:33,520

in there in the center seat

23

00:01:37,670 --> 00:01:35,840

getting good reports of first stage

24

00:01:40,870 --> 00:01:37,680

functioning throughout the launch so far

25

00:01:42,630 --> 00:01:40,880

just one minute since liftoff

26

00:01:44,469 --> 00:01:42,640

there we can see nasa astronaut jeff

27

00:01:46,789 --> 00:01:44,479

williams this his third ride on the

28

00:01:48,550 --> 00:01:46,799

soyuz spacecraft getting ready for his

29

00:01:51,749 --> 00:01:48,560

fourth flight into space's third long

30

00:01:53,350 --> 00:01:51,759

duration mission on board the station

31

00:01:55,670 --> 00:01:53,360

the crew on board the so you still doing

32

00:01:58,389 --> 00:01:55,680

well keep your eye on that owl should

33

00:02:00,230 --> 00:01:58,399

start floating uh in just a few seconds

34

00:02:06,230 --> 00:02:00,240

actually

35

00:02:09,910 --> 00:02:06,240

expecting separation as zero zero 35 27

36

00:02:14,470 --> 00:02:12,150

and you can see the jolt the third stage

37

00:02:16,309 --> 00:02:14,480

has now separated the single

38

00:02:18,910 --> 00:02:16,319

liquid-fueled engine shut down and

39

00:02:22,550 --> 00:02:18,920

dropping away in an altitude of about

40

00:02:25,110 --> 00:02:22,560

125 statute miles

41

00:02:27,270 --> 00:02:25,120

the third stage performs an avoidance

42

00:02:33,670 --> 00:02:27,280

maneuver by opening a valve in its

43

00:02:47,190 --> 00:02:34,710

michigan

44

00:02:51,990 --> 00:02:51,030

how was separation nominal in time as

45

00:02:54,070 --> 00:02:52,000

kids

46

00:02:56,869 --> 00:02:54,080

final board and getting word from the

47

00:02:59,430 --> 00:02:56,879

visiting vehicle officer all antennas

48

00:03:01,030 --> 00:02:59,440

and the solar arrays have deployed so

49

00:03:03,270 --> 00:03:01,040

all those pre-programmed commands

50

00:03:05,670 --> 00:03:03,280

executed successfully the coors and

51

00:03:07,430 --> 00:03:05,680

telemetry antennas

52

00:03:09,830 --> 00:03:07,440

out and the solar arrays deployed to

53

00:03:38,229 --> 00:03:09,840

begin providing power to the soyuz

54

00:04:05,350 --> 00:03:56,470

foreign

55

00:04:05,360 --> 00:04:24,870

um

56

00:04:24,880 --> 00:05:03,830

sure

57

00:05:03,840 --> 00:05:23,270

just like this

58

00:05:23,280 --> 00:06:04,150

oh

59

00:06:04,160 --> 00:06:11,909

what is

60

00:06:11,919 --> 00:06:29,590

this is how it should be

61

00:06:29,600 --> 00:07:27,749

foreign

62

00:07:27,759 --> 00:07:57,110

five

63

00:07:57,120 --> 00:08:15,909

do your best i'm sure

64

00:08:15,919 --> 00:08:31,029

everything is fine

65

00:08:31,039 --> 00:08:55,750

is

66

00:08:55,760 --> 00:09:31,910

what are they foreign

67

00:09:31,920 --> 00:09:53,269

all right

68

00:10:16,870 --> 00:09:54,949

i'm looking forward to my phone call

69

00:10:16,880 --> 00:10:30,630

let's

70

00:10:35,670 --> 00:10:33,110

thank you very much everyone

71

00:10:38,470 --> 00:10:35,680

dear colleagues

72

00:10:39,910 --> 00:10:38,480

we are honored to be here especially in

73

00:10:41,670 --> 00:10:39,920

this year

74

00:10:44,069 --> 00:10:41,680

in the year when we are celebrating the

75

00:10:46,870 --> 00:10:44,079

55th anniversary of the first flight to

76

00:10:48,790 --> 00:10:46,880

space human flight to space

