1
00:00:10,470 --> 00:00:07,030
[Music]

2
00:00:14,150 --> 00:00:13,190
we learned the new things first

3
00:00:15,749 --> 00:00:14,160
and we

4
00:00:18,150 --> 00:00:15,759
with an educated citizenry a little

5
00:00:19,910 --> 00:00:18,160
investment wow new whole businesses and

6
00:00:21,670 --> 00:00:19,920
industries and whether it was

7
00:00:23,990 --> 00:00:21,680
better ways of making steel or

8
00:00:25,910 --> 00:00:24,000
automobiles or whatever it was we led

9
00:00:27,990 --> 00:00:25,920
the world in innovation and technology

10
00:00:30,470 --> 00:00:28,000
and that's where the new and good jobs

11
00:00:32,950 --> 00:00:30,480
came from senator john glenn spoke

12
00:00:35,350 --> 00:00:32,960
during a nasa future forum at the ohio

13
00:00:37,350 --> 00:00:35,360

state university about the fundamental

14
00:00:39,350 --> 00:00:37,360
elements that once made america a

15
00:00:41,110 --> 00:00:39,360
leading innovator and their importance

16
00:00:42,790 --> 00:00:41,120
to the nation's future

17
00:00:44,470 --> 00:00:42,800
nasa officials university

18
00:00:46,950 --> 00:00:44,480
representatives and students

19
00:00:49,670 --> 00:00:46,960
participated in a panel discussion about

20
00:00:52,790 --> 00:00:49,680
nasa's role in advancing innovation

21
00:00:55,110 --> 00:00:52,800
technology science engineering education

22
00:00:57,590 --> 00:00:55,120
and the economy the future forum

23
00:00:59,910 --> 00:00:57,600
coincided with the 50th anniversary of

24
00:01:01,670 --> 00:00:59,920
glenn's historic friendship 7 space

25
00:01:03,510 --> 00:01:01,680
flight astronauts aboard the

26
00:01:05,910 --> 00:01:03,520
international space station sent a

27
00:01:08,230 --> 00:01:05,920
congratulatory message and talked with

28
00:01:10,710 --> 00:01:08,240
glenn during an in-flight call from the

29
00:01:13,190 --> 00:01:10,720
station 50 years ago today

30
00:01:15,749 --> 00:01:13,200
friendship seven was orbiting uh planet

31
00:01:18,789 --> 00:01:15,759
earth and that helped in a very big way

32
00:01:21,590 --> 00:01:18,799
pave the way for america to become a

33
00:01:22,950 --> 00:01:21,600
space power and to to go to the moon and

34
00:01:26,469 --> 00:01:22,960
to do the things that we're doing right

35
00:01:28,310 --> 00:01:26,479
now on the international space station

36
00:01:30,789 --> 00:01:28,320
it's my privilege today

37
00:01:33,749 --> 00:01:30,799
to be here to share nasa's fiscal year

38
00:01:36,069 --> 00:01:33,759

2013 budget nasa administrator charles

39
00:01:37,109 --> 00:01:36,079
bolden and chief financial officer beth

40
00:01:39,109 --> 00:01:37,119
robinson

41
00:01:42,310 --> 00:01:39,119
outlined the president's fiscal year

42
00:01:44,789 --> 00:01:42,320
2013 budget proposal for nasa during a

43
00:01:47,030 --> 00:01:44,799
news conference at nasa headquarters the

44
00:01:49,510 --> 00:01:47,040
proposed budget would enable nasa to

45
00:01:52,230 --> 00:01:49,520
continue the space exploration program

46
00:01:54,710 --> 00:01:52,240
envisioned by president obama one that

47
00:01:57,190 --> 00:01:54,720
creates jobs and spurs the american

48
00:01:59,429 --> 00:01:57,200
economy well into the future while

49
00:02:02,069 --> 00:01:59,439
sending us farther into space than ever

50
00:02:04,389 --> 00:02:02,079
before we've made steady and tangible

51
00:02:06,550 --> 00:02:04,399
progress on the next generation deep

52
00:02:08,790 --> 00:02:06,560
space crew capsule and our new heavy

53
00:02:10,949 --> 00:02:08,800
lift rocket that will launch astronauts

54
00:02:13,110 --> 00:02:10,959
on journeys to destinations

55
00:02:15,589 --> 00:02:13,120
farther in our solar system those

56
00:02:17,910 --> 00:02:15,599
priorities are funded in this budget

57
00:02:20,309 --> 00:02:17,920
already we've been doing test firings of

58
00:02:23,270 --> 00:02:20,319
the j2x engine that will power the heavy

59
00:02:25,830 --> 00:02:23,280
lifts upper stage orion has undergone

60
00:02:27,030 --> 00:02:25,840
water drop tests for its eventual ocean

61
