1
00:00:05,690 --> 00:00:02,480
twenty-eight and 20 seconds a.m. Central

2
00:00:09,140 --> 00:00:05,700
time 9 28 and 20 seconds p.m. in

3
00:00:11,419 --> 00:00:09,150
Baikonur you are looking live at launch

4
00:00:13,820 --> 00:00:11,429
site 1 Yuri Gagarin's launch pad at the

5
00:00:16,760 --> 00:00:13,830
Baikonur cosmodrome where human

6
00:00:19,220 --> 00:00:16,770
spaceflight began more than 58 years ago

7
00:00:22,099 --> 00:00:19,230
a team of launch controllers is watching

8
00:00:24,109 --> 00:00:22,109
over all systems aboard the Soyuz rocket

9
00:00:26,390 --> 00:00:24,119
which is fully fueled and ready for

10
00:00:28,040 --> 00:00:26,400
launch no issues have been tracked

11
00:00:29,689 --> 00:00:28,050
throughout the day which began with fuel

12
00:00:32,810 --> 00:00:29,699
and oxidizer loading in the Soyuz

13
00:00:36,590 --> 00:00:32,820

booster about 6:20 8 a.m. Central time

14
00:00:39,170 --> 00:00:36,600
4:28 p.m. in Baikonur fueling of the

15
00:00:43,280 --> 00:00:39,180
Soyuz booster was completed about two

16
00:00:44,479 --> 00:00:43,290
hours later along with the flight

17
00:00:46,279 --> 00:00:44,489
control teams around the world

18
00:00:47,990 --> 00:00:46,289
supporting the International Space

19
00:00:50,209 --> 00:00:48,000
Station program here in Mission Control

20
00:00:52,430 --> 00:00:50,219
Houston a team is watching over the

21
00:00:53,090 --> 00:00:52,440
expedition 60 crew and Space Station

22
00:00:54,950 --> 00:00:53,100
systems

23
00:00:57,770 --> 00:00:54,960
preparing to support the increase in

24
00:00:59,420 --> 00:00:57,780
crew size later today from 3 to 6 with

25
00:01:02,330 --> 00:00:59,430
the addition of NASA astronaut drew

26
00:01:05,329 --> 00:01:02,340
Morgan European Space Agency astronaut

27
00:01:08,420 --> 00:01:05,339
Luca parmitano and Russian cosmonaut and

28
00:01:10,460 --> 00:01:08,430
soyuz commander alexander skvortsov this

29
00:01:11,960 --> 00:01:10,470
trio was about to begin a planned four

30
00:01:14,330 --> 00:01:11,970
orbit six-hour flight to the

31
00:01:18,770 --> 00:01:14,340
International Space Station with docking

32
00:01:22,910 --> 00:01:18,780
scheduled at 5:51 p.m. Central Time 651

33
00:01:25,100 --> 00:01:22,920
p.m. Eastern Time their Soyuz ms 13

34
00:01:26,929 --> 00:01:25,110
spacecraft will be docking later today

35
00:01:29,899 --> 00:01:26,939
to the aft port of the Zvezda service

36
00:01:31,850 --> 00:01:29,909
module joining the Soyuz ms 12

37
00:01:34,580 --> 00:01:31,860
spacecraft that is linked to the Rassvet

38
00:01:37,550 --> 00:01:34,590

module on the earth-facing port of the

39
00:01:39,380 --> 00:01:37,560
Russian segment morgan parmitano and

40
00:01:41,660 --> 00:01:39,390
sports auth will join the current

41
00:01:42,710 --> 00:01:41,670
station residents onboard NASA

42
00:01:44,660 --> 00:01:42,720
astronauts

43
00:01:47,120 --> 00:01:44,670
Christina Cooke and Nick Hague and

44
00:01:49,370 --> 00:01:47,130
Russian cosmonaut and station commander

45
00:01:52,039 --> 00:01:49,380
alexey ovchinin who arrived at the

46
00:01:55,490 --> 00:01:52,049
station aboard soyuz ms 12 back on march

47
00:01:57,289 --> 00:01:55,500
15th here in Houston the team in Mission

48
00:01:59,120 --> 00:01:57,299
Control will be monitoring today's

49
00:02:00,609 --> 00:01:59,130
launch and receiving updates on the

50
00:02:02,959 --> 00:02:00,619
flight from their Russian counterparts

51
00:02:05,719 --> 00:02:02,969
flight director Mary Lawrence is on

52
00:02:07,690 --> 00:02:05,729
console for today's launch joined by the

53
00:02:10,940 --> 00:02:07,700
Capcom or spacecraft communicator

54
00:02:13,280 --> 00:02:10,950
european space agency astronaut andre US

55
00:02:13,460 --> 00:02:13,290
Mogensen who will be talking directly to

56
00:02:20,780 --> 00:02:13,470
the

57
00:02:23,300 --> 00:02:20,790
in telemetry will be downlink to ground

58
00:02:24,860 --> 00:02:23,310
stations along the flight path and will

59
00:02:26,690 --> 00:02:24,870
be routed to the Russian Mission Control

60
00:02:29,060 --> 00:02:26,700
Center in the town of curly off on the

61
00:02:30,950 --> 00:02:29,070
outskirts of Moscow you're looking at a

62
00:02:33,980 --> 00:02:30,960
view of that control room from a balcony

63
00:02:35,630 --> 00:02:33,990

camera and throughout the day we'll be

64
00:02:38,030 --> 00:02:35,640
taking questions from you on social

65
00:02:39,700 --> 00:02:38,040
media if you have Soyuz launch questions

66
00:02:42,650 --> 00:02:39,710
you'd like answered during our broadcast

67
00:02:54,380 --> 00:02:42,660
please submit them on twitter using the

68
00:03:01,610 --> 00:02:56,270
I'm ready to copy all the parameters

69
00:03:04,130 --> 00:03:01,620
guys this is Sawyer's lead this is just

70
00:03:05,900 --> 00:03:04,140
one with this day of historical

71
00:03:07,340 --> 00:03:05,910
significance so much on our minds that

72
00:03:09,320 --> 00:03:07,350
is not lost on the crew members

73
00:03:11,690 --> 00:03:09,330
themselves who are set to launch a short

74
00:03:13,940 --> 00:03:11,700
time from now recently during pre-launch

75
00:03:16,340 --> 00:03:13,950
activities at Red Square in Moscow

76
00:03:18,740 --> 00:03:16,350
NASA's drew Morgan who's a colonel in

77
00:03:20,750 --> 00:03:18,750
the United States Army took a moment to

78
00:03:22,400 --> 00:03:20,760
reflect on the significance of launching

79
00:03:24,590 --> 00:03:22,410
to the International Space Station on

80
00:03:27,170 --> 00:03:24,600
this day the 50th anniversary of the

81
00:03:32,960 --> 00:03:27,180
landing of Apollo 11 at tranquility base

82
00:03:35,240 --> 00:03:32,970
I think that it's a huge honor for both

83
00:03:37,070 --> 00:03:35,250
my crew my Soyuz crew as well as the

84
00:03:40,280 --> 00:03:37,080
entire crew of expedition 60 that will

85
00:03:41,420 --> 00:03:40,290
be joining and for us to be launching as

86
00:03:43,640 --> 00:03:41,430
an international crew to the

87
00:03:45,699 --> 00:03:43,650
International Space Station it's just a

88
00:03:48,890 --> 00:03:45,709

beautiful way to commemorate that and

89
00:03:50,600 --> 00:03:48,900
for us here in the same year that nASA

90
00:03:51,920 --> 00:03:50,610
has laid out this very bold plan to

91
00:03:54,740 --> 00:03:51,930
return to the surface of the Moon by

92
00:03:57,050 --> 00:03:54,750
2024 as part of the Artemis program this

93
00:03:58,670 --> 00:03:57,060
is just a just a tremendous honor for us

94
00:04:00,890 --> 00:03:58,680
to be participating this way and to be

95
00:04:02,990 --> 00:04:00,900
carrying the torch forward of space

96
00:04:05,570 --> 00:04:03,000
exploration and continuing to a spot to

97
00:04:12,259 --> 00:04:05,580
inspire generations both today and

98
00:04:14,270 --> 00:04:12,269
generations in the future and for Luca

99
00:04:16,670 --> 00:04:14,280
parmitano a lieutenant colonel in the

100
00:04:19,130 --> 00:04:16,680
Italian Air Force the Apollo program

101
00:04:21,770 --> 00:04:19,140
represented a dream to be fulfilled and

102
00:04:28,370 --> 00:04:21,780
the moon has a special destination to

103
00:04:29,900 --> 00:04:28,380
visit with a live view of the Soyuz

104
00:04:31,670 --> 00:04:29,910
booster on the launch pad at the

105
00:04:34,370 --> 00:04:31,680
Baikonur cosmodrome the countdown

106
00:04:36,260 --> 00:04:34,380
standing at t-minus 51 minutes and

107
00:04:39,950 --> 00:04:36,270
Counting before launch lift off again

108
00:04:42,469 --> 00:04:39,960
scheduled for 11 28 and 20 seconds a.m.

