



1
00:00:13,509 --> 00:00:11,350
this week at nasa

2
00:00:15,749 --> 00:00:13,519
the ignition sequence had started but

3
00:00:18,150 --> 00:00:15,759
there was a cutoff the scheduled may

4
00:00:20,310 --> 00:00:18,160
19th launch of the spacex falcon 9

5
00:00:21,750 --> 00:00:20,320
rocket and dragon spacecraft on the

6
00:00:24,390 --> 00:00:21,760
first commercial venture to the

7
00:00:27,349 --> 00:00:24,400
international space station was aborted

8
00:00:30,150 --> 00:00:27,359
with t-minus 0.5 seconds left in the

9
00:00:32,630 --> 00:00:30,160
countdown engine controller noted high

10
00:00:34,470 --> 00:00:32,640
chamber pressure in engine five

11
00:00:36,790 --> 00:00:34,480
uh software did what it was supposed to

12
00:00:38,790 --> 00:00:36,800
do aborted uh engine five then we went

13
00:00:41,590 --> 00:00:38,800

through the remaining engine shutdown uh

14

00:00:43,750 --> 00:00:41,600

we will go in and uh try another

15

00:00:45,750 --> 00:00:43,760

another day on the 22nd we're looking at

16

00:00:47,590 --> 00:00:45,760

a backup day on the 23rd as well the

17

00:00:49,110 --> 00:00:47,600

23rd

18

00:00:50,389 --> 00:00:49,120

looks like it's a good date from the

19

00:00:51,910 --> 00:00:50,399

trajectory

20

00:00:53,510 --> 00:00:51,920

and

21

00:00:55,670 --> 00:00:53,520

the station crew says they're ready to

22

00:00:58,229 --> 00:00:55,680

support the spacex demonstration flight

23

00:01:01,029 --> 00:00:58,239

to the iss calls for an extensive set of

24

00:01:03,430 --> 00:01:01,039

tests requiring the dragon spacecraft to

25

00:01:05,910 --> 00:01:03,440

show that it can move precisely in orbit

26
00:01:08,469 --> 00:01:05,920
and approach the space station carefully

27
00:01:10,149 --> 00:01:08,479
only after these tests are successful

28
00:01:12,149 --> 00:01:10,159
will the spacecraft be allowed to

29
00:01:14,469 --> 00:01:12,159
approach the orbiting laboratory close

30
00:01:18,070 --> 00:01:14,479
enough to be grappled and birthed by the

31
00:01:22,070 --> 00:01:20,550
and here we go patches are open the

32
00:01:23,990 --> 00:01:22,080
three newest residents of the

33
00:01:26,630 --> 00:01:24,000
international space station were greeted

34
00:01:28,870 --> 00:01:26,640
by their expedition 31 crewmates after

35
00:01:31,190 --> 00:01:28,880
their soyuz capsule docked safely with

36
00:01:33,670 --> 00:01:31,200
the orbiting laboratory following its

37
00:01:36,230 --> 00:01:33,680
two-day plus journey from kazakhstan

38
00:01:38,550 --> 00:01:36,240

soyuz commander gennady padalka nasa

39

00:01:40,710 --> 00:01:38,560

flight engineer joe acaba and russian

40

00:01:42,469 --> 00:01:40,720

flight engineer sergey revin are slated

41

00:01:43,590 --> 00:01:42,479

to spend the next five months on the

42

00:01:46,630 --> 00:01:43,600

station

43

00:01:50,389 --> 00:01:46,640

expedition 31 will conclude and 32 will

44

00:01:52,789 --> 00:01:50,399

begin when oleg kononenko andre kuipers

45

00:01:54,950 --> 00:01:52,799

and don pettit return to earth on july

46

00:01:58,149 --> 00:01:54,960

1st after spending more than six months

47

00:02:02,389 --> 00:02:00,550

when the spacex dragon spacecraft

48

00:02:04,550 --> 00:02:02,399

returns to earth after its mission to

49

00:02:06,630 --> 00:02:04,560

the international space station it will

50

00:02:09,910 --> 00:02:06,640

depend on a heat shield material called

51
00:02:12,229 --> 00:02:09,920
pikax to protect it during re-entry

52
00:02:14,630 --> 00:02:12,239
the heat shield material called phenolic

53
00:02:16,550 --> 00:02:14,640
impregnated carbon ablator was developed

54
00:02:17,430 --> 00:02:16,560
in partnership with nasa ames research

55
00:02:19,030 --> 00:02:17,440
center

56
00:02:22,070 --> 00:02:19,040
we were looking for advanced material

57
00:02:23,830 --> 00:02:22,080
that was lighter weight could withstand

58
00:02:25,910 --> 00:02:23,840
more extreme environments

59
00:02:29,190 --> 00:02:25,920
and would be essentially safer and more

60
00:02:31,670 --> 00:02:29,200
rugged for planetary missions

61
00:02:33,670 --> 00:02:31,680
pikax samples were tested at nasa ames

62
00:02:35,589 --> 00:02:33,680
using special facilities to simulate

63
00:02:38,229 --> 00:02:35,599

planetary re-entry temperatures and

64

00:02:40,229 --> 00:02:38,239

high-speed atmospheric flows

65

00:02:42,229 --> 00:02:40,239

during these tests the surface

66

00:02:44,110 --> 00:02:42,239

temperature of the heat shield material

67

00:02:47,430 --> 00:02:44,120

reached approximately

68

00:02:50,390 --> 00:02:47,440

3450 degrees fahrenheit almost twice as

69

00:02:52,790 --> 00:02:50,400

hot as molten lava

70

00:02:54,790 --> 00:02:52,800

pika has proved its effectiveness on the

71

00:02:56,710 --> 00:02:54,800

heat shield that protected the stardust

72

00:02:58,869 --> 00:02:56,720

capsule during its return to earth in

73

00:03:00,550 --> 00:02:58,879

january of 2006.

