1
00:00:14,919 --> 00:00:12,400
this week at NASA it is great to talk to

2
00:00:17,320 --> 00:00:14,929
all of you and I just want you to know

3
00:00:18,820 --> 00:00:17,330
that we could not be more excited at the

4
00:00:21,130 --> 00:00:18,830
Jet Propulsion Laboratory the Mars

5
00:00:23,019 --> 00:00:21,140
Curiosity flight control team took a few

6
00:00:25,240 --> 00:00:23,029
minutes from tending to NASA's newest

7
00:00:27,279 --> 00:00:25,250
Red Planet Rover to receive a special

8
00:00:29,349 --> 00:00:27,289
congratula Tory phone call from

9
00:00:31,839 --> 00:00:29,359
President Barack Obama who was aboard

10
00:00:33,819 --> 00:00:31,849
Air Force One what you've accomplished

11
00:00:36,010 --> 00:00:33,829
embodies the American spirit and your

12
00:00:39,100 --> 00:00:36,020
passion and your commitment is making a

13
00:00:41,350 --> 00:00:39,110

difference and your hard work is not

14
00:00:45,400 --> 00:00:41,360
paying dividends because our

15
00:00:49,270 --> 00:00:45,410
expectations is that curiosity is going

16
00:00:50,680 --> 00:00:49,280
to be telling us things that we did not

17
00:00:53,049 --> 00:00:50,690
know before and laying the groundwork

18
00:00:54,729 --> 00:00:53,059
for an even more audacious undertaking

19
00:00:57,160 --> 00:00:54,739
in the future and that's a human mission

20
00:00:58,990 --> 00:00:57,170
of the red planet JPL director Charles

21
00:01:00,670 --> 00:00:59,000
elachi thank the president for his

22
00:01:02,020 --> 00:01:00,680
praise and echoed the

23
00:01:03,729 --> 00:01:02,030
commander-in-chief's hope that the

24
00:01:05,109 --> 00:01:03,739
excitement generated by the mission

25
00:01:07,810 --> 00:01:05,119
would help inspire a sense of

26
00:01:10,420 --> 00:01:07,820
exploration among younger generations on

27
00:01:11,920 --> 00:01:10,430
behalf of all of us at NASA we thank you

28
00:01:13,960 --> 00:01:11,930
for taking the time to give us a call

29
00:01:15,250 --> 00:01:13,970
and hopefully we inspire some of the

30
00:01:17,170 --> 00:01:15,260
millions of young people who were

31
00:01:18,969 --> 00:01:17,180
watching the slamming the president also

32
00:01:21,190 --> 00:01:18,979
emphasized that this mission is an

33
00:01:23,200 --> 00:01:21,200
international effort offering gratitude

34
00:01:24,969 --> 00:01:23,210
to several of the countries that have

35
00:01:27,999 --> 00:01:24,979
contributed science instruments and

36
00:01:30,700 --> 00:01:28,009
expertise to aid curiosity's quest for

37
00:01:33,819 --> 00:01:30,710
evidence of microbial life on Mars Spain

38
00:01:36,730 --> 00:01:33,829

Russia Germany France Canada Italy Japan

39
00:01:39,340 --> 00:01:36,740
Australia all of them contributed I

40
00:01:41,950 --> 00:01:39,350
doubt to the instrumentation curiosity

41
00:01:44,260 --> 00:01:41,960
landed on Mars and filters the rover

42
00:01:46,330 --> 00:01:44,270
team continues to transition curiosity

43
00:01:48,760 --> 00:01:46,340
to a state of readiness for roving the

44
00:01:50,649 --> 00:01:48,770
Martian surface here's a quick report

45
00:01:53,469 --> 00:01:50,659
from JPL on what's been happening since

46
00:01:55,179 --> 00:01:53,479
curiosity's landing hi I'm Bobak

47
00:01:56,889 --> 00:01:55,189
Ferdowsi flight director with the Mars

48
00:02:00,550 --> 00:01:56,899
Science Lab curiosity and this is your

49
00:02:02,139 --> 00:02:00,560
Curiosity rover update this week we did

50
00:02:04,820 --> 00:02:02,149
a color panorama surrounding the rover

51
00:02:08,450 --> 00:02:04,830
with both the mask am rande now

52
00:02:10,190 --> 00:02:08,460
