1
00:00:07,040 --> 00:00:10,709
this week at nasa

2
00:00:15,990 --> 00:00:13,669
space exploration technologies or spacex

3
00:00:18,390 --> 00:00:16,000
will launch its dragon spacecraft on its

4
00:00:20,710 --> 00:00:18,400
second commercial orbital transportation

5
00:00:24,070 --> 00:00:20,720
services demonstration flight on

6
00:00:26,230 --> 00:00:24,080
february 7 2012

7
00:00:29,589 --> 00:00:26,240
pending completion of its final safety

8
00:00:31,910 --> 00:00:29,599
reviews testing and verification spacex

9
00:00:34,069 --> 00:00:31,920
might also send dragon to rendezvous

10
00:00:36,389 --> 00:00:34,079
with the international space station the

11
00:00:38,630 --> 00:00:36,399
announcement was made by nasa deputy

12
00:00:40,790 --> 00:00:38,640
administrator lori garver so it is the

13
00:00:45,270 --> 00:00:40,800

opening of that new commercial

14
00:00:48,150 --> 00:00:45,280
cargo delivery era for iss and it's

15
00:00:49,190 --> 00:00:48,160
great news for nasa and spacex together

16
00:00:50,150 --> 00:00:49,200
three

17
00:00:51,029 --> 00:00:50,160
two

18
00:00:52,069 --> 00:00:51,039
one

19
00:00:54,470 --> 00:00:52,079
zero

20
00:00:56,869 --> 00:00:54,480
we have liftoff of the falcon 9. on its

21
00:00:58,630 --> 00:00:56,879
first demonstration flight a year ago

22
00:01:01,110 --> 00:00:58,640
dragon was launched from the kennedy

23
00:01:03,590 --> 00:01:01,120
space center then splashed down in the

24
00:01:08,230 --> 00:01:03,600
pacific after successfully completing

25
00:01:12,230 --> 00:01:10,230
thank you very much garver made the

26
00:01:14,710 --> 00:01:12,240
spacex announcement during her opening

27
00:01:17,590 --> 00:01:14,720
remarks to nasa's future forum at the

28
00:01:20,310 --> 00:01:17,600
museum of flight in seattle

29
00:01:23,109 --> 00:01:20,320
since 2008 future forums have brought

30
00:01:26,070 --> 00:01:23,119
together technologists scientists and

31
00:01:28,789 --> 00:01:26,080
engineers with local business science

32
00:01:31,030 --> 00:01:28,799
technology and education leaders to

33
00:01:33,510 --> 00:01:31,040
discuss the importance of innovation

34
00:01:36,069 --> 00:01:33,520
discovery commercial partnerships and

35
00:01:39,109 --> 00:01:36,079
education to the success of america's

36
00:01:41,510 --> 00:01:39,119
space program and the nation as a whole

37
00:01:44,069 --> 00:01:41,520
together we're truly developing an

38
00:01:46,630 --> 00:01:44,079

industry that until recently had been

39
00:01:50,149 --> 00:01:46,640
largely science fiction but now it

40
00:01:52,710 --> 00:01:50,159
stands poised to open the new frontier

41
00:01:55,270 --> 00:01:52,720
that next chapter in human space

42
00:01:57,190 --> 00:01:55,280
development

43
00:01:59,190 --> 00:01:57,200
at a press conference held at nasa ames

44
00:02:01,030 --> 00:01:59,200
research center the kepler team

45
00:02:03,429 --> 00:02:01,040
announced the discovery of its first

46
00:02:05,590 --> 00:02:03,439
confirmed planet in the habitable zone

47
00:02:08,630 --> 00:02:05,600
or the region around a star where liquid

48
00:02:10,790 --> 00:02:08,640
water could exist on a planet's surface

49
00:02:13,510 --> 00:02:10,800
named kepler-22b

50
00:02:16,070 --> 00:02:13,520
the planet is about 2.4 times the radius

51
00:02:18,470 --> 00:02:16,080
of the earth and orbits a sun-like star

