1
00:00:07,120 --> 00:00:12,150
this week at nasa

2
00:00:16,790 --> 00:00:14,549
senator barbara mikulski of maryland was

3
00:00:18,470 --> 00:00:16,800
honored in her hometown of baltimore

4
00:00:20,550 --> 00:00:18,480
when the space telescope science

5
00:00:22,710 --> 00:00:20,560
institute renamed its data archive

6
00:00:24,790 --> 00:00:22,720
center for the longest serving woman in

7
00:00:27,990 --> 00:00:24,800
history of the u.s congress it's

8
00:00:29,189 --> 00:00:28,000
available to the world for free

9
00:00:31,750 --> 00:00:29,199
and

10
00:00:34,389 --> 00:00:31,760
whether you're a teacher

11
00:00:37,350 --> 00:00:34,399
in south baltimore or you're a young

12
00:00:39,350 --> 00:00:37,360
scientist in south africa or south korea

13
00:00:42,229 --> 00:00:39,360

you have a chance to come to the digital

14
00:00:45,350 --> 00:00:42,239
library and to have

15
00:00:47,590 --> 00:00:45,360
a library that has more than 100 times

16
00:00:51,189 --> 00:00:47,600
information of the library of congress

17
00:00:54,310 --> 00:00:51,199
the multi-mission archive at stsci or

18
00:00:56,150 --> 00:00:54,320
mast was renamed for mikulski in honor

19
00:00:58,869 --> 00:00:56,160
of her continued support of space

20
00:01:01,670 --> 00:00:58,879
science programs the archive holds a

21
00:01:04,549 --> 00:01:01,680
variety of astronomical data sets

22
00:01:07,590 --> 00:01:04,559
primarily in the optical ultraviolet and

23
00:01:09,830 --> 00:01:07,600
near-infrared captured by 16 nasa

24
00:01:15,510 --> 00:01:09,840
telescopes including the hubble space

25
00:01:20,550 --> 00:01:18,070
leaders in government industry academia

26
00:01:22,870 --> 00:01:20,560
and entrepreneurship recently gathered

27
00:01:25,270 --> 00:01:22,880
at the annual robert h goddard memorial

28
00:01:27,590 --> 00:01:25,280
symposium in greenbelt maryland to

29
00:01:29,590 --> 00:01:27,600
discuss a wide range of topics from the

30
00:01:32,069 --> 00:01:29,600
future of commercial space flight to

31
00:01:34,069 --> 00:01:32,079
protecting our home planet the theme of

32
00:01:36,630 --> 00:01:34,079
this year's two-day event dreams and

33
00:01:39,030 --> 00:01:36,640
possibilities planning to be achievable

34
00:01:41,590 --> 00:01:39,040
featured presentations and expert panel

35
00:01:44,069 --> 00:01:41,600
discussions to devise strategies for

36
00:01:46,069 --> 00:01:44,079
human space exploration technology

37
00:01:48,789 --> 00:01:46,079
advancement and public outreach and

38
00:01:51,510 --> 00:01:48,799

education this was the 50th annual

39
00:01:54,230 --> 00:01:51,520
goddard memorial symposium held in honor

40
00:01:59,190 --> 00:01:54,240
of dr robert h goddard the father of

41
00:02:03,990 --> 00:02:01,590
mason peck nasa's chief technologist

42
00:02:05,910 --> 00:02:04,000
walked the test section of the langley

43
00:02:08,309 --> 00:02:05,920
research center's eight foot high

44
00:02:11,110 --> 00:02:08,319
temperature tunnel a facility designed

45
00:02:13,510 --> 00:02:11,120
to mimic hypersonic flight conditions

46
00:02:15,990 --> 00:02:13,520
peck also inspected prototype inflatable

47
00:02:18,710 --> 00:02:16,000
lunar habitats that may someday help

48
00:02:21,350 --> 00:02:18,720
humans live and work on the moon and was

49
00:02:23,510 --> 00:02:21,360
briefed on nasa's hypersonic inflatable

50
00:02:25,910 --> 00:02:23,520
aerodynamic decelerator

51
00:02:28,390 --> 00:02:25,920
hyad focuses on the development of

52
00:02:30,790 --> 00:02:28,400
inflatable aeroshells to protect the