and we also have created the software on

53
00:02:12,440 --> 00:02:10,200
board both computers of the rover this

54
00:02:13,490 --> 00:02:12,450
week this new software is like having

55
00:02:15,470 --> 00:02:13,500
the applications with new

56
00:02:18,050 --> 00:02:15,480
functionalities on the rover allow us to

57
00:02:18,980 --> 00:02:18,060
do mobility deploy the arm and get to

58
00:02:21,410 --> 00:02:18,990
the science that we've been looking

59
00:02:23,450 --> 00:02:21,420
forward to other mission we also did a

60
00:02:26,390 --> 00:02:23,460
series of instrument checkouts those

61
00:02:36,730 --> 00:02:26,400
included the chemcam instrument the

62
00:02:40,790 --> 00:02:36,740
chemin instrument rad science REMS apxs

63
00:02:44,480 --> 00:02:40,800

Sam and the additional cameras on the

64
00:02:45,710 --> 00:02:44,490
rover including the Molly instrument we

65
00:02:47,720 --> 00:02:45,720
also downlinked some Marty

66
00:02:51,260 --> 00:02:47,730
high-resolution data images there from

67
00:02:52,850 --> 00:02:51,270
the descent imager coming up this week

68
00:02:54,560 --> 00:02:52,860
we'll be using the chemcam to zap

69
00:02:56,720 --> 00:02:54,570
targets for the first time also be

70
00:02:58,699 --> 00:02:56,730
deploying the arm and will be checking

71
00:03:00,140 --> 00:02:58,709
out the mobility system by doing a codes

72
00:03:04,430 --> 00:03:00,150
were called a rover bump or a short

73
00:03:06,620 --> 00:03:04,440
drive astronomers have found an

74
00:03:08,480 --> 00:03:06,630
extraordinary galaxy cluster one of the

75
00:03:10,580 --> 00:03:08,490
largest objects in the universe that is

76
00:03:13,250 --> 00:03:10,590
breaking several important cosmic

77
00:03:15,680 --> 00:03:13,260
records observations of the Phoenix

78
00:03:18,050 --> 00:03:15,690
cluster located about 5.7 billion

79
00:03:20,810 --> 00:03:18,060
light-years from Earth with NASA's

80
00:03:22,550 --> 00:03:20,820
Chandra x-ray Observatory the National

81
00:03:25,120 --> 00:03:22,560
Science Foundation's South Pole

82
00:03:27,830 --> 00:03:25,130
telescope and eight other world-class

83
00:03:30,199 --> 00:03:27,840
observatories may force astronomers to

84
00:03:32,030 --> 00:03:30,209
rethink how these colossal structures

85
00:03:35,030 --> 00:03:32,040
and the galaxies that inhabit them

86
00:03:36,680 --> 00:03:35,040
evolve stars are forming in the Phoenix

87
00:03:38,660 --> 00:03:36,690
cluster at the highest rate ever

88
00:03:40,970 --> 00:03:38,670

observed for the middle of a galaxy

89
00:03:43,490 --> 00:03:40,980
cluster the object also is the most

90
00:03:46,280 --> 00:03:43,500
powerful producer of x-rays of any known

91
00:03:48,890 --> 00:03:46,290
cluster and among the most massive the

92
00:03:50,690 --> 00:03:48,900
data also suggests the rate of hot gas

93
00:03:53,080 --> 00:03:50,700
cooling in the central regions of the

94
00:03:56,090 --> 00:03:53,090
cluster is the largest ever observed

95
00:03:58,070 --> 00:03:56,100
because of their tremendous size galaxy

96
00:04:00,640 --> 00:03:58,080
clusters are crucial objects for

97
00:04:03,440 --> 00:04:00,650
studying cosmology and galaxy evolution

98
00:04:05,330 --> 00:04:03,450
so finding one with such extreme

99
00:04:07,400 --> 00:04:05,340
properties like the Phoenix cluster is

100
00:04:09,870 --> 00:04:07,410
important

101
00:04:11,790 --> 00:04:09,880
aboard the International Space Station

102
00:04:14,730 --> 00:04:11,800
expedition 32 commander gennady padalka

103
00:04:16,310 --> 00:04:14,740
and flight engineer yuri malenchenko of

104
00:04:19,229 --> 00:04:16,320
