



1
00:00:07,120 --> 00:00:13,830
this week at nasa

2
00:00:17,430 --> 00:00:15,749
space shuttle endeavour made its final

3
00:00:19,349 --> 00:00:17,440
move from the orbiter's processing

4
00:00:21,429 --> 00:00:19,359
hangar to the vehicle assembly building

5
00:00:23,910 --> 00:00:21,439
at the kennedy space center this

6
00:00:26,550 --> 00:00:23,920
activity called a rollover was followed

7
00:00:29,269 --> 00:00:26,560
by endeavors mating to its external tank

8
00:00:33,910 --> 00:00:29,279
and twin solid rocket boosters already

9
00:00:39,830 --> 00:00:37,190
during the 14-day sts-134 mission

10
00:00:41,670 --> 00:00:39,840
endeavors crew commanded by mark kelly

11
00:00:44,470 --> 00:00:41,680
will deliver to the international space

12
00:00:46,869 --> 00:00:44,480
station the alpha magnetic spectrometer

13
00:00:49,910 --> 00:00:46,879

as well as communications antennas a

14

00:00:54,229 --> 00:00:49,920

high pressure gas tank and spare parts

15

00:00:56,470 --> 00:00:54,239

targeted to launch on april 19th sts-134

16

00:00:58,709 --> 00:00:56,480

will be the 36th shuttle mission to the

17

00:01:03,349 --> 00:00:58,719

international space station and

18

00:01:05,830 --> 00:01:04,630

i've seen it now within the

19

00:01:07,750 --> 00:01:05,840

administration

20

00:01:09,590 --> 00:01:07,760

still we've got work to do to really

21

00:01:11,590 --> 00:01:09,600

connect our whole budget

22

00:01:13,510 --> 00:01:11,600

deputy administrator lori garver

23

00:01:16,070 --> 00:01:13,520

completed a whirlwind tour of nasa

24

00:01:18,310 --> 00:01:16,080

facilities in california updating the

25

00:01:20,950 --> 00:01:18,320

golden state centers on the president's

26
00:01:22,149 --> 00:01:20,960
fiscal year 2012 budget proposal for the

27
00:01:23,990 --> 00:01:22,159
agency

28
00:01:25,830 --> 00:01:24,000
garver participated in town hall

29
00:01:28,149 --> 00:01:25,840
employee presentations at the ames

30
00:01:30,230 --> 00:01:28,159
research center in northern california

31
00:01:32,390 --> 00:01:30,240
the dryden flight research center at

32
00:01:35,030 --> 00:01:32,400
edwards air force base and the jet

33
00:01:37,109 --> 00:01:35,040
propulsion laboratory in pasadena she

34
00:01:39,590 --> 00:01:37,119
also met with the glory satellite launch

35
00:01:41,749 --> 00:01:39,600
team at vandenberg air force base

36
00:01:44,630 --> 00:01:41,759
during her two-day trip the deputy

37
00:01:46,630 --> 00:01:44,640
administrator explained how nasa's 2012

38
00:01:48,389 --> 00:01:46,640

budget request aligns with the

39

00:01:51,510 --> 00:01:48,399

directives congress laid out for the

40

00:01:52,469 --> 00:01:51,520

agency in the 2010 nasa authorization

41

00:01:54,870 --> 00:01:52,479

act

42

00:01:57,350 --> 00:01:54,880

garver also said nasa will continue to

43

00:01:59,510 --> 00:01:57,360

support the international space station

44

00:02:01,749 --> 00:01:59,520

stabilize the aeronautics budget

45

00:02:06,870 --> 00:02:01,759

emphasize space technology

46

00:02:06,880 --> 00:02:10,869

and now centerpieces

47

00:02:15,830 --> 00:02:13,190

if you gradually apply enough pressure

48

00:02:17,990 --> 00:02:15,840

to a soda can it will eventually ripple

49

00:02:20,070 --> 00:02:18,000

and collapse that's similar to what a

50

00:02:21,910 --> 00:02:20,080

team of nasa engineers at the marshall

51
00:02:24,150 --> 00:02:21,920
space flight center will do to an

52
00:02:25,270 --> 00:02:24,160
immense cylinder simulating a rocket

53
00:02:27,350 --> 00:02:25,280
fuel tank

54
00:02:29,270 --> 00:02:27,360
they hope to generate new shell buckling

55
00:02:31,750 --> 00:02:29,280
data from which lightweight safe and

56
00:02:34,949 --> 00:02:31,760
sturdy skins for future launch vehicles

57
00:02:38,309 --> 00:02:34,959
can be designed why it is critical is if

58
00:02:40,309 --> 00:02:38,319
we are building structures too heavy

59
00:02:41,750 --> 00:02:40,319
like we have in the past we're not going

60
00:02:44,630 --> 00:02:41,760
to be able to get the payload into space

61
00:02:47,110 --> 00:02:44,640
like we want to the 27 and a half foot

62
00:02:49,589 --> 00:02:47,120
wide 20 foot tall aluminum lithium

63
00:02:51,910 --> 00:02:49,599

cylinder will be sandwiched between two

64

00:02:54,470 --> 00:02:51,920

massive loading rings sophisticated

65

00:02:56,869 --> 00:02:54,480

