



1
00:00:09,260 --> 00:00:04,789
we're standing by for the issuance of

2
00:00:11,810 --> 00:00:09,270
the launch command card come from start

3
00:00:22,240 --> 00:00:11,820
confirm second umbilical tower is now

4
00:00:22,250 --> 00:00:26,200
intermediate

5
00:00:32,470 --> 00:00:29,679
Ryan we had liftoff liftoff of the Soyuz

6
00:00:35,259 --> 00:00:32,480
rocket and a tma 11m spacecraft on a

7
00:00:36,850 --> 00:00:35,269
truly Olympic leap delivering three more

8
00:00:39,189 --> 00:00:36,860
crew members to the International Space

9
00:00:40,990 --> 00:00:39,199
Station on a historic mission to

10
00:00:43,780 --> 00:00:41,000
continue the seamless transition of

11
00:00:52,240 --> 00:00:43,790
humans on their own relay to continue

12
00:01:05,590 --> 00:00:52,250
studying science at space 20-second Jets

13
00:01:29,000 --> 00:01:08,560

beautiful launched already 45 seconds

14

00:01:33,750 --> 00:01:31,770

Victor girlfriend passing through the

15

00:01:35,820 --> 00:01:33,760

area of maximum dynamic pressure on the

16

00:01:37,740 --> 00:01:35,830

vehicle one minute ten seconds into the

17

00:01:47,370 --> 00:01:37,750

flight the velocity is already eleven

18

00:01:54,990 --> 00:01:51,480

we copy a lot in clicket square and

19

00:01:58,969 --> 00:01:55,000

everything's fine on board everything is

20

00:02:05,550 --> 00:01:58,979

nominal and we can copy loud and clear

21

00:02:08,370 --> 00:02:05,560

we can see you on camera and everything

22

00:02:12,180 --> 00:02:08,380

is going on nominally actually the

23

00:02:18,800 --> 00:02:12,190

launch was pretty smooth now we can feel

24

00:02:28,589 --> 00:02:21,949

standing by for escape tower jettison

25

00:02:31,860 --> 00:02:28,599

nominal and jettison of the four

26
00:02:34,140 --> 00:02:31,870
strap-on boosters these have completed

27
00:02:37,050 --> 00:02:34,150
their job they've dropped away in an

28
00:02:49,300 --> 00:02:37,060
altitude of about 28 miles the vehicles

29
00:02:57,910 --> 00:02:53,229
140 seconds everything is nominal

30
00:02:57,920 --> 00:03:04,570
we're monitoring

31
00:03:11,080 --> 00:03:06,850
reporting the second stage engines are

32
00:03:13,920 --> 00:03:11,090
in great shape and whether in the shroud

33
00:03:17,350 --> 00:03:13,930
is now separated from the vehicle

34
00:03:22,000 --> 00:03:17,360
Rockets altitude is now about 48 statute

35
00:03:26,920 --> 00:03:22,010
miles control defense and three minutes

36
00:03:31,000 --> 00:03:26,930
into the flight Soyuz is traveling at

37
00:03:37,020 --> 00:03:31,010
about 4,700 miles per hour can you

38
00:03:42,850 --> 00:03:37,030

inside three crew members Koichi Wakata

39

00:03:46,210 --> 00:03:42,860

as you see the onboard mascot with the

40

00:03:48,340 --> 00:03:46,220

crew members one of the one of the

41

00:03:57,890 --> 00:03:48,350

Olympic Winter Games mascots a polar

42

00:03:57,900 --> 00:04:28,720

you

43

00:04:28,730 --> 00:05:25,940

give issue

44

00:05:31,980 --> 00:05:28,770

but again the BSE deprivation selection

45

00:05:35,760 --> 00:05:31,990

below will be pretty good I'd like to

46

00:05:37,590 --> 00:05:35,770

assure all possible blessings hope that

47

00:06:10,020 --> 00:05:37,600

God is with you and so are all the

48

00:06:10,030 --> 00:06:45,210

Oh

49

00:06:45,220 --> 00:06:49,720

back yet

50

00:06:49,730 --> 00:06:55,519

kill the man

51

00:06:55,529 --> 00:07:10,750

hey Jerry

52

00:09:34,500 --> 00:08:30,480

you

53

00:09:40,290 --> 00:09:37,380

those pathetic especially been easy

54

00:09:48,660 --> 00:09:40,300

he was gravely FIU's a mighty men p.m.