the Russian Federal Space Agency

105
00:04:21,780 --> 00:04:19,239
ventured outside the peers airlock on a

106
00:04:24,150 --> 00:04:21,790
spacewalk to install debris shields on

107
00:04:26,370 --> 00:04:24,160
the Zvezda service module the two also

108
00:04:29,310 --> 00:04:26,380
moved a telescoping cargo train from

109
00:04:31,410 --> 00:04:29,320
peers to the zarya module the excursion

110
00:04:34,680 --> 00:04:31,420
is one of two station deviates slated

111
00:04:36,180 --> 00:04:34,690
for August August 30th NASA flight

112
00:04:38,400 --> 00:04:36,190
engineer suni williams and flight

113
00:04:41,250 --> 00:04:38,410

engineer aki hoshide of the japan

114
00:04:43,050 --> 00:04:41,260
aerospace exploration agency are

115
00:04:46,050 --> 00:04:43,060
scheduled to egress the quest airlock

116
00:04:48,120 --> 00:04:46,060
for a six and a half hour spacewalk to

117
00:04:50,400 --> 00:04:48,130
perform electrical work on the Trust's

118
00:04:52,680 --> 00:04:50,410
and install cables for our future

119
00:04:55,020 --> 00:04:52,690
Russian laboratory module it will be

120
00:05:00,180 --> 00:04:55,030
he'll she taste first spacewalk and the

121
00:05:02,190 --> 00:05:00,190
third for a japanese astronaut while

122
00:05:04,770 --> 00:05:02,200
nasa's teams have been taking a close

123
00:05:07,230 --> 00:05:04,780
look at how Orion's parachutes behave as

124
00:05:09,360 --> 00:05:07,240
the 20,000 pound space craft descends

125
00:05:11,550 --> 00:05:09,370
through the sky they've also been

126
00:05:14,100 --> 00:05:11,560
investigating another challenge how do

127
00:05:16,980 --> 00:05:14,110
you recover parachutes that are 100 feet

128
00:05:18,780 --> 00:05:16,990
wide from the water NASA's neutral

129
00:05:20,760 --> 00:05:18,790
buoyancy laboratory at the Johnson Space

130
00:05:23,460 --> 00:05:20,770
Center in Houston was the setting as

131
00:05:25,680 --> 00:05:23,470
these teams took some of Orion's drogue

132
00:05:28,020 --> 00:05:25,690
and main parachutes and ducked them in

133
00:05:29,880 --> 00:05:28,030
the water they were noting how long the

134
00:05:31,560 --> 00:05:29,890
shoot stayed afloat and the best ways to

135
00:05:34,170 --> 00:05:31,570
get them out of the water and into a

136
00:05:36,870 --> 00:05:34,180
boat each one of the main chutes weighs

137
00:05:39,300 --> 00:05:36,880
close to 300 pounds the water doubles

138
00:05:43,080 --> 00:05:39,310

that weight so testing ways of handling

139
00:05:45,090 --> 00:05:43,090
them and doing it safely is important we

140
00:05:48,540 --> 00:05:45,100
learn every time we do a parachute test

141
00:05:51,240 --> 00:05:48,550
of something we find ways to improve the

142
00:05:53,280 --> 00:05:51,250
parachute design so that when we finally

143
00:05:54,870 --> 00:05:53,290
fly the parachute system for human

144
00:05:57,510 --> 00:05:54,880
spaceflight it's a safe and reliable

145
00:05:59,400 --> 00:05:57,520
system the Orion team was joined by

146
00:06:01,200 --> 00:05:59,410
members of the united states navy as

147
00:06:04,230 --> 00:06:01,210
well as the recovery forces that will

148
00:06:06,510 --> 00:06:04,240
work exploration flight test-1 Orion's

149
00:06:09,719 --> 00:06:06,520
first unmanned test flight scheduled for

150
00:06:13,140 --> 00:06:09,729
2014 that flight will send a Ryan more

151
00:06:15,150 --> 00:06:13,150
than 3,600 miles into space reaching

152
00:06:17,580 --> 00:06:15,160
speeds of more than 20,000 miles per

153
00:06:20,580 --> 00:06:17,590
hour and returning for a splashdown in

154
00:06:22,950 --> 00:06:20,590
the Pacific Ocean this recovery

155