52
00:02:21,190 --> 00:02:18,480
about 600 light years away between the

53
00:02:22,229 --> 00:02:21,200
constellations of cygnus and lyra well

54
00:02:23,990 --> 00:02:22,239
certainly the things that's most

55
00:02:25,750 --> 00:02:24,000
exciting to me is the fact that we have

56
00:02:27,670 --> 00:02:25,760
finally after looking at all these

57
00:02:30,309 --> 00:02:27,680
candidates spending all this effort that

58
00:02:32,710 --> 00:02:30,319
we could confirm a planet in a habitable

59
00:02:35,190 --> 00:02:32,720
zone that's nearly earth's size

60
00:02:37,589 --> 00:02:35,200
scientists don't know yet if kepler-22b

61
00:02:40,309 --> 00:02:37,599
has a predominantly rocky gaseous or

62
00:02:42,309 --> 00:02:40,319
liquid composition but its discovery is

63
00:02:44,509 --> 00:02:42,319

a step closer to finding earth-like

64
00:02:47,350 --> 00:02:44,519
planets the kepler team announced today

65
00:02:51,509 --> 00:02:47,360
1094 new planet candidates bringing the

66
00:02:54,470 --> 00:02:51,519
total roster up to 2300

67
00:02:56,390 --> 00:02:54,480
of those 207 are earth sized it's an

68
00:02:59,270 --> 00:02:56,400
exciting milestone because we are really

69
00:03:01,030 --> 00:02:59,280
honing in on on truly earth-sized

70
00:03:02,790 --> 00:03:01,040
habitable planets

71
00:03:04,869 --> 00:03:02,800
the announcement helped to kick off the

72
00:03:07,509 --> 00:03:04,879
beginning of the first ever kepler

73
00:03:09,589 --> 00:03:07,519
science conference just days earlier the

74
00:03:11,830 --> 00:03:09,599
kepler mission celebrated one thousand

75
00:03:13,270 --> 00:03:11,840
days of conducting science operations in

76
00:03:15,509 --> 00:03:13,280
space

77
00:03:18,229 --> 00:03:15,519
famed astrophysicist and science

78
00:03:19,910 --> 00:03:18,239
communicator neil degrasse tyson also

79
00:03:21,990 --> 00:03:19,920
came to the event to help the team

80
00:03:24,710 --> 00:03:22,000
celebrate the milestone it's great to

81
00:03:27,430 --> 00:03:24,720
see the energy and enthusiasm

82
00:03:29,589 --> 00:03:27,440
of the workforce for kepler

83
00:03:31,830 --> 00:03:29,599
matching the magnitude of the science

84
00:03:34,229 --> 00:03:31,840
that's coming out from the telescope

85
00:03:36,390 --> 00:03:34,239
itself kepler is nasa's three and a half

86
00:03:38,390 --> 00:03:36,400
year mission to search for earth-sized

87
00:03:40,949 --> 00:03:38,400
potentially habitable planets in our

88
00:03:42,869 --> 00:03:40,959

galaxy

89
00:03:45,110 --> 00:03:42,879
just up the highway from ames in san

90
00:03:47,110 --> 00:03:45,120
francisco the announcement of another

91
00:03:49,750 --> 00:03:47,120
exciting finding at the american

92
00:03:52,149 --> 00:03:49,760
geophysical union's annual meeting

93
00:03:54,470 --> 00:03:52,159
researchers from nasa and the ohio state

94
00:03:57,670 --> 00:03:54,480
university confirmed that the major

95
00:04:00,869 --> 00:03:57,680
tsunami caused by the march 2011 tohoku

96
00:04:03,190 --> 00:04:00,879
oki earthquake in japan was in fact a

97
00:04:04,229 --> 00:04:03,200
merging tsunami caused by two wave

98
00:04:06,470 --> 00:04:04,239
fronts

99
00:04:08,789 --> 00:04:06,480
the forming of a single double high wave

100
00:04:10,789 --> 00:04:08,799
increased its intensity and ability to

101
00:04:11,670 --> 00:04:10,799
