1
00:00:35,990 --> 00:00:33,110
hello everyone this is the pre-launch

2
00:00:38,709 --> 00:00:36,000
news conference for jason 3. to be

3
00:00:40,229 --> 00:00:38,719
launched tomorrow spacex falcon 9 rocket

4
00:00:42,310 --> 00:00:40,239
on sunday

5
00:00:44,790 --> 00:00:42,320
january 17th

6
00:00:47,270 --> 00:00:44,800
and here to discuss the launch the

7
00:00:50,869 --> 00:00:47,280
countdown and the spacecraft

8
00:00:53,830 --> 00:00:50,879
we have beginning with our

9
00:00:56,830 --> 00:00:53,840
program manager from noaa jim silva the

10
00:01:02,310 --> 00:01:00,229
manager sandra smalley director of the

11
00:01:07,670 --> 00:01:02,320
science mission directorate joint agency

12
00:01:15,749 --> 00:01:10,550
tim dunn the nasa launch manager during

13
00:01:23,270 --> 00:01:17,910

hans koenigsmann the vice president of

14
00:01:26,710 --> 00:01:24,469
paraguay

15
00:01:28,870 --> 00:01:26,720
the jason-3 project manager from the

16
00:01:32,149 --> 00:01:28,880
nasa jet propulsion laboratory in

17
00:01:36,310 --> 00:01:34,230
and lieutenant joseph rau the launch

18
00:01:38,469 --> 00:01:36,320
weather officer for the countdown on

19
00:01:40,069 --> 00:01:38,479
sunday from the 30th operation support

20
00:01:42,310 --> 00:01:40,079
squadron

21
00:01:45,510 --> 00:01:42,320
and we'll begin first with jim silva the

22
00:01:46,870 --> 00:01:45,520
jason 3 program manager from noaa jim

23
00:01:49,030 --> 00:01:46,880
thank you george

24
00:01:49,990 --> 00:01:49,040
good afternoon and welcome to the jason

25
00:01:52,389 --> 00:01:50,000
3

26
00:01:53,990 --> 00:01:52,399
press briefing i'm jim silva

27
00:01:56,389 --> 00:01:54,000
program manager for noaa and i'm

28
00:01:58,149 --> 00:01:56,399
actually very thrilled to be here just

29
00:01:59,429 --> 00:01:58,159
two days before launch we've been

30
00:02:00,870 --> 00:01:59,439
waiting for this

31
00:02:03,670 --> 00:02:00,880
launch for

32
00:02:05,910 --> 00:02:03,680
well over two years now

33
00:02:08,389 --> 00:02:05,920
this mission could not be possible

34
00:02:09,430 --> 00:02:08,399
without the productive collaboration

35
00:02:12,630 --> 00:02:09,440
between

36
00:02:14,869 --> 00:02:12,640
noaa and its partners umetsat the french

37
00:02:17,430 --> 00:02:14,879
space agency canes

38
00:02:20,309 --> 00:02:17,440

and nasa

39
00:02:23,430 --> 00:02:20,319
noaa provides the launch vehicle

40
00:02:25,910 --> 00:02:23,440
the launch services

41
00:02:27,589 --> 00:02:25,920
three instruments on the json-3

42
00:02:29,589 --> 00:02:27,599
spacecraft

43
00:02:31,670 --> 00:02:29,599
all through a reimbursable agreement

44
00:02:34,309 --> 00:02:31,680
with nasa

45
00:02:37,110 --> 00:02:34,319
noaa is also responsible for operating

46
00:02:39,110 --> 00:02:37,120
the ground stations in alaska

47
00:02:42,710 --> 00:02:39,120
and virginia

48
00:02:45,670 --> 00:02:42,720
for routine spacecraft operations

49
00:02:48,869 --> 00:02:45,680
and for operational data processing data

50
00:02:50,550 --> 00:02:48,879
archive and distribution

51
00:02:52,630 --> 00:02:50,560
all of the

52
00:02:54,470 --> 00:02:52,640
three things that i just mentioned

53
00:02:57,430 --> 00:02:54,480
are delivered by

54
00:02:59,910 --> 00:02:57,440
the noaa satellite operations facility

55
00:03:03,270 --> 00:02:59,920
in suitland maryland

56
00:03:05,750 --> 00:03:03,280
we also provide user services for our

57
00:03:10,790 --> 00:03:05,760
partner jpl who are going to be

58
00:03:11,589 --> 00:03:10,800
monitoring the us instruments on json3

59
00:03:14,550 --> 00:03:11,599
and

60
00:03:17,990 --> 00:03:14,560
with our partner overseas umetset the

61
00:03:20,710 --> 00:03:18,000
european operational processing center

62
00:03:23,110 --> 00:03:20,720
for json data

63
00:03:25,430 --> 00:03:23,120

i'd like to go over the mission

64
00:03:27,350 --> 00:03:25,440
overview

65
00:03:31,270 --> 00:03:27,360
in my opinion

66
00:03:33,750 --> 00:03:31,280
json3 and its three predecessors

67
00:03:35,350 --> 00:03:33,760
topics poseidon

68
00:03:38,309 --> 00:03:35,360
jason 1

69
00:03:41,350 --> 00:03:38,319
and jason 2

70
00:03:44,630 --> 00:03:41,360
provide the most accurate measurements

71
00:03:47,910 --> 00:03:44,640
of global sea surface heights

72
00:03:51,990 --> 00:03:47,920
think of it a satellite that is orbiting

73
00:03:54,470 --> 00:03:52,000
the earth more than 1300 kilometers away

74
00:03:55,509 --> 00:03:54,480
is able to tell us the height of the sea

75
00:03:58,830 --> 00:03:55,519
surface

76
00:04:01,750 --> 00:03:58,840
with an accuracy of less than two

77
00:04:05,509 --> 00:04:01,760
inches paraphrase from charlotte's web

78
00:04:10,309 --> 00:04:07,110
its primary mission

79
00:04:14,390 --> 00:04:10,319
is to determine ocean circulation

80
00:04:19,830 --> 00:04:15,910
let me speak about some of the

81
00:04:21,430 --> 00:04:19,840
operational benefits of this mission

82
00:04:23,670 --> 00:04:21,440
our colleagues in the national weather

83
00:04:27,350 --> 00:04:23,680
service

84
00:04:29,510 --> 00:04:27,360
run a environmental prediction center

85
00:04:32,710 --> 00:04:29,520
there are actually seven of them and

86
00:04:36,550 --> 00:04:32,720
three of those make use of altimetry

87
00:04:36,560 --> 00:04:39,590
in near real time

88
00:04:45,830 --> 00:04:43,749

for instance the ocean prediction center

89
00:04:48,390 --> 00:04:45,840
is able to collect

90
00:04:50,950 --> 00:04:48,400
significant wave heights

91
00:04:56,310 --> 00:04:52,469
wind speed

92
00:04:57,670 --> 00:04:56,320
from the jason-3

93
00:04:59,990 --> 00:04:57,680
operational

94
00:05:01,990 --> 00:05:00,000
geophysical data records which are the

95
00:05:03,510 --> 00:05:02,000
uh the new real-time products that we

96
00:05:05,830 --> 00:05:03,520
delivered to them

97
00:05:07,909 --> 00:05:05,840
and they're able to

98
00:05:12,150 --> 00:05:07,919
forecast the

99
00:05:14,230 --> 00:05:12,160
waves around the globe to provide

100
00:05:18,790 --> 00:05:14,240
particularly significant waves and wind

101
00:05:26,150 --> 00:05:23,189
safety and that provide for maritime

102
00:05:28,710 --> 00:05:26,160
safety so

103
00:05:31,670 --> 00:05:28,720
the the other centers are the climate

104
00:05:32,469 --> 00:05:31,680
prediction center which uses

105
00:05:34,629 --> 00:05:32,479
the

106
00:05:37,430 --> 00:05:34,639
observations from el nino

107
00:05:39,110 --> 00:05:37,440
to depict uh the extent

108
00:05:40,150 --> 00:05:39,120
of the l

109
00:05:43,749 --> 00:05:40,160
the

110
00:05:46,230 --> 00:05:43,759
is affecting

111
00:05:49,990 --> 00:05:46,240
the weather patterns not just in this

112
00:05:53,590 --> 00:05:51,590
the other center that makes use of our

113
00:05:54,469 --> 00:05:53,600

data is the environmental modeling

114
00:05:56,710 --> 00:05:54,479
center

115
00:05:58,550 --> 00:05:56,720
these are this is the group at noaa that

116
00:06:00,629 --> 00:05:58,560
forecasts the weather three to seven

117
00:06:03,510 --> 00:06:00,639
days in advance

118
00:06:07,029 --> 00:06:03,520
they use the um

119
00:06:08,870 --> 00:06:07,039
hot spots depicted by

120
00:06:11,270 --> 00:06:08,880
the altimetry data

121
00:06:13,270 --> 00:06:11,280
to be able to detect

122
00:06:15,990 --> 00:06:13,280
where the

123
00:06:18,469 --> 00:06:16,000
these areas are in the oceans

124
00:06:20,230 --> 00:06:18,479
and be able to

125
00:06:23,110 --> 00:06:20,240
forecast

126
00:06:28,150 --> 00:06:23,120
the intensification of tropical storms

127
00:06:32,469 --> 00:06:30,150
those are just three examples of the

128
00:06:35,909 --> 00:06:32,479
operational uses of the data

129
00:06:36,950 --> 00:06:35,919
the navy also uses significant wave

130
00:06:39,590 --> 00:06:36,960
heights

131
00:06:42,550 --> 00:06:39,600
and sea surface winds

132