109
00:04:49,340 --> 00:04:42,479
Central time nine twenty-eight and 20

110
00:04:51,320 --> 00:04:49,350
seconds p.m. in Baikonur all of the

111
00:04:53,840 --> 00:04:51,330
pre-launch preparations as we mentioned

112
00:04:57,440 --> 00:04:53,850
earlier have gone by the book everything

113
00:05:01,550 --> 00:04:57,450

proceeding on track in about 10 minutes

114
00:05:04,330 --> 00:05:01,560
the retraction of the gantry arms will

115
00:05:07,490 --> 00:05:04,340
be completed to expose the Soyuz booster

116
00:05:07,820 --> 00:05:07,500
for the final 45 minutes or so of the

117
00:05:10,280 --> 00:05:07,830
cow

118
00:05:11,840 --> 00:05:10,290
down the crew climbed on board of

119
00:05:14,590 --> 00:05:11,850
destroyers less than an hour ago

120
00:05:16,880 --> 00:05:14,600
strapped inside for their ride to orbit

121
00:05:21,710 --> 00:05:16,890
conducted leak checks the hatch to the

122
00:05:24,950 --> 00:05:21,720
Soyuz spacecraft is closed as we

123
00:05:26,570 --> 00:05:24,960
mentioned earlier Luca parmitano of the

124
00:05:28,670 --> 00:05:26,580
European Space Agency who is a

125
00:05:31,070 --> 00:05:28,680
lieutenant colonel in the Italian Air

126
00:05:33,110 --> 00:05:31,080
Force in pre-launch activities at Red

127
00:05:35,390 --> 00:05:33,120
Square in Moscow a few weeks ago before

128
00:05:37,940 --> 00:05:35,400
the crew departed for Baikonur also

129
00:05:39,530 --> 00:05:37,950
offered his views on the significance of

130
00:05:41,690 --> 00:05:39,540
launching on this day the 50th

131
00:05:46,730 --> 00:05:41,700
anniversary of Apollo 11s landing on the

132
00:05:48,980 --> 00:05:46,740
moon I think my generation was affected

133
00:05:51,530 --> 00:05:48,990
by the Apollo program despite the fact

134
00:05:56,740 --> 00:05:51,540
that we didn't see it happening I was

135
00:06:00,860 --> 00:05:56,750
born about six years after the last

136
00:06:04,430 --> 00:06:00,870
landing but it was such a momentous

137
00:06:07,010 --> 00:06:04,440
event we change humanity forever that it

138
00:06:12,410 --> 00:06:07,020

created what I would call a collective

139
00:06:16,790 --> 00:06:12,420
memory growing up I would I would see it

140
00:06:18,830 --> 00:06:16,800
in toys or reports on on TV

141
00:06:21,620 --> 00:06:18,840
documentaries I could I would hear my

142
00:06:24,080 --> 00:06:21,630
parents talk about it and as a matter of

143
00:06:25,790 --> 00:06:24,090
fact for the first 10 or 12 years of my

144
00:06:27,740 --> 00:06:25,800
life I was convinced that we were still

145
00:06:30,020 --> 00:06:27,750
going to the moon I was not aware of the

146
00:06:33,890 --> 00:06:30,030
fact that we had stopped traveling to

147
00:06:36,890 --> 00:06:33,900
the moon long before I was born so it

148
00:06:38,540 --> 00:06:36,900
gave me a sense that going to the moon

149
00:06:40,280 --> 00:06:38,550
and being an astronaut was something

150
00:06:42,200 --> 00:06:40,290
possible despite the fact that I was

151
00:06:44,480 --> 00:06:42,210
born in Sicily which is that the

152
00:06:47,660 --> 00:06:44,490
periphery of Europe far away from

153
00:06:49,880 --> 00:06:47,670
anything that is aerospace related I

154
00:06:52,280 --> 00:06:49,890
think he affected me more ways that I

155
00:06:54,980 --> 00:06:52,290
can describe because it gave me it gave

156
00:06:57,920 --> 00:06:54,990
me that sense of possibility which is

157
00:07:00,910 --> 00:06:57,930
what I would like to communicate when I

158
00:07:06,200 --> 00:07:00,920
talk to students and young kids that

159
00:07:08,360 --> 00:07:06,210
things are possible that was Luca

160
00:07:10,250 --> 00:07:08,370
parmitano who was board engineer number

161
00:07:13,400 --> 00:07:10,260
one seated in the left seat of the Soyuz

162
00:07:16,040 --> 00:07:13,410
ms-13 you see this view of the launch

163
00:07:19,130 --> 00:07:16,050

site one yuri gagarin's launch pad where

164
00:07:21,890 --> 00:07:19,140
human space flight began 58 years ago

165
00:07:26,690 --> 00:07:21,900
more than 58 years ago with his launch

166
00:07:29,020 --> 00:07:26,700
on April 12 1961 again just now

167
00:07:31,550 --> 00:07:29,030
beginning the retraction of the gantry

168
00:07:34,880 --> 00:07:31,560
arms the service structures that have

169
00:07:35,330 --> 00:07:34,890
surrounded the Soyuz spacecraft in its

170
00:07:37,690 --> 00:07:35,340
booster

171
00:07:42,080 --> 00:07:37,700
since it rolled out to the launch pad

172
00:07:44,840 --> 00:07:42,090
back on Thursday the launch again is

173
00:07:47,330 --> 00:07:44,850
just 47 and a half minutes from now at

174
00:08:00,700 --> 00:07:47,340
11:28 and 20 seconds a.m. Central time

175
00:08:06,740 --> 00:08:04,340
here in Mission Control several graphics

176
00:08:09,020 --> 00:08:06,750
have been specially prepared before this

177
00:08:11,690 --> 00:08:09,030
50th anniversary of Apollo 11s landing

178
00:08:14,780 --> 00:08:11,700
on the moon on this front screen you see

179
00:08:16,370 --> 00:08:14,790
as some of the insignias of the partner

180
00:08:19,580 --> 00:08:16,380
agencies of the International Space

181
00:08:22,340 --> 00:08:19,590
Station program the Apollo 11 logo

182
00:08:24,440 --> 00:08:22,350
Apollo 11s 50th anniversary in the words

183
00:08:26,720 --> 00:08:24,450
we came in peace for all mankind the

184
00:08:28,700 --> 00:08:26,730
words on the plaque on the leg of the

185
00:08:39,860 --> 00:08:28,710
lunar module eagle that landed at

186
00:08:42,670 --> 00:08:39,870
tranquility base 50 years ago today and

187
00:08:44,900 --> 00:08:42,680
earlier today less than an hour ago the

188
00:08:48,290 --> 00:08:44,910

legendary flight director who was on

189
00:08:50,690 --> 00:08:48,300
console in the Apollo mission operations

190
00:08:53,570 --> 00:08:50,700
control room one floor above us Gene

191
00:08:56,030 --> 00:08:53,580
Kranz visited flight director Mary

192
00:08:58,550 --> 00:08:56,040
Lawrence and spacecraft communicator

193
00:09:01,220 --> 00:08:58,560
ondrea's mogensen on this 50th

194
00:09:03,320 --> 00:09:01,230
anniversary of the landing of eagle at

195
00:09:05,210 --> 00:09:03,330
tranquility base accompanied by the

196
00:09:08,570 --> 00:09:05,220
chief flight director Holly ridings

197
00:09:12,770 --> 00:09:08,580
this truly a moment in history Kranz

198
00:09:15,560 --> 00:09:12,780
wearing his traditional white vest he is

199
00:09:18,710 --> 00:09:15,570
his callsign was white flight back

200
00:09:21,110 --> 00:09:18,720
during the day visiting Mary Lawrence

201
00:09:23,960 --> 00:09:21,120
whose callsign is infinity flight on

202
00:09:26,120 --> 00:09:23,970
this 50th anniversary of the landing of

203
00:09:30,260 --> 00:09:26,130
Apollo 11 Neil Armstrong and Buzz Aldrin

204
00:09:32,510 --> 00:09:30,270
that occurred at 3:18 p.m. Central time

205
00:09:33,040 --> 00:09:32,520
4:18 p.m. Eastern time near the crater

206
00:09:37,150 --> 00:09:33,050
molt

207
00:09:51,769 --> 00:09:37,160
he at tranquility base on the surface of

208
00:09:57,449 --> 00:09:54,870
and now a good view once again from our

209
00:09:59,939 --> 00:09:57,459
cameras at the launch pad at site one at

210
00:10:04,470 --> 00:09:59,949
the Baikonur cosmodrome in Kazakhstan as

211
00:10:10,470 --> 00:10:04,480
the gantry arms are retracting to expose

212
00:10:23,100 --> 00:10:10,480
the Soyuz booster the FG booster and the

213
00:10:25,800 --> 00:10:23,110

Soyuz ms-13 spacecraft and here's a view

214
00:10:27,150 --> 00:10:25,810
inside ms-13 of the bottom of your

215
00:10:30,480 --> 00:10:27,160
screen as soyuz commander alexander

216
00:10:32,939 --> 00:10:30,490
skvortsov of ros cosmos to his left at

217
00:10:35,340 --> 00:10:32,949
the top of the screen is European Space

218
00:10:37,439 --> 00:10:35,350
Agency astronaut Luca parmitano just out

219
00:10:40,069 --> 00:10:37,449
of the field of view to the right of

220
00:10:44,280 --> 00:10:40,079
scores off is NASA astronaut drew Morgan

221
00:10:47,090 --> 00:10:44,290
hanging over escorts off is a zero-g

222
00:10:52,019 --> 00:10:47,100
indicator a toy duck that squirts off

223
00:10:57,150 --> 00:10:52,029
has used as a mascot to indicate motion

224
00:11:00,090 --> 00:10:57,160
during powered flight and the absence of

225
00:11:02,610 --> 00:11:00,100
gravity once of the Soyuz separates from

226
00:11:04,530 --> 00:11:02,620
the third stage of its booster into the

227
00:11:06,269 --> 00:11:04,540
preliminary orbit for the chase to catch

228
00:11:08,879 --> 00:11:06,279
up to the International Space Station

229
00:11:11,430 --> 00:11:08,889
the same mascot that sport saw flew on

230
00:11:14,040 --> 00:11:11,440
his two previous Soyuz flights he is

231
00:11:16,800 --> 00:11:14,050
about to embark on his third flight into

232
00:11:21,110 --> 00:11:16,810
space parmitano his second drew Morgan

233
00:11:24,210 --> 00:11:21,120
making his first flight into space today

234
00:11:26,430 --> 00:11:24,220
we're approaching the 44 minute mark

235
00:11:29,910 --> 00:11:26,440
until launch again the countdown

236
00:11:32,430 --> 00:11:29,920
proceeding smoothly on a sweltering

237
00:11:35,340 --> 00:11:32,440
midsummer night at the Baikonur

238
00:11:38,100 --> 00:11:35,350

cosmodrome in Kazakhstan about to begin

239
00:11:40,199 --> 00:11:38,110
a mission to increase the crew size from

240
00:11:42,800 --> 00:11:40,209
the from three to six aboard the

241
00:11:45,420 --> 00:11:42,810
International Space Station as

242
00:11:47,009 --> 00:11:45,430
expedition 60 crew members Christina

243
00:11:49,800 --> 00:11:47,019
cooked Nick Hague and alexey ovchinin

244
00:11:52,050 --> 00:11:49,810
the current station commander await the

245
00:12:17,340 --> 00:11:52,060
arrival of three new crewmates later

246
00:12:22,480 --> 00:12:20,260
the day's activities in Baikonur begins

247
00:12:25,420 --> 00:12:22,490
several hours ago the crew was awakened

248
00:12:27,490 --> 00:12:25,430
at about 228 Central Time 12:20 8 p.m.

249
00:12:30,010 --> 00:12:27,500
local time and Baikonur some nine hours

250
00:12:31,870 --> 00:12:30,020
before launch the crew members then

251
00:12:33,760 --> 00:12:31,880
participated in final pre-launch

252
00:12:35,920 --> 00:12:33,770
activities that began at their crew

253
00:12:38,830 --> 00:12:35,930
quarters and a time-honored tradition

254
00:12:40,750 --> 00:12:38,840
before departing for the launch pad the

255
00:12:42,670 --> 00:12:40,760
three crew members observed the ritual

256
00:12:45,820 --> 00:12:42,680
of autographing the doors of the rooms

257
00:13:18,070 --> 00:12:45,830
they occupied at the cosmonaut Hotel in

258
00:13:20,380 --> 00:13:18,080
the town of Baikonur the crew received a

259
00:13:29,100 --> 00:13:20,390
traditional blessing from an russian

260
00:13:36,389 --> 00:13:33,360
God's a guide for you see and then to

261
00:13:38,160 --> 00:13:36,399
the traditional music around 528 a.m.

262
00:13:41,430 --> 00:13:38,170
Central time the crew departed the

263
00:13:43,500 --> 00:13:41,440

cosmonaut hotel and boarded a bus for

264
00:13:46,250 --> 00:13:43,510
their 40 minute ride to the integration

265
00:13:49,350 --> 00:13:46,260
and suit-up facility at building 254

266
00:13:52,500 --> 00:13:49,360
inside the Baikonur cosmodrome again an

267
00:14:10,199 --> 00:13:52,510
extremely hot day temperatures over the

268
00:14:13,530 --> 00:14:10,209
century mark in Baikonur a large throng

269
00:14:17,040 --> 00:14:13,540
of family members and well-wishers on

270
00:14:20,790 --> 00:14:17,050
hand to watch the crew bid farewell as

271
00:14:23,370 --> 00:14:20,800
they climbed aboard their bus for the 40

272
00:14:30,470 --> 00:14:23,380
minute ride out to the cosmodrome and

273
00:14:30,480 --> 00:14:40,240
okay guys bye good luck

274
00:14:54,780 --> 00:14:42,530
we're with you

275
00:14:54,790 --> 00:15:14,890
[Music]

276
00:15:14,900 --> 00:15:34,840
[Applause]