74

00:03:03,030 --> 00:03:00,560

it'll be used by the mars science

75

00:03:05,350 --> 00:03:03,040

laboratory to land its rover curiosity

76

00:03:07,589 --> 00:03:05,360

on the red planet

77

00:03:10,149 --> 00:03:07,599

and of course when the first commercial

78

00:03:13,190 --> 00:03:10,159

cargo resupply mission to the iss

79

00:03:16,149 --> 00:03:13,200

returns a payload safely back to earth

80

00:03:22,309 --> 00:03:16,159

pikax will have played a major role in

81

00:03:27,270 --> 00:03:25,270

evaluation of a key component of the j2x

82

00:03:28,390 --> 00:03:27,280

engine continues at the stennis space

83

00:03:30,869 --> 00:03:28,400

center

84

00:03:33,910 --> 00:03:30,879

nasa recently conducted a long duration

85

00:03:36,390 --> 00:03:33,920

test of the j2x power pack a system of

86

00:03:38,789 --> 00:03:36,400

components on the top portion of the j2x

87

00:03:39,750 --> 00:03:38,799

engine that helps the engine produce

88

00:03:42,949 --> 00:03:39,760

thrust

89

00:03:45,670 --> 00:03:42,959

the 340 second test was designed to

90

00:03:48,149 --> 00:03:45,680

operate the power pack turbo pumps over

91

00:03:50,390 --> 00:03:48,159

a range of speeds by varying the gas

92

00:03:52,869 --> 00:03:50,400

generator valve positions

93

00:03:55,110 --> 00:03:52,879

continued testing of the j2x which will

94

00:03:57,750 --> 00:03:55,120

help propel nasa's new space launch

95

00:04:00,070 --> 00:03:57,760

system are scheduled through the summer

96

00:04:02,229 --> 00:04:00,080

the sls is the new heavy lift launch

97

00:04:04,710 --> 00:04:02,239

vehicle that will expand human presence

98

00:04:07,270 --> 00:04:04,720

beyond low earth orbit and with the

99

00:04:11,509 --> 00:04:07,280

orion crew capsule enable new missions

100

00:04:14,229 --> 00:04:11,519

of exploration across the solar system

101
00:04:18,390 --> 00:04:14,239
all of whom have achieved distinction

102
00:04:22,710 --> 00:04:20,310
the state of alabama celebrated its

103
00:04:25,830 --> 00:04:22,720
space exploration heritage designating

104
00:04:27,749 --> 00:04:25,840
may 3rd as nasa day in alabama the state

105
00:04:29,749 --> 00:04:27,759
legislature commended the marshall space

106
00:04:32,150 --> 00:04:29,759
flight center for its role in space

107
00:04:33,909 --> 00:04:32,160
exploration and as an engine of economic

108
00:04:36,550 --> 00:04:33,919
development and the anchor of the

109
00:04:39,110 --> 00:04:36,560
aerospace industry in north alabama

110
00:04:41,749 --> 00:04:39,120
i salute marshall and nasa

111
00:04:43,749 --> 00:04:41,759
when we look at the economic impact that

112
00:04:46,070 --> 00:04:43,759
they have on our state

113
00:04:48,790 --> 00:04:46,080

it's unprecedented and they are right

114

00:04:51,590 --> 00:04:48,800

there with us as alabamians

115

00:04:53,990 --> 00:04:51,600

marshall has an estimated 2.9 billion

116

00:04:55,909 --> 00:04:54,000

dollar economic impact on the region its

117

00:04:58,070 --> 00:04:55,919

nearly six thousand government and

118

00:05:00,550 --> 00:04:58,080

contractor personnel ninety percent of

119

00:05:03,030 --> 00:05:00,560

whom are college educated make nasa the

120