55

00:09:48,670 --> 00:10:31,110

but

56

00:10:37,150 --> 00:10:35,290

president of the state commission the

57

00:10:40,930 --> 00:10:37,160

crew of the search vehicle is ready for

58

00:12:37,550 --> 00:10:42,770

right

59

00:12:53,820 --> 00:12:45,790

you

60

00:12:59,290 --> 00:12:56,590

bill Gerstenmaier NASA's

61

00:13:01,990 --> 00:12:59,300

straighter for space operations bill the

62

00:13:04,269 --> 00:13:02,000

year ends for launches here in Baikonur

63

00:13:07,090 --> 00:13:04,279

with one that is going to be tough to

64

00:13:09,670 --> 00:13:07,100

beat very spectacular liftoff new crew

65

00:13:11,829 --> 00:13:09,680

headed for the station for a very very

66

00:13:15,220 --> 00:13:11,839

complex few days and few months so your

67

00:13:17,410 --> 00:13:15,230

thoughts today again just a tremendous

68

00:13:20,110 --> 00:13:17,420

job with the launch today the weather

69

00:13:22,540 --> 00:13:20,120

was outstanding the rocket looked great

70

00:13:24,249 --> 00:13:22,550

coming off the launch pad I think every

71

00:13:25,809 --> 00:13:24,259

launch I see looks a little bit different

72

00:13:27,100 --> 00:13:25,819

I see some new things things look

73

00:13:29,259 --> 00:13:27,110

different but it just worked out

74

00:13:32,350 --> 00:13:29,269

tremendously smooth and as you said a

75

00:13:34,090 --> 00:13:32,360

tremendously busy time on orbit you know

76

00:13:37,150 --> 00:13:34,100

the docking here in just several hours

77

00:13:39,639 --> 00:13:37,160

hope followed by hatch opening and then

78

00:13:42,129 --> 00:13:39,649

the EV a the next day on Saturday and

79

00:13:44,110 --> 00:13:42,139

then followed by the landing so that you

80

00:13:45,639 --> 00:13:44,120

know that it looks easy but if you know

81

00:13:47,410 --> 00:13:45,649

we went through all the reviews with the

82

00:13:49,569 --> 00:13:47,420

ground teams and the preparation for

83

00:13:51,759 --> 00:13:49,579

this activity was just tremendous to get

84

00:13:54,129 --> 00:13:51,769

all the understanding to understand how

85

00:13:55,720 --> 00:13:54,139

things had to be the the beta angle the

86

00:13:57,400 --> 00:13:55,730

angled the Sun with respect to space

87

00:13:59,019 --> 00:13:57,410

station was unique at this period of

88

00:14:01,300 --> 00:13:59,029

time so they had to put solar rays in

89

00:14:03,100 --> 00:14:01,310

the right place just a tremendous amount

90

00:14:05,499 --> 00:14:03,110

of work went into make this thing look

91

00:14:07,300 --> 00:14:05,509

easy so when we see this and we step

92

00:14:09,460 --> 00:14:07,310

back when we my role you say oh it's

93

00:14:11,139 --> 00:14:09,470

easy and it's routine we need to step

94

00:14:12,910 --> 00:14:11,149

back and think about the hard work that

95

00:14:14,590 --> 00:14:12,920

teams put in for many many months

96

00:14:16,090 --> 00:14:14,600

preparing for this activity to make it

97

00:14:18,249 --> 00:14:16,100

look the way it did today but just an

98

00:14:20,379 --> 00:14:18,259

outstanding day to day a great start to

99

00:14:21,759 --> 00:14:20,389

this expedition coming up on the

100

00:14:23,740 --> 00:14:21,769

fifteenth anniversary of the first

101
00:14:26,050 --> 00:14:23,750
element launch for the International

102
00:14:29,079 --> 00:14:26,060
Space Station research is rolling on

103
00:14:30,819 --> 00:14:29,089
board just about fully assembled a few

104
00:14:34,030 --> 00:14:30,829
components you have to be launched for

105
00:14:36,400 --> 00:14:34,040
the Russian side how has this complex

106
00:14:39,370 --> 00:14:36,410
now matured and blossomed into what it

107
00:14:41,470 --> 00:14:39,380
is today in just 15 short years I mean

108
00:14:43,360 --> 00:14:41,480
it's it's tremendously encouraging to me

109
00:14:45,490 --> 00:14:43,370
to see the amount of research is getting

110
00:14:47,679 --> 00:14:45,500
done you know this last several weeks

111
00:14:50,139 --> 00:14:47,689
the crew has done more research hours

112
00:14:52,509 --> 00:14:50,149
