
NASA
Kelly Will Lead STS-134

1
00:00:12,549 --> 00:00:10,629
this week at nasa

2
00:00:15,030 --> 00:00:12,559
i would like to return

3
00:00:16,630 --> 00:00:15,040
and and command

4
00:00:18,550 --> 00:00:16,640
sts-134

5
00:00:21,429 --> 00:00:18,560
astronaut mark kelly will remain

6
00:00:23,269 --> 00:00:21,439
commander of sts-134

7
00:00:25,509 --> 00:00:23,279
whether kelly would lead the mission as

8
00:00:27,830 --> 00:00:25,519
scheduled was in doubt when his wife

9
00:00:29,830 --> 00:00:27,840
arizona congresswoman gabrielle giffords

10
00:00:32,790 --> 00:00:29,840
was critically wounded in a shooting

11
00:00:34,870 --> 00:00:32,800
that occurred in tucson early last month

12
00:00:38,389 --> 00:00:34,880
giffords continues her recovery in a

13
00:00:40,709 --> 00:00:38,399

houston hospital her days are filled

14
00:00:43,750 --> 00:00:40,719
from the time she gets up at 8 o'clock

15
00:00:45,830 --> 00:00:43,760
until after 6 pm with

16
00:00:47,270 --> 00:00:45,840
six hours of speech occupational

17
00:00:49,270 --> 00:00:47,280
physical therapy

18
00:00:51,910 --> 00:00:49,280
so she's got very busy days

19
00:00:54,389 --> 00:00:51,920
and meals in between

20
00:00:58,630 --> 00:00:54,399
and i started to think

21
00:00:59,990 --> 00:00:58,640
about sts-134 about the mission my crew

22
00:01:00,950 --> 00:01:00,000
the fact that i've been training for it

23
00:01:03,430 --> 00:01:00,960
for

24
00:01:05,350 --> 00:01:03,440
nearly a year and a half

25
00:01:07,590 --> 00:01:05,360
and considering

26
00:01:10,310 --> 00:01:07,600
a bunch of other factors including how

27
00:01:12,550 --> 00:01:10,320
what gabrielle would want me to do

28
00:01:14,390 --> 00:01:12,560
and what her parents and her family and

29
00:01:16,469 --> 00:01:14,400
my family would like

30
00:01:18,550 --> 00:01:16,479
you know i ultimately made the decision

31
00:01:21,109 --> 00:01:18,560
this will be mark kelly's fourth trip

32
00:01:24,710 --> 00:01:21,119
into space targeted to launch on april

33
00:01:26,550 --> 00:01:24,720
19th sts-134 is a two-week mission to

34
00:01:28,789 --> 00:01:26,560
the international space station

35
00:01:32,390 --> 00:01:28,799
and the next to last scheduled flight in

36
00:01:38,550 --> 00:01:35,670
slow down when we get three feet out

37
00:01:40,390 --> 00:01:38,560
the newest member of the sts-133 crew

38
00:01:42,789 --> 00:01:40,400

continues training with his five

39
00:01:44,389 --> 00:01:42,799
discovery crewmates for their upcoming

40
00:01:46,950 --> 00:01:44,399
mission to the international space

41
00:01:49,270 --> 00:01:46,960
station steve bowen a veteran of two

42
00:01:51,830 --> 00:01:49,280
space flights replaced tim copra as

43
00:01:54,469 --> 00:01:51,840
mission specialist too after copra

44
00:01:56,389 --> 00:01:54,479
injured himself in a bicycle accident

45
00:01:58,870 --> 00:01:56,399
bowen joins commander steve lindsey

46
00:02:01,429 --> 00:01:58,880
pilot eric boe and mission specialists

47
00:02:03,510 --> 00:02:01,439
mike barrett nicole stott and alvin drew

48
00:02:05,749 --> 00:02:03,520
on sts-133

49
00:02:07,830 --> 00:02:05,759
together they'll deliver and install the

50
00:02:10,309 --> 00:02:07,840
permanent multi-purpose module the

51
00:02:12,550 --> 00:02:10,319
express logistics carrier for and

52
00:02:15,830 --> 00:02:12,560
provide critical spare components to the

53
00:02:19,750 --> 00:02:17,910
space shuttle discovery awaits them at

54
00:02:23,670 --> 00:02:19,760
the kennedy space center's launch pad

55
00:02:26,390 --> 00:02:23,680
39a after riding the 3.4 miles from the

56
00:02:30,470 --> 00:02:26,400
vehicle assembly building atop its giant

57
00:02:35,270 --> 00:02:33,350
meanwhile nasa engineers and technicians

58
00:02:37,509 --> 00:02:35,280
at the marshall space flight center

59
00:02:39,750 --> 00:02:37,519
continue their investigation into those

60
00:02:42,309 --> 00:02:39,760
cracks found on parts of space shuttle

61
00:02:44,350 --> 00:02:42,319
discovery's external tank the first of

62
00:02:47,190 --> 00:02:44,360
the cracks were discovered during

63
00:02:48,550 --> 00:02:47,200

sts-133's failed launch attempt last

64
00:02:51,110 --> 00:02:48,560
november 5th

65
00:02:53,350 --> 00:02:51,120