53
00:02:31,990 --> 00:02:30,800
spacecraft during re-entry into earth's

54
00:02:33,830 --> 00:02:32,000
atmosphere

55
00:02:35,990 --> 00:02:33,840
hyad is one of the technologies and

56
00:02:38,150 --> 00:02:36,000
development under peck's office through

57
00:02:41,589 --> 00:02:38,160
the game-changing development program

58
00:02:46,630 --> 00:02:44,070
america's next heavy lift launch vehicle

59
00:02:49,589 --> 00:02:46,640
the space launch system is a step closer

60
00:02:51,509 --> 00:02:49,599
to its first launch in 2017 following

61
00:02:53,350 --> 00:02:51,519
completion of its latest milestone

62
00:02:54,309 --> 00:02:53,360
reviews at the marshall space flight

63
00:02:57,110 --> 00:02:54,319

center

64
00:02:59,509 --> 00:02:57,120
these extensive nasa-led reviews set

65
00:03:01,990 --> 00:02:59,519
requirements that further narrow the

66
00:03:04,790 --> 00:03:02,000
scope of the sls design and concept

67
00:03:06,790 --> 00:03:04,800
evaluation including crew safety and the

68
00:03:09,509 --> 00:03:06,800
rocket interface with the orion

69
00:03:11,430 --> 00:03:09,519
multi-purpose crew vehicle the next step

70
00:03:14,710 --> 00:03:11,440
of the review process scheduled for

71
00:03:21,910 --> 00:03:14,720
early summer will evaluate cost schedule

72
00:03:26,550 --> 00:03:24,390
a rocket sled that replicates the forces

73
00:03:29,270 --> 00:03:26,560
a supersonic spacecraft would experience

74
00:03:31,589 --> 00:03:29,280
prior to landing was recently tested by

75
00:03:34,070 --> 00:03:31,599
nasa at the u.s naval air weapons

76
00:03:36,470 --> 00:03:34,080
station at china lake california

77
00:03:39,270 --> 00:03:36,480
sleds like this will allow the low

78
00:03:42,949 --> 00:03:39,280
density supersonic decelerator project

79
00:03:45,910 --> 00:03:42,959
or ldsd to test inflatable and parachute

80
00:03:47,670 --> 00:03:45,920
decelerators for slowing spacecraft as

81
00:03:49,270 --> 00:03:47,680
they descend on mars and other

82
00:03:51,270 --> 00:03:49,280
destinations

83
00:03:54,070 --> 00:03:51,280
that would enable nasa to increase the

84
00:03:55,350 --> 00:03:54,080
size of payloads at lands and landing

85
00:03:57,509 --> 00:03:55,360
accuracy

86
00:04:00,229 --> 00:03:57,519
these new decelerators represent the

87
00:04:03,350 --> 00:04:00,239
first steps on the technology pathway to

88
00:04:05,429 --> 00:04:03,360

land humans and habitats on new worlds

89
00:04:08,630 --> 00:04:05,439
this test series is led by the jet

90
00:04:10,949 --> 00:04:08,640
propulsion laboratory ldsd is one of

91
00:04:13,110 --> 00:04:10,959
nine missions managed by nasa's marshall

92
00:04:15,830 --> 00:04:13,120
space flight center on behalf of the

93
00:04:18,310 --> 00:04:15,840
agency

94
00:04:20,789 --> 00:04:18,320
two imax cameras used in orbit have

95
00:04:23,990 --> 00:04:20,799
found new space at the smithsonian's

96
00:04:27,430 --> 00:04:24,000
national air and space museum from 1984

97
00:04:29,909 --> 00:04:27,440
to 1998 the two-dimensional imax cameras

98
00:04:32,469 --> 00:04:29,919
were used on 17 missions by space

99
00:04:35,030 --> 00:04:32,479
shuttle crews to capture stunning views

100
00:04:37,909 --> 00:04:35,040
of earth and life in microgravity it's

101
00:04:40,070 --> 00:04:37,919
not just an adventuresome place to live

102
00:04:42,070 --> 00:04:40,080
but actually a pleasant and challenging

103
00:04:43,990 --> 00:04:42,080
and interesting place to live among

104
00:04:46,469 --> 00:04:44,000
those on hand for the presentation in