00:05:04,870 --> 00:05:03,040

third largest employer in huntsville for

121

00:05:07,189 --> 00:05:04,880

more than a half a century we have

122

00:05:09,510 --> 00:05:07,199

embodied the values of determination

123

00:05:11,909 --> 00:05:09,520

achievement and a thirst for knowledge

124

00:05:13,749 --> 00:05:11,919

that made this nation great we are still

125

00:05:14,870 --> 00:05:13,759

a symbol of this nation's greatness and

126
00:05:16,629 --> 00:05:14,880
promise

127
00:05:19,670 --> 00:05:16,639
marshall the center that developed the

128
00:05:21,909 --> 00:05:19,680
saturn v moon rocket in the 1960s is now

129
00:05:24,070 --> 00:05:21,919
working on the space launch system a

130
00:05:27,110 --> 00:05:24,080
long-range rocket designed to take us

131
00:05:29,029 --> 00:05:27,120
beyond earth orbit nasa astronaut tj

132
00:05:31,189 --> 00:05:29,039
creamer who lived and worked on the

133
00:05:33,029 --> 00:05:31,199
international space station spoke to

134
00:05:34,310 --> 00:05:33,039
groups of local students visiting the

135
00:05:35,510 --> 00:05:34,320
state capitol

136
00:05:37,590 --> 00:05:35,520
we want to be able to extend the

137
00:05:39,590 --> 00:05:37,600
humanity and go farther and learn more

138
00:05:40,790 --> 00:05:39,600

about earth learn more about the

139

00:05:43,670 --> 00:05:40,800

sciences

140

00:05:45,830 --> 00:05:43,680

to be able to make tomorrow better nasa

141

00:05:47,670 --> 00:05:45,840

is a national treasure it truly is a

142

00:05:49,430 --> 00:05:47,680

national treasure and we're just so

143

00:05:51,430 --> 00:05:49,440

proud to share in that and what we're

144

00:05:56,390 --> 00:05:51,440

able to develop in north alabama with

145

00:06:00,710 --> 00:05:58,390

thrill seekers had a blast learning

146

00:06:02,150 --> 00:06:00,720

about space during education day at

147

00:06:04,309 --> 00:06:02,160

king's dominion

148

00:06:05,990 --> 00:06:04,319

students and teachers applied the math

149

00:06:08,469 --> 00:06:06,000

and science they've used this school

150

00:06:10,710 --> 00:06:08,479

year to fund problem solving activities

151
00:06:12,790 --> 00:06:10,720
at the theme park the langley research

152
00:06:14,950 --> 00:06:12,800
center had interactive exhibits where

153
00:06:17,590 --> 00:06:14,960
park goers could learn how astronauts

154
00:06:19,590 --> 00:06:17,600
live and work in space win prizes by

155
00:06:22,309 --> 00:06:19,600
answering nasa technology related

156
00:06:24,870 --> 00:06:22,319
questions and playing the nasa spin the

157
00:06:26,950 --> 00:06:24,880
wheel game

158
00:06:29,590 --> 00:06:26,960
they also explored how riding a roller

159
00:06:31,590 --> 00:06:29,600
coaster produces g-forces just as a

160
00:06:32,469 --> 00:06:31,600
spacecraft does when it launches into

161
00:06:34,309 --> 00:06:32,479
space

162
00:06:36,870 --> 00:06:34,319
there were also exhibits highlighting

163
00:06:41,510 --> 00:06:36,880

nasa aeronautics missions and displays

164

00:06:46,150 --> 00:06:43,990

solar ray let's get some energy in there

165

00:06:47,909 --> 00:06:46,160

founder let's make some noise what are

166

00:06:50,230 --> 00:06:47,919

we doing we got to get something going