00:06:25,410 --> 00:06:22,960
orion's parachutes and the capsule

156
00:06:29,460 --> 00:06:25,420
itself will continue during a lead-up to

157
00:06:31,200 --> 00:06:29,470
eft-1 Orion also has more drop test plan

158
00:06:33,990 --> 00:06:31,210
at the Langley Research Center and

159
00:06:38,760 --> 00:06:34,000
parachute tests at the US Army Yuma

160
00:06:40,590 --> 00:06:38,770
Proving Grounds later this month decade

161
00:06:43,380 --> 00:06:40,600
we believe will be one of discovery and

162
00:06:45,600 --> 00:06:43,390
of one of new and innovative approaches

163
00:06:47,670 --> 00:06:45,610

and tools thinks that we both evolved

164
00:06:50,190 --> 00:06:47,680
the National Research Council has

165
00:06:52,790 --> 00:06:50,200
released its second decade of survey and

166
00:06:55,860 --> 00:06:52,800
solar and space physics or heliophysics

167
00:06:58,200 --> 00:06:55,870
the broad based assessment identifies

168
00:07:00,150 --> 00:06:58,210
the highest scientific priorities of the

169
00:07:02,520 --> 00:07:00,160
u.s. solar and space physics research

170
00:07:04,320 --> 00:07:02,530
enterprise for the next ten years it's

171
00:07:06,540 --> 00:07:04,330
truly national in scope it's really

172
00:07:09,450 --> 00:07:06,550
intended to talk about NASA and itself

173
00:07:11,100 --> 00:07:09,460
noah DOD all the investments that are

174
00:07:13,560 --> 00:07:11,110
being made and so on space physics in

175
00:07:15,990 --> 00:07:13,570
various ways requested by NASA and the

176
00:07:18,660 --> 00:07:16,000
National Science Foundation this the

177
00:07:22,040 --> 00:07:18,670
katol survey follows the NRC's previous

178
00:07:24,540 --> 00:07:22,050
survey and solar and space physics

179
00:07:26,190 --> 00:07:24,550
acting associate administrator Robert

180
00:07:28,920 --> 00:07:26,200
Lightfoot and Langley Research Center

181
00:07:30,990 --> 00:07:28,930
Director Lesa Roe joined others at a

182
00:07:33,000 --> 00:07:31,000
headquarters recognition ceremony for

183
00:07:35,460 --> 00:07:33,010
contributors to a new flex book

184
00:07:38,250 --> 00:07:35,470
developed by NASA and the nonprofit

185
00:07:40,170 --> 00:07:38,260
education organization ck-12 as we

186
00:07:42,000 --> 00:07:40,180
challenge the boundaries of everything

187
00:07:44,010 --> 00:07:42,010
all the technologies that we need to do

188
00:07:45,510 --> 00:07:44,020

that we've got to have the modeling and

189
00:07:46,530 --> 00:07:45,520
simulation to allow us to deal with

190
00:07:47,730 --> 00:07:46,540
those aren't certainties and the

191
00:07:49,530 --> 00:07:47,740
environments we're going to face the

192
00:07:51,210 --> 00:07:49,540
temperatures the pressures all the

193
00:07:53,460 --> 00:07:51,220
different things that our spacecraft are

194
00:07:54,900 --> 00:07:53,470
going to see hopefully this project will

195
00:07:57,540 --> 00:07:54,910
help lead to us having that workforce

196
00:08:00,000 --> 00:07:57,550
we're going to need in the future a flex

197
00:08:01,830 --> 00:08:00,010
book is an open-source textbook that can

198
00:08:03,900 --> 00:08:01,840
be customized and evolved with the

199
00:08:06,090 --> 00:08:03,910
changing needs of a user and help

200
00:08:09,150 --> 00:08:06,100
maximize stem teaching and learning in

201
00:08:11,160 --> 00:08:09,160
grades K through 12 the new flex book

202
00:08:13,200 --> 00:08:11,170
entitled modeling and simulation for

203
00:08:14,970 --> 00:08:13,210
high school teachers principals problems

204
00:08:17,370 --> 00:08:14,980
and lesson plans is set for broad

205
00:08:19,800 --> 00:08:17,380
release this month