00:06:45,830 --> 00:06:42,560
to be able to provide for safe maritime

133
00:06:50,870 --> 00:06:49,589
one of the advantages of json3 over its

134
00:06:54,390 --> 00:06:50,880
predecessors

135
00:06:57,110 --> 00:06:54,400
is through improved science algorithms

136
00:06:59,029 --> 00:06:57,120
we can generate

137
00:07:00,710 --> 00:06:59,039
sea surface

138
00:07:04,550 --> 00:07:00,720

excuse me

139
00:07:07,589 --> 00:07:04,560
wind speed and current much closer to

140
00:07:10,230 --> 00:07:07,599
our shorelines than we did in the past

141
00:07:12,390 --> 00:07:10,240
in the past we were able to detect

142
00:07:15,029 --> 00:07:12,400
these features approximately 10

143
00:07:18,550 --> 00:07:15,039
kilometers away from our shorelines

144
00:07:21,189 --> 00:07:18,560
with this the improved algorithms we're

145
00:07:23,749 --> 00:07:21,199
able to do this one kilometer away

146
00:07:27,350 --> 00:07:23,759
that's a significant advantage over our

147
00:07:30,070 --> 00:07:27,360
predecessors particularly in providing

148
00:07:37,990 --> 00:07:30,080
for search and rescue services in case

149
00:07:41,189 --> 00:07:39,029
so

150
00:07:42,790 --> 00:07:41,199
noah could not have accomplished this

151
00:07:45,909 --> 00:07:42,800
mission

152
00:07:49,110 --> 00:07:45,919
without the help of our partners

153
00:07:51,270 --> 00:07:49,120
i want to extend my sincere appreciation

154
00:07:54,550 --> 00:07:51,280
to nasa umezad

155
00:07:57,110 --> 00:07:54,560
and canes for their support

156
00:07:59,350 --> 00:07:57,120
noah is ready for launch

157
00:08:01,189 --> 00:07:59,360
go jason 3.

158
00:08:03,589 --> 00:08:01,199
thank you jim

159
00:08:05,670 --> 00:08:03,599
now to sandra smalley director of the

160
00:08:07,990 --> 00:08:05,680
science mission director joint agency

161
00:08:09,430 --> 00:08:08,000
satellite division at nasa headquarters

162
00:08:11,830 --> 00:08:09,440
sandra

163
00:08:13,589 --> 00:08:11,840

good afternoon everybody i too am really

164
00:08:15,189 --> 00:08:13,599
excited about this mission and looking

165
00:08:18,070 --> 00:08:15,199
forward to launch and successful

166
00:08:20,070 --> 00:08:18,080
operations on sunday i want to commend

167
00:08:21,670 --> 00:08:20,080
the team congratulate them for the hard

168
00:08:24,390 --> 00:08:21,680
work and the outstanding job they've

169
00:08:27,430 --> 00:08:24,400
done to get the team to this point ready

170
00:08:30,070 --> 00:08:27,440
to launch and operate

171
00:08:32,949 --> 00:08:30,080
nasa has long used space as a unique

172
00:08:34,469 --> 00:08:32,959
vantage point to understand and increase

173
00:08:37,750 --> 00:08:34,479
our understanding

174
00:08:39,430 --> 00:08:37,760
of our home planet improve our lives and

175
00:08:41,750 --> 00:08:39,440
safeguard our future

176
00:08:43,509 --> 00:08:41,760
the joint agency satellite division

177
00:08:44,630 --> 00:08:43,519
within the science mission director at

178
00:08:47,990 --> 00:08:44,640
nasa

179
00:08:50,630 --> 00:08:48,000
serves a unique role we support partner

180
00:08:51,670 --> 00:08:50,640
organizations and bring to bear nasa's

181
00:08:54,070 --> 00:08:51,680
unique

182
00:08:56,470 --> 00:08:54,080
expertise in space and scientific

183
00:08:57,910 --> 00:08:56,480
exploration to support services such as

184
00:08:59,990 --> 00:08:57,920
weather prediction

185
00:09:01,829 --> 00:09:00,000
and and resources management natural

186
00:09:03,590 --> 00:09:01,839
resources management

187
00:09:05,430 --> 00:09:03,600
our division's unique role is to serve

188
00:09:06,790 --> 00:09:05,440

as the acquisition agent for these

189
00:09:08,470 --> 00:09:06,800
organizations

190
00:09:10,710 --> 00:09:08,480
for jason 3

191
00:09:12,389 --> 00:09:10,720
we facilitated access to nasa's

192
00:09:14,949 --> 00:09:12,399
expertise at the jet propulsion

193
00:09:17,190 --> 00:09:14,959
laboratory in pasadena california and

194
00:09:19,670 --> 00:09:17,200
the launch services program

195
00:09:21,269 --> 00:09:19,680
at kennedy space center to support both

196
00:09:24,550 --> 00:09:21,279
instrument development project

197
00:09:26,310 --> 00:09:24,560
management and launch services support

198
00:09:28,470 --> 00:09:26,320
the earth science division within the

199
00:09:30,710 --> 00:09:28,480
science mission director also plays a

200
00:09:32,630 --> 00:09:30,720
very important role by advancing

201
00:09:35,350 --> 00:09:32,640
scientific understanding of earth

202
00:09:38,389 --> 00:09:35,360
systems in its response to natural and

203
00:09:40,630 --> 00:09:38,399
human induced changes to improve

204
00:09:43,670 --> 00:09:40,640
prediction of climate and weather and

205
00:09:46,790 --> 00:09:43,680
national natural hazards

206
00:09:49,030 --> 00:09:46,800
the division the esd division provides

207
00:09:52,230 --> 00:09:49,040
financial support to the mission and

208
00:09:55,350 --> 00:09:52,240
co-leads with canes the ocean surface

209
00:09:57,509 --> 00:09:55,360
topology science team

210
00:09:59,910 --> 00:09:57,519
jason-3 will extend the multi-decadal

211
00:10:02,550 --> 00:09:59,920
data set provided by its predecessor

212
00:10:05,350 --> 00:10:02,560
missions to improve upon critical global

213
00:10:07,670 --> 00:10:05,360

sea surface levels wave height and wind

214
00:10:09,670 --> 00:10:07,680
speed measurements

215
00:10:12,790 --> 00:10:09,680
jason 3 provides a continuity of the

216
00:10:16,069 --> 00:10:12,800
ocean altimetry data from monitoring the

217
00:10:17,990 --> 00:10:16,079
sea level rise globally

218
00:10:19,910 --> 00:10:18,000
building and launching jason 3 has been

219
00:10:22,230 --> 00:10:19,920
an incredible demonstration of

220
00:10:24,630 --> 00:10:22,240
international partnership as you can see

221
00:10:26,550 --> 00:10:24,640
on the slide

222
00:10:29,269 --> 00:10:26,560
it depicts each organization's

223
00:10:32,310 --> 00:10:29,279
contributions to the mission

224
00:10:34,630 --> 00:10:32,320
this is an international cooperation

225
00:10:37,990 --> 00:10:34,640
in which noaa is partnering with nasa

226
00:10:40,550 --> 00:10:38,000
yumet sat and canes no one met sat are

227
00:10:42,790 --> 00:10:40,560
providing the lead to this mission

228
00:10:45,269 --> 00:10:42,800
canes provides the spacecraft and three

229
00:10:47,190 --> 00:10:45,279
instruments similarly nasa and the jet

230
00:10:48,870 --> 00:10:47,200
propulsion laboratory are also providing

231
00:10:51,269 --> 00:10:48,880
three instruments

232
00:10:53,190 --> 00:10:51,279
the launch services program provided the

233
00:10:55,269 --> 00:10:53,200
spacex falcon 9

234
00:10:56,470 --> 00:10:55,279
launch vehicle and launch support to the

235
00:10:58,870 --> 00:10:56,480
mission

236
00:11:00,790 --> 00:10:58,880
i joined the team in august of 2015 so

237
00:11:03,030 --> 00:11:00,800
i'm probably the newest member and i

238
00:11:05,190 --> 00:11:03,040

have to say it really has been

239
00:11:07,509 --> 00:11:05,200
an incredible

240
00:11:09,110 --> 00:11:07,519
opportunity for me and it's showed me

241
00:11:12,870 --> 00:11:09,120
what a tremendous cooperation and

242
00:11:17,269 --> 00:11:15,110
the spacex team and the launch services

243
00:11:20,150 --> 00:11:17,279
program have worked diligently hand in

244
00:11:22,630 --> 00:11:20,160
hand to ensure return to flight and our

245
00:11:24,630 --> 00:11:22,640
european partners and our u.s partners

246
00:11:25,750 --> 00:11:24,640
have worked collegially to ensure we

247
00:11:28,310 --> 00:11:25,760
overcome

248
00:11:30,710 --> 00:11:28,320
overcame any obstacle that we were faced

249
00:11:32,230 --> 00:11:30,720
so we're ready to launch on sunday

250
00:11:36,949 --> 00:11:32,240
i'm really looking forward to it i'm

251
00:11:38,949 --> 00:11:36,959
excited about it go jason 3 go falcon 9.