new test data are improving confidence

66
00:02:55,350 --> 00:02:53,360
that the repairs already completed on

67
00:02:57,589 --> 00:02:55,360
more than a hundred of the et's

68
00:03:00,229 --> 00:02:57,599
so-called stringers have space shuttle

69
00:03:03,190 --> 00:03:00,239
discovery ready for her february 24th

70
00:03:05,430 --> 00:03:03,200
targeted launch date the 21 foot long

71
00:03:07,910 --> 00:03:05,440
metal stringers connect the cone-shaped

72
00:03:10,070 --> 00:03:07,920
liquid oxygen tank on top with the

73
00:03:12,790 --> 00:03:10,080
oblong liquid hydrogen tank on the

74
00:03:15,270 --> 00:03:12,800
bottom our testing is going to make sure

75
00:03:18,309 --> 00:03:15,280
that these stringer repairs

76
00:03:19,790 --> 00:03:18,319
are at least as good as the the tank was

77
00:03:22,309 --> 00:03:19,800
as it ever was

78
00:03:27,430 --> 00:03:22,319
sts-133 is the final scheduled flight

79
00:03:27,440 --> 00:03:31,990
and now centerpieces

80
00:03:36,390 --> 00:03:34,149
scientists working on nasa's kepler

81
00:03:39,110 --> 00:03:36,400
mission announced they have discovered

82
00:03:42,070 --> 00:03:39,120
more than 1100 planetary candidates in

83
00:03:44,070 --> 00:03:42,080
the space telescope's field of view

84
00:03:48,070 --> 00:03:44,080
the findings are based on the results of

85
00:03:50,550 --> 00:03:48,080
observations of more than 156 000 stars

86
00:03:52,229 --> 00:03:50,560
conducted between may and september of

87
00:03:53,910 --> 00:03:52,239
2009

88
00:03:55,509 --> 00:03:53,920

now these are candidates

89
00:03:58,390 --> 00:03:55,519
but most of them i'm convinced will be

90
00:04:00,070 --> 00:03:58,400
confirmed in the coming months and years

91
00:04:02,550 --> 00:04:00,080
that's more than all the people have

92
00:04:05,270 --> 00:04:02,560
found so far in history

93
00:04:08,070 --> 00:04:05,280
among the 1100 planet candidates the

94
00:04:09,910 --> 00:04:08,080
kepler science team has found 54 that

95
00:04:12,149 --> 00:04:09,920
are orbiting in their star's habitable

96
00:04:15,110 --> 00:04:12,159
zone a region where liquid water could

97
00:04:17,430 --> 00:04:15,120
exist on the surface of a planet

98
00:04:20,789 --> 00:04:17,440
five of those candidates are near earth

99
00:04:23,189 --> 00:04:20,799
size and the other 49 range in size from

100
00:04:25,510 --> 00:04:23,199
twice the size of the earth to larger

101
00:04:27,830 --> 00:04:25,520
than jupiter

102
00:04:29,909 --> 00:04:27,840
ground-based observatories and nasa's

103
00:04:31,990 --> 00:04:29,919
spitzer space telescope will be used

104
00:04:34,230 --> 00:04:32,000
this spring and summer to help determine

105
00:04:36,150 --> 00:04:34,240
if these candidates can be validated as

106
00:04:38,150 --> 00:04:36,160
planets

107
00:04:40,790 --> 00:04:38,160
not only is the kepler team finding

108
00:04:43,030 --> 00:04:40,800
individual planetary candidates they are

109
00:04:45,590 --> 00:04:43,040
also discovering some of their first

110
00:04:47,749 --> 00:04:45,600
multi-planet systems as well

111
00:04:50,390 --> 00:04:47,759
they have detected 86 potential

112
00:04:52,230 --> 00:04:50,400
planetary systems that may have two or

113
00:04:55,350 --> 00:04:52,240

more planets

114
00:04:57,909 --> 00:04:55,360
one system named kepler-11 has been

115
00:05:00,230 --> 00:04:57,919
confirmed to have at least six planets

116
00:05:02,629 --> 00:05:00,240
orbiting a sun-like star

117
00:05:05,990 --> 00:05:02,639
the kepler-11 planetary system is

118
00:05:07,909 --> 00:05:06,000
amazing it's amazingly compact it's

119
00:05:11,189 --> 00:05:07,919
amazingly flat

120
00:05:13,909 --> 00:05:11,199
there's an amazingly large number of big

121
00:05:15,909 --> 00:05:13,919
planets orbiting close to their star

122
00:05:17,110 --> 00:05:15,919
we didn't know such systems could even

123
00:05:19,029 --> 00:05:17,120
exist

124
00:05:21,270 --> 00:05:19,039
scientists are excited that the number

125
00:05:24,150 --> 00:05:21,280
of planetary candidates discovered in

126
00:05:25,990 --> 00:05:24,160
four months worth of data shows promise

127
00:05:30,790 --> 00:05:26,000
that a relatively large number of

128
00:05:36,629 --> 00:05:33,350
think of this high-tech tinker toy as a

129
