



1
00:00:06,720 --> 00:00:10,950
this week at nasa

2
00:00:16,710 --> 00:00:14,629
to complete its 39th and final flight

3
00:00:18,310 --> 00:00:16,720
main gear touchdown the nose of the

4
00:00:19,990 --> 00:00:18,320
shuttle being rotated down toward the

5
00:00:25,509 --> 00:00:20,000
flight deck

6
00:00:30,310 --> 00:00:27,670
and nosegear touchdown in the end of a

7
00:00:32,310 --> 00:00:30,320
historic journey space shuttle discovery

8
00:00:35,430 --> 00:00:32,320
landed safely at the kennedy space

9
00:00:37,110 --> 00:00:35,440
center after its 5.3 million mile

10
00:00:40,709 --> 00:00:37,120
journey to the international space

11
00:00:43,510 --> 00:00:40,719
station the sts-133 crew of commander

12
00:00:46,229 --> 00:00:43,520
steve lindsey pilot eric boe and mission

13
00:00:48,630 --> 00:00:46,239

specialists al drew nicole stott mike

14

00:00:50,950 --> 00:00:48,640

barrett and steve bowen delivered the

15

00:00:52,950 --> 00:00:50,960

permanent multi-purpose module which

16

00:00:54,950 --> 00:00:52,960

provides extra space for science

17

00:00:56,869 --> 00:00:54,960

experiments and storage

18

00:00:59,510 --> 00:00:56,879

discovery also brought the express

19

00:01:01,670 --> 00:00:59,520

logistics carrier 4 to the station an

20

00:01:03,110 --> 00:01:01,680

external platform for holding large

21

00:01:04,950 --> 00:01:03,120

equipment

22

00:01:06,310 --> 00:01:04,960

all right you guys i know

23

00:01:09,990 --> 00:01:06,320

there's more important things to do but

24

00:01:12,870 --> 00:01:10,000

we want to take a picture of you okay

25

00:01:15,190 --> 00:01:12,880

okay that's good all right back to work

26
00:01:17,590 --> 00:01:15,200
bowen and drew conducted two spacewalks

27
00:01:20,390 --> 00:01:17,600
to do maintenance work and install new

28
00:01:22,710 --> 00:01:20,400
components on the orbiting complex

29
00:01:25,270 --> 00:01:22,720
the discovery astronauts also joined

30
00:01:27,749 --> 00:01:25,280
with their iss hosts to take a call on

31
00:01:29,749 --> 00:01:27,759
station from president obama who asked

32
00:01:32,789 --> 00:01:29,759
about the station's newest crew member

33
00:01:35,109 --> 00:01:32,799
robonaut 2 or r2 the first human-like

34
00:01:37,190 --> 00:01:35,119
robot to live and work in space are you

35
00:01:39,109 --> 00:01:37,200
guys making him do chores up there

36
00:01:42,149 --> 00:01:39,119
washing the dishes or something or does

37
00:01:44,710 --> 00:01:42,159
he have more exciting jobs he's still in

38
00:01:47,109 --> 00:01:44,720

packing foam so we hope to uh to get him

39

00:01:49,429 --> 00:01:47,119

out shortly and uh it's going to be fun

40

00:01:50,950 --> 00:01:49,439

to see how uh how he works

41

00:01:55,429 --> 00:01:50,960

he's still in packing foam that's a

42

00:01:57,429 --> 00:01:55,439

shame man come on guys unpack the guy

43

00:01:58,630 --> 00:01:57,439

he flew all that way and you guys aren't

44

00:02:00,870 --> 00:01:58,640

unpacking them

45

00:02:02,789 --> 00:02:00,880

yeah you know the poor guy's been locked

46

00:02:04,789 --> 00:02:02,799

in that foam for about four months now

47

00:02:06,870 --> 00:02:04,799

and uh every once while we hear kind of

48

00:02:08,949 --> 00:02:06,880

some scratching sounds from inside and