252
00:11:40,870 --> 00:11:38,959
thank you sandra

253
00:11:43,509 --> 00:11:40,880
now to tim dunn from the launch services

254
00:11:45,509 --> 00:11:43,519
program at kennedy space center and he

255
00:11:48,230 --> 00:11:45,519
is the nasa launch manager during the

256
00:11:49,829 --> 00:11:48,240
countdown on sunday tim

257
00:11:51,670 --> 00:11:49,839
thank you george

258
00:11:53,750 --> 00:11:51,680
i'm proud to be here today representing

259
00:11:55,670 --> 00:11:53,760
the men and women of nasa's launch

260
00:11:57,269 --> 00:11:55,680
services program

261
00:11:59,350 --> 00:11:57,279
i'm the nasa launch manager for the

262
00:12:01,030 --> 00:11:59,360
jason-3 mission and i'm thrilled to

263
00:12:03,990 --> 00:12:01,040

serve as the launch director for a

264
00:12:06,550 --> 00:12:04,000
falcon 9 launched nasa spacecraft that

265
00:12:09,190 --> 00:12:06,560
will provide ultra precise sea surface

266
00:12:11,430 --> 00:12:09,200
height worldwide

267
00:12:13,350 --> 00:12:11,440
after successful launches over the past

268
00:12:16,150 --> 00:12:13,360
two years here at vandenberg air force

269
00:12:18,550 --> 00:12:16,160
base the nasa launch team is back on the

270
00:12:21,829 --> 00:12:18,560
central california coast

271
00:12:24,230 --> 00:12:21,839
jason 3 is the first nasa lsp mission to

272
00:12:27,670 --> 00:12:24,240
launch on a falcon 9 vehicle and will

273
00:12:30,629 --> 00:12:27,680
depart earth from space launch complex 4

274
00:12:32,870 --> 00:12:30,639
the pad we call slick 4.