277
00:15:39,969 --> 00:15:37,900
and the crew bus departed for the sudo

278
00:15:43,629 --> 00:15:39,979
facility now you're looking inside the

279
00:15:46,329 --> 00:15:43,639
site 250 for several hours ago as the

280
00:15:48,029 --> 00:15:46,339
crew began its suit up procedures the

281
00:15:51,460 --> 00:15:48,039
soyuz commander alexander skvortsov

282
00:15:54,549 --> 00:15:51,470
suiting up inside his Sokol a launch and

283
00:16:03,669 --> 00:15:54,559
entry suit joined in that activity by

284
00:16:05,799 --> 00:16:03,679
Luca parmitano and drew Morgan you'll

285
00:16:08,049 --> 00:16:05,809
see in a moment as the suits were

286
00:16:11,499 --> 00:16:08,059
pressurized to ensure that they were

287
00:16:13,210 --> 00:16:11,509
leak free as a family members looked on

288
00:16:15,999 --> 00:16:13,220

across a protective pane of glass

289
00:16:17,739 --> 00:16:16,009
maintaining quarantine with the suit up

290
00:16:21,099 --> 00:16:17,749
having been completed about three and a

291
00:16:23,619 --> 00:16:21,109
half hours prior to launch this is video

292
00:17:09,090 --> 00:16:23,629
that was recorded just a few hours ago

293
00:17:13,510 --> 00:17:11,440
alexander's corks off and Luca parmitano

294
00:17:17,250 --> 00:17:13,520
will be aboard the International Space

295
00:17:20,830 --> 00:17:17,260
Station until February sixth next year a

296
00:17:23,590 --> 00:17:20,840
slightly extended stay for Drew morgan

297
00:17:26,290 --> 00:17:23,600
he will remain onboard the International

298
00:17:28,990 --> 00:17:26,300
Space Station until April 1st of next

299
00:17:31,870 --> 00:17:29,000
year returning home with Alex for

300
00:17:34,060 --> 00:17:31,880
coschka and Jessica Mir of NASA who will

301
00:17:36,730 --> 00:17:34,070
be launching on September 25th you can

302
00:17:39,490 --> 00:17:36,740
see a view there of some of the large

303
00:17:42,730 --> 00:17:39,500
throng of family members VIPs and

304
00:17:45,580 --> 00:17:42,740
well-wishers in the suit up facility

305
00:17:49,620 --> 00:17:45,590
again separated by that protective pane

306
00:17:52,900 --> 00:17:49,630
of glass to maintain medical quarantine

307
00:17:55,450 --> 00:17:52,910
Morgan set to begin the first flight for

308
00:17:57,310 --> 00:17:55,460
him this will be the second flight into

309
00:17:59,650 --> 00:17:57,320
space for Luca parmitano and the third

310
00:18:01,570 --> 00:17:59,660
coming up for Alexander Skvortsov we'll

311
00:18:48,810 --> 00:18:01,580
be talking more about these three crew

312
00:18:55,090 --> 00:18:51,610
there you see a drew Morgan settling

313
00:18:57,070 --> 00:18:55,100

into what essentially is a replica of

314
00:19:01,210 --> 00:18:57,080
the seat that he is now strapped into

315
00:19:02,919 --> 00:19:01,220
aboard the Soyuz ms-13 spacecraft as the

316
00:19:06,370 --> 00:19:02,929
leak checks were conducted to ensure

317
00:19:09,669 --> 00:19:06,380
that his suit is airtight and ready to

318
00:19:12,580 --> 00:19:09,679
support the 8-minute 45 second flight to

319
00:19:15,130 --> 00:19:12,590
orbit countdown by the way proceeding on

320
00:19:23,010 --> 00:19:15,140
track launch schedule less than thirty

321
00:19:23,020 --> 00:19:49,360
[Music]

322
00:19:55,490 --> 00:19:52,610
and you see Luca parmitano settling in

323
00:19:57,440 --> 00:19:55,500
for his pressurization check of his

324
00:20:01,700 --> 00:19:57,450
sokol launch and entry suit and there's

325
00:20:04,240 --> 00:20:01,710
drew Morgan as he strode up to the glass

326
00:20:07,600 --> 00:20:04,250
to have a chat with his family

327
00:20:40,060 --> 00:20:07,610
final opportunity to talk to them before

328
00:20:40,070 --> 00:20:47,960
the skies

329
00:21:01,610 --> 00:20:55,510
[Music]

330
00:21:06,990 --> 00:21:04,500
as you can see the crew in good spirits

331
00:21:09,900 --> 00:21:07,000
very animated as they had this

332
00:21:13,530 --> 00:21:09,910
opportunity to share their thoughts

333
00:21:15,530 --> 00:21:13,540
about their suit up the final hours

334
00:21:26,940 --> 00:21:15,540
before liftoff

335
00:21:26,950 --> 00:21:50,810
[Music]

336
00:21:55,800 --> 00:21:53,880
and their suits lead-free and ready to

337
00:21:57,480 --> 00:21:55,810
support launch the crew then exchanged

338
00:22:00,120 --> 00:21:57,490

final thoughts with senior Russian

339
00:22:03,030 --> 00:22:00,130
Russian NASA and European Space Agency

340
00:22:04,830 --> 00:22:03,040
managers one final opportunity to

341
00:22:07,410 --> 00:22:04,840
receive expressions of good luck and

342
00:22:14,310 --> 00:22:07,420
Godspeed before departing for the launch

343
00:22:17,550 --> 00:22:14,320
pad everything is fine that way great

344
00:22:20,660 --> 00:22:17,560
point having successful flight wish you

345
00:22:24,810 --> 00:22:20,670
knew that everything goes as planned I

346
00:22:28,920 --> 00:22:24,820
am glad to see you happy

347
00:22:46,680 --> 00:22:28,930
focus goal-oriented phases we're

348
00:22:55,810 --> 00:22:46,690
confident seriously you guys are well

349
00:23:02,950 --> 00:22:57,810
see factor in soft landing

350
00:23:43,400 --> 00:23:20,660
[Music]

351
00:23:48,480 --> 00:23:46,020
once again maintaining tradition the

352
00:23:50,070 --> 00:23:48,490
crew members strode out of the site 254

353
00:23:52,560 --> 00:23:50,080
integration building toward Russian

354
00:23:54,060 --> 00:23:52,570
managers to declare one final time that

355
00:23:55,700 --> 00:23:54,070
they were ready for launch before

356
00:23:58,620 --> 00:23:55,710
boarding their bus this was at about

357
00:24:01,530 --> 00:23:58,630
8:30 a.m. Central time for the ride that

358
00:24:04,140 --> 00:24:01,540
Launchpad won the drive took about 25

359
00:24:07,080 --> 00:24:04,150
minutes with an arrival at the pad just

360
00:24:14,159 --> 00:24:07,090
before 9 a.m. Central time

361
00:24:23,490 --> 00:24:17,380
decree of the transportation Soyuz

362
00:24:35,649 --> 00:24:32,350
no the blogroll domestic I've replaced

363
00:24:50,790 --> 00:24:35,659

it back away from the glass away from

364
00:24:57,890 --> 00:24:54,030
this video now showing the crew arriving

365
00:25:00,360 --> 00:24:57,900
at launch pad one at the pad the crew

366
00:25:02,520 --> 00:25:00,370
you'll see in a moment climbed a few

367
00:25:04,320 --> 00:25:02,530
stairs and waved goodbye to well-wishers

368
00:25:06,299 --> 00:25:04,330
entering the elevator for the ride to

369
00:25:08,250 --> 00:25:06,309
the top of the soyuz rocket to board

370
00:25:15,120 --> 00:25:08,260
their capsule which they've now been

371
00:25:20,779 --> 00:25:18,510
who of them s12 has arrived at the lunch

372
00:27:01,730 --> 00:25:20,789
bed

373
00:27:07,100 --> 00:27:04,029
and the elevator carrying the crew

374
00:27:09,919 --> 00:27:07,110
headed up to the 160 foot level where

375
00:27:12,529 --> 00:27:09,929
the crew boarded the Soyuz vehicle they

376
00:27:18,320 --> 00:27:12,539
are strapped in of course and ready for

377
00:27:20,240 --> 00:27:18,330
launch now back with a live view of the

378
00:27:22,880 --> 00:27:20,250
Soyuz on the launch pad and Baikonur the

379
00:27:25,310 --> 00:27:22,890
gantry arms had been retracted we are

380
00:27:27,860 --> 00:27:25,320
now coming up on the t-minus 28 minute

381
00:27:31,130 --> 00:27:27,870
mark before a launch lift off again

382
00:27:34,690 --> 00:27:31,140
scheduled for 11 28 and 20 seconds a.m.

383
00:27:39,710 --> 00:27:34,700
Central time 9 28 and 20 seconds p.m. in

384
00:27:41,690 --> 00:27:39,720
Baikonur 50 years ago on this day the

385
00:27:43,730 --> 00:27:41,700
world Stood Still and held its

386
00:27:45,799 --> 00:27:43,740
collective breath as NASA rewrote the

387
00:27:48,680 --> 00:27:45,809
history books of course by landing

388
00:27:50,389 --> 00:27:48,690

humans on the moon that achievement came

389
00:27:53,630 --> 00:27:50,399
less than a decade after a call to

390
00:27:55,159 --> 00:27:53,640
action by President Kennedy join us now

391
00:27:57,289 --> 00:27:55,169
as we take a look back at how those

392
00:27:59,750 --> 00:27:57,299
words and the efforts that followed

393
00:28:09,950 --> 00:27:59,760
inspired and continued to inspire

394
00:28:14,610 --> 00:28:09,960
generations of space explorers and it is

395
00:28:14,620 --> 00:28:24,039
[Music]

396
00:28:33,919 --> 00:28:29,960
- I climb the highest mountain why 35

397
00:28:37,360 --> 00:28:33,929
years ago fly the Atlantic why does Rice

398
00:28:42,340 --> 00:28:37,370
play Texas we choose to go to the moon

399
00:28:59,690 --> 00:28:48,840
we choose to go to an armed program

400
00:29:02,280 --> 00:28:59,700
[Music]

401
00:29:04,920 --> 00:29:02,290
expedition 12 commander bill McArthur

402
00:29:06,520 --> 00:29:04,930
with a greeting for his expedition 11

403
00:29:23,570 --> 00:29:06,530
counterpart

404
00:29:29,340 --> 00:29:27,360
because of your work because of the

405
00:29:31,470 --> 00:29:29,350
ingenuity dedication and entrepreneurial

406
00:29:33,570 --> 00:29:31,480
spirit reflected in this room and

407
00:29:36,180 --> 00:29:33,580
throughout the American space enterprise

408
00:29:37,860 --> 00:29:36,190
since the end of Apollo 11 we forged

409
00:29:40,830 --> 00:29:37,870
incredible breakthroughs in our

410
00:29:45,340 --> 00:29:40,840
technology have allowed us to go further

411
00:29:53,019 --> 00:29:49,040
[Music]

412
00:29:57,400 --> 00:29:56,319
the first woman and the next man on the

413
00:29:59,890 --> 00:29:57,410

moon

414
00:30:23,990 --> 00:29:59,900
[Music]