49

00:02:11,110 --> 00:02:08,959

uh the crew was enthusiastically

50

00:02:13,510 --> 00:02:11,120

welcomed back by nasa administrator

51
00:02:16,070 --> 00:02:13,520
charles bolden in his remarks about

52
00:02:18,070 --> 00:02:16,080
space shuttle discovery's final mission

53
00:02:20,550 --> 00:02:18,080
and the orbiter's place in space

54
00:02:22,710 --> 00:02:20,560
exploration history if my numbers are

55
00:02:24,390 --> 00:02:22,720
correct it's the 39th flight on on

56
00:02:28,869 --> 00:02:24,400
discovery

57
00:02:30,790 --> 00:02:28,879
me and for bob cabana over here because

58
00:02:32,229 --> 00:02:30,800
we both had an opportunity to fly on it

59
00:02:34,309 --> 00:02:32,239
twice and

60
00:02:37,110 --> 00:02:34,319
so this is very bittersweet for all of

61
00:02:40,229 --> 00:02:37,120
us discovery becomes the first in nasa's

62
00:02:42,509 --> 00:02:40,239
three orbiter fleet to be retired in all

63
00:02:46,150 --> 00:02:42,519

discovery traveled more than

64

00:02:50,150 --> 00:02:46,160

148.2 million miles and made more than 5

65

00:02:55,509 --> 00:02:50,160

800 orbits of earth over a total of 365

66

00:02:59,350 --> 00:02:57,270

later in the week space shuttle

67

00:03:02,229 --> 00:02:59,360

endeavour moved from kennedy's vehicle

68

00:03:05,190 --> 00:03:02,239

assembly building to launch pad 39a for

69

00:03:07,630 --> 00:03:05,200

its final mission a 14-day journey to

70

00:03:10,869 --> 00:03:07,640

the international space station the

71

00:03:13,350 --> 00:03:10,879

sts-134 crew commander mark kelly pilot

72

00:03:16,470 --> 00:03:13,360

greg johnson and mission specialists

73

00:03:18,790 --> 00:03:16,480

mike fink drew feustel greg chatatov and

74

00:03:21,670 --> 00:03:18,800

roberto vittori of the european space

75

00:03:24,149 --> 00:03:21,680

agency will deliver to the iss the alpha

76
00:03:26,789 --> 00:03:24,159
magnetic spectrometer an instrument

77
00:03:28,789 --> 00:03:26,799
designed to detect unusual matter by

78
00:03:30,869 --> 00:03:28,799
measuring cosmic rays

79
00:03:33,670 --> 00:03:30,879
the crew also will deliver the express

80
00:03:35,509 --> 00:03:33,680
logistics carrier 3 a platform with

81
00:03:37,990 --> 00:03:35,519
spare parts to sustain station

82
00:03:39,750 --> 00:03:38,000
operations after the shuttle program

83
00:03:41,910 --> 00:03:39,760
ends later this year

84
00:03:44,949 --> 00:03:41,920
endeavour is targeted to launch april

85
00:03:44,959 --> 00:03:49,350
and now centerpieces

86
00:03:53,429 --> 00:03:51,350
nasa's payload operations center in

87
00:03:55,990 --> 00:03:53,439
huntsville alabama celebrated a major

88
00:03:58,070 --> 00:03:56,000

milestone it's been 10 years since the

89

00:03:59,910 --> 00:03:58,080

payload operations center at nasa's

90

00:04:01,429 --> 00:03:59,920

marshall space flight center became the

91

00:04:03,910 --> 00:04:01,439

science command post for the

92

00:04:06,550 --> 00:04:03,920

international space station since march

93

00:04:08,869 --> 00:04:06,560

8 2001 the marshall team has supported

94

00:04:11,350 --> 00:04:08,879

more than 6 000 hours of science

95

00:04:13,429 --> 00:04:11,360

experiments conducted by 41 space

96

00:04:16,629 --> 00:04:13,439

station crew members and coordinated