167

00:06:52,150 --> 00:06:50,240

now nearly 100 students converged on

168

00:06:54,309 --> 00:06:52,160

wallops flight facility recently for the

169

00:06:55,670 --> 00:06:54,319

annual inspire the next generation day

170

00:06:57,270 --> 00:06:55,680

what we're doing here today is we're

171

00:06:59,189 --> 00:06:57,280

actually doing inspire the next

172

00:07:00,710 --> 00:06:59,199

generation where we have

173

00:07:03,270 --> 00:07:00,720

parents that work here at wallops

174

00:07:04,950 --> 00:07:03,280

bringing their students in to

175

00:07:05,749 --> 00:07:04,960

try out a few things that we actually do

176

00:07:08,629 --> 00:07:05,759

here

177

00:07:10,870 --> 00:07:08,639

we're a polar orbit sun synchronous with

178

00:07:13,110 --> 00:07:10,880

the sun so that our solar array is

179

00:07:15,270 --> 00:07:13,120

always pointing towards the sun once we

180

00:07:17,029 --> 00:07:15,280

get done coloring and designing our

181

00:07:20,790 --> 00:07:17,039

rockets we're going to prep them for

182

00:07:24,070 --> 00:07:20,800

flights it's fun like i get to like go

183

00:07:26,550 --> 00:07:24,080

with my mom and build kites and build

184

00:07:29,110 --> 00:07:26,560

solar powered cars it's really really

185

00:07:30,950 --> 00:07:29,120

fun i've had a good time

186

00:07:33,189 --> 00:07:30,960

i'm hoping to be a civil engineer when i

187

00:07:34,629 --> 00:07:33,199

get older so it's really fun

188

00:07:36,950 --> 00:07:34,639

the young explorers learned about

189

00:07:38,950 --> 00:07:36,960

science technology engineering and math

190

00:07:41,430 --> 00:07:38,960

or stem careers they could pursue with

191

00:07:43,110 --> 00:07:41,440

nasa the navy the coast guard noaa fish

192

00:07:57,830 --> 00:07:43,120

and wildlife and the marine science

193

00:08:01,110 --> 00:07:59,749

i'm janeja gensler i work in the

194

00:08:03,110 --> 00:08:01,120

international space station program

195

00:08:05,749 --> 00:08:03,120

office of external integration at the

196

00:08:08,790 --> 00:08:05,759

nasa johnson space center

197

00:08:10,950 --> 00:08:08,800

i was born in bangkok thailand and i

198

00:08:12,629 --> 00:08:10,960

immigrated to the u.s when i was about

199

00:08:15,909 --> 00:08:12,639

two or three years old

200

00:08:17,830 --> 00:08:15,919

moved to dallas texas and i basically

201
00:08:19,990 --> 00:08:17,840
grew up there and

202
00:08:22,309 --> 00:08:20,000
went to school

203
00:08:24,390 --> 00:08:22,319
at the university of texas at austin i

204
00:08:26,869 --> 00:08:24,400
got my chemical engineering bachelor's

205
00:08:29,350 --> 00:08:26,879
degree from ut the international space

206
00:08:31,990 --> 00:08:29,360
station is a wonderful program

207
00:08:33,509 --> 00:08:32,000
a lot of people in the general public

208
00:08:36,070 --> 00:08:33,519
don't know that we even have an

209
00:08:37,990 --> 00:08:36,080
international space station so from that

210
00:08:39,909 --> 00:08:38,000
standpoint our office does a lot of

211
00:08:41,829 --> 00:08:39,919
external communications and we get out

212
00:08:44,070 --> 00:08:41,839
there we do a lot of public outreach

213
00:08:46,710 --> 00:08:44,080