415
00:30:26,600 --> 00:30:24,000
we'll be American astronauts once again

416
00:30:30,440 --> 00:30:26,610
a live view just after sunset of the

417
00:30:32,150 --> 00:30:30,450
Soyuz ms-13 extremely warm night at the

418
00:30:34,820 --> 00:30:32,160
Baikonur cosmodrome in the Central Asian

419
00:30:36,860 --> 00:30:34,830
desert today's launch marking the first

420
00:30:39,350 --> 00:30:36,870
flight into space for NASA's drew Morgan

421
00:30:42,200 --> 00:30:39,360
the second for Luca parmitano of the

422
00:30:44,840 --> 00:30:42,210
European Space Agency and the third for

423
00:30:48,920 --> 00:30:44,850
Roscosmos cosmonaut and Soyuz ms-13

424
00:30:50,450 --> 00:30:48,930
commander Alexander Skvortsov with that

425
00:30:52,160 --> 00:30:50,460
in mind and a look at the crew let's

426
00:30:54,950 --> 00:30:52,170
take a moment to learn more about drew

427
00:31:17,200 --> 00:30:54,960
Morgan NASA's next astronaut to fly in

428
00:31:24,520 --> 00:31:21,250
I think I often describe myself as a

429
00:31:30,250 --> 00:31:24,530
soldier a physician and an astronaut the

430
00:31:35,090 --> 00:31:32,990
one of the earliest memories I have is

431
00:31:37,280 --> 00:31:35,100
of always wanting to be in the military

432
00:31:39,110 --> 00:31:37,290
of wanting to be a soldier quite a

433
00:31:42,050 --> 00:31:39,120
history of military service in our

434
00:31:44,480 --> 00:31:42,060
family both of my grandparents my my

435
00:31:46,430 --> 00:31:44,490
father was an Air Force officer and I

436
00:31:48,680 --> 00:31:46,440
also remember my parents telling me a

437
00:31:50,960 --> 00:31:48,690
story about my great uncle Clank Perry

438
00:31:52,610 --> 00:31:50,970

McClintock who was a paratrooper in

439
00:31:55,490 --> 00:31:52,620
World War two he was in the 101st

440
00:31:57,650 --> 00:31:55,500
Airborne Division and jumped at Normandy

441
00:31:59,930 --> 00:31:57,660
on d-day and then jumped in operation

442
00:32:01,610 --> 00:31:59,940
Market Garden in Holland and that was

443
00:32:03,440 --> 00:32:01,620
the first time I had ever heard of the

444
00:32:05,330 --> 00:32:03,450
concept of a paratrooper or what it

445
00:32:07,790 --> 00:32:05,340
meant to be an airborne soldier so when

446
00:32:10,400 --> 00:32:07,800
I later decided and graduated in high

447
00:32:12,110 --> 00:32:10,410
school and I went to West Point I knew

448
00:32:14,120 --> 00:32:12,120
that I was very interested in this

449
00:32:15,650 --> 00:32:14,130
concept of being an airborne soldier at

450
00:32:18,110 --> 00:32:15,660
West Point they had a parachute team

451
00:32:21,320 --> 00:32:18,120
called the Black Knights yes I made the

452
00:32:22,880 --> 00:32:21,330
parachute team and and that became one

453
00:32:24,590 --> 00:32:22,890
of the central activities of my

454
00:32:27,860 --> 00:32:24,600
remaining three and a half years at West

455
00:32:29,810 --> 00:32:27,870
Point in addition to academics after

456
00:32:32,150 --> 00:32:29,820
class we jumped most days of the week

457
00:32:34,520 --> 00:32:32,160
but then we were also demonstration team

458
00:32:35,960 --> 00:32:34,530
so we jumped in football games also

459
00:32:38,450 --> 00:32:35,970
while I was a cadet I went through

460
00:32:41,420 --> 00:32:38,460
military basic airborne course which

461
00:32:43,700 --> 00:32:41,430
taught military static lines parachuting

462
00:32:46,010 --> 00:32:43,710
specifically the parachute aspect of it

463
00:32:49,400 --> 00:32:46,020

if I go back to the time when I was a

464
00:32:51,500 --> 00:32:49,410
cadet my teammates that I was selected

465
00:32:54,590 --> 00:32:51,510
with became my best friends in the world

466
00:32:56,750 --> 00:32:54,600
and continued to be to this day and that

467
00:32:58,790 --> 00:32:56,760
camaraderie that we had and that

468
00:33:00,740 --> 00:32:58,800
dependency we had on each other making

469
00:33:02,810 --> 00:33:00,750
sure that we were skilled in the

470
00:33:05,150 --> 00:33:02,820
aircraft skilled in the air our lives

471
00:33:06,440 --> 00:33:05,160
depended on each other to do safety

472
00:33:08,900 --> 00:33:06,450
checks of each other that type of

473
00:33:11,240 --> 00:33:08,910
camaraderie is something that I feel now

474
00:33:13,610 --> 00:33:11,250
in the astronaut corps with my astronaut

475
00:33:15,250 --> 00:33:13,620
colleagues as well I think about how 20

476
00:33:18,220 --> 00:33:15,260
years ago I was developing those skills

477
00:33:22,230 --> 00:33:18,230
at an early age and didn't even know it

478
00:33:25,029 --> 00:33:22,240
[Music]

479
00:33:29,410 --> 00:33:25,039
I'm Andrew Morgan and I'm a soldier a

480
00:33:43,470 --> 00:33:40,669
[Music]

481
00:33:45,480 --> 00:33:43,480
born in Morgantown West Virginia to a

482
00:33:48,030 --> 00:33:45,490
military family drew Morgan moved

483
00:33:50,310 --> 00:33:48,040
between California New York Texas Great

484
00:33:52,980 --> 00:33:50,320
Britain and Delaware over the course of

485
00:33:55,289 --> 00:33:52,990
his childhood he graduated from high

486
00:33:56,910 --> 00:33:55,299
school in Delaware earned a Bachelor of

487
00:33:58,650 --> 00:33:56,920
Science degree in environmental

488
00:34:00,660 --> 00:33:58,660

engineering at the US Military Academy

489
00:34:02,549 --> 00:34:00,670
at West Point and then earned a

490
00:34:03,990 --> 00:34:02,559
doctorate in medicine from the uniformed

491
00:34:07,289 --> 00:34:04,000
services University of the Health

492
00:34:09,869 --> 00:34:07,299
Sciences in Bethesda Maryland he is an

493
00:34:12,270 --> 00:34:09,879
emergency physician in the US Army with

494
00:34:15,119 --> 00:34:12,280
a specialization in primary care sports

495
00:34:16,800 --> 00:34:15,129
medicine he holds ratings as a military

496
00:34:19,830 --> 00:34:16,810
flight surgeon and as a special

497
00:34:21,840 --> 00:34:19,840
operations diving medical officer his

498
00:34:23,700 --> 00:34:21,850
military career includes service and

499
00:34:26,609 --> 00:34:23,710
elite Special Operations units in

500
00:34:29,849 --> 00:34:26,619
Washington and in Iraq Afghanistan and

501
00:34:32,010 --> 00:34:29,859
Africa Morgan along with current station

502
00:34:34,440 --> 00:34:32,020
residents Nick Hague and Christina cook

503
00:34:36,570 --> 00:34:34,450
was selected to become an astronaut as

504
00:34:38,780 --> 00:34:36,580
part of NASA's 21st astronaut class

505
00:34:41,970 --> 00:34:38,790
known by the nickname the eight-balls

506
00:34:43,760 --> 00:34:41,980
together they participated in a two-year

507
00:34:47,149 --> 00:34:43,770
highly specialized training program

508
00:34:50,399 --> 00:34:47,159
completing that training in July of 2015

509
00:34:53,099 --> 00:34:50,409
Morgan Haig and cook along with Luca

510
00:34:55,290 --> 00:34:53,109
parmitano are all part of what will be

511
00:34:56,700 --> 00:34:55,300
the Space Station's space walking teams

512
00:34:59,760 --> 00:34:56,710
for the next several months

513
00:35:01,920 --> 00:34:59,770

in fact if all goes as planned Morgan

514
00:35:03,960 --> 00:35:01,930
will be joining Nick Haig next month to

515
00:35:06,090 --> 00:35:03,970
install the next international docking

516
00:35:08,820 --> 00:35:06,100
adaptor to the harmony module during a

517
00:35:10,859 --> 00:35:08,830
spacewalk and is slated to join

518
00:35:13,920 --> 00:35:10,869
parmitano for a complex series of

519
00:35:15,090 --> 00:35:13,930
spacewalks later this year to repair and

520
00:35:17,609 --> 00:35:15,100
refurbish the Alpha Magnetic

521
00:35:20,640 --> 00:35:17,619
Spectrometer which was delivered to the

522
00:35:22,440 --> 00:35:20,650
station in 2011 in addition to being an

523
00:35:24,599 --> 00:35:22,450
accomplished soldier physician and soon

524
00:35:27,030 --> 00:35:24,609
to be space traveler there's a lot more

525
00:35:28,710 --> 00:35:27,040
to astronaut drew Morgan as we head into

526
00:35:30,510 --> 00:35:28,720
the final minutes of the launch

527
00:35:37,360 --> 00:35:30,520
countdown let's take a look once again

528
00:35:37,370 --> 00:35:41,180
[Music]