than any crew in the past so again we

113
00:14:54,370 --> 00:14:52,519

continue to surpass our expectations we

114

00:14:56,710 --> 00:14:54,380

raise the bar a little bit higher we ask

115

00:14:58,540 --> 00:14:56,720

the crew to do a little bit more but the

116

00:15:00,370 --> 00:14:58,550

number of new investigations the amount

117

00:15:02,889 --> 00:15:00,380

of research is going on board station is

118

00:15:04,780 --> 00:15:02,899

just outstanding so everything we talked

119

00:15:07,179 --> 00:15:04,790

about everything we dreamed all those

120

00:15:08,889 --> 00:15:07,189

hard work we put in place is starting to

121

00:15:10,090 --> 00:15:08,899

come to fruition so I

122

00:15:12,280 --> 00:15:10,100

and I think we'll see it through this

123

00:15:13,929 --> 00:15:12,290

expedition will see it really intense

124

00:15:15,609 --> 00:15:13,939

through this week through the EVs the

125

00:15:17,859 --> 00:15:15,619

activities and then the landing coming

126

00:15:19,359 --> 00:15:17,869

up but but then we'll get back into the

127

00:15:21,069 --> 00:15:19,369

research mode and I think we'll see just

128

00:15:22,869 --> 00:15:21,079

another tremendous period onboard

129

00:15:25,449 --> 00:15:22,879

station so that the change from that

130

00:15:27,519 --> 00:15:25,459

beginning 15 years ago today is just

131

00:15:29,980 --> 00:15:27,529

absolutely phenomenal when I think about

132

00:15:32,499 --> 00:15:29,990

the change and I could sit here as I as

133

00:15:34,540 --> 00:15:32,509

I look at you and I can imagine each one

134

00:15:36,340 --> 00:15:34,550

of the configurations of the station as

135

00:15:38,679 --> 00:15:36,350

it was built out each shuttle flight the

136

00:15:41,230 --> 00:15:38,689

amount of EVs we put in the work we did

137

00:15:43,629 --> 00:15:41,240

with our Russian partners it's amazing

138

00:15:49,689 --> 00:15:43,639

to think of all that today and see where

139

00:15:51,579 --> 00:15:49,699

we are today almost 15 years later Mike

140

00:15:54,939 --> 00:15:51,589

suffered a knee International Space

141

00:15:56,379 --> 00:15:54,949

Station program manager Mike I guess of

142

00:15:58,780 --> 00:15:56,389

human space flight was an Olympic

143

00:16:01,090 --> 00:15:58,790

contest today's launch would merit a

144

00:16:02,919 --> 00:16:01,100

gold medal your thoughts as you saw

145

00:16:04,480 --> 00:16:02,929

these this experienced crew take off

146

00:16:06,489 --> 00:16:04,490

with the Olympic torch for the

147

00:16:08,470 --> 00:16:06,499

International Space Station well there's

148

00:16:10,629 --> 00:16:08,480

many things that go through my mind

149

00:16:14,100 --> 00:16:10,639

during a launch and of course the crews

150

00:16:17,199 --> 00:16:14,110

safety is paramount among them and so

151
00:16:19,720 --> 00:16:17,209
today is not really different than most

152
00:16:22,689 --> 00:16:19,730
days when the engines cut off i marvel

153
00:16:24,790 --> 00:16:22,699
at the at the capability of the Soyuz

154
00:16:27,639 --> 00:16:24,800
system and how it reliably gets our

155
00:16:29,470 --> 00:16:27,649
crews to orbit and it takes that kind of

156
00:16:32,110 --> 00:16:29,480
capability that kind of reliability that

157
00:16:35,139 --> 00:16:32,120
kind of sustaining engineering that we

158
00:16:37,480 --> 00:16:35,149
do on throughout the entire program to

159
00:16:40,030 --> 00:16:37,490
not only get our crews to station back

160
00:16:43,090 --> 00:16:40,040
and forth safely but also conduct the

161
00:16:44,319 --> 00:16:43,100
research we need to do on orbit to get

162
00:16:46,989 --> 00:16:44,329
the most out of the vehicle that we

163
00:16:49,480 --> 00:16:46,999

built you've got a four-day ballet

164

00:16:52,119 --> 00:16:49,490

coming up for nine crew members on

165

00:16:53,860 --> 00:16:52,129

station how complicated is this and how

166

00:16:57,789 --> 00:16:53,870

valuable is the experience of this crew

167

00:17:00,340 --> 00:16:57,799

to pull off this activity well it is