making sure that the public is aware of

214

00:08:49,670 --> 00:08:46,720

all the benefits that iss you know has

215

00:08:51,750 --> 00:08:49,680

provided and is able to offer we want to

216

00:08:54,310 --> 00:08:51,760

make sure that everybody knows that it's

217

00:08:56,870 --> 00:08:54,320

a manned station we've been manned for

218

00:08:59,750 --> 00:08:56,880

over 10 years we're up there seven days

219

00:09:02,550 --> 00:08:59,760

a week 24 hours a day 365 days a year

220

00:09:04,230 --> 00:09:02,560

and we've provided great benefits um to

221

00:09:06,550 --> 00:09:04,240

humankind and we're still doing that

222

00:09:08,630 --> 00:09:06,560

with all the utilization that we're

223

00:09:11,829 --> 00:09:08,640

currently ramping up we've completed

224

00:09:13,750 --> 00:09:11,839

assembly and we're working on all the

225

00:09:16,070 --> 00:09:13,760

research that's going to help us go and

226

00:09:17,350 --> 00:09:16,080

explore beyond low earth orbit one of

227

00:09:19,670 --> 00:09:17,360

the most fun things i've done out here

228

00:09:22,389 --> 00:09:19,680

at nasa is i was able to go and watch a

229

00:09:24,310 --> 00:09:22,399

soyuz launch out in kazakhstan i love to

230

00:09:26,230 --> 00:09:24,320

travel especially as a family love to

231

00:09:27,670 --> 00:09:26,240

travel outside the country but this was

232

00:09:30,630 --> 00:09:27,680

the first time

233

00:09:32,470 --> 00:09:30,640

i've traveled that far away i guess to

234

00:09:34,630 --> 00:09:32,480

an exotic location other than thailand

235

00:09:37,670 --> 00:09:34,640

where i'm from just being there and

236

00:09:43,910 --> 00:09:37,680

being a part of human space flight was

237

00:09:50,790 --> 00:09:47,350

i feel the liftoff the clock has started

238

00:09:52,790 --> 00:09:50,800

50 years ago on may 24 1962

239

00:09:55,030 --> 00:09:52,800

mercury astronaut scott carpenter

240

00:09:57,910 --> 00:09:55,040

launched from cape canaveral aboard the

241

00:09:59,430 --> 00:09:57,920

aurora 7 spacecraft the flight was the

242

00:10:01,750 --> 00:09:59,440

second manned orbital mission of the

243

00:10:03,509 --> 00:10:01,760

mercury program following john glenn's

244

00:10:04,550 --> 00:10:03,519

friendship seven flight three months

245

00:10:06,870 --> 00:10:04,560

earlier

246

00:10:09,190 --> 00:10:06,880

like glenn carpenter circled the earth

247

00:10:11,829 --> 00:10:09,200

three times the focus of the five hour

248

00:10:14,230 --> 00:10:11,839

mission was on science and included the

249

00:10:16,069 --> 00:10:14,240

first study of liquids in weightlessness

250

00:10:18,150 --> 00:10:16,079

and earth photography

251
00:10:20,710 --> 00:10:18,160
a targeting mishap during re-entry took

252
00:10:21,670 --> 00:10:20,720
the spacecraft about 250 miles off

253
00:10:24,470 --> 00:10:21,680
course

254
00:10:26,710 --> 00:10:24,480
however carpenter and aurora 7 were

255
00:10:28,630 --> 00:10:26,720
safely recovered after splashdown in the

256
00:10:31,670 --> 00:10:28,640
atlantic ocean

257
00:10:33,910 --> 00:10:31,680
and that's this week at nasa for more on

258
00:10:36,150 --> 00:10:33,920
these and other stories or to follow us