00:02:29,270 --> 00:02:27,040
landing

62
00:02:37,190 --> 00:02:29,280
funding is included in this budget to

63
00:02:42,869 --> 00:02:40,630

2012's first test of the j-2x nasa's

64
00:02:45,589 --> 00:02:42,879
first human-rated engine to be developed

65
00:02:47,910 --> 00:02:45,599
in 40 years is in the books

66
00:02:51,190 --> 00:02:47,920
engineers at the stennis space center

67
00:02:53,750 --> 00:02:51,200
conducted a short 1.8 second test firing

68
00:02:55,990 --> 00:02:53,760
of the j2x power pack the power pack

69
00:02:58,149 --> 00:02:56,000
comprises components on the top portion

70
00:03:00,710 --> 00:02:58,159
of the engine designed to generate the

71
00:03:03,190 --> 00:03:00,720
thrust needed to power the upper stage

72
00:03:05,430 --> 00:03:03,200
of nasa's space launch system the next

73
00:03:07,589 --> 00:03:05,440
generation heavy lift launch vehicle

74
00:03:09,670 --> 00:03:07,599
that will be capable of missions beyond

75
00:03:12,309 --> 00:03:09,680
low earth orbit it's a pretty important

76
00:03:13,910 --> 00:03:12,319
test we have had the facility down for

77
00:03:16,630 --> 00:03:13,920
almost two years

78
00:03:19,430 --> 00:03:16,640
so the first test allows us to get the

79
00:03:21,750 --> 00:03:19,440
facility up and operational and to make

80
00:03:23,270 --> 00:03:21,760
sure that it can

81
00:03:26,070 --> 00:03:23,280
do the things it's supposed to do to

82
00:03:28,229 --> 00:03:26,080
support the j2x power pack test

83
00:03:30,630 --> 00:03:28,239
stennis is planning to conduct about a

84
00:03:34,630 --> 00:03:30,640
dozen tests on the power pack from now

85
00:03:38,470 --> 00:03:36,869
what should i do the expedition 30 crew

86
00:03:41,830 --> 00:03:38,480
conducted the international space

87
00:03:44,550 --> 00:03:41,840
station's 30th russian-based spacewalk

88
00:03:47,910 --> 00:03:44,560

cosmonauts oleg kononenko and anton

89
00:03:50,149 --> 00:03:47,920
shkaplerov spent a total of 6 hours 15

90
00:03:51,750 --> 00:03:50,159
minutes completing a variety of work on

91
00:03:54,390 --> 00:03:51,760
the orbiting outpost

92
00:03:56,229 --> 00:03:54,400
the duo moved one of two strela cargo

93
00:03:58,630 --> 00:03:56,239
cranes from the piers docking

94
00:04:01,509 --> 00:03:58,640
compartment to the poisk mini research

95
00:04:03,429 --> 00:04:01,519
module and installed a materials sample

96
00:04:05,429 --> 00:04:03,439
experiment which will investigate the

97
00:04:07,429 --> 00:04:05,439
effects of space on the mechanical

98
00:04:09,509 --> 00:04:07,439
properties of those materials

99
00:04:11,910 --> 00:04:09,519
the pair was unable to complete all of

100
00:04:13,910 --> 00:04:11,920
the originally planned work including

101
00:04:16,390 --> 00:04:13,920
the installation of five protective

102
00:04:18,069 --> 00:04:16,400
shields on the zvezda service module

103
00:04:24,150 --> 00:04:18,079
this was the third spacewalk for

104
00:04:28,070 --> 00:04:26,150
so man meets machine aboard the

105
00:04:30,390 --> 00:04:28,080
international space station another

106
00:04:32,950 --> 00:04:30,400
first inside the space station

107
00:04:35,110 --> 00:04:32,960
expedition 30 commander dan burbank and

108
00:04:37,189 --> 00:04:35,120
robonaut completed the first handshake

109
00:04:39,430 --> 00:04:37,199
between a humanoid robot and an

110
00:04:41,510 --> 00:04:39,440
astronaut in space the historic

111
00:04:43,990 --> 00:04:41,520
milestone took place during a two-day

112
00:04:44,950 --> 00:04:44,000
checkout of robonaut's joints hands and

113
00:04:47,110 --> 00:04:44,960

fingers

114
00:04:49,350 --> 00:04:47,120
robonaut is designed with a dexterity to

115
00:04:51,749 --> 00:04:49,360
complete work in space typically

116
00:04:53,909 --> 00:04:51,759
performed by humans designed at the

117
00:04:56,710 --> 00:04:53,919
johnson space hitter robonaut was

118
00:04:58,310 --> 00:04:56,720
launched to the station on sts-133

119
00:05:01,080 --> 00:04:58,320
the final flight of space shuttle

120
00:05:05,110 --> 00:05:02,870
[Applause]