168

00:17:03,789 --> 00:17:00,350

I'll say it's complicated but it's well

169

00:17:06,100 --> 00:17:03,799

planned out we're not taking any risks

170

00:17:08,439 --> 00:17:06,110

any additional risk in terms of things

171

00:17:10,600 --> 00:17:08,449

that we're not comfortable with but it

172

00:17:12,460 --> 00:17:10,610

is a challenging period it's we have

173

00:17:13,449 --> 00:17:12,470

nine crew on board and so you have to

174

00:17:15,669 --> 00:17:13,459

make sure you know where they're all at

175

00:17:17,199 --> 00:17:15,679

particularly during the eda we have to

176

00:17:19,329 --> 00:17:17,209

separate the crews some in different

177

00:17:22,000 --> 00:17:19,339

areas of the station and so that plays a

178

00:17:24,340 --> 00:17:22,010

role also we're at a higher beta which

179

00:17:26,110 --> 00:17:24,350

rolls in a big role in how we configure

180

00:17:28,449 --> 00:17:26,120

the vehicle particularly solar rays for

181

00:17:30,640 --> 00:17:28,459

docking and EV a and for the undocking

182

00:17:31,870 --> 00:17:30,650

we have to sleep ship the crew so

183

00:17:33,880 --> 00:17:31,880

there's quite a few things we have to

184

00:17:35,830 --> 00:17:33,890

concern ourselves with but it's all been

185

00:17:38,950 --> 00:17:35,840

planned by a team that's been doing this

186

00:17:43,210 --> 00:17:38,960

for 15 years now and and they're getting

187

00:17:46,150 --> 00:17:43,220

pretty good at it but it's it's it's

188

00:17:48,340 --> 00:17:46,160

difficulty belies which you see on the

189

00:17:50,260 --> 00:17:48,350

surface it looks it looks pretty easy

190

00:17:52,480 --> 00:17:50,270

when you watch it happen but there's

191

00:17:54,790 --> 00:17:52,490

quite a bit of work going on to to make

192

00:17:56,470 --> 00:17:54,800

it happen the way it does and finally

193

00:17:58,120 --> 00:17:56,480

Mike the choreography of this launch of

194

00:17:59,830 --> 00:17:58,130

course being moved up a few weeks it was

195

00:18:02,050 --> 00:17:59,840

designed to bring the Olympic torch up

196

00:18:04,510 --> 00:18:02,060

to the station and back home it within a

197

00:18:07,710 --> 00:18:04,520

few days you were pretty eloquent before

198

00:18:10,930 --> 00:18:07,720

the state commission and discussing the

199

00:18:12,730 --> 00:18:10,940

how symbolic this activity was in

200

00:18:14,050 --> 00:18:12,740

relation to the correlation to the work

201
00:18:15,850 --> 00:18:14,060
that goes on every day aboard the

202
00:18:18,220 --> 00:18:15,860
station your thoughts about how the

203
00:18:20,740 --> 00:18:18,230
torch and the station are fit hand in

204
00:18:22,990 --> 00:18:20,750
glove basically well they do I mean the

205
00:18:26,110 --> 00:18:23,000
International Space Station is 15

206
00:18:29,590 --> 00:18:26,120
countries got together to build and

207
00:18:33,010 --> 00:18:29,600
operate the the most complicated project

208
00:18:34,300 --> 00:18:33,020
in human history it's and so that's a

209
00:18:37,030 --> 00:18:34,310
pretty big deal and of course the

210
00:18:39,150 --> 00:18:37,040
Olympics themselves have been around

211
00:18:42,160 --> 00:18:39,160
since before the calendar we use today

212
00:18:44,260 --> 00:18:42,170
and so it's the oldest event in human

213
00:18:47,820 --> 00:18:44,270

history and tying those two together I

214

00:18:51,100 --> 00:18:47,830

think reminds us all reminds the world

215

00:18:53,940 --> 00:18:51,110

what we can do when we put our minds to

216

00:18:58,360 --> 00:18:53,950

it for peaceful peaceful purposes and

217

00:19:01,570 --> 00:18:58,370

and to me I marvel at that because when

218

00:19:03,310 --> 00:19:01,580

we when we as humanity get together to

219

00:19:06,190 --> 00:19:03,320

accomplish an objective there's nothing

220

00:19:09,340 --> 00:19:06,200

we cannot do and this just shines light

221

00:19:11,650 --> 00:19:09,350

that the space station program itself is

222

00:19:21,910 --> 00:19:11,660

enriching our lives and making the world