travel long distances without losing

102
00:04:13,990 --> 00:04:11,680
power

103
00:04:16,390 --> 00:04:14,000
the odds against the nasa and european

104
00:04:17,909 --> 00:04:16,400
radar satellites observing and capturing

105
00:04:23,270 --> 00:04:17,919
the data they did of this merging

106
00:04:28,070 --> 00:04:25,430
more than 34 years after its launch

107
00:04:30,310 --> 00:04:28,080
nasa's voyager 1 spacecraft has entered

108
00:04:32,230 --> 00:04:30,320
a new region between our solar system

109
00:04:34,390 --> 00:04:32,240
and interstellar space

110
00:04:36,550 --> 00:04:34,400
data it's obtained over the last year

111
00:04:39,350 --> 00:04:36,560
suggests this new region is a kind of

112
00:04:42,150 --> 00:04:39,360
cosmic purgatory where the solar wind is

113
00:04:44,950 --> 00:04:42,160

calm our solar system's magnetic field

114
00:04:47,270 --> 00:04:44,960
piles up and higher energy particles

115
00:04:49,909 --> 00:04:47,280
appear to leak from our solar system

116
00:04:52,950 --> 00:04:49,919
into interstellar space although voyager

117
00:04:55,590 --> 00:04:52,960
1 is about 11 billion miles from the sun

118
00:04:58,070 --> 00:04:55,600
it has yet to cross one major space

119
00:04:59,749 --> 00:04:58,080
faring threshold we're very close to the

120
00:05:01,430 --> 00:04:59,759
edge of interstellar space now

121
00:05:03,350 --> 00:05:01,440
unfortunately our models are not

122
00:05:05,350 --> 00:05:03,360
accurate enough to tell us how close so

123
00:05:07,909 --> 00:05:05,360
it could be a few more months or it

124
00:05:10,710 --> 00:05:07,919
could be a few more years but voyager 1

125
00:05:12,310 --> 00:05:10,720
is moving out a billion miles every

126
00:05:16,070 --> 00:05:12,320
three years so we shouldn't have too

127
00:05:18,390 --> 00:05:16,080
long to wait to find out what's outside

128
00:05:20,790 --> 00:05:18,400
expedition 30 soyuz commander oleg

129
00:05:23,270 --> 00:05:20,800
kononenko nasa flight engineer don

130
00:05:25,590 --> 00:05:23,280
pettit and european space agency flight

131
00:05:27,670 --> 00:05:25,600
engineer andre calpers have left the

132
00:05:29,830 --> 00:05:27,680
gagarin training center in star city

133
00:05:31,830 --> 00:05:29,840
russia for the baikonur cosmodrome in

134
00:05:33,270 --> 00:05:31,840
kazakhstan where they will complete

135
00:05:35,189 --> 00:05:33,280
training for their launch to the

136
00:05:35,990 --> 00:05:35,199
international space station later this

137
00:05:41,990 --> 00:05:36,000
month

138
00:05:46,390 --> 00:05:44,310

astronaut chris ferguson the last person

139
00:05:49,110 --> 00:05:46,400
to serve as commander of a space shuttle

140
00:05:50,790 --> 00:05:49,120
mission has retired from nasa

141
00:05:54,310 --> 00:05:50,800
he plans to take a new job in the

142
00:05:56,870 --> 00:05:54,320
private sector and lift off the final

143
00:05:59,430 --> 00:05:56,880
liftoff of atlantis on the shoulders of

144
00:06:03,430 --> 00:05:59,440
the space shuttle america will continue

145
00:06:05,430 --> 00:06:03,440
the dream on sts-135 in july 2011 the

146
00:06:07,590 --> 00:06:05,440
retired u.s navy captain was the

147
00:06:10,629 --> 00:06:07,600
commander for the final flight of space

148
00:06:12,790 --> 00:06:10,639
shuttle atlantis the 135th and final

149
00:06:15,830 --> 00:06:12,800
mission of america's 30-year space