105
00:04:49,030 --> 00:04:46,479
the museum's moving beyond earth gallery

106
00:04:51,909 --> 00:04:49,040
were former shuttle commander bill reedy

107
00:04:55,030 --> 00:04:51,919
imax camera co-inventor graham ferguson

108
00:04:57,830 --> 00:04:55,040
and imax producer tony meyers it's very

109
00:05:00,150 --> 00:04:57,840
much like a time machine

110
00:05:00,870 --> 00:05:00,160
it certainly takes you back

111
00:05:03,510 --> 00:05:00,880
to

112
00:05:06,390 --> 00:05:03,520
another time another era

113
00:05:08,390 --> 00:05:06,400

the images i mean just seem to be etched

114
00:05:10,310 --> 00:05:08,400
in my memory certainly

115
00:05:13,830 --> 00:05:10,320
the footage captured by the on-orbit

116
00:05:16,870 --> 00:05:13,840
cameras led to six imax films including

117
00:05:19,029 --> 00:05:16,880
blue planet mission to mirror and the

118
00:05:24,710 --> 00:05:19,039
dream is alive which had a special

119
00:05:28,870 --> 00:05:27,110
nasa researchers are one step closer to

120
00:05:30,870 --> 00:05:28,880
understanding the thin atmosphere and

121
00:05:33,350 --> 00:05:30,880
dust above the surface of the moon

122
00:05:35,510 --> 00:05:33,360
working as a small observatory the lunar

123
00:05:37,909 --> 00:05:35,520
atmosphere and dust environment explorer

124
00:05:39,510 --> 00:05:37,919
or lady mission will gather detailed

125
00:05:41,830 --> 00:05:39,520
information about conditions near the

126
00:05:43,670 --> 00:05:41,840
surface and environmental influences on

127
00:05:46,070 --> 00:05:43,680
lunar dust

128
00:05:47,990 --> 00:05:46,080
the latte propulsion system built by

129
00:05:50,390 --> 00:05:48,000
space systems loral in palo alto

130
00:05:53,110 --> 00:05:50,400
california is a modified version of the

131
00:05:55,670 --> 00:05:53,120
kind used in nearly 60 geostationary

132
00:05:58,150 --> 00:05:55,680
commercial satellites currently in orbit

133
00:05:59,670 --> 00:05:58,160
thanks for a great job now onward to the

134
00:06:02,230 --> 00:05:59,680
moon

135
00:06:04,309 --> 00:06:02,240
in a brief ceremony nasa ames research

136
00:06:06,150 --> 00:06:04,319
center director pete warden recently

137
00:06:08,390 --> 00:06:06,160
took delivery of the propulsion system

138
00:06:09,270 --> 00:06:08,400

from space systems laurel president john

139
00:06:11,189 --> 00:06:09,280
kelly

140
00:06:13,590 --> 00:06:11,199
well one of the really

141
00:06:15,990 --> 00:06:13,600
neat things about what nasa is doing is

142
00:06:19,270 --> 00:06:16,000
we're trying to do more or less money

143
00:06:20,469 --> 00:06:19,280
and a key part of that is is using

144
00:06:25,749 --> 00:06:20,479
commercial

145
00:06:26,870 --> 00:06:25,759
took

146
00:06:28,710 --> 00:06:26,880
things they've been building for the

147
00:06:30,390 --> 00:06:28,720
commercial community and packaged them a

148
00:06:32,150 --> 00:06:30,400
little smaller to take us to the moon

149
00:06:35,189 --> 00:06:32,160
and we're really happy about it we're

150
00:06:37,430 --> 00:06:35,199
very proud that we had that opportunity

151
00:06:40,309 --> 00:06:37,440
i think this is a very neat

152
00:06:42,469 --> 00:06:40,319
uh shrunk satellite and

153
00:06:44,710 --> 00:06:42,479
we hope that we can certainly do that

154
00:06:46,790 --> 00:06:44,720
more in the future ladie will orbit the

155
00:06:49,350 --> 00:06:46,800
moon in a low altitude retrograde

156
00:06:51,350 --> 00:06:49,360
equatorial orbit the most complex lunar

157
00:06:52,710 --> 00:06:51,360