529
00:35:44,490 --> 00:35:43,230
what's your favorite movie Band of

530
00:35:46,830 --> 00:35:44,500
Brothers your favorite food anything

531
00:35:48,060 --> 00:35:46,840
spicy favorite color olive drab are you

532
00:35:49,380 --> 00:35:48,070
a morning person or a night nurse

533
00:35:50,910 --> 00:35:49,390
definitely a morning person

534
00:35:52,440 --> 00:35:50,920
I'm not demonstrating that very well no

535
00:35:54,030 --> 00:35:52,450
but yes I am my person what's your

536
00:35:55,500 --> 00:35:54,040
favorite ice cream flavor mint chocolate

537
00:35:57,150 --> 00:35:55,510
chip is there one thing you have in your

538
00:35:58,890 --> 00:35:57,160

fridge all the time milk

539
00:36:01,200 --> 00:35:58,900
what accomplishment are you most proud

540
00:36:02,460 --> 00:36:01,210
of my kids who's the person who makes

541
00:36:04,140 --> 00:36:02,470
you laugh the most

542
00:36:06,690 --> 00:36:04,150
my wife what's your most memorable

543
00:36:08,250 --> 00:36:06,700
career moment graduating from Ranger

544
00:36:09,720 --> 00:36:08,260
School and being promoted to major on

545
00:36:12,000 --> 00:36:09,730
the same thing if you could have one

546
00:36:14,520 --> 00:36:12,010
superpower only what would it be

547
00:36:16,590 --> 00:36:14,530
time travel what's your favorite pizza

548
00:36:18,210 --> 00:36:16,600
topic lots and lots of cheese your

549
00:36:20,550 --> 00:36:18,220
favorite animal parma Dillo favorite

550
00:36:22,380 --> 00:36:20,560
dance moves air guitar who inspires you

551
00:36:24,930 --> 00:36:22,390
my dad what would you like to be

552
00:36:26,820 --> 00:36:24,940
remembered for being a good husband his

553
00:36:28,320 --> 00:36:26,830
father what advice would you give to

554
00:36:30,660 --> 00:36:28,330
your younger self be a good team player

555
00:36:32,460 --> 00:36:30,670
what would be a good theme song for your

556
00:36:34,980 --> 00:36:32,470
life live it well by Switchfoot you

557
00:36:36,270 --> 00:36:34,990
could spend one day on mars what would

558
00:36:38,760 --> 00:36:36,280
you do there for fun

559
00:36:40,980 --> 00:36:38,770
take pictures what is a life goal you

560
00:36:48,840 --> 00:36:40,990
plan to achieve this year come home

561
00:36:50,490 --> 00:36:48,850
safely from space born and paterno Italy

562
00:36:52,560 --> 00:36:50,500
European Space Agency astronaut Luca

563
00:36:55,050 --> 00:36:52,570

parmitano is a lieutenant colonel in the

564
00:36:56,580 --> 00:36:55,060
Italian Air Force after completing a

565
00:36:58,740 --> 00:36:56,590
bachelor's degree in political science

566
00:37:02,130 --> 00:36:58,750
at the University of Naples Federico -

567
00:37:05,250 --> 00:37:02,140
in 1999 he graduated from the Italian

568
00:37:07,080 --> 00:37:05,260
Air Force Academy in 2000 the following

569
00:37:08,760 --> 00:37:07,090
year he completed basic flight training

570
00:37:11,070 --> 00:37:08,770
with the US Air Force involved in

571
00:37:14,250 --> 00:37:11,080
European NATO joint jet pilot training

572
00:37:15,810 --> 00:37:14,260
at Sheppard Air Force Base in Texas he

573
00:37:19,170 --> 00:37:15,820
continued his training completing

574
00:37:22,890 --> 00:37:19,180
coursework in Germany in 2002 in Italy

575
00:37:24,330 --> 00:37:22,900
in 2003 in Belgium in 2005 and then

576
00:37:26,430 --> 00:37:24,340
completing a master's degree in

577
00:37:30,630 --> 00:37:26,440
experimental flight test engineering in

578
00:37:33,150 --> 00:37:30,640
July of 2009 parmitano flew the AMX

579
00:37:36,930 --> 00:37:33,160
aircraft with the thirteenth group 32nd

580
00:37:39,030 --> 00:37:36,940
wing in Amendola Italy from 2001 to 2007

581
00:37:42,810 --> 00:37:39,040
obtaining all aircraft qualifications

582
00:37:44,850 --> 00:37:42,820
during that time in 2007 he was selected

583
00:37:45,720 --> 00:37:44,860
by the Italian Air Force to become a

584
00:37:48,270 --> 00:37:45,730
test pilot

585
00:37:50,490 --> 00:37:48,280
he has logged more than 2000 hours of

586
00:37:52,380 --> 00:37:50,500
flight time his qualified are more than

587
00:37:53,700 --> 00:37:52,390
twenty types of military airplanes and

588
00:37:57,480 --> 00:37:53,710

helicopters and his flow

589
00:38:00,510 --> 00:37:57,490
over 40 types of aircraft selected as an

590
00:38:02,160 --> 00:38:00,520
ISA astronaut in 2009 parmitano was

591
00:38:03,750 --> 00:38:02,170
assigned as a flight engineer to the

592
00:38:05,040 --> 00:38:03,760
Italian Space Agency's first

593
00:38:07,170 --> 00:38:05,050
long-duration mission on the

594
00:38:10,380 --> 00:38:07,180
International Space Station flying in

595
00:38:12,120 --> 00:38:10,390
2013 aboard soyuz tma onine m to the

596
00:38:15,870 --> 00:38:12,130
station as a member of the expedition

597
00:38:17,970 --> 00:38:15,880
36/37 crew he took part in a pair of

598
00:38:20,640 --> 00:38:17,980
spacewalks logging a combined total of

599
00:38:23,370 --> 00:38:20,650
seven hours and 39 minutes outside the

600
00:38:25,829 --> 00:38:23,380
station he will take over command of the

601
00:38:27,900 --> 00:38:25,839
International Space Station from current

602
00:38:30,420 --> 00:38:27,910
commander alexey ovchinin in october

603
00:38:33,000 --> 00:38:30,430
becoming the third european astronaut on

604
00:38:35,359 --> 00:38:33,010
the first italian to do so he is board

605
00:38:37,819 --> 00:38:35,369
engineer number one for today's launch

606
00:38:40,520 --> 00:38:37,829
the left of the Soyuz commander

607
00:38:43,440 --> 00:38:40,530
Roscosmos cosmonaut alexander skvortsov

608
00:38:46,349 --> 00:38:43,450
who is returning to space for the third

609
00:38:48,870 --> 00:38:46,359
time today a retired colonel in the

610
00:38:50,790 --> 00:38:48,880
Russian Air Force Skvortsov was born in

611
00:38:53,370 --> 00:38:50,800
the shulk of a Moscow region in Russia

612
00:38:54,990 --> 00:38:53,380
after graduating from high school and

613
00:38:57,000 --> 00:38:55,000

then from the Stavrou Pohl Air Force

614
00:38:59,309 --> 00:38:57,010
pilot and navigator school as pilot

615
00:39:01,620 --> 00:38:59,319
engineer he went on to graduate from the

616
00:39:04,799 --> 00:39:01,630
military red banner Zhukov air defense

617
00:39:06,720 --> 00:39:04,809
Academy in 1997 as a navigator and

618
00:39:09,630 --> 00:39:06,730
operational tactical fighter Defense

619
00:39:12,140 --> 00:39:09,640
aviator he served as a pilot a senior

620
00:39:14,789 --> 00:39:12,150
pilot and an air flight commander

621
00:39:16,620 --> 00:39:14,799
squirts off enlisted into the astronaut

622
00:39:18,990 --> 00:39:16,630
and cosmonaut core of the Gagarin

623
00:39:21,450 --> 00:39:19,000
cosmonaut training center in 1997

624
00:39:23,609 --> 00:39:21,460
becoming a member of the 12th cosmonaut

625
00:39:27,299 --> 00:39:23,619
class and becoming a test cosmonaut in

626
00:39:29,430 --> 00:39:27,309
November of 1999 qualified as a

627
00:39:32,010 --> 00:39:29,440
cosmonaut instructor he is qualified as

628
00:39:34,440 --> 00:39:32,020
both a diver and a powered paragliding

629
00:39:37,319 --> 00:39:34,450
instructor having performed over 500

630
00:39:38,640 --> 00:39:37,329
jumps in 2010 he graduated from the

631
00:39:42,180 --> 00:39:38,650
Russian Academy of Public Administration

632
00:39:44,400 --> 00:39:42,190
with a degree in law he is a veteran of

633
00:39:47,280 --> 00:39:44,410
two long-duration spaceflights both to

634
00:39:50,180 --> 00:39:47,290
the International Space Station in 2010

635
00:39:52,710 --> 00:39:50,190
he was the commander of Soyuz TMA 18 an

636
00:39:55,980 --> 00:39:52,720
expedition 23 flight engineer in the

637
00:39:58,579 --> 00:39:55,990
station's expedition 24 commander his

638
00:40:00,690 --> 00:39:58,589

second spaceflight took place in 2014

639
00:40:03,930 --> 00:40:00,700
once again taking on the role of

640
00:40:05,930 --> 00:40:03,940
commander of Soyuz TMA 12 M and working

641
00:40:09,349 --> 00:40:05,940
aboard the space station as an

642
00:40:11,450 --> 00:40:09,359
39/40 flight engineer during his mission

643
00:40:13,700 --> 00:40:11,460
he performed two spacewalks accumulating

644
00:40:17,000 --> 00:40:13,710
a total of 12 hours and 33 minutes

645
00:40:19,819 --> 00:40:17,010
outside the station as mentioned earlier

646
00:40:21,680 --> 00:40:19,829
he is serving as Soyuz ms-13 commander

647
00:40:27,740 --> 00:40:21,690
today and will be a flight engineer

648
00:40:29,630 --> 00:40:27,750
during expeditions 60 and 61 as we

649
00:40:31,280 --> 00:40:29,640
celebrate the Apollo 11 anniversary

650
00:40:33,500 --> 00:40:31,290
today as we've mentioned several times

651
00:40:36,020 --> 00:40:33,510
earlier in this broadcast and inspired

652
00:40:37,579 --> 00:40:36,030
by the Apollo missions drew Morgan

653
00:40:39,770 --> 00:40:37,589
described the significance and the

654
00:40:42,020 --> 00:40:39,780
symbolism of his cruise expedition 60

655
00:40:45,530 --> 00:40:42,030
crew patch during a recent crew news

656
00:40:47,839 --> 00:40:45,540
conference 60 patch there are elements

657
00:40:50,540 --> 00:40:47,849
of that hatch that commemorate the

658
00:40:52,550 --> 00:40:50,550
Apollo 11 moon landing you are familiar

659
00:40:55,190 --> 00:40:52,560
with the Apollo 11 patch bears some

660
00:40:56,300 --> 00:40:55,200
resemblance rather than the moon in the

661
00:40:57,410 --> 00:40:56,310
foreground we have the earth in the

662
00:41:00,349 --> 00:40:57,420
foreground and the moon in the

663
00:41:01,640 --> 00:41:00,359

background and the El constellation for

664
00:41:03,920 --> 00:41:01,650
the fifty years and then the Eagle

665
00:41:06,020 --> 00:41:03,930
constellation and just like the Eagle in

666
00:41:07,970 --> 00:41:06,030
the Apollo 11 patch so you know the

667
00:41:09,079 --> 00:41:07,980
patch designers and the crew came

668
00:41:10,849 --> 00:41:09,089
together and really thought this was a

669
00:41:12,770 --> 00:41:10,859
great idea and very similar to the

670
00:41:14,839 --> 00:41:12,780
Apollo 11 patch of course there are no

671
00:41:16,579 --> 00:41:14,849
names represented on this patch which

672
00:41:19,790 --> 00:41:16,589
was an important element for us as well

673
00:41:21,859 --> 00:41:19,800
that to really embody that sense that

674
00:41:27,770 --> 00:41:21,869
this was an accomplishment of the world

675
00:41:29,210 --> 00:41:27,780
and not one single country and we're

676
00:41:31,280 --> 00:41:29,220
back with our live coverage of the

677
00:41:33,859 --> 00:41:31,290
launch of Morgan parmitano and supports

678
00:41:35,420 --> 00:41:33,869
off and of course on the launch pad at

679
00:41:39,650 --> 00:41:35,430
the Baikonur cosmodrome in Kazakhstan

680
00:41:41,870 --> 00:41:39,660
the Soyuz ms-13 stands on the floodlit

681
00:41:45,349 --> 00:41:41,880
launch pad with liftoff scheduled just

682
00:41:48,829 --> 00:41:45,359
under 14 minutes from now the Soyuz

683
00:41:50,710 --> 00:41:48,839
rocket stands 162 feet tall weighs six

684
00:41:53,660 --> 00:41:50,720
hundred eighty thousand pounds and

685
00:41:56,150 --> 00:41:53,670
consists of the Soyuz ms-13 inside a

686
00:42:00,290 --> 00:41:56,160
protective shroud at the top and the

687
00:42:03,829 --> 00:42:00,300
three-stage Soyuz FG booster below the

688
00:42:06,920 --> 00:42:03,839

Soyuz spacecraft that will take our trio

689
00:42:08,690 --> 00:42:06,930
of crew members to orbit today was mated

690
00:42:11,420 --> 00:42:08,700
to its booster and the three main stages

691
00:42:14,630 --> 00:42:11,430
were joined together on Wednesday just

692
00:42:17,240 --> 00:42:14,640
24 hours later on Thursday the soyuz

693
00:42:19,760 --> 00:42:17,250
rocket began its trek to the launch pad

694
00:42:22,640 --> 00:42:19,770
right on time at 7 a.m. Baikonur time

695
00:42:24,920 --> 00:42:22,650
maintaining tradition arriving less than

696
00:42:27,140 --> 00:42:24,930
two hours later where it was raised to

697
00:42:30,620 --> 00:42:27,150
its vertical position for final

698
00:42:32,360 --> 00:42:30,630
pre-launch preparations the Soyuz is now

699
00:42:34,700 --> 00:42:32,370
of course poised for launch with its

700
00:42:36,560 --> 00:42:34,710
three crew members on board the Soyuz

701
00:42:39,320 --> 00:42:36,570
spacecraft sitting high above the three

702
00:42:41,350 --> 00:42:39,330
stages of the Soyuz booster which uses

703
00:42:46,850 --> 00:42:41,360
kerosene and liquid oxygen as the

704
00:42:48,740 --> 00:42:46,860
propellant at engine ignition the Soyuz

705
00:42:51,080 --> 00:42:48,750
as engines will come up to flight speed

706
00:42:53,480 --> 00:42:51,090
the launch pad hold down arms will

707
00:42:57,350 --> 00:42:53,490
retract and the booster rocket will be

708
00:42:59,450 --> 00:42:57,360
on its way the first stage engines and

709
00:43:02,000 --> 00:42:59,460
liquid fuel strap-on boosters will burn

710
00:43:04,040 --> 00:43:02,010
for about one minute 58 seconds as the

711
00:43:06,080 --> 00:43:04,050
Soyuz arcs out to the northeast from the

712
00:43:07,730 --> 00:43:06,090
Baikonur cosmodrome on a trajectory

713
00:43:09,650 --> 00:43:07,740

designed to catch up to the

714
00:43:12,350 --> 00:43:09,660
International Space Station six hours

715
00:43:15,170 --> 00:43:12,360
later just before first stage separation

716
00:43:17,720 --> 00:43:15,180
the vehicles launch escape tower will be

717
00:43:19,580 --> 00:43:17,730
jettisoned followed seconds later by the

718
00:43:22,820 --> 00:43:19,590
jettisoning of the four strap-on

719
00:43:24,890 --> 00:43:22,830
first-stage boosters about a half minute

720
00:43:26,830 --> 00:43:24,900
later the clamshell fairing around the

721
00:43:29,810 --> 00:43:26,840
upper stage of the booster will separate

722
00:43:31,940 --> 00:43:29,820
exposing the Soyuz ms-13 for the first

723
00:43:34,940 --> 00:43:31,950
time as the Soyuz continues its Trek

724
00:43:36,740 --> 00:43:34,950
uphill the second stage of the Soyuz

725
00:43:39,770 --> 00:43:36,750
rocket will burn until the four minute

726
00:43:41,840 --> 00:43:39,780
57 second mark when the third stage will

727
00:43:43,970 --> 00:43:41,850
ignite a so-called hot stage technique

728
00:43:46,460 --> 00:43:43,980
that precedes the separation of the

729
00:43:49,310 --> 00:43:46,470
second stage the third stage will

730
00:43:51,230 --> 00:43:49,320
continue to fire until eight minutes 45

731
00:43:53,510 --> 00:43:51,240
seconds after launch when it too will

732
00:43:56,540 --> 00:43:53,520
shut down leading to Soyuz spacecraft

733
00:43:59,060 --> 00:43:56,550
separation that will be followed within

734
00:44:01,820 --> 00:43:59,070
seconds by the deployment of the soyuz

735
00:44:04,670 --> 00:44:01,830
MS 13 solar arrays and navigational

736
00:44:05,960 --> 00:44:04,680
antennas at this point the soyuz in its

737
00:44:08,450 --> 00:44:05,970
three-man crew will be in its

738
00:44:10,400 --> 00:44:08,460

preliminary orbit for this chase to

739
00:44:14,110 --> 00:44:10,410
catch up to and dock to the

740
00:44:16,640 --> 00:44:14,120
International Space Station and that

741
00:44:18,650 --> 00:44:16,650
Soyuz spacecraft is scheduled to dock to

742
00:44:20,750 --> 00:44:18,660
the aft part of the space station's

743
00:44:23,540 --> 00:44:20,760
Zvezda service module later today for

744
00:44:27,740 --> 00:44:23,550
orbits after launch docking the schedule

745
00:44:29,080 --> 00:44:27,750
for 551 p.m. Central Time 651 p.m.