121
00:05:08,150 --> 00:05:05,120
a special valentine's day treat for

122
00:05:10,870 --> 00:05:08,160
space fans in the washington dc area

123
00:05:13,430 --> 00:05:10,880
three nasa astronauts from recent iss

124
00:05:16,230 --> 00:05:13,440
expeditions shared experiences from

125
00:05:18,629 --> 00:05:16,240
those missions complete with pictures

126
00:05:20,710 --> 00:05:18,639
a captive headquarters audience heard

127
00:05:22,790 --> 00:05:20,720
from flight engineers katie coleman of

128
00:05:26,150 --> 00:05:22,800
expedition 2627

129
00:05:29,029 --> 00:05:26,160
ron garan of expedition 27 28 and mike

130
00:05:31,590 --> 00:05:29,039
fossum an expedition 28 flight engineer

131
00:05:33,189 --> 00:05:31,600
and commander of expedition 29 so we're

132
00:05:35,270 --> 00:05:33,199
really excited to

133
00:05:37,510 --> 00:05:35,280
come to washington today and to a nasa

134
00:05:39,189 --> 00:05:37,520
headquarters to say thanks to all of the

135
00:05:40,950 --> 00:05:39,199
people here that helped make this

136
00:05:42,950 --> 00:05:40,960
possible that have worked for so many

137
00:05:46,629 --> 00:05:42,960
decades on the international space

138
00:05:49,670 --> 00:05:46,639

station program and to now really see it

139
00:05:51,029 --> 00:05:49,680
coming to life for me if i could have

140
00:05:52,390 --> 00:05:51,039
packed up my whole family and brought

141
00:05:54,390 --> 00:05:52,400
them and i'm actually taking this quote

142
00:05:56,469 --> 00:05:54,400
from don pettit who's up there

143
00:05:57,350 --> 00:05:56,479
uh i would have brought them and there's

144
00:05:59,350 --> 00:05:57,360
actually

145
00:06:02,390 --> 00:05:59,360
no reason for people not to live there

146
00:06:04,390 --> 00:06:02,400
just all the time

147
00:06:06,710 --> 00:06:04,400
the astronauts participated in several

148
00:06:09,350 --> 00:06:06,720
other events later that day including a

149
00:06:11,430 --> 00:06:09,360
tweet up at nasa headquarters with garen

150
00:06:13,670 --> 00:06:11,440
a presentation by coleman and fossum at

151
00:06:16,070 --> 00:06:13,680
the smithsonian national air and space

152
00:06:18,150 --> 00:06:16,080
museum and an appearance by all three at

153
00:06:20,870 --> 00:06:18,160
the university of maryland in college

154
00:06:22,870 --> 00:06:20,880
park

155
00:06:24,629 --> 00:06:22,880
if you enjoyed the saturday morning

156
00:06:27,270 --> 00:06:24,639
science demonstrations performed by

157
00:06:28,550 --> 00:06:27,280
astronaut don pettit during his previous

158
00:06:30,870 --> 00:06:28,560
space missions

159
00:06:33,350 --> 00:06:30,880
pettit now a member of the expedition 30

160
00:06:35,590 --> 00:06:33,360
crew is back at it again i'm going to

161
00:06:37,510 --> 00:06:35,600
take a syringe with a little teflon

162
00:06:39,909 --> 00:06:37,520
cannula i'm going to squirt drops of

163
00:06:41,749 --> 00:06:39,919

water out and look what happens when

164
00:06:44,230 --> 00:06:41,759
those drops of water get close to that

165
00:06:46,629 --> 00:06:44,240
charged knitting needle nasa and the

166
00:06:49,510 --> 00:06:46,639
american physical society have partnered

167
00:06:51,909 --> 00:06:49,520
to share unique videos of pettit using

168
00:06:55,350 --> 00:06:51,919
everyday objects to demonstrate physics

169
00:06:57,670 --> 00:06:55,360
in its new series science off the sphere

170
00:07:00,390 --> 00:06:57,680
the videos will be posted on the aps

171
00:07:02,790 --> 00:07:00,400
website physics central winners

172
00:07:04,390 --> 00:07:02,800
providing answers to challenge questions

173
00:07:06,950 --> 00:07:04,400
posed during the series will be

174
00:07:10,469 --> 00:07:06,960
recognized by pettit during a future

175
00:07:14,390 --> 00:07:12,230
the glenn research center recently

176
00:07:17,350 --> 00:07:14,400
hosted media representatives at its

177