flight path attempted since the apollo

158
00:06:54,629 --> 00:06:52,720
missions

159
00:06:56,550 --> 00:06:54,639
a thorough understanding will help

160
00:06:58,230 --> 00:06:56,560
researchers predict how future lunar

161
00:07:00,469 --> 00:06:58,240
exploration may shape the moon's

162
00:07:04,309 --> 00:07:00,479
environment and how the environment may

163
00:07:08,230 --> 00:07:05,909

a new piece of hardware that will

164
00:07:10,390 --> 00:07:08,240
provide enhanced satellite observations

165
00:07:12,870 --> 00:07:10,400
of precipitation has arrived at the

166
00:07:15,909 --> 00:07:12,880
goddard space flight center the dual

167
00:07:18,309 --> 00:07:15,919
frequency precipitation radar or dpr

168
00:07:20,790 --> 00:07:18,319
built by the japan aerospace exploration

169
00:07:24,309 --> 00:07:20,800
agency will work in conjunction with a

170
00:07:27,430 --> 00:07:24,319
gpm microwave imager or gmi

171
00:07:29,510 --> 00:07:27,440
both are scheduled to fly in 2014 on the

172
00:07:31,909 --> 00:07:29,520
global precipitation missions core

173
00:07:34,629 --> 00:07:31,919
observatory it can be used to make

174
00:07:36,870 --> 00:07:34,639
combined products together with the gmi

175
00:07:39,990 --> 00:07:36,880
that allow the scientists to determine a

176
00:07:42,629 --> 00:07:40,000
lot more about precipitation from rain

177
00:07:44,950 --> 00:07:42,639
through snow be it light or be it heavy

178
00:07:47,589 --> 00:07:44,960
than they know today comprised of two

179
00:07:49,990 --> 00:07:47,599
radars the dpr will provide 3d

180
00:07:52,070 --> 00:07:50,000
measurements of the shapes sizes and

181
00:07:55,990 --> 00:07:52,080
other physical characteristics of

182
00:08:02,230 --> 00:07:59,749
dr chrisa cavalioto an astrophysicist at

183
00:08:05,749 --> 00:08:02,240
nasa's marshall space flight center has

184
00:08:07,510 --> 00:08:05,759
been selected as the 2012 recipient of

185
00:08:10,790 --> 00:08:07,520
the danny heinemann prize in

186
00:08:13,270 --> 00:08:10,800
astrophysics jointly selected each year

187
00:08:16,469 --> 00:08:13,280
by the american institute of physics and

188
00:08:19,270 --> 00:08:16,479

the american astronomical society i was

189
00:08:22,950 --> 00:08:19,280
floored i was very excited i was

190
00:08:25,110 --> 00:08:22,960
delighted i was surprised the citation

191
00:08:27,110 --> 00:08:25,120
for the heinemann prize recognizes

192
00:08:29,589 --> 00:08:27,120
cavalioto for her extensive

193
00:08:31,749 --> 00:08:29,599
accomplishments and discoveries in the

194
00:08:33,430 --> 00:08:31,759
areas of gamma ray burst

195
00:08:36,630 --> 00:08:33,440
and their afterglows

196
00:08:39,110 --> 00:08:36,640
soft gamma ray repeaters and magnetars

197
00:08:41,909 --> 00:08:39,120
this is a mid-career

198
00:08:44,230 --> 00:08:41,919
award so my colleagues acknowledged what

199
00:08:45,990 --> 00:08:44,240
i've done and they at the same time they

200
00:08:47,910 --> 00:08:46,000
told me i'll probably have to work

201
00:08:50,310 --> 00:08:47,920
another 35 years

202
00:08:51,269 --> 00:08:50,320
and then i said well that's fine with me

203
00:08:53,509 --> 00:08:51,279
but

204
00:08:55,750 --> 00:08:53,519
i'll take a future x-ray mission with

205
00:08:58,389 --> 00:08:55,760
that the heinemann prize is named after

206
00:09:01,350 --> 00:08:58,399
the late danny heinemann a belgian

207
00:09:03,990 --> 00:09:01,360
american engineer business executive and

208
00:09:06,710 --> 00:09:04,000
philanthropic sponsor of scientific

209