746
00:44:33,400 --> 00:44:29,090
Eastern Time

747
00:44:36,650 --> 00:44:33,410
now just eleven minutes until launch

748
00:44:39,880 --> 00:44:36,660
down at the Baikonur cosmodrome a large

749
00:44:43,040 --> 00:44:39,890
group of NASA Russian and European

750
00:44:45,200 --> 00:44:43,050
representatives is at the cosmodrome a

751
00:44:48,110 --> 00:44:45,210
short distance from the launch pad and

752
00:44:49,940 --> 00:44:48,120
with them NASA public affairs officer

753
00:44:54,410 --> 00:44:49,950
Dan Huot who was there to provide an

754
00:44:56,510 --> 00:44:54,420
update on activities there dan hello Rob

755
00:44:58,340 --> 00:44:56,520
coming to you from a very sweltering

756
00:45:00,350 --> 00:44:58,350
Kazakhstan where temperatures throughout

757
00:45:02,270 --> 00:45:00,360
the weeks activities have climbed into

758
00:45:03,950 --> 00:45:02,280
the triple digits but haven't dampened

759
00:45:06,080 --> 00:45:03,960
the excitement to see this launch one

760
00:45:08,000 --> 00:45:06,090
bit friends and family from our crew

761
00:45:10,070 --> 00:45:08,010
members along with senior program

762
00:45:11,780 --> 00:45:10,080
officials including NASA International

763
00:45:13,880 --> 00:45:11,790

Space Station program manager Kirk

764
00:45:16,310 --> 00:45:13,890
Shireman where's cosmos head Dmitry

765
00:45:18,260 --> 00:45:16,320
Rogozin and ISA director-general yawn

766
00:45:20,270 --> 00:45:18,270
Verner are all on location to support

767
00:45:23,060 --> 00:45:20,280
the launch of this international crew

768
00:45:25,100 --> 00:45:23,070
taking flight 50 years the day after

769
00:45:27,200 --> 00:45:25,110
Neil Armstrong and Buzz Aldrin put

770
00:45:30,020 --> 00:45:27,210
humanity's first footprints on the moon

771
00:45:32,090 --> 00:45:30,030
Morgan scores off in parmitano we'll

772
00:45:34,250 --> 00:45:32,100
have no shortage of activities once they

773
00:45:37,040 --> 00:45:34,260
arrive with their expedition slated to

774
00:45:39,020 --> 00:45:37,050
be jam-packed with more than 260 science

775
00:45:41,210 --> 00:45:39,030
investigations a steady stream of

776
00:45:43,760 --> 00:45:41,220
visiting spacecraft and upwards of a

777
00:45:45,770 --> 00:45:43,770
dozen spacewalks including some of the

778
00:45:47,750 --> 00:45:45,780
most ambitious forays into the vacuum of

779
00:45:49,790 --> 00:45:47,760
space ever conceived that we'll see

780
00:45:51,350 --> 00:45:49,800
Morgan and parmitano work to extend the

781
00:45:54,560 --> 00:45:51,360
life of the Alpha Magnetic Spectrometer

782
00:45:56,420 --> 00:45:54,570
a massive particle physics experiment

783
00:45:59,240 --> 00:45:56,430
looking to unlock the secrets behind the

784
00:46:01,070 --> 00:45:59,250
origin of our universe for now though

785
00:46:03,110 --> 00:46:01,080
I'll send it back to you Rob and Mission

786
00:46:12,020 --> 00:46:03,120
Control Houston as we countdown to

787
00:46:14,120 --> 00:46:12,030
liftoff here in Baikonur back with a

788
00:46:16,010 --> 00:46:14,130

live view of the soyuz on the launch pad

789
00:46:19,370 --> 00:46:16,020
that countdown approaching the t-minus

790
00:46:20,780 --> 00:46:19,380
nine minute mark inside the crew cabin

791
00:46:22,190 --> 00:46:20,790
the crew is making final preparations

792
00:46:26,090 --> 00:46:22,200
for launch

793
00:46:27,920 --> 00:46:26,100
a good view of drew morgan his face

794
00:46:30,590 --> 00:46:27,930
partially obscured by the zero-g

795
00:46:32,810 --> 00:46:30,600
mascot that he is batting around in a

796
00:46:34,670 --> 00:46:32,820
playful manner at the lower right hand

797
00:46:38,270 --> 00:46:34,680
corner of your screen as soyuz commander

798
00:46:40,220 --> 00:46:38,280
alexander skvortsov just a few minutes

799
00:46:43,340 --> 00:46:40,230
ago that come the crew completed their

800
00:46:45,920 --> 00:46:43,350
final suit leak checks the testing of

801
00:46:46,310 --> 00:46:45,930
the descent module in which the three

802
00:46:47,810 --> 00:46:46,320
crew

803
00:46:53,510 --> 00:46:47,820
members are strapped inside is now

804
00:46:55,220 --> 00:46:53,520
complete the spacecraft's gyros are in

805
00:46:58,790 --> 00:46:55,230
flight readiness and flight recorders

806
00:47:00,740 --> 00:46:58,800
have now been activated just eight and a

807
00:47:02,390 --> 00:47:00,750
half minutes away from launch pre launch

808
00:47:04,610 --> 00:47:02,400
operations nearly complete at the

809
00:47:06,560 --> 00:47:04,620
Baikonur cosmodrome launch controllers

810
00:47:13,930 --> 00:47:06,570
at the blockhouse in Baikonur reporting

811
00:47:19,580 --> 00:47:16,910
at the time of launch the International

812
00:47:22,220 --> 00:47:19,590
Space Station will be flying 254 miles

813
00:47:25,370 --> 00:47:22,230

over southern Russia flying between

814
00:47:27,560 --> 00:47:25,380
Kazakhstan and Mongolia some 646 miles

815
00:47:30,440 --> 00:47:27,570
ahead of the Soyuz as it climbs off the

816
00:47:33,860 --> 00:47:30,450
launch pad the Soyuz will be launching

817
00:47:37,130 --> 00:47:33,870
into a narrow corridor of just 34 point

818
00:47:38,660 --> 00:47:37,140
two degrees basically the moment where

819
00:47:40,700 --> 00:47:38,670
the Earth's rotation carries the

820
00:47:42,740 --> 00:47:40,710
Baikonur cosmodrome into the plane of

821
00:47:45,230 --> 00:47:42,750
the station's orbit very much like

822
00:47:48,260 --> 00:47:45,240
driving a car onto an on-ramp of a

823
00:47:50,300 --> 00:47:48,270
freeway to expedite the Soyuz is four

824
00:47:59,700 --> 00:47:50,310
orbits six-hour trek to catch up to the

825
00:48:03,940 --> 00:48:02,080
we're now at the seven and a half minute

826
00:48:06,160 --> 00:48:03,950
mark before launch at this point in the

827
00:48:09,130 --> 00:48:06,170
countdown the Soyuz is first and second

828
00:48:11,260 --> 00:48:09,140
stage engines have been declared ready

829
00:48:13,750 --> 00:48:11,270
for launch telemetry being received from

830
00:48:16,240 --> 00:48:13,760
the rocket indicating that all primary

831
00:48:19,180 --> 00:48:16,250
and backup systems are set to support

832
00:48:21,970 --> 00:48:19,190
liftoff at a view from the other camera

833
00:48:23,560 --> 00:48:21,980
inside the descent module squirts off at

834
00:48:25,810 --> 00:48:23,570
the bottom of your screen at the top of

835
00:48:28,300 --> 00:48:25,820
your screen European Space Agency

836
00:48:36,250 --> 00:48:28,310
astronaut Luca parmitano ready to begin

837
00:48:37,960 --> 00:48:36,260
his second flight into space here in

838
00:48:39,670 --> 00:48:37,970

Mission Control in Houston flight

839
00:48:41,500 --> 00:48:39,680
director Mary Lorenz has pulled all of

840
00:48:45,370 --> 00:48:41,510
her flight controllers the International

841
00:48:47,020 --> 00:48:45,380
Space Station is ready to accept the

842
00:48:49,690 --> 00:48:47,030
arrival of the three crew members later

843
00:48:51,700 --> 00:48:49,700
today Lawrence on console joined by

844
00:48:53,440 --> 00:48:51,710
European Space Agency astronaut and

845
00:48:56,020 --> 00:48:53,450
spacecraft communicator ondrea's

846
00:48:58,300 --> 00:48:56,030
Mogensen the feed that you're watching

847
00:49:00,100 --> 00:48:58,310
on NASA TV is also being uplinked to the

848
00:49:02,470 --> 00:49:00,110
crew onboard the International Space

849
00:49:21,610 --> 00:49:02,480
Station now at the t-minus six and a

850
00:49:26,010 --> 00:49:21,620
half minute mark before launch all this

851
00:49:28,270 --> 00:49:26,020
is just one word we are feeling well

852
00:49:31,360 --> 00:49:28,280
that report through an interpreter of

853
00:49:32,890 --> 00:49:31,370
the words of Alexander Skvortsov saying

854
00:49:35,860 --> 00:49:32,900
the crew feels well they are ready for

855
00:49:37,780 --> 00:49:35,870
launch by the way a launch key has now

856
00:49:40,000 --> 00:49:37,790
been inserted in the launch bunker this

857
00:49:47,829 --> 00:49:40,010
is a real key that transitions the

858
00:49:53,030 --> 00:49:50,630
and you're hearing some of the music

859
00:49:57,260 --> 00:49:53,040
that is piped in from the blockhouse in

860
00:49:59,180 --> 00:49:57,270
Baikonur to relax the crew in the final

861
00:50:21,020 --> 00:49:59,190
minutes before liftoff this is a

862
00:50:23,900 --> 00:50:21,030
traditional activity coming up on the

863
00:50:25,640 --> 00:50:23,910

5-minute mark before launch the

864
00:50:27,800 --> 00:50:25,650
blockhouse in Baikonur reporting the

865
00:50:31,760 --> 00:50:27,810
range is clear the Soyuz rocket ready to

866
00:50:32,690 --> 00:50:31,770
begin its journey up hill t-minus five

867
00:50:34,609 --> 00:50:32,700
minutes and Counting

868
00:50:36,680 --> 00:50:34,619
onboard systems now are being switched

869
00:50:39,309 --> 00:50:36,690
to onboard control the commander's

870
00:50:41,450 --> 00:50:39,319
cockpit displays have been activated and

871
00:51:02,640 --> 00:50:41,460
the crew has closed their helmets

872
00:51:08,800 --> 00:51:07,030
- - 4 minutes 28 seconds as we speak the

873
00:51:16,260 --> 00:51:08,810
International Space Station now flying

874
00:51:20,470 --> 00:51:18,820
the fuel lines and other elements of the

875
00:51:22,710 --> 00:51:20,480
rocket engines now being purged with

876
00:51:37,970 --> 00:51:22,720
nitrogen to fireproof them by removing

877
00:51:49,540 --> 00:51:40,230
inside four minutes before launch

878
00:51:54,920 --> 00:51:52,280
the next major activity will be the

879
00:51:56,960 --> 00:51:54,930
drain back of excess propellant to make

880
00:52:05,270 --> 00:51:56,970
sure the Soyuz booster is of the proper

881
00:52:14,660 --> 00:52:05,280
weight for liftoff less than three and a

882
00:52:30,940 --> 00:52:14,670
half minutes before launch the other

883
00:52:30,950 --> 00:52:36,769
2-3 minutes and Counting

884
00:52:41,489 --> 00:52:39,539
just seconds away from the boosters fuel

885
00:52:43,439 --> 00:52:41,499
tanks being pressurized for flight this

886
00:52:45,870 --> 00:52:43,449
will optimize the flow of fuel and help

887
00:52:54,630 --> 00:52:45,880
to add structural support to the rocket

888
00:53:11,670 --> 00:52:54,640

as it sits on the launch pad the

889
00:53:17,230 --> 00:53:14,530
coming up on the t-minus two minute mark

890
00:53:30,900 --> 00:53:17,240
on the 50th anniversary of humanity's

891
00:53:30,910 --> 00:53:38,730
t-minus two minutes and Counting

892
00:53:44,260 --> 00:53:41,050
coming up on determination of the ground

893
00:54:01,960 --> 00:53:44,270
propellant feed at the 1-minute mark the

894
00:54:01,970 --> 00:54:24,040
t-minus 90 seconds

895
00:54:28,180 --> 00:54:26,740
the first of two ground umbilicals will

896
00:54:30,730 --> 00:54:28,190
retract their from the side of the

897
00:54:34,090 --> 00:54:30,740
vehicle at about the t-minus 35 second

898
00:54:40,710 --> 00:54:34,100
mark that will initiate auto sequence

899
00:54:40,720 --> 00:54:49,690
t-minus 50 seconds

900
00:55:01,570 --> 00:54:53,780
you go to internal power ground first of

901
00:55:01,580 --> 00:55:18,540
t-minus 30 seconds

902
00:55:23,800 --> 00:55:21,430
the second umbilical now retracting

903
00:55:26,440 --> 00:55:23,810
initiating auto sequence start we have

904
00:55:30,300 --> 00:55:26,450
main engine ignition engines and turbo

905
00:55:38,590 --> 00:55:30,310
pumps up to flight speed five four three

906
00:55:40,870 --> 00:55:38,600
two one and liftoff fifty years after a

907
00:55:43,060 --> 00:55:40,880
small step for man the Soyuz rocket and

908
00:55:44,890 --> 00:55:43,070
its multinational crew take a giant leap

909
00:55:48,420 --> 00:55:44,900
off the launch pad bound for the

910
00:55:48,430 --> 00:55:53,059
[Music]