00:07:19,670 --> 00:07:17,360
space power facility there inside the

178
00:07:22,309 --> 00:07:19,680
clean room high bay facility a new

179
00:07:24,469 --> 00:07:22,319
communications test bed that'll fly on

180
00:07:26,710 --> 00:07:24,479
the international space station was

181
00:07:29,270 --> 00:07:26,720
going through its checkout

182
00:07:32,710 --> 00:07:29,280
the space communications and navigation

183
00:07:35,749 --> 00:07:32,720
or scan testbed will be the first space

184
00:07:38,629 --> 00:07:35,759
hardware for exploring the promise of

185
00:07:40,469 --> 00:07:38,639
software-defined radio technology the

186
00:07:42,950 --> 00:07:40,479
interesting part of this scan testbed

187
00:07:44,629 --> 00:07:42,960
are its three software defined radios

188
00:07:46,629 --> 00:07:44,639

these are radios that can be completely

189
00:07:49,110 --> 00:07:46,639
reconfigured on orbit

190
00:07:51,510 --> 00:07:49,120
by software that means new operating

191
00:07:53,350 --> 00:07:51,520
environments new applications that will

192
00:07:55,830 --> 00:07:53,360
change the characteristics of how it

193
00:07:58,150 --> 00:07:55,840
communicates after creating in a special

194
00:07:59,110 --> 00:07:58,160
container provided by the kennedy space

195
00:08:01,430 --> 00:07:59,120
center

196
00:08:04,230 --> 00:08:01,440
the scan test bed will be sent to

197
00:08:07,270 --> 00:08:04,240
japan's tanagoshima space center for its

198
00:08:10,070 --> 00:08:07,280
scheduled launch to the iss later this

199
00:08:14,230 --> 00:08:12,070
in recognition of the contributions by

200
00:08:17,270 --> 00:08:14,240
african americans to the cause of space

201
00:08:20,309 --> 00:08:17,280
exploration this week at nasa profiles

202
00:08:21,990 --> 00:08:20,319
karen harper i.t workforce manager for

203
00:08:27,110 --> 00:08:22,000
the office of the chief information

204
00:08:31,110 --> 00:08:28,869
good morning this is karen harper how

205
00:08:34,230 --> 00:08:31,120
may i help you the responsibility that i

206
00:08:36,070 --> 00:08:34,240
have within the office of the cio is to

207
00:08:37,589 --> 00:08:36,080
look at their i.t workforce and make

208
00:08:39,350 --> 00:08:37,599
sure that we have

209
00:08:42,070 --> 00:08:39,360
the appropriate

210
00:08:45,030 --> 00:08:42,080
competencies to do the job within the

211
00:08:47,910 --> 00:08:45,040
i.t community for the agency in that is

212
00:08:51,030 --> 00:08:47,920
looking at workforce analysis workforce

213
00:08:53,190 --> 00:08:51,040

gaps in terms of the i.t community and

214
00:08:56,470 --> 00:08:53,200
then being able to make recommendations

215
00:08:58,310 --> 00:08:56,480
to the cio where we perceive to be gaps

216
00:09:01,430 --> 00:08:58,320
and how we can plan for the future in

217
00:09:05,350 --> 00:09:01,440
the next generation of workers the i.t

218
00:09:08,470 --> 00:09:05,360
workers within nasa i started out as

219
00:09:12,310 --> 00:09:08,480
with the air force in human resource

220
00:09:13,990 --> 00:09:12,320
management so that prepared me for 13 14

221
00:09:17,590 --> 00:09:14,000
years looking at

222
00:09:19,990 --> 00:09:17,600
the workforce starting in 1995

223
00:09:22,310 --> 00:09:20,000
i worked i started working for glenn

224
00:09:24,710 --> 00:09:22,320
research center as the legislative

225
00:09:26,470 --> 00:09:24,720
liaison officer for the center director

226
00:09:27,990 --> 00:09:26,480
and in that position i had the

227
00:09:30,150 --> 00:09:28,000
opportunity to

228
00:09:32,470 --> 00:09:30,160
help advocate the

229
00:09:34,310 --> 00:09:32,480
technology the importance of the nasa

230
00:09:36,389 --> 00:09:34,320
center within throughout the state of

231
00:09:38,610 --> 00:09:36,399
ohio to see if you can take a look

232
00:09:39,670 --> 00:09:38,620
mentoring touches my heart and

233
00:09:41,910 --> 00:09:39,680
[Music]