206
00:08:22,170 --> 00:08:19,810
an upcoming mission to study the

207
00:08:24,150 --> 00:08:22,180
development of Atlantic hurricanes using

208
00:08:25,800 --> 00:08:24,160
unmanned aerial vehicles based at the

209
00:08:27,390 --> 00:08:25,810
nasa wallops flight facility was

210
00:08:29,790 --> 00:08:27,400
discussed during a public presentation

211
00:08:32,130 --> 00:08:29,800
at the facilities visitors center the

212
00:08:34,440 --> 00:08:32,140
hurricane and severe storm sentinel hs3

213
00:08:36,630 --> 00:08:34,450

is a five-year mission specifically

214
00:08:38,400 --> 00:08:36,640
targeted to investigate the processes

215
00:08:40,260 --> 00:08:38,410
that underlie hurricane formation and

216
00:08:42,330 --> 00:08:40,270
intensity change in the Atlantic Ocean

217
00:08:44,250 --> 00:08:42,340
basin if we understand more about the

218
00:08:46,560 --> 00:08:44,260
storm then we can predict that better we

219
00:08:48,450 --> 00:08:46,570
can get people out of harm's way we can

220
00:08:50,970 --> 00:08:48,460
not evacuate people when they don't need

221
00:08:52,770 --> 00:08:50,980
to evacuate and we can you know save

222
00:08:54,210 --> 00:08:52,780
human lives by making sure that

223
00:08:56,760 --> 00:08:54,220
everyone's informed and has a best

224
00:08:59,190 --> 00:08:56,770
information possible hs3 will use to

225
00:09:00,870 --> 00:08:59,200
NASA Global Hawk unmanned aerial

226
00:09:02,520 --> 00:09:00,880
vehicles one with an instrument suite

227
00:09:04,020 --> 00:09:02,530
geared toward measurement of the

228
00:09:06,030 --> 00:09:04,030
environment and the other with

229
00:09:08,400 --> 00:09:06,040
instruments suited to inner core

230
00:09:10,800 --> 00:09:08,410
structure and processes the aircraft are

231
00:09:13,440 --> 00:09:10,810
capable of flight altitudes greater than

232
00:09:16,140 --> 00:09:13,450
55,000 feet in flight directions of up

233
00:09:17,940 --> 00:09:16,150
to 30 hours more than 200 people will be

234
00:09:19,710 --> 00:09:17,950
involved in preparing and supporting the

235
00:09:21,660 --> 00:09:19,720
aircraft flight planning and aircraft

236
00:09:23,910 --> 00:09:21,670
coordination and conducting the science

237
00:09:25,770 --> 00:09:23,920
data collection it's the volume of data

238
00:09:27,510 --> 00:09:25,780

that really makes it unique and the

239
00:09:29,190 --> 00:09:27,520
scientists are all going to be working

240
00:09:30,750 --> 00:09:29,200
together and communicating and even

241
00:09:33,540 --> 00:09:30,760
showing real-time data during the

242
00:09:35,310 --> 00:09:33,550
mission to help them you know understand

243
00:09:36,990 --> 00:09:35,320
what they're seeing and communicate

244
00:09:38,820 --> 00:09:37,000
during their while they were doing their

245
00:09:40,860 --> 00:09:38,830
evaluation and all this stuff is going

246
00:09:42,840 --> 00:09:40,870
to be fed into models that can help us

247
00:09:45,090 --> 00:09:42,850
better predict spawns in addition to the

248
00:09:47,600 --> 00:09:45,100
2012 mission the project will also be

249
00:09:49,759 --> 00:09:47,610
conducted from Wallops in 2013 and 2014

250
00:09:52,249 --> 00:09:49,769
providing sustained measurement

251
00:09:54,889 --> 00:09:52,259
over several years due to limited

252
00:09:59,419 --> 00:09:54,899
sampling opportunities in any given her

253
00:10:00,910 --> 00:09:59,429
Akane season smokey welcome to NASA

254
00:10:03,290 --> 00:10:00,920
welcome to the Johnson Space Center

255
00:10:05,329 --> 00:10:03,300
smokey bear visited the Johnson Space

256
00:10:07,489 --> 00:10:05,339