77

00:10:49,509 --> 00:10:48,800

i wish you all the best in your lives

78

00:10:51,030 --> 00:10:49,519

and

79

00:10:54,069 --> 00:10:51,040

we'll be back soon

80

00:11:00,389 --> 00:10:54,079

exactly today is march 18th

81

00:11:11,670 --> 00:11:02,710

the first space walk so it's very

82

00:11:16,150 --> 00:11:14,069

it is a very responsible moment in your

83

00:11:18,870 --> 00:11:16,160

lives i wish you good luck

84

00:11:21,509 --> 00:11:18,880

all the best godspeed

85

00:11:25,509 --> 00:11:21,519

alexei oleg and jeffrey

86

00:11:27,670 --> 00:11:25,519

i want to wish you a successful flight

87

00:11:30,310 --> 00:11:27,680

soft landing

88

00:11:33,190 --> 00:11:30,320

good docking and i'm sure that you will

89

00:11:35,190 --> 00:11:33,200  
perform the entire flight program

90

00:11:37,190 --> 00:11:35,200  
successfully

91

00:11:39,750 --> 00:11:37,200  
and you know that

92

00:11:40,829 --> 00:11:39,760  
all specialists who are working in the

93

00:11:42,470 --> 00:11:40,839  
space

94

00:11:45,190 --> 00:11:42,480  
industry

95

00:11:46,870 --> 00:11:45,200  
has have done a lot for this flight to

96

00:11:49,910 --> 00:11:46,880  
become a reality

97

00:11:52,069 --> 00:11:49,920  
and they keep doing everything to

98

00:11:54,710 --> 00:11:52,079  
ensure the success of your flight i want

99

00:11:56,310 --> 00:11:54,720  
to wish you a good launch

100

00:11:58,470 --> 00:11:56,320  
and

101

00:12:00,790 --> 00:11:58,480

i want to tell you that the hardware is

102

00:12:03,430 --> 00:12:00,800

ready many exciting research activities

103

00:12:05,030 --> 00:12:03,440

occurring but enjoy yourself and take

104

00:12:11,269 --> 00:12:05,040

very good care of the space station for

105

00:12:14,150 --> 00:12:12,389

jeffrey

106

00:12:15,509 --> 00:12:14,160

have a good lunch and all the best to

107

00:12:17,350 --> 00:12:15,519

you good luck

108

00:12:18,949 --> 00:12:17,360

thank you very much

109

00:12:20,230 --> 00:12:18,959

thank you

110

00:12:26,389 --> 00:12:20,240

godspeed

111

00:12:26,399 --> 00:12:58,790

oh

112

00:13:03,990 --> 00:13:02,310

mr chairman of the state commission

113

00:13:04,829 --> 00:13:04,000

our crew

114

00:13:08,230 --> 00:13:04,839

of

115

00:13:08,240 --> 00:13:13,269

are ready for the flight

116

00:13:29,110 --> 00:13:15,430

all right

117

00:13:29,120 --> 00:14:43,030

good luck good luck

118

00:14:46,150 --> 00:14:43,829

uh

119

00:14:47,829 --> 00:14:46,160

the soyuz vehicle has successfully

120

00:14:52,389 --> 00:14:47,839

arrived to the launch pad and we're

121

00:14:55,990 --> 00:14:54,470

this way

122

00:15:27,750 --> 00:14:56,000

attention please

123

00:15:27,760 --> 00:15:41,509

oh the best

124

00:15:41,519 --> 00:15:57,910

good luck good luck

125

00:16:22,470 --> 00:16:00,629

good luck guys

126

00:16:22,480 --> 00:16:41,110

um

127

00:16:46,310 --> 00:16:43,749

dan hartman deputy iss program manager

128

00:16:48,069 --> 00:16:46,320

the power of a pre-dawn launch of a

129

00:16:50,389 --> 00:16:48,079

soyuz vehicle dan

130

00:16:52,550 --> 00:16:50,399

your thoughts as you watched the

131

00:16:54,389 --> 00:16:52,560

trio take a flight to the station and

132

00:16:56,629 --> 00:16:54,399

the significance of this launch yeah it

133