275
00:12:34,470 --> 00:12:32,880
i'd like to recognize the falcon 9 jason

276
00:12:36,629 --> 00:12:34,480
3 launch team

277
00:12:39,670 --> 00:12:36,639
spacex nasa

278
00:12:42,790 --> 00:12:39,680
jpl noah caness

279
00:12:45,350 --> 00:12:42,800
and the air force's 30th space wing

280
00:12:46,389 --> 00:12:45,360
this assembled group of professionals is

281
00:12:49,350 --> 00:12:46,399
brilliant

282
00:12:51,430 --> 00:12:49,360
and absolutely enjoyable to work with

283
00:12:53,829 --> 00:12:51,440
i am blessed to call myself a member of

284
00:12:55,829 --> 00:12:53,839
this team

285
00:12:57,750 --> 00:12:55,839
over the past few weeks the falcon 9

286
00:12:59,269 --> 00:12:57,760
team has been busy with final launch

287
00:13:01,509 --> 00:12:59,279
preparations

288
00:13:03,430 --> 00:13:01,519

last week we performed a successful

289
00:13:05,590 --> 00:13:03,440
mission dress rehearsal

290
00:13:08,310 --> 00:13:05,600
and then encapsulated the jason-3

291
00:13:11,030 --> 00:13:08,320
spacecraft inside its protective shroud

292
00:13:13,430 --> 00:13:11,040
what we call the payload fairing

293
00:13:15,670 --> 00:13:13,440
last friday the combined launch team

294
00:13:17,990 --> 00:13:15,680
held the flight readiness review

295
00:13:21,030 --> 00:13:18,000
we assessed all preparations to date of

296
00:13:24,470 --> 00:13:21,040
the rocket range and facility assets and

297
00:13:26,310 --> 00:13:24,480
the readiness of the jason-3 spacecraft

298
00:13:28,550 --> 00:13:26,320
earlier this week the combined launch

299
00:13:31,430 --> 00:13:28,560
team performed a successful engine

300
00:13:35,190 --> 00:13:31,440
ignition and seven second firing of all

301
00:13:37,190 --> 00:13:35,200
nine of falcon 9's first stage engines

302
00:13:39,189 --> 00:13:37,200
the team then returned the rocket to its

303
00:13:41,509 --> 00:13:39,199
hangar where it was joined to the

304
00:13:43,430 --> 00:13:41,519
spacecraft

305
00:13:45,030 --> 00:13:43,440
just this morning we held the launch

306
00:13:47,509 --> 00:13:45,040
readiness review

307
00:13:50,710 --> 00:13:47,519
where we received approval from senior

308
00:13:53,350 --> 00:13:50,720
nasa noaa and spacex management as well

309
00:13:55,829 --> 00:13:53,360
as spacecraft and range agencies to

310
00:13:57,750 --> 00:13:55,839
continue processing toward countdown

311
00:13:59,910 --> 00:13:57,760
sunday morning

312
00:14:02,230 --> 00:13:59,920
at slick4 today we began the process of

313
00:14:04,470 --> 00:14:02,240

final launch preparations by rolling the

314
00:14:07,189 --> 00:14:04,480
rocket out to the pad deck

315
00:14:10,230 --> 00:14:07,199
tomorrow we will erect the falcon 9 to

316
00:14:12,470 --> 00:14:10,240
its vertical launch position

317
00:14:14,470 --> 00:14:12,480
just two days from now the launch team

318
00:14:16,230 --> 00:14:14,480
will arrive on console in the early

319
00:14:19,030 --> 00:14:16,240
sunday morning hours to perform the

320
00:14:20,710 --> 00:14:19,040
final preparations of pressurization and

321
00:14:22,230 --> 00:14:20,720
vehicle checkouts

322
00:14:23,590 --> 00:14:22,240
the launch team will be polled for

323
00:14:26,710 --> 00:14:23,600
concurrence to load the rocket

324
00:14:28,710 --> 00:14:26,720
propellants about 6 30 am

325
00:14:31,110 --> 00:14:28,720
rp1 kerosene will be loaded into the

326
00:14:33,750 --> 00:14:31,120
first and second stage fuel tanks

327
00:14:36,870 --> 00:14:33,760
followed by liquid oxygen loading on

328
00:14:39,030 --> 00:14:36,880
both stages at about 8 am

329
00:14:39,910 --> 00:14:39,040
after a series of final launch vehicle

330
00:14:43,110 --> 00:14:39,920
checks

331
00:14:46,870 --> 00:14:43,120
we will be ready for launch at 10 42 and

332
00:14:49,910 --> 00:14:46,880
18 seconds am pacific time with a 30

333
00:14:53,350 --> 00:14:49,920
second launch window

334
00:14:55,750 --> 00:14:53,360
i'd like to take a personal note here

335
00:14:58,470 --> 00:14:55,760
and tell you that one of my biggest

336
00:15:01,269 --> 00:14:58,480
cheerleaders for space launch in this

337
00:15:03,350 --> 00:15:01,279
role that i have was my dear aunt

338
00:15:04,629 --> 00:15:03,360

that we lost from our family this past

339
00:15:06,310 --> 00:15:04,639
month

340
00:15:07,990 --> 00:15:06,320
so when i get to this point in a launch

341
00:15:09,350 --> 00:15:08,000
countdown i always think of her we

342
00:15:11,189 --> 00:15:09,360
called her nune

343
00:15:13,430 --> 00:15:11,199
and i loved her dearly

344
00:15:15,509 --> 00:15:13,440
and some things that i would take for

345
00:15:17,269 --> 00:15:15,519
granted i would pick up the phone when i

346
00:15:19,030 --> 00:15:17,279
got home to florida after a launch

347
00:15:21,350 --> 00:15:19,040
campaign or when i was visiting her in

348
00:15:24,069 --> 00:15:21,360
alabama and she would go on about what

349
00:15:26,550 --> 00:15:24,079
an amazing job that that launch team

350
00:15:28,949 --> 00:15:26,560
must do and how in the world do you do

351
00:15:30,949 --> 00:15:28,959
all those things and i would try to play

352
00:15:31,990 --> 00:15:30,959
it play it down that you know it's just

353
00:15:34,389 --> 00:15:32,000
our job

354
00:15:36,629 --> 00:15:34,399
but this time when i came out for this

355
00:15:40,150 --> 00:15:36,639
campaign and i'm sitting here today it

356
00:15:42,150 --> 00:15:40,160
really is amazing work that we do and if

357
00:15:43,829 --> 00:15:42,160
i have a message if there's the next

358
00:15:45,910 --> 00:15:43,839
generation of a launch team that's

359
00:15:48,949 --> 00:15:45,920
watching us right now

360
00:15:51,590 --> 00:15:48,959
this is amazing work it's very hard work

361
00:15:53,910 --> 00:15:51,600
but it's very satisfying it's thrilling

362
00:15:55,749 --> 00:15:53,920
and you'll never regret if you choose a

363
00:15:57,430 --> 00:15:55,759

career in space launch

364
00:15:59,110 --> 00:15:57,440
putting these wonderful spacecraft on

365
00:16:00,870 --> 00:15:59,120
orbit

366
00:16:03,189 --> 00:16:00,880
so i'd like to summarize by saying the

367
00:16:05,030 --> 00:16:03,199
falcon 9 rocket and the jason-3

368
00:16:07,110 --> 00:16:05,040
spacecraft are ready

369
00:16:08,870 --> 00:16:07,120
the launch team is prepared and excited

370
00:16:10,470 --> 00:16:08,880
to be here at vandenberg

371
00:16:13,269 --> 00:16:10,480
and we're poised to launch this

372
00:16:16,069 --> 00:16:13,279
important mission for our nation

373
00:16:17,990 --> 00:16:16,079
back to you george thank you tim

374
00:16:19,590 --> 00:16:18,000
and now to hans koenigsmann the vice

375
00:16:22,790 --> 00:16:19,600
president of mission assurance for

376
00:16:25,030 --> 00:16:22,800
spacex from hawthorne california hans

377
00:16:27,030 --> 00:16:25,040
good afternoon thank you and um i just

378
00:16:28,870 --> 00:16:27,040
want to follow on i'm i'm happy to be uh

379
00:16:31,189 --> 00:16:28,880
back in vandenberg um

380
00:16:33,269 --> 00:16:31,199
we uh we launched um two and a half

381
00:16:35,509 --> 00:16:33,279
years ago um the basically first falcon

382
00:16:38,150 --> 00:16:35,519
1.1 from here we're going to launch

383
00:16:40,150 --> 00:16:38,160