cameras and sensors will record how and

66

00:02:59,430 --> 00:02:56,879

where the test article buckles as it's

67

00:03:00,949 --> 00:02:59,440

subjected to almost one million pounds

68

00:03:04,149 --> 00:03:00,959

of force

69

00:03:06,550 --> 00:03:04,159

during this shell buckling testing we

70

00:03:07,910 --> 00:03:06,560

also integrated a new method

71

00:03:10,309 --> 00:03:07,920

of

72

00:03:12,550 --> 00:03:10,319

seeing strains and seeing

73

00:03:13,750 --> 00:03:12,560

displacements using video image

74

00:03:15,750 --> 00:03:13,760

correlation

75

00:03:16,830 --> 00:03:15,760

also known as vic

76

00:03:19,509 --> 00:03:16,840

vic

77

00:03:22,550 --> 00:03:19,519

utilizes black dots on a white

78

00:03:25,750 --> 00:03:22,560

background on our test article

79

00:03:28,470 --> 00:03:25,760

and using high resolution cameras

80

00:03:31,270 --> 00:03:28,480

we'll be able to

81

00:03:34,630 --> 00:03:31,280

see the test article in three dimensions

82

00:03:37,910 --> 00:03:34,640

and be able to actually show real time

83

00:03:39,990 --> 00:03:37,920

during the load application during test

84

00:03:42,470 --> 00:03:40,000

such things as displacements in full

85

00:03:44,789 --> 00:03:42,480

field also researchers believe data from

86

00:03:47,430 --> 00:03:44,799

this first full-scale shell buckling

87

00:03:49,910 --> 00:03:47,440

knockdown factor test will help update

88

00:03:52,229 --> 00:03:49,920

essential design calculations made

89

00:03:54,630 --> 00:03:52,239

during the apollo era well before the

90

00:03:57,110 --> 00:03:54,640

advent of modern composite materials

91

00:03:58,630 --> 00:03:57,120

manufacturing processes and advanced

92

00:04:00,789 --> 00:03:58,640

computer modeling

93

00:04:03,110 --> 00:04:00,799

in turn that should lead to the design

94

00:04:05,350 --> 00:04:03,120

and production of lightweight safe and

95

00:04:07,670 --> 00:04:05,360

cost effective structures like the main

96

00:04:08,710 --> 00:04:07,680

fuel tank of a future heavy lift launch

97

00:04:10,949 --> 00:04:08,720

vehicle

98

00:04:12,789 --> 00:04:10,959

targeted for late this month the test is

99

00:04:14,630 --> 00:04:12,799

being led by the nasa engineering and

100

00:04:16,550 --> 00:04:14,640

safety center with the support of

101
00:04:19,670 --> 00:04:16,560
langley researchers and marshall

102
00:04:23,350 --> 00:04:21,590
nasa's kepler team celebrated the

103
00:04:25,110 --> 00:04:23,360
midpoint of their three and a half year

104
00:04:28,150 --> 00:04:25,120
mission to search for earth-sized

105
00:04:29,749 --> 00:04:28,160
planets around other stars in the galaxy

106
00:04:31,670 --> 00:04:29,759
the occasion brought together many of

107
00:04:34,070 --> 00:04:31,680
the dignitaries whose efforts helped to

108
00:04:35,749 --> 00:04:34,080
make the mission successful

109
00:04:37,430 --> 00:04:35,759
the event followed major recent

110
00:04:39,590 --> 00:04:37,440
announcements from the kepler science

111
00:04:42,070 --> 00:04:39,600
team including the first confirmed

112
00:04:44,790 --> 00:04:42,080
extrasolar rocky planet as well as the

113
00:04:46,870 --> 00:04:44,800

flattest most compact multi-planet solar

114

00:04:48,790 --> 00:04:46,880

system found to date

115

00:04:51,030 --> 00:04:48,800

the celebration also coincided with the

116

00:04:53,030 --> 00:04:51,040

kepler science operations team receiving

117

00:04:54,310 --> 00:04:53,040

their award for nasa software of the

118

00:04:56,230 --> 00:04:54,320

year

119

00:04:58,230 --> 00:04:56,240

the success of the mission so far

120

00:05:00,230 --> 00:04:58,240

inspired team members to reflect on the

121

00:05:03,189 --> 00:05:00,240

importance of kepler in the context of

122

00:05:06,070 --> 00:05:03,199

human history this is a celebration

123

00:05:08,230 --> 00:05:06,080

uh that's larger than than just a single

124

00:05:10,710 --> 00:05:08,240

mission just a nasa mission just a bunch

125

00:05:12,710 --> 00:05:10,720

of scientists getting together this is a

126

00:05:14,710 --> 00:05:12,720

mission that sans that's answering some

127

00:05:17,029 --> 00:05:14,720

of the most fundamental questions that

128

00:05:19,029 --> 00:05:17,039

every person wonders about at night when

129

00:05:20,870 --> 00:05:19,039

they look up at the stars

130

00:05:22,629 --> 00:05:20,880