00:16:58,310 --> 00:16:56,639

was spectacular rob especially

134

00:17:00,230 --> 00:16:58,320

after the weeks of effort that they had

135

00:17:01,829 --> 00:17:00,240

to do to get this vehicle ready with all

136

00:17:03,590 --> 00:17:01,839

the wind conditions that they have the

137

00:17:05,909 --> 00:17:03,600

pad teams did such a tremendous job to

138

00:17:07,110 --> 00:17:05,919

prepare for it to see that launch and

139

00:17:08,789 --> 00:17:07,120

see the crew on their way to the

140

00:17:10,949 --> 00:17:08,799

international space station arriving in

141

00:17:12,870 --> 00:17:10,959

about five and a half hours from now was

142

00:17:14,390 --> 00:17:12,880

a tremendous speed the space station

143

00:17:16,949 --> 00:17:14,400

itself has already maneuvered itself

144

00:17:19,189 --> 00:17:16,959

into some docking orientation in support

145

00:17:21,110 --> 00:17:19,199

of this uh the docking it'll take place

146

00:17:23,429 --> 00:17:21,120

and it'll be great to get us back to a

147

00:17:26,150 --> 00:17:23,439

complement of six on board the station

148

00:17:27,909 --> 00:17:26,160

now once that crew is back to a half

149

00:17:29,750 --> 00:17:27,919

dozen on board

150

00:17:31,430 --> 00:17:29,760

how about the volume of work that lies

151  
00:17:33,270 --> 00:17:31,440  
ahead here in the weeks and months ahead

152  
00:17:35,110 --> 00:17:33,280  
sure they're going to be extremely busy

153  
00:17:36,789 --> 00:17:35,120  
the pace of vehicles coming to the space

154  
00:17:38,470 --> 00:17:36,799  
station won't slow down until about the

155  
00:17:40,310 --> 00:17:38,480  
mid-april time period

156  
00:17:42,950 --> 00:17:40,320  
we have an orbital launch out of ksc

157  
00:17:45,430 --> 00:17:42,960  
here in the next few days uh called

158  
00:17:47,510 --> 00:17:45,440  
orbital atk 6 carrying a full load of

159  
00:17:49,990 --> 00:17:47,520  
cargo and a couple of payloads that

160  
00:17:51,350 --> 00:17:50,000  
actually will support station will do a

161  
00:17:52,630 --> 00:17:51,360  
lot of transfers onto the station and

162  
00:17:53,590 --> 00:17:52,640  
once it leaves they'll they have a

163  
00:17:55,830 --> 00:17:53,600

couple more payloads that they'll

164

00:17:57,750 --> 00:17:55,840

perform we also have a progress launch

165

00:17:59,909 --> 00:17:57,760

on the 31st of this month and then

166

00:18:01,669 --> 00:17:59,919

spacex will get their their vehicle off

167

00:18:05,110 --> 00:18:01,679

the ground probably the first week of

168

00:18:06,789 --> 00:18:05,120

april and uh in it is a

169

00:18:08,710 --> 00:18:06,799

an inflatable module that will install

170

00:18:10,870 --> 00:18:08,720

on the space station and at the same

171

00:18:12,950 --> 00:18:10,880

time we'll have both the spacex mission

172

00:18:14,710 --> 00:18:12,960

or the spacex dragon and the orbital

173

00:18:16,710 --> 00:18:14,720

cygnus attached to the space station at

174

00:18:18,549 --> 00:18:16,720

the same time that will be a first and

175

00:18:20,230 --> 00:18:18,559

then from another commercial aspect with

176

00:18:22,150 --> 00:18:20,240

this inflatable module on the side of

177

00:18:24,310 --> 00:18:22,160

the node it kind of really shows that

178

00:18:25,830 --> 00:18:24,320