another run on sunday morning and i'm

384
00:16:42,310 --> 00:16:40,160
really excited about this partly also

385
00:16:45,509 --> 00:16:42,320
because this is our first

386
00:16:47,670 --> 00:16:45,519
nls nasa mission and partly also because

387
00:16:49,590 --> 00:16:47,680
this is a really big science mission of

388
00:16:51,430 --> 00:16:49,600

a really amazing

389
00:16:53,350 --> 00:16:51,440
spacecraft um

390
00:16:55,350 --> 00:16:53,360
continuous spacecraft measurements

391
00:16:57,749 --> 00:16:55,360
basically that are that are extremely

392
00:17:00,310 --> 00:16:57,759
important in science and and uh you know

393
00:17:03,430 --> 00:17:00,320
for the rest of us too so um

394
00:17:05,829 --> 00:17:03,440
overall i'm really happy to to continue

395
00:17:07,990 --> 00:17:05,839
into this launch um

396
00:17:11,029 --> 00:17:08,000
the uh falcon 9 vehicle is doing very

397
00:17:13,189 --> 00:17:11,039
very well um we had as tim pointed out

398
00:17:14,870 --> 00:17:13,199
we had a static fire on

399
00:17:17,590 --> 00:17:14,880
i think it was monday

400
00:17:19,429 --> 00:17:17,600
the the days kind of blur into uh into

401
00:17:21,429 --> 00:17:19,439
run on launch campaigns so it's really

402
00:17:23,350 --> 00:17:21,439
hard to tell what day you're on but it

403
00:17:25,829 --> 00:17:23,360
was on monday um we did some data review

404
00:17:27,990 --> 00:17:25,839
after that we concluded everything is uh

405
00:17:30,470 --> 00:17:28,000
it's in great shape and the vehicle is

406
00:17:32,390 --> 00:17:30,480
really ready to go

407
00:17:34,070 --> 00:17:32,400
we then reviewed again this morning and

408
00:17:34,950 --> 00:17:34,080
uh came out that we should proceed to

409
00:17:36,950 --> 00:17:34,960
launch

410
00:17:38,630 --> 00:17:36,960
uh we um

411
00:17:40,870 --> 00:17:38,640
and i'm actually i'm coming i'm straight

412
00:17:43,270 --> 00:17:40,880
from the the launch pad um i took a look

413
00:17:45,029 --> 00:17:43,280

at the vehicle kicked the tires um off

414
00:17:47,350 --> 00:17:45,039
the te

415
00:17:48,950 --> 00:17:47,360
and uh i can say this is a great looking

416
00:17:50,630 --> 00:17:48,960
vehicle um

417
00:17:53,110 --> 00:17:50,640
everything is in in working order and

418
00:17:55,750 --> 00:17:53,120
i'm looking forward to the launch on uh

419
00:17:58,549 --> 00:17:55,760
on sunday sunday early in the well

420
00:18:00,230 --> 00:17:58,559
the the launch is an at a good time the

421
00:18:01,669 --> 00:18:00,240
countdown will start really early in the

422
00:18:05,909 --> 00:18:01,679
morning of course

423
00:18:08,549 --> 00:18:07,430
all right

424
00:18:11,510 --> 00:18:08,559
okay

425
00:18:13,990 --> 00:18:11,520
thank you hans and now to parag fosei

426
00:18:16,230 --> 00:18:14,000
the jason-3 project manager from nasa's

427
00:18:18,150 --> 00:18:16,240
jet propulsion laboratory

428
00:18:21,190 --> 00:18:18,160
thank you george um just to pick up

429
00:18:23,110 --> 00:18:21,200
where uh hans left off first i want to i

430
00:18:25,430 --> 00:18:23,120
want to thank the spacex team for

431
00:18:26,310 --> 00:18:25,440
building uh such a incredible rocket

432
00:18:29,430 --> 00:18:26,320
it's

433
00:18:30,950 --> 00:18:29,440
an amazing vehicle and we're looking to

434
00:18:32,710 --> 00:18:30,960
uh forward to getting off the ground and

435
00:18:33,909 --> 00:18:32,720
getting into space it's a it's a long

436
00:18:35,909 --> 00:18:33,919
time coming

437
00:18:37,029 --> 00:18:35,919
um we've been working on this project

438
00:18:39,190 --> 00:18:37,039

personally i've been working on this

439
00:18:42,630 --> 00:18:39,200
project since 2007

440
00:18:45,110 --> 00:18:42,640
and so i'm excited and the team has has

441
00:18:47,909 --> 00:18:45,120
stayed together uh at all four partner

442
00:18:50,710 --> 00:18:47,919
levels and and working hard to to get

443
00:18:53,029 --> 00:18:50,720
the rocket and the spacecraft uh in

444
00:18:54,710 --> 00:18:53,039
orbit and producing data so let me tell

445
00:18:56,310 --> 00:18:54,720
you a little bit about the background of

446
00:18:57,990 --> 00:18:56,320
the mission if we can go to the first

447
00:18:58,950 --> 00:18:58,000
chart

448
00:19:03,669 --> 00:18:58,960
so

449
00:19:06,230 --> 00:19:03,679
is the next in a series of highly

450
00:19:07,270 --> 00:19:06,240
successful ocean surface topography

451
00:19:09,430 --> 00:19:07,280
measuring

452
00:19:12,950 --> 00:19:09,440
satellites started by the topex poseidon

453
00:19:13,830 --> 00:19:12,960
mission in 1992 then jason won jason ii

454
00:19:18,150 --> 00:19:13,840
and

455
00:19:20,070 --> 00:19:18,160
up with more creative names

456
00:19:21,350 --> 00:19:20,080
we didn't but uh

457
00:19:24,070 --> 00:19:21,360
this was

458
00:19:26,870 --> 00:19:24,080
to indicate the real strong sense of

459
00:19:29,350 --> 00:19:26,880
continuity uh and uh in the measurement

460
00:19:31,909 --> 00:19:29,360
that we're uh we're trying to

461
00:19:34,710 --> 00:19:31,919
continue on uh and extend past this

462
00:19:36,070 --> 00:19:34,720
existing 20-year record that we have

463
00:19:37,430 --> 00:19:36,080

so let me uh

464
00:19:40,630 --> 00:19:37,440
show you on the next slide a little bit

465
00:19:42,789 --> 00:19:40,640
about how the measurement is is done

466
00:19:44,310 --> 00:19:42,799
we've used this graphic now for

467
00:19:47,029 --> 00:19:44,320
20 years

468
00:19:49,110 --> 00:19:47,039
since almost topex poseidon so the the

469
00:19:50,070 --> 00:19:49,120
measurement principle is rather simple

470
00:19:51,350 --> 00:19:50,080
we have

471
00:19:53,029 --> 00:19:51,360
a rf

472
00:19:55,110 --> 00:19:53,039
essentially a radio signal that's

473
00:19:57,430 --> 00:19:55,120
transmitted from the satellite bounces

474
00:19:58,870 --> 00:19:57,440
off the surface of the ocean we measure

475
00:20:00,710 --> 00:19:58,880
how long it takes

476
00:20:03,029 --> 00:20:00,720
the other thing we need to know is

477
00:20:04,230 --> 00:20:03,039
very precisely is what's the position of

478
00:20:06,149 --> 00:20:04,240
the satellite

479
00:20:09,110 --> 00:20:06,159
once you know those things and you do

480
00:20:11,750 --> 00:20:09,120
some fancy math you can come up with

481
00:20:13,110 --> 00:20:11,760
the sea surface height

482
00:20:14,870 --> 00:20:13,120
sounds easy

483
00:20:17,190 --> 00:20:14,880
nice cartoon

484
00:20:20,310 --> 00:20:17,200
to actually build it we really need a

485
00:20:23,029 --> 00:20:20,320
set of sophisticated instruments

486
00:20:25,430 --> 00:20:23,039
if as jim mentioned before

487
00:20:26,630 --> 00:20:25,440
i like to tell people that you know this

488
00:20:28,950 --> 00:20:26,640

is not your

489
00:20:31,029 --> 00:20:28,960
your car gps receiver that we're flying

490
00:20:34,230 --> 00:20:31,039
for example uh we're we're trying to

491
00:20:36,630 --> 00:20:34,240
take a measurement from 1300 kilometers

492
00:20:38,149 --> 00:20:36,640
we're flying six kilometers per second

493
00:20:40,710 --> 00:20:38,159
and we're measuring the sea surface

494
00:20:43,510 --> 00:20:40,720
height to about four centimeters so

495
00:20:45,430 --> 00:20:43,520