the night was a rare opportunity for the

131

00:05:24,710 --> 00:05:22,639

diverse kepler team to raise their

132

00:05:27,189 --> 00:05:24,720

glasses and toast their achievements

133

00:05:29,430 --> 00:05:27,199

both past and present and to acknowledge

134

00:05:32,790 --> 00:05:29,440

high expectations for future discoveries

135

00:05:38,150 --> 00:05:34,790

we have a team of four over here your

136

00:05:40,070 --> 00:05:38,160

team five team of three is team six two

137

00:05:41,830 --> 00:05:40,080

dozen teachers became students for a

138

00:05:43,990 --> 00:05:41,840

week during the virginia aerospace

139

00:05:45,749 --> 00:05:44,000

science and technology scholars teacher

140

00:05:49,830 --> 00:05:45,759

institute

141

00:05:51,990 --> 00:05:49,840

research center in hampton was designed

142

00:05:53,909 --> 00:05:52,000

to give educators the tools they need to

143

00:05:56,629 --> 00:05:53,919

bring the excitement of nasa content to

144

00:05:58,390 --> 00:05:56,639

their students this time we have 25 stem

145

00:06:00,309 --> 00:05:58,400

teachers so science technology

146

00:06:02,469 --> 00:06:00,319

engineering and math teachers that are

147

00:06:04,550 --> 00:06:02,479

coming to us from across the state

148

00:06:06,150 --> 00:06:04,560

they are high school teachers and

149

00:06:07,749 --> 00:06:06,160

they're coming to us for the week to

150

00:06:09,510 --> 00:06:07,759

learn about

151
00:06:11,590 --> 00:06:09,520
nasa materials curriculum that they can

152
00:06:12,629 --> 00:06:11,600
integrate into their classroom we are

153
00:06:15,110 --> 00:06:12,639
using

154
00:06:17,029 --> 00:06:15,120
mars as a context planning a mars

155
00:06:18,550 --> 00:06:17,039
mission much like the summer academy for

156
00:06:20,950 --> 00:06:18,560
the students teachers heard from

157
00:06:23,189 --> 00:06:20,960
planetary scientists and engineers who

158
00:06:24,870 --> 00:06:23,199
actually worked on mars missions they

159
00:06:27,270 --> 00:06:24,880
also had the opportunity to work with

160
00:06:29,590 --> 00:06:27,280
nasa multimedia materials and create

161
00:06:31,510 --> 00:06:29,600
their own podcasts for technology

162
00:06:34,870 --> 00:06:31,520
teacher octavia williams this

163
00:06:37,590 --> 00:06:34,880

opportunity was too good to pass up it's

164

00:06:39,029 --> 00:06:37,600

very important and so important that you

165

00:06:41,029 --> 00:06:39,039

know i had to miss like three days of

166

00:06:42,469 --> 00:06:41,039

class during a penny hauler game

167

00:06:44,070 --> 00:06:42,479

teachers were challenged to build a

168

00:06:46,469 --> 00:06:44,080

propulsion system that would haul the

169

00:06:47,990 --> 00:06:46,479

most amount of pennies the farthest they

170

00:06:49,749 --> 00:06:48,000

were given pretend money to buy

171

00:06:51,670 --> 00:06:49,759

materials in only a certain amount of

172

00:06:53,430 --> 00:06:51,680

time to build their system

173

00:06:54,950 --> 00:06:53,440

the team that carried the most pennies

174

00:06:56,230 --> 00:06:54,960

the farthest for the least amount of

175

00:06:57,589 --> 00:06:56,240

money won

176

00:06:59,510 --> 00:06:57,599

the past day and a half they've really

177

00:07:01,270 --> 00:06:59,520

learned about the science today they're

178

00:07:03,189 --> 00:07:01,280

learning about the engineering and the

179

00:07:05,430 --> 00:07:03,199

engineering design process and what

180

00:07:07,270 --> 00:07:05,440

we're trying to do with this week is

181

00:07:09,510 --> 00:07:07,280

give them activities and have them

182

00:07:11,350 --> 00:07:09,520

actually do activities that they could

183

00:07:13,270 --> 00:07:11,360

easily take back to the classroom for

184

00:07:14,950 --> 00:07:13,280

many of these teachers the institute

185

00:07:17,749 --> 00:07:14,960

offered them a fresh perspective and

186

00:07:19,589 --> 00:07:17,759

introduce them to new ideas oh my gosh

187

00:07:20,870 --> 00:07:19,599

it's fabulous i just can't you know

188

00:07:22,230 --> 00:07:20,880

can't get enough of it we've only done

189

00:07:23,670 --> 00:07:22,240

two days and i could go back with so

190

00:07:25,350 --> 00:07:23,680

much stuff to use in my classroom we got

191

00:07:29,350 --> 00:07:25,360

still got two more days to go so i'm

192

00:07:34,070 --> 00:07:31,830

and that's this week at nasa