we're to we're starting to really put

179

00:18:28,710 --> 00:18:25,840

some focus on the commercialization of

180

00:18:30,710 --> 00:18:28,720

space station

181

00:18:32,630 --> 00:18:30,720

bill gerstenmaier nasa's associate

182

00:18:34,870 --> 00:18:32,640

administrator for human exploration bill

183

00:18:37,430 --> 00:18:34,880

the russians have pulled off a trifecta

184

00:18:39,190 --> 00:18:37,440

their third launch in six days soyuz

185

00:18:41,350 --> 00:18:39,200

headed to the station the importance of

186

00:18:43,669 --> 00:18:41,360

this launch all of this activity and

187

00:18:45,270 --> 00:18:43,679

what lies ahead for the station yeah

188

00:18:47,110 --> 00:18:45,280

just a tremendous amount of activity

189

00:18:48,950 --> 00:18:47,120

here at the cosmodrome the three

190

00:18:50,950 --> 00:18:48,960

launches in this short period of time is

191

00:18:52,470 --> 00:18:50,960

just absolutely amazing

192

00:18:54,150 --> 00:18:52,480

even this much getting the vehicle on

193

00:18:56,470 --> 00:18:54,160

the pad with the high winds and having

194

00:18:58,310 --> 00:18:56,480

to stand down for a day to continue with

195

00:19:00,789 --> 00:18:58,320

the operations was just a really

196

00:19:02,549 --> 00:19:00,799

testament to how serious the russians

197

00:19:04,230 --> 00:19:02,559

treat this business how serious and

198

00:19:06,150 --> 00:19:04,240

focused they are just like all of us are

199

00:19:07,909 --> 00:19:06,160

in spaceflight you know when you start

200

00:19:09,510 --> 00:19:07,919

thinking things are easy then you get in

201  
00:19:10,870 --> 00:19:09,520  
trouble so that just a tremendous

202  
00:19:12,150 --> 00:19:10,880  
concentration

203  
00:19:13,909 --> 00:19:12,160  
this flight really kicks off a

204  
00:19:15,909 --> 00:19:13,919  
tremendous increment on board station

205  
00:19:17,430 --> 00:19:15,919  
lots of research lots of cargo vehicles

206  
00:19:19,590 --> 00:19:17,440  
lots of activity on board the space

207  
00:19:21,270 --> 00:19:19,600  
station so we'll potentially get to see

208  
00:19:23,430 --> 00:19:21,280  
very soon a

209  
00:19:25,750 --> 00:19:23,440  
cygnus launch a progress launch and a

210  
00:19:27,909 --> 00:19:25,760  
spacex launch in in a very short order

211  
00:19:29,669 --> 00:19:27,919  
of time so just as the cosmodrome just

212  
00:19:31,190 --> 00:19:29,679  
did these multiple launches you'll see

213  
00:19:33,510 --> 00:19:31,200

multiple dockings on board the space

214

00:19:35,110 --> 00:19:33,520

station but it's really not the dockings

215

00:19:36,789 --> 00:19:35,120

it's not the launches it's the research

216

00:19:38,870 --> 00:19:36,799

behind that so these spacecraft are

217

00:19:40,789 --> 00:19:38,880

bringing a tremendous amount of research

218

00:19:42,710 --> 00:19:40,799

when we increase our crew size to six

219

00:19:44,710 --> 00:19:42,720

just the research tempo will pick up so

220

00:19:46,390 --> 00:19:44,720

just an exciting time on space station

221

00:19:48,070 --> 00:19:46,400

essentially enabled by this wonderful

222

00:19:49,750 --> 00:19:48,080

beautiful launch we got to see today in

223

00:19:50,630 --> 00:19:49,760

kazakhstan

224

00:19:53,029 --> 00:19:50,640

bill

225

00:19:54,950 --> 00:19:53,039