this is a set of uh requires a set of

496
00:20:47,590 --> 00:20:45,440
very sophisticated instruments

497
00:20:50,149 --> 00:20:47,600
um i'll just point out a couple of them

498
00:20:52,230 --> 00:20:50,159
to you on this beautiful model of the

499
00:20:55,909 --> 00:20:52,240
satellite i can lift it up because the

500
00:20:58,390 --> 00:20:55,919
real satellite weighs 500 kilos uh and

501
00:20:59,909 --> 00:20:58,400
and our babies in the

502
00:21:00,950 --> 00:20:59,919
attach the rocket so i can't show you

503
00:21:01,669 --> 00:21:00,960
that today

504
00:21:03,350 --> 00:21:01,679
but

505
00:21:05,750 --> 00:21:03,360
this right here is the the main

506
00:21:09,029 --> 00:21:05,760
instrument uh it's the radar altimeter

507
00:21:11,029 --> 00:21:09,039
uh we've got the radiometer up here that

508
00:21:12,870 --> 00:21:11,039
does the correction for

509
00:21:14,710 --> 00:21:12,880
the radar altimeter signal as it comes

510
00:21:16,390 --> 00:21:14,720
through the clouds and then we've got a

511
00:21:18,630 --> 00:21:16,400
couple more instruments

512
00:21:19,510 --> 00:21:18,640
with the doris and gps instruments in

513
00:21:20,230 --> 00:21:19,520

the back

514
00:21:23,270 --> 00:21:20,240
that

515
00:21:24,950 --> 00:21:23,280
measure the position of the satellite

516
00:21:26,710 --> 00:21:24,960
extremely accurately

517
00:21:28,390 --> 00:21:26,720
as we're going around in in the full

518
00:21:30,070 --> 00:21:28,400
orbit

519
00:21:32,789 --> 00:21:30,080
so let me show you a little bit about

520
00:21:34,950 --> 00:21:32,799
how we got here to vandenberg and um how

521
00:21:36,549 --> 00:21:34,960
everything has progressed uh to date if

522
00:21:38,230 --> 00:21:36,559
we can roll that

523
00:21:40,549 --> 00:21:38,240
that footage

524
00:21:42,390 --> 00:21:40,559
so the the instruments are are developed

525
00:21:44,310 --> 00:21:42,400
in separate places we send them to

526
00:21:45,909 --> 00:21:44,320
france we integrate the whole satellite

527
00:21:48,310 --> 00:21:45,919
and then send it back

528
00:21:49,590 --> 00:21:48,320
here to vandenberg air force base to

529
00:21:50,630 --> 00:21:49,600
launch

530
00:21:52,390 --> 00:21:50,640
of course

531
00:21:54,950 --> 00:21:52,400
we've got a whole slew of people that

532
00:21:56,950 --> 00:21:54,960
come out here help unload the satellite

533
00:21:59,510 --> 00:21:56,960
move it into the payload processing

534
00:22:00,710 --> 00:21:59,520
facility in a nice clean

535
00:22:01,590 --> 00:22:00,720
space

536
00:22:03,430 --> 00:22:01,600
and

537
00:22:04,390 --> 00:22:03,440
then we go through a very careful

538
00:22:06,870 --> 00:22:04,400

process

539
00:22:07,750 --> 00:22:06,880
of of course unpacking the satellite

540
00:22:12,230 --> 00:22:07,760
and

541
00:22:14,549 --> 00:22:12,240
happened or or changed in the process of

542
00:22:16,310 --> 00:22:14,559
transportation between continents that

543
00:22:18,630 --> 00:22:16,320
we get over here

544
00:22:21,350 --> 00:22:18,640
we set up the whole satellite do a whole

545
00:22:23,830 --> 00:22:21,360
series of checkout tests

546
00:22:25,110 --> 00:22:23,840
very thoroughly carefully it's our last

547
00:22:26,710 --> 00:22:25,120
chance

548
00:22:29,350 --> 00:22:26,720
to check the whole satellite its

549
00:22:30,549 --> 00:22:29,360
operation i can happily say that the

550
00:22:32,789 --> 00:22:30,559
satellite

551
00:22:35,909 --> 00:22:32,799
arrived here with no issues we checked

552
00:22:38,870 --> 00:22:35,919
it here it still has no issues we've

553
00:22:41,350 --> 00:22:38,880
done the final sets of preparations

554
00:22:42,950 --> 00:22:41,360
before we've encapsulated into the

555
00:22:44,950 --> 00:22:42,960
fairing on the rocket

556
00:22:46,950 --> 00:22:44,960
and everything's

557
00:22:47,990 --> 00:22:46,960
looking very good

558
00:22:50,950 --> 00:22:48,000
so

559
00:22:52,870 --> 00:22:50,960
once we do get into space and separate

560
00:22:54,549 --> 00:22:52,880
from this beautiful rocket we want to

561
00:22:55,430 --> 00:22:54,559
start the mission let me show you a

562
00:22:57,669 --> 00:22:55,440
little bit

563
00:23:00,230 --> 00:22:57,679

in terms of an animation of what that

564
00:23:01,669 --> 00:23:00,240
would look like so as soon as we

565
00:23:03,750 --> 00:23:01,679
separate from

566
00:23:06,630 --> 00:23:03,760
from the falcon 9

567
00:23:09,029 --> 00:23:06,640
within about six minutes we'll we'll

568
00:23:11,430 --> 00:23:09,039
deploy the solar panels that'll be the

569
00:23:13,669 --> 00:23:11,440
first and most critical operation

570
00:23:14,950 --> 00:23:13,679
we want to get power onto the onto the

571
00:23:16,789 --> 00:23:14,960
satellite

572
00:23:19,029 --> 00:23:16,799
we've been charging the battery here

573
00:23:20,870 --> 00:23:19,039
continually getting ready for this and

574
00:23:22,950 --> 00:23:20,880
then we'll start basically checking out

575
00:23:26,149 --> 00:23:22,960
the whole satellite satellite will be

576
00:23:28,630 --> 00:23:26,159
stabilized and then moved into a a fine

577
00:23:31,029 --> 00:23:28,640
pointing mode pointing at the earth and

578
00:23:34,710 --> 00:23:31,039
then we'll start the full operation of

579
00:23:36,470 --> 00:23:34,720
the satellite so just to illustrate that

580
00:23:37,669 --> 00:23:36,480
that operation i have one more uh

581
00:23:40,470 --> 00:23:37,679
animation

582
00:23:42,149 --> 00:23:40,480
and um if we can roll that um i can show

583
00:23:44,789 --> 00:23:42,159
you a little bit um

584
00:23:46,950 --> 00:23:44,799
so this is purely a an animation

585
00:23:49,590 --> 00:23:46,960
notional animation so we're we're doing

586
00:23:50,390 --> 00:23:49,600
kind of a strip map of the ocean surface

587
00:23:52,310 --> 00:23:50,400
um

588
00:23:55,269 --> 00:23:52,320

the the red circle going back and forth

589
00:23:57,750 --> 00:23:55,279
is the uh is the uh nate is the radar

590
00:24:00,390 --> 00:23:57,760
altimeter that's bouncing a signal off

591
00:24:02,789 --> 00:24:00,400
the off the ocean we're collecting that

592
00:24:04,470 --> 00:24:02,799
and then basically we're orbiting doing

593
00:24:05,590 --> 00:24:04,480
a full set of orbits around the whole

594
00:24:07,990 --> 00:24:05,600
globe

595
00:24:09,269 --> 00:24:08,000
every 10 days and producing

596
00:24:11,990 --> 00:24:09,279
beautiful maps

597
00:24:14,070 --> 00:24:12,000
of the ocean weather in a sense in terms

598
00:24:15,669 --> 00:24:14,080
of the ocean circulation and the sea

599
00:24:17,510 --> 00:24:15,679
surface height so

600
00:24:19,350 --> 00:24:17,520
team is excited

601
00:24:21,430 --> 00:24:19,360
again thanks to the spacex team for

602
00:24:24,230 --> 00:24:21,440
accommodating us at vandenberg we've

603
00:24:25,110 --> 00:24:24,240
worked beautifully with the whole spacex

604
00:24:30,390 --> 00:24:25,120
team

605
00:24:32,070 --> 00:24:30,400
crews from the u.s and france it's

606
00:24:34,470 --> 00:24:32,080
worked out beautifully and very

607
00:24:36,870 --> 00:24:34,480
professionally so thank you and we're

608
00:24:38,149 --> 00:24:36,880
ready to go go jason three and go falcon

609
00:24:40,149 --> 00:24:38,159
9.