00:09:08,710 --> 00:09:07,670
three

210
00:09:09,990 --> 00:09:08,720
two

211
00:09:13,269 --> 00:09:10,000
one

212
00:09:15,509 --> 00:09:13,279
we have ignition and liftoff of a delta

213
00:09:18,630 --> 00:09:15,519

ii rocket carrying nasa on an odyssey

214
00:09:22,070 --> 00:09:18,640
back to mars eleven years ago on april 7

215
00:09:24,310 --> 00:09:22,080
2001 the mars odyssey orbiter began its

216
00:09:25,350 --> 00:09:24,320
journey to map and search for water on

217
00:09:27,430 --> 00:09:25,360
mars

218
00:09:30,310 --> 00:09:27,440
launched by a delta ii rocket from cape

219
00:09:32,870 --> 00:09:30,320
canaveral it reached its destination six

220
00:09:34,790 --> 00:09:32,880
months later not only have odyssey's

221
00:09:36,870 --> 00:09:34,800
science instruments discovered vast

222
00:09:39,670 --> 00:09:36,880
amounts of frozen water just beneath the

223
00:09:41,990 --> 00:09:39,680
martian surface run a radiation safety

224
00:09:44,550 --> 00:09:42,000
check for future astronauts and map

225
00:09:47,030 --> 00:09:44,560
surface textures minerals and elements

226
00:09:50,470 --> 00:09:47,040
its camera has also produced the highest

227
00:09:53,030 --> 00:09:50,480
resolution map of the entire red planet

228
00:09:55,190 --> 00:09:53,040
in addition to its own science odyssey

229
00:09:57,829 --> 00:09:55,200
has relayed to earth nearly all of the

230
00:10:00,230 --> 00:09:57,839
data provided by the mars rover's spirit

231
00:10:02,550 --> 00:10:00,240
and opportunity and will provide relay

232
00:10:05,190 --> 00:10:02,560
service for the mars science laboratory

233
00:10:07,990 --> 00:10:05,200
after its rover curiosity lands on mars

234
00:10:12,310 --> 00:10:10,310
and april 8th marks the 10th anniversary

235
00:10:15,509 --> 00:10:12,320
of the launch of space shuttle atlantis

236
00:10:17,509 --> 00:10:15,519
on sts-110 an assembly flight to the

237
00:10:19,269 --> 00:10:17,519
international space station

238
00:10:21,590 --> 00:10:19,279

the launch marked a milestone for

239
00:10:24,069 --> 00:10:21,600
mission specialist jerry ross as he

240
00:10:25,430 --> 00:10:24,079
became the first human to fly in space

241
00:10:27,430 --> 00:10:25,440
seven times

242
00:10:29,509 --> 00:10:27,440
the primary objective of the flight for

243
00:10:32,550 --> 00:10:29,519
roth and his crewmates commander michael

244
00:10:35,829 --> 00:10:32,560
bloomfield pilot steve frick and mission

245
00:10:38,949 --> 00:10:35,839
specialists steve smith ellen ochoa lee

246
00:10:41,430 --> 00:10:38,959
morin and rex walheim was installation

247
00:10:43,670 --> 00:10:41,440
of the s0 truss the center of the

248
00:10:45,430 --> 00:10:43,680
station's supporting backbone

249
00:10:47,190 --> 00:10:45,440
that and other work was accomplished

250
00:10:49,110 --> 00:10:47,200
during four spacewalks

251
00:10:51,430 --> 00:10:49,120
including transfer of experiments and

252
00:10:53,670 --> 00:10:51,440
supplies between the shuttle and station

253
00:10:56,069 --> 00:10:53,680
and replenishment of an oxygen tank on

254
00:10:58,310 --> 00:10:56,079
the quest airlock used to repressurize

255
00:11:00,550 --> 00:10:58,320
the airlock after spacewalks

256
00:11:02,630 --> 00:11:00,560
the mission ended 10 days later when

257
00:11:04,949 --> 00:11:02,640
atlantis and crew touched down safely at

258
00:11:07,910 --> 00:11:04,959
the kennedy space center

259
00:11:10,150 --> 00:11:07,920
and that's this week at nasa for more on

260
00:11:12,069 --> 00:11:10,160
these and other stories or to follow us