in the background of the drama of these

226

00:19:56,310 --> 00:19:54,960

launches themselves sometimes it's

227

00:19:58,870 --> 00:19:56,320

forgotten about the strength of the

228

00:20:01,190 --> 00:19:58,880

international partnership

229

00:20:03,190 --> 00:20:01,200

was how is that exhibited today and what

230

00:20:04,870 --> 00:20:03,200

was pulled off and what lies ahead in

231

00:20:06,950 --> 00:20:04,880

the weeks to come

232

00:20:08,950 --> 00:20:06,960

again i just see a tremendous

233

00:20:11,669 --> 00:20:08,960

cooperation between us and our russian

234

00:20:13,990 --> 00:20:11,679

partners up at the state commission uh

235

00:20:15,830 --> 00:20:14,000

natalia corley of uh karlev's daughter

236

00:20:17,270 --> 00:20:15,840

was there and she talked to the crew and

237

00:20:20,070 --> 00:20:17,280

addressed the crew and talked to them as

238

00:20:22,549 --> 00:20:20,080

an international crew and she said you

239

00:20:23,990 --> 00:20:22,559

know her father sergey pavlich

240

00:20:25,830 --> 00:20:24,000

if he would have been here he would have

241

00:20:28,230 --> 00:20:25,840

been proud of seeing this international

242

00:20:29,669 --> 00:20:28,240

team coming together so when i see her

243

00:20:31,029 --> 00:20:29,679

reflect that and think about the

244

00:20:32,870 --> 00:20:31,039

wonderful things that have come from

245

00:20:34,470 --> 00:20:32,880

this cooperation that that her father

246

00:20:36,870 --> 00:20:34,480

could have never imagined when he was in

247

00:20:38,870 --> 00:20:36,880

the middle of racing the u.s to space

248

00:20:40,870 --> 00:20:38,880

now we're going hand in hand to space as

249

00:20:42,630 --> 00:20:40,880

a team and and she sees that and she

250

00:20:45,110 --> 00:20:42,640

recognizes how special and wonderful

251  
00:20:45,830 --> 00:20:45,120  
this is so it was really touching to see

252  
00:20:47,750 --> 00:20:45,840  
her

253  
00:20:48,950 --> 00:20:47,760  
do that and bring that memory forward

254  
00:20:50,870 --> 00:20:48,960  
it's also exciting to see this

255  
00:20:52,950 --> 00:20:50,880  
expedition kick off and and what we do

256  
00:20:54,470 --> 00:20:52,960  
today i don't know what it'll bring us

257  
00:20:56,230 --> 00:20:54,480  
in the future but we're essentially

258  
00:20:57,909 --> 00:20:56,240  
planting seeds of international

259  
00:20:59,590 --> 00:20:57,919  
cooperation that through the challenge

260  
00:21:01,830 --> 00:20:59,600  
of space flight will grow into something

261  
00:21:03,590 --> 00:21:01,840  
amazing that we will not see for decades

262  
00:21:06,070 --> 00:21:03,600  
so i can't wait to see what will come in

263  
00:21:07,190 --> 00:21:06,080

the future is as she looked back and let

264

00:21:08,950 --> 00:21:07,200

me see

265

00:21:11,270 --> 00:21:08,960

her excitement of the international crew

266

00:21:13,590 --> 00:21:11,280

getting ready to go fly so cooperation

267

00:21:15,270 --> 00:21:13,600

is important we don't do this as a team

268

00:21:16,950 --> 00:21:15,280

we have to do this as a team we have to

269

00:21:19,110 --> 00:21:16,960

all work together we can't do this

270

00:24:18,789 --> 00:21:19,120

individually and today was an example of

271

00:24:18,799 --> 00:24:32,950

foreign