610
00:24:41,669 --> 00:24:40,159
thank you parag and we'll look now at

611
00:24:43,190 --> 00:24:41,679
the weather forecast for sunday morning

612
00:24:45,029 --> 00:24:43,200
lieutenant joseph rowland our launch

613
00:24:47,029 --> 00:24:45,039

weather officer

614
00:24:48,630 --> 00:24:47,039
thank you george so

615
00:24:50,789 --> 00:24:48,640
weather typically in january this time

616
00:24:53,110 --> 00:24:50,799
of year on the central coast california

617
00:24:55,269 --> 00:24:53,120
is noted by a shallow high pressure with

618
00:24:57,029 --> 00:24:55,279
some transiting low pressure systems

619
00:24:58,230 --> 00:24:57,039
moving through now this year it's been a

620
00:24:59,909 --> 00:24:58,240
little bit different normally we get one

621
00:25:01,269 --> 00:24:59,919
or two through throughout the season but

622
00:25:03,190 --> 00:25:01,279
of course with the el nino effects has

623
00:25:04,630 --> 00:25:03,200
been highly publicized we've had a

624
00:25:07,990 --> 00:25:04,640
couple more frontal systems moving

625
00:25:09,510 --> 00:25:08,000
through so uh moving on to the satellite

626
00:25:10,789 --> 00:25:09,520
so as you can see we're relatively clear

627
00:25:12,549 --> 00:25:10,799
here today we had a weak system move

628
00:25:14,310 --> 00:25:12,559
through last night the next system is

629
00:25:16,310 --> 00:25:14,320
off to our west we're going to see that

630
00:25:17,830 --> 00:25:16,320
move through this evening into tomorrow

631
00:25:19,909 --> 00:25:17,840
we'll see sporadic rain showers off and

632
00:25:20,870 --> 00:25:19,919
on all day saturday but behind it's high

633
00:25:22,070 --> 00:25:20,880
pressure and we're going to see that

634
00:25:23,750 --> 00:25:22,080
build in and we'll see how that plays

635
00:25:25,430 --> 00:25:23,760
out on the forecast

636
00:25:28,789 --> 00:25:25,440
so looking at the day of launch forecast

637
00:25:33,110 --> 00:25:30,870
and then here's just a another depiction

638
00:25:35,029 --> 00:25:33,120

of the satellite so looking at the day

639
00:25:36,310 --> 00:25:35,039
of launch forecast slide relatively

640
00:25:37,750 --> 00:25:36,320
benign conditions we're going to see a

641
00:25:39,669 --> 00:25:37,760
little bit of cirrus cloud ahead of the

642
00:25:41,990 --> 00:25:39,679
next system but as i said high pressure

643
00:25:43,269 --> 00:25:42,000
is going to be dominating the region in

644
00:25:44,549 --> 00:25:43,279
during that time

645
00:25:46,230 --> 00:25:44,559
visibility is going to be unrestricted

646
00:25:47,510 --> 00:25:46,240
temperatures about 56 61 degrees

647
00:25:49,510 --> 00:25:47,520
fahrenheit winds will be pretty light

648
00:25:51,269 --> 00:25:49,520
out of the west and then sea states out

649
00:25:53,430 --> 00:25:51,279
uh for a potential barge landing will be

650
00:25:55,590 --> 00:25:53,440
about 10 to 13 feet the overall

651
00:25:57,029 --> 00:25:55,600
probability of violation for the primary

652
00:25:59,750 --> 00:25:57,039
attempt is going to be zero percent with

653
00:26:05,430 --> 00:25:59,760
no constraints of concern

654
00:26:08,390 --> 00:26:06,950
as we get to the

655
00:26:09,669 --> 00:26:08,400
scrub forecast period we're actually

656
00:26:11,669 --> 00:26:09,679
going to see another funnel system kind

657
00:26:13,669 --> 00:26:11,679
of move into the region and what we're

658
00:26:15,029 --> 00:26:13,679
going to see is uh overnight sunday

659
00:26:16,789 --> 00:26:15,039
night into monday morning we're going to

660
00:26:19,269 --> 00:26:16,799
see increased increased cloud cover to

661
00:26:20,789 --> 00:26:19,279
include cumulus clouds uh as we move

662
00:26:22,549 --> 00:26:20,799
into t 0 we're looking at an overall

663
00:26:24,149 --> 00:26:22,559

probability a violation of 30 percent

664
00:26:25,669 --> 00:26:24,159
for cumulus clouds and again this for

665
00:26:27,190 --> 00:26:25,679
triggered lightning

666
00:26:28,710 --> 00:26:27,200
we're seeing some lesser probabilities

667
00:26:30,549 --> 00:26:28,720
of violation for lightning down at about

668
00:26:32,710 --> 00:26:30,559
10 as well as thick clouds and disturbed

669
00:26:35,190 --> 00:26:32,720
weather also at 10 percent winds will be

670
00:26:37,510 --> 00:26:35,200
pretty light again 230 to 260 degrees at

671
00:26:39,430 --> 00:26:37,520
8 to 10 knots and with the exception of

672
00:26:40,549 --> 00:26:39,440
the cumulus clouds and the other

673
00:26:41,909 --> 00:26:40,559
probabilities of violation that we're

674
00:26:44,710 --> 00:26:41,919
looking for

675
00:26:45,590 --> 00:26:44,720
weather is looking uh pretty decent

676
00:26:47,269 --> 00:26:45,600
and

677
00:26:48,950 --> 00:26:47,279
that concludes the weather portion

678
00:26:50,630 --> 00:26:48,960
that's all i have back to you george

679
00:26:53,029 --> 00:26:50,640
thank you turn around

680
00:26:56,710 --> 00:26:53,039
we'll take questions now we'll start

681
00:26:58,549 --> 00:26:56,720
here in the in the hangar and then

682
00:27:00,549 --> 00:26:58,559
take questions on the phone and then

683
00:27:03,430 --> 00:27:00,559
social media social media can ask

684
00:27:05,190 --> 00:27:03,440
questions by going to

685
00:27:12,149 --> 00:27:05,200
ask nasa

686
00:27:16,870 --> 00:27:14,390
hi stephen clark from space flight now a

687
00:27:18,310 --> 00:27:16,880
couple of questions one for hans um if

688
00:27:20,950 --> 00:27:18,320

you could talk about

689
00:27:22,230 --> 00:27:20,960
the drone ship landing attempt uh

690
00:27:23,990 --> 00:27:22,240
why you're going to go for the drone

691
00:27:25,990 --> 00:27:24,000
ship versus landing back on land as you

692
00:27:27,350 --> 00:27:26,000
did last month at the cape

693
00:27:28,710 --> 00:27:27,360
and and

694
00:27:31,510 --> 00:27:28,720
how you feel about the prospects for

695
00:27:34,389 --> 00:27:31,520
that and also if someone could give a

696
00:27:37,190 --> 00:27:34,399
cost for the jason 3 mission if that's

697
00:27:38,950 --> 00:27:37,200
that's doable thanks

698
00:27:41,430 --> 00:27:38,960
should i go first

699
00:27:42,310 --> 00:27:41,440
okay so um droneship landing is correct

700
00:27:46,070 --> 00:27:42,320
we

701
00:27:48,549 --> 00:27:46,080
just read the instruction

702
00:27:51,590 --> 00:27:48,559
this time for a for landing attempt and

703
00:27:53,269 --> 00:27:51,600
um it is part of a secondary mission

704
00:27:55,750 --> 00:27:53,279
um

705
00:27:58,070 --> 00:27:55,760
the reason we don't uh land on land on

706
00:28:00,070 --> 00:27:58,080
the temple land on land like we did for

707
00:28:02,070 --> 00:28:00,080
uh the last mission at the cape

708
00:28:04,549 --> 00:28:02,080
is that we do not have environmental

709
00:28:05,510 --> 00:28:04,559
approval at this point in time at this

710
00:28:07,510 --> 00:28:05,520
range

711
00:28:10,149 --> 00:28:07,520
uh that's something that we uh we will

712
00:28:12,470 --> 00:28:10,159
do in the future um future missions will

713
00:28:13,909 --> 00:28:12,480

see uh land landing hopefully

714
00:28:16,710 --> 00:28:13,919
um

715
00:28:19,510 --> 00:28:16,720
and uh currently uh things are looking

716
00:28:22,310 --> 00:28:19,520
looking good um the sea stage is uh

717
00:28:24,389 --> 00:28:22,320
it's good for surfing and a little bit a

718
00:28:26,789 --> 00:28:24,399
little bit high for landing but uh we

719
00:28:28,950 --> 00:28:26,799
don't we don't anticipate that that's

720
00:28:31,669 --> 00:28:28,960
gonna be a major problem i'm pretty

721
00:28:33,029 --> 00:28:31,679
hopeful we had a really good landing

722
00:28:34,950 --> 00:28:33,039
last time

723
00:28:38,389 --> 00:28:34,960
so things are looking good at this point

724
00:28:41,590 --> 00:28:40,389
so if i could address the question on

725
00:28:43,350 --> 00:28:41,600
the cost

726
00:28:46,310 --> 00:28:43,360
the last numbers i checked were

727
00:28:55,830 --> 00:28:46,320
approximately 180 million dollars as

728
00:29:00,549 --> 00:28:57,909
phillips loss with nasa spaceflight.com

729
00:29:02,230 --> 00:29:00,559
i think this is for mr dunn were there

730
00:29:03,830 --> 00:29:02,240
any outstanding issues coming out of the

731
00:29:07,110 --> 00:29:03,840
launch readiness review today or are you

732
00:29:08,789 --> 00:29:07,120
pretty much clean and ready to go

733
00:29:11,110 --> 00:29:08,799
so i'll take that one so the question

734
00:29:13,350 --> 00:29:11,120
was are were there any actions or

735
00:29:14,310 --> 00:29:13,360
outstanding issues coming out of lrr

736
00:29:16,710 --> 00:29:14,320
today

737
00:29:17,510 --> 00:29:16,720
and the answer there is no

738
00:29:21,830 --> 00:29:17,520

we

739
00:29:24,389 --> 00:29:21,840
leading into our flight readiness review

740
00:29:26,470 --> 00:29:24,399
a week ago the team was working those

741
00:29:28,470 --> 00:29:26,480
through flight readiness review we have

742
00:29:31,510 --> 00:29:28,480
closed those in the week between fr and

743
00:29:33,830 --> 00:29:31,520
today and we were very happy to have a

744
00:29:36,950 --> 00:29:33,840
incredibly clean spacecraft and launch

745
00:29:38,950 --> 00:29:36,960
vehicle at lr this morning

746
00:29:40,870 --> 00:29:38,960
thanks and then a question about the

747
00:29:43,110 --> 00:29:40,880
launch trajectory are you going to have

748
00:29:45,750 --> 00:29:43,120
to do any kind of a dog leg maneuver um

749
00:29:47,430 --> 00:29:45,760
off off a slick four pad um i know for

750
00:29:49,510 --> 00:29:47,440
the delta launches that you had to do

751
00:29:50,950 --> 00:29:49,520
that off the slick two pad

752
00:29:52,389 --> 00:29:50,960
thanks

753
00:29:54,549 --> 00:29:52,399
we don't we don't

754
00:29:57,350 --> 00:29:54,559
we don't do any dog legs we go straight

755
00:29:59,269 --> 00:29:57,360
into a um and i i apologize i should

756
00:30:01,430 --> 00:29:59,279
have probably um said this earlier too

757
00:30:02,389 --> 00:30:01,440
um i was missing the slide

758
00:30:06,710 --> 00:30:02,399
um

759
00:30:08,870 --> 00:30:06,720
parking it's a two burn two burn mission

760
00:30:10,950 --> 00:30:08,880
for the uh for the main mission so you

761
00:30:13,750 --> 00:30:10,960
will see the standard standard orbit

762
00:30:15,510 --> 00:30:13,760
insertion that you we always have into

763
00:30:17,510 --> 00:30:15,520

a fairly

764
00:30:20,549 --> 00:30:17,520
medium perigee and then we have a high

765
00:30:22,870 --> 00:30:20,559
apogee and at the apogee we are circular

766
00:30:24,710 --> 00:30:22,880
circularizing the orbit um

767
00:30:32,070 --> 00:30:24,720
to the uh

768