00:05:38,390 --> 00:05:36,639
giant recycling effort literally

130
00:05:40,150 --> 00:05:38,400
engineers at nasa's langley research

131
00:05:42,710 --> 00:05:40,160
center recently dug the pieces out of

132
00:05:44,629 --> 00:05:42,720
six crates that were in storage

133
00:05:46,870 --> 00:05:44,639
the struts and nodes were from a

134
00:05:49,749 --> 00:05:46,880
research project done back in the early

135
00:05:53,909 --> 00:05:49,759
90s you want to put it in like this

136
00:05:56,150 --> 00:05:53,919
the 315 struts and 84 nodes are part of

137
00:05:59,189 --> 00:05:56,160
a space structure concept for a large

138
00:06:01,749 --> 00:05:59,199

orbiting telescope almost 46 feet in

139
00:06:03,350 --> 00:06:01,759
diameter the idea was to design a

140
00:06:05,350 --> 00:06:03,360
lightweight and compactly stored

141
00:06:07,749 --> 00:06:05,360
configuration that astronauts could

142
00:06:10,390 --> 00:06:07,759
easily put together during a spacewalk

143
00:06:12,710 --> 00:06:10,400
the structure we have behind me

144
00:06:16,150 --> 00:06:12,720
was called the precision segmented

145
00:06:18,309 --> 00:06:16,160
reflector it's a 14 meter diameter

146
00:06:19,350 --> 00:06:18,319
it's the primary support truss for the

147
00:06:21,909 --> 00:06:19,360
mirrors

148
00:06:24,230 --> 00:06:21,919
for for the primary mirror of a

149
00:06:27,110 --> 00:06:24,240
telescope what was once a project for

150
00:06:28,469 --> 00:06:27,120
humans will now become an experiment for

151
00:06:30,070 --> 00:06:28,479
robots

152
00:06:32,150 --> 00:06:30,080
langley human robotics systems

153
00:06:34,790 --> 00:06:32,160
researchers are working with the goddard

154
00:06:36,710 --> 00:06:34,800
space flight center and a university to

155
00:06:37,749 --> 00:06:36,720
see if machines can build the trust

156
00:06:40,469 --> 00:06:37,759
system

157
00:06:43,189 --> 00:06:40,479
west virginia university and goddard are

158
00:06:46,230 --> 00:06:43,199
starting to do research in robotic

159
00:06:49,270 --> 00:06:46,240
assembly and robotic operations in space

160
00:06:51,510 --> 00:06:49,280
they have a huge facility it's beautiful

161
00:06:53,909 --> 00:06:51,520
it's new they've got a big flat floor

162
00:06:56,230 --> 00:06:53,919
with a shuttle arm

163
00:06:57,749 --> 00:06:56,240

they've got three or four other robots

164
00:07:00,150 --> 00:06:57,759
so we decided

165
00:07:02,390 --> 00:07:00,160
uh it would be very nice

166
00:07:04,309 --> 00:07:02,400
to ship them this hardware

167
00:07:06,629 --> 00:07:04,319
but first the humans used langley's

168
00:07:09,430 --> 00:07:06,639
airplane hangar the only place with

169
00:07:11,990 --> 00:07:09,440
enough empty available space indoors to

170
00:07:13,749 --> 00:07:12,000
assemble the massive structure

171
00:07:16,230 --> 00:07:13,759
that way they could ensure their robot

172
00:07:18,390 --> 00:07:16,240
colleagues stayed away would have all

173
00:07:24,390 --> 00:07:18,400
the pieces they need to try to put the

174
00:07:29,990 --> 00:07:27,990
this aj26 rocket test engine was removed

175
00:07:32,469 --> 00:07:30,000
from its test stand at the center space

176
00:07:34,710 --> 00:07:32,479
center after two successful firings

177
00:07:35,990 --> 00:07:34,720
convinced engineers that a third was

178
00:07:38,710 --> 00:07:36,000
unnecessary

179
00:07:41,510 --> 00:07:38,720
the aerojet a26 will power the first

180
00:07:43,909 --> 00:07:41,520
stage of orbital sciences corporation's

181
00:07:45,990 --> 00:07:43,919
taurus ii a rocket that's scheduled to

182
00:07:48,070 --> 00:07:46,000
start delivering commercial cargo and

183
00:07:50,790 --> 00:07:48,080
supplies to the international space

184
00:07:53,189 --> 00:07:50,800
station beginning early next year

185
00:07:55,990 --> 00:07:53,199
under nasa's cots or commercial orbital

186
00:07:57,749 --> 00:07:56,000
transportation services program orbital

187
00:08:00,550 --> 00:07:57,759
is slated to conduct eight cargo

188
00:08:02,550 --> 00:08:00,560

missions to the iss the testing of the

189
00:08:04,710 --> 00:08:02,560
actual flight engine is scheduled to

190
00:08:07,830 --> 00:08:04,720
begin february 7th

191
00:08:10,589 --> 00:08:07,840
and that's this week at nasa for more on