911
00:55:58,200 --> 00:55:56,220
good first stage performance Soyuz

912
00:55:59,490 --> 00:55:58,210
delivering nine hundred thirty thousand

913
00:56:03,990 --> 00:55:59,500

pounds of thrust from its four boosters

914
00:56:07,049 --> 00:56:04,000
and single engine the night time sky is

915
00:56:08,730 --> 00:56:07,059
creating a halo like effect as the Soyuz

916
00:56:10,440 --> 00:56:08,740
arcs to the Northeast away from the

917
00:56:19,650 --> 00:56:10,450
Baikonur cosmodrome in pursuit of the

918
00:56:23,490 --> 00:56:19,660
International Space Station the vehicle

919
00:56:25,380 --> 00:56:23,500
are nominal and they're stable copy good

920
00:56:26,760 --> 00:56:25,390
reports from the blockhouse in Baikonur

921
00:56:33,829 --> 00:56:26,770
punching a hole through the clouds

922
00:56:33,839 --> 00:56:38,900
good engine performance being reported

923
00:56:47,819 --> 00:56:43,500
your feet roll are nominal one minute 10

924
00:56:49,680 --> 00:56:47,829
seconds into the flight alexander

925
00:56:53,579 --> 00:56:49,690
skvortsov reports the crew is feeling

926
00:56:55,410 --> 00:56:53,589
well now going through the period of

927
00:57:03,329 --> 00:56:55,420
maximum dynamic pressure leaving a

928
00:57:06,539 --> 00:57:03,339
contrail Soyuz traveling almost 3,000

929
00:57:08,130 --> 00:57:06,549
miles an hour 15 miles in altitude 10

930
00:57:19,589 --> 00:57:08,140
miles downrange from the Baikonur

931
00:57:22,650 --> 00:57:19,599
cosmodrome one minute 45 seconds after

932
00:57:24,630 --> 00:57:22,660
launch all structural parameters

933
00:57:28,950 --> 00:57:24,640
reported to be in excellent shape

934
00:57:30,690 --> 00:57:28,960
a good view inside MS 13 Alexander

935
00:57:32,460 --> 00:57:30,700
sports off at the bottom of your screen

936
00:57:35,190 --> 00:57:32,470
at the top of your screen look at

937
00:57:41,279 --> 00:57:35,200
parmitano as we stand by for first stage

938
00:57:53,099 --> 00:57:41,289

separation first stage separation

939
00:57:57,180 --> 00:57:53,109
confirmed the eco stable the Soyuz now

940
00:57:59,549 --> 00:57:57,190
traveling 4,500 miles an hour 29 miles

941
00:58:02,640 --> 00:57:59,559
in altitude 29 miles downrange from the

942
00:58:07,300 --> 00:58:04,780
to want to have minutes into the flight

943
00:58:10,589 --> 00:58:07,310
all structural parameters reported to be

944
00:58:18,640 --> 00:58:10,599
an excellent shape second stage

945
00:58:20,320 --> 00:58:18,650
performance reported nominal the launch

946
00:58:22,150 --> 00:58:20,330
shroud has now been jettisoned and now

947
00:58:25,000 --> 00:58:22,160
we're seeing a view from a camera on the

948
00:58:27,520 --> 00:58:25,010
second stage of the Soyuz rocket we will

949
00:58:30,099 --> 00:58:27,530
no longer see in cabin views that

950
00:58:32,650 --> 00:58:30,109
external camera activated by Alexander

951
00:58:35,800 --> 00:58:32,660
Skvortsov from a button on his control

952
00:58:40,450 --> 00:58:35,810
panel but a great view of looking down

953
00:58:42,690 --> 00:58:40,460
the Soyuz booster again this view from a

954
00:58:45,370 --> 00:58:42,700
second stage camera on the Soyuz rocket

955
00:58:59,829 --> 00:58:45,380
three minutes 15 seconds into the flight

956
00:59:03,550 --> 00:58:59,839
everything proceeding normally 120

957
00:59:05,710 --> 00:59:03,560
seconds of the second stage engines are

958
00:59:19,160 --> 00:59:05,720
operating nominally and everything is

959
00:59:31,260 --> 00:59:25,140
220 seconds the flight is nominal copy

960
00:59:33,480 --> 00:59:31,270
everything is nominal on board four

961
00:59:36,840 --> 00:59:33,490
minutes into the flight almost halfway

962
00:59:40,950 --> 00:59:36,850
through powered flight as the Soyuz

963
00:59:43,740 --> 00:59:40,960

ms-13 in its trio of crew continues its

964
00:59:45,600 --> 00:59:43,750
flight uphill and the beginning of a

965
00:59:47,790 --> 00:59:45,610
six-hour journey to the International

966
00:59:55,070 --> 00:59:47,800
Space Station a spectacular view from a

967
01:00:03,180 --> 00:59:59,040
the Soyuz traveling 8,500 miles an hour

968
01:00:07,410 --> 01:00:03,190
91 miles in altitude 248 miles downrange

969
01:00:29,750 --> 01:00:07,420
from the Baikonur cosmodrome everything

970
01:00:36,420 --> 01:00:33,780
second stage separation is confirmed and

971
01:00:39,270 --> 01:00:36,430
you see the aft skirt from the second

972
01:00:41,760 --> 01:00:39,280
stage separating second stage separation

973
01:00:44,099 --> 01:00:41,770
is complete continuing to receive

974
01:00:46,890 --> 01:00:44,109
downlink video from the Soyuz booster at

975
01:00:48,570 --> 01:00:46,900
the five minute 15-second mark into the

976
01:00:50,849 --> 01:00:48,580
flight three and a half minutes of

977
01:00:53,849 --> 01:00:50,859
powered flight remaining the Soyuz being

978
01:00:56,040 --> 01:00:53,859
powered on the singular capability of

979
01:01:07,920 --> 01:00:56,050
its third stage engine all parameters

980
01:01:10,920 --> 01:01:07,930
are reported in excellent shape three

981
01:01:13,470 --> 01:01:10,930
hundred and thirty seconds in the third

982
01:01:18,510 --> 01:01:13,480
stage engines are operating nominally

983
01:01:21,150 --> 01:01:18,520
the soyou is now traveling over ten

984
01:01:24,450 --> 01:01:21,160
thousand miles an hour 111 miles in

985
01:01:31,440 --> 01:01:24,460
altitude 417 miles downrange from the

986
01:01:33,510 --> 01:01:31,450
Baikonur cosmodrome and by the way at

987
01:01:36,720 --> 01:01:33,520
the time of third stage shut down an

988
01:01:38,460 --> 01:01:36,730

orbital insertion the ISS will be flying

989
01:01:41,430 --> 01:01:38,470
over the far eastern coast of Russia

990
01:01:44,370 --> 01:01:41,440
near the Sea of Japan almost 2,500

991
01:01:46,440 --> 01:01:44,380
statute miles ahead of the Soyuz as it

992
01:01:53,490 --> 01:01:46,450
begins its chase to catch up to the

993
01:01:55,500 --> 01:01:53,500
station and Ernest six minutes 20

994
01:02:09,050 --> 01:01:55,510
seconds into the flight two and a half

995
01:02:14,370 --> 01:02:11,460
190 seconds the launch vehicle

996
01:02:16,260 --> 01:02:14,380
parameters are nominal copy Oh

997
01:02:22,350 --> 01:02:16,270
everything is nominal on board the

998
01:02:22,970 --> 01:02:22,360
cruise feeling well all the parameters

999
01:02:25,650 --> 01:02:22,980
are nominal

1000
01:02:28,410 --> 01:02:25,660
as you can hear Alexander Skvortsov

1001
01:02:31,020 --> 01:02:28,420
continuing to provide progress reports

1002
01:02:33,330 --> 01:02:31,030
to the launch control center in Baikonur

1003
01:02:36,060 --> 01:02:33,340
at the time of third stage shutdown in

1004
01:02:37,980 --> 01:02:36,070
spacecraft separation control of the

1005
01:02:39,630 --> 01:02:37,990
Soyuz his flight to the International

1006
01:02:41,970 --> 01:02:39,640
Space Station will be reverted back to

1007
01:02:43,950 --> 01:02:41,980
the flight control team of the Russian

1008
01:02:47,430 --> 01:02:43,960
Mission Control Center in Korea on the

1009
01:02:49,800 --> 01:02:47,440
outskirts of Moscow 7 minutes 15 seconds

1010
01:02:51,750 --> 01:02:49,810
into the flight the Soyuz traveling

1011
01:02:55,740 --> 01:02:51,760
thirteen thousand two hundred miles an

1012
01:02:59,210 --> 01:02:55,750
hour 124 miles in altitude 715 miles

1013
01:03:14,040 --> 01:03:05,340

the vehicle stable copy everything is

1014
01:03:16,380 --> 01:03:14,050
nominal here good reports continue to be

1015
01:03:19,050 --> 01:03:16,390
received back from the blockhouse in

1016
01:03:21,540 --> 01:03:19,060
Baikonur good structural parameters the

1017
01:03:24,450 --> 01:03:21,550
third stage engine continues to burn as

1018
01:03:32,250 --> 01:03:24,460
advertised as we approach the 8 minute

1019
01:03:36,270 --> 01:03:32,260
mark into the flight third stage engines

1020
01:03:47,520 --> 01:03:36,280
are operating nominally everything is

1021
01:03:55,590 --> 01:03:47,530
nominal onboard we're doing well 490

1022
01:03:57,420 --> 01:03:55,600
seconds the vehicle is stable okay all

1023
01:04:00,720 --> 01:03:57,430
everything is nominal here we're doing

1024
01:04:03,480 --> 01:04:00,730
well eight and a half minutes into the

1025
01:04:07,940 --> 01:04:03,490
flight about 15 seconds away from third

1026
01:04:15,950 --> 01:04:13,400
Patrol are nominal copy