00:30:33,110 --> 00:30:32,080
13 36 right kilometers

769
00:30:34,789 --> 00:30:33,120
altitude

770
00:30:36,630 --> 00:30:34,799
and um

771
00:30:39,430 --> 00:30:36,640
and then the second stage will will

772
00:30:43,190 --> 00:30:39,440
perform at the orbit burn uh later after

773
00:30:48,710 --> 00:30:44,950
good afternoon matt cam with cbs los

774
00:30:50,310 --> 00:30:48,720
angeles um so falcon 9 1.1

775
00:30:52,710 --> 00:30:50,320
finishing her story where she started it

776
00:30:55,430 --> 00:30:52,720
here at vandenberg uh can we comment on

777
00:30:57,269 --> 00:30:55,440
the uh potential for expanding

778
00:30:58,630 --> 00:30:57,279
uh launch operations from the west coast

779
00:31:01,110 --> 00:30:58,640
now

780
00:31:02,789 --> 00:31:01,120
certainly um so i yeah this is an

781
00:31:06,149 --> 00:31:02,799
interesting observation that

782
00:31:07,190 --> 00:31:06,159
1.1 started and i think it was september

783
00:31:08,710 --> 00:31:07,200
um

784
00:31:10,789 --> 00:31:08,720
two and a half years

785
00:31:13,269 --> 00:31:10,799
two and two and a quarter years ago here

786
00:31:15,110 --> 00:31:13,279
from the uh from the west coast and um i

787
00:31:18,389 --> 00:31:15,120
do remember that launch very well

788
00:31:20,149 --> 00:31:18,399

and uh it was a pretty glorious day and

789
00:31:21,830 --> 00:31:20,159
i will be we're going to repeat that on

790
00:31:24,630 --> 00:31:21,840
on on sunday morning

791
00:31:27,590 --> 00:31:24,640
and and then of course we we end um the

792
00:31:30,310 --> 00:31:27,600
the 1.1 series here at the um at the

793
00:31:32,310 --> 00:31:30,320
west coast again now i do know um the

794
00:31:34,630 --> 00:31:32,320
the current manifest has more launches

795
00:31:36,470 --> 00:31:34,640
um at the west coast coming up um later

796
00:31:37,669 --> 00:31:36,480
this year um

797
00:31:45,029 --> 00:31:37,679
i

798
00:31:47,669 --> 00:31:45,039
you know

799
00:31:48,710 --> 00:31:47,679
coming up uh later this year in into um

800
00:31:49,509 --> 00:31:48,720
similar

801
00:31:50,630 --> 00:31:49,519
um

802
00:31:52,950 --> 00:31:50,640
polar

803
00:31:55,830 --> 00:31:52,960
um or higher inclination and inclination

804
00:31:58,870 --> 00:31:55,840
orbits so um we will pick up our our

805
00:32:04,070 --> 00:31:58,880
launch rate from this uh from this

806
00:32:08,230 --> 00:32:05,990
any further questions here

807
00:32:10,870 --> 00:32:08,240
in the audience

808
00:32:13,669 --> 00:32:10,880
okay let's uh go to the phones we have a

809
00:32:15,909 --> 00:32:13,679
question from irene klotz from reuters

810
00:32:18,230 --> 00:32:15,919
irene if you're on go ahead

811
00:32:20,630 --> 00:32:18,240
i am thanks very much george i have a

812
00:32:22,549 --> 00:32:20,640
couple questions for hans

813
00:32:25,029 --> 00:32:22,559

first of all the um

814
00:32:27,269 --> 00:32:25,039
you said that the reason why the

815
00:32:30,230 --> 00:32:27,279
falcon win attempt a land landing was

816
00:32:33,350 --> 00:32:30,240
just environmental were there any um

817
00:32:35,509 --> 00:32:33,360
uh were there any limitations on the uh

818
00:32:37,110 --> 00:32:35,519
on the orbit and the power of this

819
00:32:38,230 --> 00:32:37,120
particular rocket

820
00:32:40,230 --> 00:32:38,240
as well

821
00:32:43,830 --> 00:32:40,240
and also if you have any update on the

822
00:32:45,830 --> 00:32:43,840
status of the um first stage that was

823
00:32:47,269 --> 00:32:45,840
that you were able to land here at the

824
00:32:49,509 --> 00:32:47,279
cape um

825
00:32:51,830 --> 00:32:49,519
back in december that'd be great and i

826
00:32:54,470 --> 00:32:51,840
had one quick follow-up for whoever gave

827
00:32:57,590 --> 00:32:54,480
us the program costs for the mission if

828
00:32:59,990 --> 00:32:57,600
that 180 million included launch costs

829
00:33:04,070 --> 00:33:00,000
and how many years of operations is

830
00:33:09,190 --> 00:33:06,549
so um whether we could launch um whether

831
00:33:11,029 --> 00:33:09,200
we could land back on on land um the the

832
00:33:12,549 --> 00:33:11,039
answer is absolutely um

833
00:33:14,149 --> 00:33:12,559
we um

834
00:33:16,549 --> 00:33:14,159
we would have enough energy on this

835
00:33:18,950 --> 00:33:16,559
mission to come back to land uh without

836
00:33:21,269 --> 00:33:18,960
without any issues so um it's not um

837
00:33:24,870 --> 00:33:21,279
it's not anything technical um

838
00:33:27,909 --> 00:33:24,880

in this case and uh and um regarding uh

839
00:33:30,470 --> 00:33:27,919
the booster we got back um from flight

840
00:33:33,509 --> 00:33:30,480
21 or upcom and at the cape

841
00:33:34,310 --> 00:33:33,519
um that booster is in great shape um we

842
00:33:41,830 --> 00:33:34,320
we

843
00:33:43,669 --> 00:33:41,840
are

844
00:33:46,070 --> 00:33:43,679
going into a static fire i'm not sure

845
00:33:48,710 --> 00:33:46,080
what the status exactly is

846
00:33:52,950 --> 00:33:48,720
as of today

847
00:33:55,509 --> 00:33:52,960
just completed okay great um

848
00:33:57,830 --> 00:33:55,519
yeah i was i was focusing on on this

849
00:34:00,870 --> 00:33:57,840
mission for for today and uh tomorrow

850
00:34:07,029 --> 00:34:00,880
and uh and then sunday possibly monday

851
00:34:12,710 --> 00:34:10,550
uh in terms of the the costs uh the 180

852
00:34:15,349 --> 00:34:12,720
million dollars that i quoted earlier

853
00:34:16,950 --> 00:34:15,359
does include five years of mission

854
00:34:19,349 --> 00:34:16,960
operations

855
00:34:23,109 --> 00:34:19,359
and uh the cost of the launch vehicle as

856
00:34:27,510 --> 00:34:25,669
sorry any more questions on the phone no

857
00:34:29,909 --> 00:34:27,520
no questions on the phone all right

858
00:34:32,310 --> 00:34:29,919
let's uh take social media now you can

859
00:34:34,710 --> 00:34:32,320
still ask on social media if you like

860
00:34:36,869 --> 00:34:34,720
ask nasa let's go to steve cole i think

861
00:34:39,349 --> 00:34:36,879
we have a couple of questions steve

862
00:34:42,550 --> 00:34:39,359
thanks george how frequently does noah

863
00:34:47,990 --> 00:34:42,560

receive analyze and compile jason 3 data

864
00:34:52,069 --> 00:34:49,349
i'm sorry

865
00:34:54,869 --> 00:34:52,079
how frequently does noah analyze and

866
00:34:59,750 --> 00:34:54,879
compile the json3 data for global or

867
00:34:59,760 --> 00:35:04,069
i don't i don't

868
00:35:08,950 --> 00:35:06,470
we collect the data

869
00:35:11,270 --> 00:35:08,960
on an orbital basis

870
00:35:15,349 --> 00:35:11,280
and we deliver those products

871
00:35:19,430 --> 00:35:16,630
i think that's just how often that

872
00:35:21,270 --> 00:35:19,440
answers how often

873
00:35:25,710 --> 00:35:21,280
how often do we collect data

874
00:35:30,470 --> 00:35:28,230
12.7 orbits per day

875
00:35:33,750 --> 00:35:30,480
so that's how many times we process the

876
00:35:36,069 --> 00:35:33,760
data on a daily basis

877
00:35:38,310 --> 00:35:36,079
okay thank you um

878
00:35:39,750 --> 00:35:38,320
this one has to do with the registration

879
00:35:42,069 --> 00:35:39,760
of the satellite jason 2 was

880
00:35:46,630 --> 00:35:42,079
unregistered by france

881
00:35:46,640 --> 00:35:53,270
i don't know the answer to that

882
00:35:57,750 --> 00:35:55,589
okay we'll have to get back to that an

883
00:36:01,030 --> 00:35:57,760
answer back to that question

884
00:36:02,870 --> 00:36:01,040
that's what we have for now george

885
00:36:06,069 --> 00:36:02,880
all right we'll come back here for any

886
00:36:08,230 --> 00:36:06,079
additional questions here in the hangar

887
00:36:10,390 --> 00:36:08,240
steve

888
00:36:12,630 --> 00:36:10,400

hi just to follow up on the the drone

889
00:36:14,150 --> 00:36:12,640
ship landing attempt um

890
00:36:15,829 --> 00:36:14,160
you know we obviously saw the landing

891
00:36:17,829 --> 00:36:15,839
live at the cape it was right in front

892
00:36:19,750 --> 00:36:17,839
of our eyes will we see anything live at

893
00:36:22,550 --> 00:36:19,760
the drone ship or will we just hear

894
00:36:23,750 --> 00:36:22,560
about it uh you know after the fact uh

895
00:36:26,390 --> 00:36:23,760
results of it

896
00:36:28,310 --> 00:36:26,400
we we tried to bring this over life but

897
00:36:29,910 --> 00:36:28,320
um that

898
00:36:31,829 --> 00:36:29,920
it's obviously out there in the ocean

899
00:36:33,750 --> 00:36:31,839
and uh it's hard to get connection uh we

900
00:36:34,790 --> 00:36:33,760
may not be able to do this we will we

901
00:36:36,470 --> 00:36:34,800
will um

902
00:36:38,390 --> 00:36:36,480
we'll do our best

903
00:36:39,910 --> 00:36:38,400
and uh and then likewise um i don't

904
00:36:42,310 --> 00:36:39,920
think you can see it

905
00:36:47,910 --> 00:36:42,320
from from the land either it's it's just

906
00:36:51,349 --> 00:36:49,349
yeah i think we'll have another

907
00:36:53,109 --> 00:36:51,359
follow-up on social media right this is

908
00:36:55,030 --> 00:36:53,119
a local question barring weather

909
00:37:01,190 --> 00:36:55,040
concerns will the launch be visible from

910
00:37:04,310 --> 00:37:02,950
so it sounds like the question was will

911
00:37:07,349 --> 00:37:04,320
the launch be visible from the

912
00:37:08,550 --> 00:37:07,359
vandenberg weather station area so i'm

913
00:37:10,630 --> 00:37:08,560

going to turn that over to lieutenant

914
00:37:11,990 --> 00:37:10,640
round because he knows where the weather

915
00:37:13,750 --> 00:37:12,000
station is

916
00:37:15,670 --> 00:37:13,760
uh actually it probably should be

917
00:37:17,670 --> 00:37:15,680
visible

918
00:37:19,270 --> 00:37:17,680
from our actual compound that we sit in

919
00:37:20,790 --> 00:37:19,280
you can't see the slicks down there you

920
00:37:22,710 --> 00:37:20,800
can see slick 2 really really well i

921
00:37:24,230 --> 00:37:22,720
mean there's a grand sand out there

922
00:37:26,230 --> 00:37:24,240
i don't believe you can actually see the

923
00:37:27,750 --> 00:37:26,240
slick so you should see it once it

924
00:37:30,150 --> 00:37:27,760
clears the trees you know a few seconds

925
00:37:31,109 --> 00:37:30,160
after launch but no i don't believe here

926
00:37:35,589 --> 00:37:31,119
you're going to be able to see it

927
00:37:35,599 --> 00:37:39,670
any further questions

928
00:37:44,710 --> 00:37:42,470
all right that will conclude this

929
00:37:46,790 --> 00:37:44,720
briefing just a programming note that

930
00:37:49,190 --> 00:37:46,800
our launch coverage on nasa television

931
00:37:50,950 --> 00:37:49,200
on sunday morning begins at 8 a.m