150
00:06:20,870 --> 00:06:18,469
a milestone for engineers in the j2x

151
00:06:23,749 --> 00:06:20,880
program at the stennis space center they

152
00:06:26,790 --> 00:06:23,759
recently installed the upgraded j2x

153
00:06:29,510 --> 00:06:26,800
power pack on the a1 test stand and are

154
00:06:31,430 --> 00:06:29,520
a step closer to starting new tests

155
00:06:33,990 --> 00:06:31,440
the power pack is a critical component

156
00:06:37,670 --> 00:06:34,000
of the j2x the engine that'll produce

157
00:06:40,150 --> 00:06:37,680
the 294 000 pounds of thrust needed for

158
00:06:42,870 --> 00:06:40,160
nasa's new space launch system to carry

159
00:06:45,909 --> 00:06:42,880
astronauts to destinations beyond low

160
00:06:50,150 --> 00:06:47,909
the microgravity science glovebox team

161
00:06:51,909 --> 00:06:50,160
has reason to celebrate the science

162
00:06:54,390 --> 00:06:51,919
facility aboard the international space

163
00:06:57,029 --> 00:06:54,400

station has passed 10 000 hours of

164
00:06:59,510 --> 00:06:57,039
operation the glove box developed by the

165
00:07:01,430 --> 00:06:59,520
european space agency and managed by the

166
00:07:04,870 --> 00:07:01,440
marshall space flight center launched to

167
00:07:07,110 --> 00:07:04,880
the station during expedition 5 in 2002

168
00:07:08,950 --> 00:07:07,120
over the past nine years the glove box

169
00:07:11,110 --> 00:07:08,960
has been used to conduct a wide range of

170
00:07:13,430 --> 00:07:11,120
microgravity research including fluid

171
00:07:15,830 --> 00:07:13,440
physics combustion science material

172
00:07:17,990 --> 00:07:15,840
science biotechnology fundamental

173
00:07:19,749 --> 00:07:18,000
physics and other investigations seeking

174
00:07:22,230 --> 00:07:19,759
to understand the role of gravity in

175
00:07:24,150 --> 00:07:22,240
basic physical and chemical interactions

176
00:07:25,830 --> 00:07:24,160
the big thing about msg is containment

177
00:07:27,430 --> 00:07:25,840
so it allows us to do all these

178
00:07:28,950 --> 00:07:27,440
different types of experiments that may

179
00:07:31,749 --> 00:07:28,960
have some

180
00:07:33,350 --> 00:07:31,759
impact to crew safety or or the crew's

181
00:07:35,350 --> 00:07:33,360
health or whatever and they're able to

182
00:07:36,150 --> 00:07:35,360
do it in a confined environment so that

183
00:07:40,309 --> 00:07:36,160
gives

184
00:07:42,629 --> 00:07:40,319
chance to do something in space and use

185
00:07:44,150 --> 00:07:42,639
the microgravity environment to do it to

186
00:07:46,469 --> 00:07:44,160
get results that they couldn't get on

187
00:07:50,710 --> 00:07:48,390
the hubble space telescope has passed

188
00:07:53,589 --> 00:07:50,720

another milestone in its 21 years of

189
00:07:56,070 --> 00:07:53,599
exploration the 10 000th refereed

190
00:07:58,710 --> 00:07:56,080
science paper based on data captured by

191
00:08:00,309 --> 00:07:58,720
hubble has been published this makes the

192
00:08:03,110 --> 00:08:00,319
telescope one of the most prolific

193
00:08:05,270 --> 00:08:03,120
astronomical endeavors in history for

194
00:08:08,070 --> 00:08:05,280
the past 21 years thousands of

195
00:08:10,230 --> 00:08:08,080
astronomers around the world in over 35

196
00:08:14,150 --> 00:08:10,240
countries have engaged in hubble

197
00:08:18,550 --> 00:08:16,629