1027
01:04:28,310 --> 01:04:15,960
we are sending by for coal and

1028
01:04:32,260 --> 01:04:28,320
everything is nominal on board and we

1029
01:04:34,910 --> 01:04:32,270
have third stage shutdown and separation

1030
01:04:37,610 --> 01:04:34,920
its confirm congratulations on the

1031
01:04:39,770 --> 01:04:37,620
nominal orbital insertion Mission

1032
01:04:42,800 --> 01:04:39,780
Control Moscow is here get you Slav is

1033
01:04:45,620 --> 01:04:42,810
here congratulations again copy all

1034
01:04:47,990 --> 01:04:45,630
thank you very much and you can see the

1035
01:04:58,030 --> 01:04:48,000
Soyuz solar arrays beginning to unfurl

1036
01:05:01,190 --> 01:04:58,040
as planned clear loud and clear as well

1037
01:05:03,560 --> 01:05:01,200
and we have confirmation of a perfect

1038
01:05:06,140 --> 01:05:03,570

solar array deploy a vanilla antennas

1039
01:05:09,860 --> 01:05:06,150
have also been deployed a text book

1040
01:05:11,750 --> 01:05:09,870
launch for Soyuz ms-13 three new space

1041
01:05:14,180 --> 01:05:11,760
explorers enroute to the International

1042
01:05:16,760 --> 01:05:14,190
Space Station 50 years to the day that

1043
01:05:25,430 --> 01:05:16,770
Neil Armstrong and Buzz Aldrin landed on

1044
01:05:29,720 --> 01:05:25,440
the moon okay we are on page 35 and

1045
01:05:31,400 --> 01:05:29,730
please perform all those steps and we

1046
01:05:46,329 --> 01:05:31,410
are standing by for the readings from

1047
01:05:55,519 --> 01:05:51,680
Moscow this is which was - and I ready

1048
01:06:00,739 --> 01:05:55,529
to copy the first reading yes we are s

1049
01:06:06,140 --> 01:06:00,749
are pressure seven nine eight will

1050
01:06:28,710 --> 01:06:06,150
pressure is eight one three assail

1051
01:06:34,440 --> 01:06:32,579
so they're there forever and at their

1052
01:06:38,099 --> 01:06:34,450
we'll need to go through the corral

1053
01:06:47,929 --> 01:06:38,109
actual is complete already copy I'm

1054
01:06:53,339 --> 01:06:52,499
you must be pretty clear that we perform

1055
01:06:56,370 --> 01:06:53,349
on three

1056
01:07:01,349 --> 01:06:56,380
do you want me to give you form three

1057
01:07:10,019 --> 01:07:01,359
Sara yes we are ready seventeen decimal

1058
01:07:18,390 --> 01:07:10,029
one eighteen seventeen nineteen two six

1059
01:07:27,719 --> 01:07:18,400
six twenty two decimal zero 21 one

1060
01:07:35,459 --> 01:07:27,729
decimal 722 three to seven twenty three

1061
01:07:41,309 --> 01:07:35,469
three to nine twenty four seventeen

1062
01:07:49,199 --> 01:07:41,319
decimal three twenty five seventeen

1063
01:07:55,410 --> 01:07:49,209

decimal seven twenty six two six six the

1064
01:08:05,349 --> 01:07:55,420
prop is eight seven is eight seven eight

1065
01:08:14,900 --> 01:08:09,880
'i'm course one test is underway copy

1066
01:08:35,800 --> 01:08:14,910
each other did you send the command from

1067
01:08:40,370 --> 01:08:38,089
this is Mission Control Houston you're

1068
01:08:42,829 --> 01:08:40,380
looking at a view from the balcony

1069
01:08:44,269 --> 01:08:42,839
camera overlooking the cavernous flight

1070
01:08:46,609 --> 01:08:44,279
control room of the Russian Mission

1071
01:08:50,870 --> 01:08:46,619
Control Center in car the off outside

1072
01:08:52,970 --> 01:08:50,880
Moscow drew Morgan Luca parmitano and

1073
01:08:55,039 --> 01:08:52,980
Alexander skorts off well on their way

1074
01:08:57,829 --> 01:08:55,049
to catch up to the International Space

1075
01:09:00,849 --> 01:08:57,839
Station after a flawless launch from the

1076
01:09:04,189 --> 01:09:00,859
Baikonur cosmodrome in Kazakhstan

1077
01:09:07,879 --> 01:09:04,199
liftoff occurring on time at 11:28 and

1078
01:09:11,720 --> 01:09:07,889
20 seconds a.m. Central time 12 28 and

1079
01:09:13,579 --> 01:09:11,730
20 seconds p.m. Eastern Time 9 28 and 20

1080
01:09:18,069 --> 01:09:13,589
seconds p.m. at the Baikonur cosmodrome

1081
01:09:21,200 --> 01:09:18,079
about an hour after sunset Soyuz ms-13

1082
01:09:24,439 --> 01:09:21,210
lifted off perfectly arced out to the

1083
01:09:27,589 --> 01:09:24,449
northeast and began its Trek an 8 minute

1084
01:09:31,089 --> 01:09:27,599
45 second journey to its preliminary

1085
01:09:33,680 --> 01:09:31,099
orbit Soyuz is now well on its way to

1086
01:09:36,379 --> 01:09:33,690
reaching the International Space Station

1087
01:09:38,510 --> 01:09:36,389
later today all of its systems in great

1088
01:09:41,300 --> 01:09:38,520

shape and Alexander skorts off the Soyuz

1089
01:09:43,490 --> 01:09:41,310
commander reporting that his crewmates

1090
01:09:47,780 --> 01:09:43,500
Drew Morgan and Luca parmitano and

1091
01:09:49,490 --> 01:09:47,790
himself all are in excellent shape so

1092
01:09:52,910 --> 01:09:49,500
with that let's take a look ahead at

1093
01:09:56,839 --> 01:09:52,920
what lies on the horizon for NASA TV

1094
01:09:59,060 --> 01:09:56,849
programming coming up Soyuz related at 3

1095
01:10:01,790 --> 01:09:59,070
p.m. Central time 4:00 p.m. Eastern Time

1096
01:10:03,410 --> 01:10:01,800
we'll have a video file a post launch

1097
01:10:05,120 --> 01:10:03,420
video file that will include all of

1098
01:10:06,950 --> 01:10:05,130
today's launch activities and post

1099
01:10:09,919 --> 01:10:06,960
launch interviews that are being

1100
01:10:11,899 --> 01:10:09,929
conducted at the Baikonur cosmodrome our

1101
01:10:13,910 --> 01:10:11,909
docking coverage rendezvous and docking

1102
01:10:16,100 --> 01:10:13,920
of these Soyuz to the F port of the

1103
01:10:19,939 --> 01:10:16,110
Zvezda service module will begin at 5:00

1104
01:10:23,290 --> 01:10:19,949
p.m. Central time 6:00 p.m. Eastern Time

1105
01:10:28,250 --> 01:10:23,300
that will lead to a docking at 5:51

1106
01:10:31,879 --> 01:10:28,260
actually 551 p.m. Central Time 651 p.m.

1107
01:10:33,620 --> 01:10:31,889
Eastern Time there will be then our

1108
01:10:35,780 --> 01:10:33,630
hatch opening coverage and the welcoming

1109
01:10:38,450 --> 01:10:35,790
ceremony that will ensue with

1110
01:10:41,270 --> 01:10:38,460
congratulatory calls from family and

1111
01:10:43,430 --> 01:10:41,280
friends in Baikonur our hatch opening

1112
01:10:45,799 --> 01:10:43,440
coverage to begin at 7:00 p.m. Central

1113
01:11:13,180 --> 01:10:45,809

time tonight hatch opening planned at

1114
01:11:17,839 --> 01:11:15,500
thank you very much thank you

1115
01:11:19,790 --> 01:11:17,849
we hope everything will go smoothly

1116
01:11:32,870 --> 01:11:19,800
we're sure of that good luck

1117
01:11:35,479 --> 01:11:32,880
Godspeed thank you you just heard

1118
01:11:37,370 --> 01:11:35,489
congratulatory words radioed up to

1119
01:11:40,100 --> 01:11:37,380
Alexander's courts off and his crewmates

1120
01:11:43,040 --> 01:11:40,110
aboard the Soyuz from the chief flight

1121
01:11:46,520 --> 01:11:43,050
director at the Russian Mission Control

1122
01:11:47,990 --> 01:11:46,530
Center of Vladimir Solovyov scores off

1123
01:11:52,009 --> 01:11:48,000
reporting that the crew is in great

1124
01:11:54,169 --> 01:11:52,019
shape the Soyuz on its way with a series

1125
01:11:57,620 --> 01:11:54,179
of pre-programmed burns over the next

1126
01:11:59,839 --> 01:11:57,630
several hours on a fast track for orbit

1127
01:12:02,209 --> 01:11:59,849
rendezvous to reach the International

1128
01:12:04,729 --> 01:12:02,219
Space Station well that will wrap up our

1129
01:12:06,500 --> 01:12:04,739
launch coverage a perfect launch on this

1130
01:12:10,669 --> 01:12:06,510
50th anniversary of the landing of

1131
01:12:12,799 --> 01:12:10,679
humans on the moon as Soyuz ms-13 drew

1132
01:12:13,370 --> 01:12:12,809
Morgan Luca parmitano and Alexander

1133
01:12:16,339 --> 01:12:13,380
Skvortsov

1134
01:12:18,140 --> 01:12:16,349
in their preliminary orbit enroute to a

1135
01:12:20,930 --> 01:12:18,150
docking to the International Space

1136
01:12:22,879 --> 01:12:20,940
Station later today we'll be back on the

1137
01:12:24,500 --> 01:12:22,889
air with you at 5:00 p.m. Central time

1138
01:12:26,600 --> 01:12:24,510

6:00 p.m. Eastern Time with our

1139
01:12:28,370 --> 01:12:26,610
rendezvous and docking coverage in the

1140
01:12:30,830 --> 01:12:28,380
meantime from all of us here at NASA on

1141
01:12:33,439 --> 01:12:30,840
this historic day in human spaceflight