234
00:09:44,949 --> 00:09:41,920
it's because when i was growing up other

235
00:09:46,949 --> 00:09:44,959
than having a very lovely loving family

236
00:09:49,829 --> 00:09:46,959
i did not have any mentoring

237
00:09:51,750 --> 00:09:49,839
relationships i was discouraged by a

238
00:09:53,990 --> 00:09:51,760

guidance counselor that told me i was

239
00:09:57,030 --> 00:09:54,000
not college material went to a deep

240
00:09:59,509 --> 00:09:57,040
place for me to prove that i could go to

241
00:10:02,230 --> 00:09:59,519
college i was college material

242
00:10:03,590 --> 00:10:02,240
i did graduate went on to pursue my

243
00:10:06,550 --> 00:10:03,600
master's

244
00:10:07,990 --> 00:10:06,560
i think for a young person to

245
00:10:09,750 --> 00:10:08,000
be prepared

246
00:10:11,670 --> 00:10:09,760
they need to

247
00:10:14,230 --> 00:10:11,680
get engaged in

248
00:10:16,949 --> 00:10:14,240
stem disciplines and understand the

249
00:10:18,790 --> 00:10:16,959
value of math and science and preparing

250
00:10:21,190 --> 00:10:18,800
yourself for whatever career that you

251
00:10:25,590 --> 00:10:21,200
choose

252
00:10:27,750 --> 00:10:25,600
35 years ago on february 18 1977

253
00:10:30,230 --> 00:10:27,760
enterprise the first space shuttle

254
00:10:32,790 --> 00:10:30,240
orbiter completed its first flight test

255
00:10:35,190 --> 00:10:32,800
at the dryden flight research center

256
00:10:38,230 --> 00:10:35,200
constructed without an engine enterprise

257
00:10:40,630 --> 00:10:38,240
was mounted atop a boeing 747 shuttle

258
00:10:43,190 --> 00:10:40,640
carrier aircraft to measure structural

259
00:10:46,550 --> 00:10:43,200
integrity handling qualities and other

260
00:10:48,710 --> 00:10:46,560
capabilities prior to atmospheric flight

261
00:10:51,190 --> 00:10:48,720
enterprise never flew in space but it

262
00:10:53,269 --> 00:10:51,200
was crucial to the space shuttle program

263
00:10:55,350 --> 00:10:53,279

the approach and landing tests it

264
00:10:57,829 --> 00:10:55,360
performed that year demonstrated that

265
00:11:00,310 --> 00:10:57,839
the orbiter could fly in the atmosphere

266
00:11:02,389 --> 00:11:00,320
and land like an airplane except without

267
00:11:04,550 --> 00:11:02,399
power like a glider

268
00:11:14,069 --> 00:11:04,560
enterprise was named for the starship on

269
00:11:18,790 --> 00:11:16,470
and february 20th is the 50th

270
00:11:21,110 --> 00:11:18,800
anniversary of john glenn's historic

271
00:11:23,670 --> 00:11:21,120
flight aboard friendship 7.

272
00:11:26,230 --> 00:11:23,680
on that flight glenn became the first

273
00:11:28,870 --> 00:11:26,240
american to orbit the earth circling the

274
00:11:31,670 --> 00:11:28,880
globe three times as he passed over

275
00:11:34,069 --> 00:11:31,680
perth western australia residents there

276
00:11:36,710 --> 00:11:34,079
turned on house lights and street lights

277
00:11:37,670 --> 00:11:36,720
earning perth the nickname the city of

278
00:11:39,430 --> 00:11:37,680
light

279
00:11:41,590 --> 00:11:39,440
there were some tense moments near the

280
00:11:43,990 --> 00:11:41,600
end of the 4-hour 55-minute mercury

281
00:11:46,069 --> 00:11:44,000
mission as flight controllers could not

282
00:11:48,470 --> 00:11:46,079
determine if the capsule's heat shield

283
00:11:50,150 --> 00:11:48,480
was intact during re-entry

284
00:11:51,750 --> 00:11:50,160
but the capsule returned to earth

285
00:11:54,230 --> 00:11:51,760
without incident

286
00:11:56,949 --> 00:11:54,240
glenn was later celebrated as a national

287
00:11:58,389 --> 00:11:56,959
hero during a ticker tape parade in new

288
00:12:01,350 --> 00:11:58,399

york city

289
00:12:03,910 --> 00:12:01,360
and that's this week at nasa for more on

290
00:12:06,389 --> 00:12:03,920
these and other stories or to follow us