300 teenagers spent their saturday night

198
00:08:21,350 --> 00:08:18,560
getting connected during tedx youth at

199
00:08:23,270 --> 00:08:21,360
nasa the event sponsored by nasa langley

200
00:08:25,670 --> 00:08:23,280
the national institute of aerospace and

201
00:08:27,670 --> 00:08:25,680
virginia air and space center offered 13

202
00:08:29,830 --> 00:08:27,680
to 18 year olds an evening of motivating

203
00:08:32,790 --> 00:08:29,840
speakers interactive exhibits and

204
00:08:35,350 --> 00:08:32,800
messages about creativity risk taking

205
00:08:37,350 --> 00:08:35,360
and becoming a leader it's not about who

206
00:08:40,469 --> 00:08:37,360
never makes mistakes it's not about who

207
00:08:43,430 --> 00:08:40,479
never falls down it's about who

208
00:08:45,910 --> 00:08:43,440
builds the skill of getting up faster in

209
00:08:48,150 --> 00:08:45,920
today's world to really be a superstar

210
00:08:49,750 --> 00:08:48,160
at tedx youth at nasa the goal was to

211
00:08:51,509 --> 00:08:49,760
get liberal arts minded students

212
00:08:53,910 --> 00:08:51,519
thinking about how they can play a role

213
00:08:56,070 --> 00:08:53,920

in the areas of science technology

214
00:08:58,070 --> 00:08:56,080
engineering and math i really like the

215
00:09:00,630 --> 00:08:58,080
speakers they

216
00:09:02,790 --> 00:09:00,640
are very inspirational and i liked

217
00:09:05,190 --> 00:09:02,800
simon nance i believe his name was he

218
00:09:07,030 --> 00:09:05,200
kind of put calculus into life and kind

219
00:09:08,630 --> 00:09:07,040
of explained a couple things that like

220
00:09:11,030 --> 00:09:08,640
didn't really occur to me so that was

221
00:09:13,350 --> 00:09:11,040
interesting we've got some really tough

222
00:09:14,630 --> 00:09:13,360
problems in this world that we need you

223
00:09:17,030 --> 00:09:14,640
to solve

224
00:09:20,230 --> 00:09:17,040
and they require an understanding of

225
00:09:21,829 --> 00:09:20,240
science technology engineering and

226
00:09:24,070 --> 00:09:21,839
mathematics and that's what this

227
00:09:26,230 --> 00:09:24,080
conference is about getting you excited

228
00:09:30,389 --> 00:09:26,240
getting you motivated about those

229
00:09:35,430 --> 00:09:32,790
nasa administrator charlie bolden and

230
00:09:38,150 --> 00:09:35,440
deputy administrator lori garver were on

231
00:09:40,870 --> 00:09:38,160
hand at the 2011 combined federal

232
00:09:43,269 --> 00:09:40,880
campaign carnival and silent auction at

233
00:09:46,310 --> 00:09:43,279
nasa headquarters

234
00:09:48,550 --> 00:09:46,320
cfc the world's largest and most

235
00:09:51,030 --> 00:09:48,560
successful annual workplace charity

236
00:09:52,790 --> 00:09:51,040
campaign raises millions of dollars

237
00:09:55,190 --> 00:09:52,800
every year to support community

238
00:09:57,350 --> 00:09:55,200

organizations and provide aid to

239
00:09:59,430 --> 00:09:57,360
survivors of natural disasters the

240
00:10:03,190 --> 00:09:59,440
combined federal campaign is here to

241
00:10:04,630 --> 00:10:03,200
support families and folks in need and

242
00:10:06,310 --> 00:10:04,640
at here at nasa headquarters are hoping

243
00:10:08,630 --> 00:10:06,320
to raise three hundred thousand dollars

244
00:10:11,509 --> 00:10:08,640
towards that goal

245
00:10:14,230 --> 00:10:11,519
and that's this week at nasa