Center to celebrate both his 68th

257
00:10:09,699 --> 00:10:07,499
birthday and a Space Act agreement

258
00:10:12,039 --> 00:10:09,709
between NASA and the US Forest Service

259
00:10:14,720 --> 00:10:12,049
JSC deputy director Ellen Ochoa

260
00:10:16,369 --> 00:10:14,730
astronaut Mike Fossum and others rolled

261
00:10:18,979 --> 00:10:16,379
out the red carpet for smokey and

262
00:10:21,139 --> 00:10:18,989
members of both the US and the Texas

263
00:10:24,289 --> 00:10:21,149

Forest Service complete with a tour of

264
00:10:26,239 --> 00:10:24,299
Mission Control and birthday cake smokey

265
00:10:28,699 --> 00:10:26,249
also meant Robonaut and it's designers

266
00:10:31,039 --> 00:10:28,709
and made a special stop at the JSC

267
00:10:33,379 --> 00:10:31,049
childcare center to talk about fire

268
00:10:35,389 --> 00:10:33,389
prevention and to plant a tree to

269
00:10:39,859 --> 00:10:35,399
symbolize the partnership between NASA

270
00:10:41,229 --> 00:10:39,869
and the Forest Service on August

271
00:10:45,499 --> 00:10:41,239
twentieth the voyager 2 spacecraft

272
00:10:47,030 --> 00:10:45,509
chalks up another year of exploration 35

273
00:10:49,100 --> 00:10:47,040
years ago on that date for a Jew to

274
00:10:51,739 --> 00:10:49,110
launch from Cape Canaveral to explore

275
00:10:53,749 --> 00:10:51,749
Jupiter and Saturn after a string of

276
00:10:56,030 --> 00:10:53,759
discoveries at those planets the mission

277
00:10:58,369 --> 00:10:56,040
of Voyager 2 and its twin voyager 1

278
00:11:00,499 --> 00:10:58,379
launched a less than a month later was

279
00:11:03,259 --> 00:11:00,509
extended to the outer planets of Uranus

280
00:11:05,600 --> 00:11:03,269
and Neptune the duals current campaign

281
00:11:08,059 --> 00:11:05,610
the Voyager interstellar mission is

282
00:11:10,730 --> 00:11:08,069
helping NASA reach beyond the outer

283
00:11:13,429 --> 00:11:10,740
planets to the heliosheath the outermost

284
00:11:15,319 --> 00:11:13,439
layer of the heliosphere where the solar

285
00:11:18,079 --> 00:11:15,329
wind is slowed by the pressure of

286
00:11:20,119 --> 00:11:18,089
interstellar gas this extended mission

287
00:11:22,549 --> 00:11:20,129
continues to characterize the outer

288
00:11:25,519 --> 00:11:22,559

solar system environment and search for

289
00:11:28,160 --> 00:11:25,529
the heliopause boundary the outer limits

290
00:11:33,369 --> 00:11:28,170
of the sun's magnetic field and outward

291
00:11:36,859 --> 00:11:33,379
flow of the solar wind 25 years ago in

292
00:11:39,319 --> 00:11:36,869
1987 the late Sally Ride America's first

293
00:11:41,119 --> 00:11:39,329
woman in space headed a group at NASA

294
00:11:43,369 --> 00:11:41,129
headquarters that completed an

295
00:11:46,159 --> 00:11:43,379
assessment of NASA's options beyond the

296
00:11:48,559 --> 00:11:46,169
space station on august seventeenth of

297
00:11:51,289 --> 00:11:48,569
that year nASA released that groups

298
00:11:53,629 --> 00:11:51,299
report leadership and America's future

299
00:11:56,150 --> 00:11:53,639
in space which came to be known as the

300
00:11:58,460 --> 00:11:56,160
ride report the document recommended

301
00:12:00,669 --> 00:11:58,470
major programs to study earth sciences

302
00:12:03,060 --> 00:12:00,679
with powerful orbiting sensors and

303
00:12:06,240 --> 00:12:03,070
exploration of the solar system with new

304
00:12:08,820 --> 00:12:06,250
generations of robotic probes and that's

305
00:12:10,710 --> 00:12:08,830
this week @nasa for more on these and

306
00:12:12,870 --> 00:12:10,720
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