97

00:04:18,949 --> 00:04:16,639

more than 1 100 experiments on board the

98

00:04:20,870 --> 00:04:18,959

orbiting complex the center celebrated

99

00:04:23,030 --> 00:04:20,880

these historic accomplishments during a

100

00:04:24,629 --> 00:04:23,040

special program which included a plaque

101
00:04:26,950 --> 00:04:24,639
hanging ceremony in the payload

102
00:04:28,710 --> 00:04:26,960
operations center to mark the event

103
00:04:30,629 --> 00:04:28,720
marshall managers including center

104
00:04:32,710 --> 00:04:30,639
director robert lightfoot took part in

105
00:04:34,629 --> 00:04:32,720
the activities and discussed the vital

106
00:04:36,469 --> 00:04:34,639
role the payload operations center has

107
00:04:40,710 --> 00:04:36,479
played in the history of nasa's

108
00:04:45,909 --> 00:04:43,189
on a cold and windy february afternoon

109
00:04:47,990 --> 00:04:45,919
50 years ago the late paul bickle soared

110
00:04:50,629 --> 00:04:48,000
into the stratosphere with one goal in

111
00:04:52,870 --> 00:04:50,639
mind to set a world altitude record for

112
00:04:54,870 --> 00:04:52,880
unpowered sail planes

113
00:04:56,390 --> 00:04:54,880

bickel then director of nasa's flight

114

00:04:58,150 --> 00:04:56,400
research center at edwards air force

115

00:05:00,629 --> 00:04:58,160
base and president of the soaring

116

00:05:02,390 --> 00:05:00,639
society of america was an avid and

117

00:05:04,950 --> 00:05:02,400
accomplished sail plane pilot who

118

00:05:06,710 --> 00:05:04,960
devoted every weekend to soaring

119

00:05:09,029 --> 00:05:06,720
former nasa research pilot einer

120

00:05:11,110 --> 00:05:09,039
anaboltson a record-setting sail plane

121

00:05:13,029 --> 00:05:11,120
pilot himself noted at a recent

122

00:05:15,110 --> 00:05:13,039
colloquium that bickle knew what he

123

00:05:16,469 --> 00:05:15,120
wanted to do and didn't exceed what he

124

00:05:19,350 --> 00:05:16,479
knew he could do

125

00:05:20,550 --> 00:05:19,360
prepared very thoroughly and it was a

126

00:05:23,029 --> 00:05:20,560

conservative

127

00:05:25,189 --> 00:05:23,039

test pilot-like engineering approach to

128

00:05:26,870 --> 00:05:25,199

the the problem

129

00:05:28,550 --> 00:05:26,880

and paul had excellent eyes and he

130

00:05:30,950 --> 00:05:28,560

certainly had the competitive instinct

131

00:05:32,790 --> 00:05:30,960

and the flying talents could have been a

132

00:05:34,950 --> 00:05:32,800

a great fighter pilot

133

00:05:37,350 --> 00:05:34,960

in just over two hours bickel and his

134

00:05:39,430 --> 00:05:37,360

schweitzer 123 sail plane were back on

135

00:05:40,830 --> 00:05:39,440

the ground after reaching an altitude of

136

00:05:44,070 --> 00:05:40,840

46

137

00:05:45,749 --> 00:05:44,080

267 feet a record that would stand for

138

00:05:47,670 --> 00:05:45,759

25 years

139

00:05:49,830 --> 00:05:47,680

the schweitzer has been preserved by his

140

00:05:51,590 --> 00:05:49,840

family and was on display during the

141

00:05:53,029 --> 00:05:51,600

colloquium at nasa's dryden flight

142

00:05:54,710 --> 00:05:53,039

research center

143

00:05:57,110 --> 00:05:54,720

seeing the aircraft in which bickel's

144

00:05:58,870 --> 00:05:57,120

record was achieved and comparing it to

145

00:06:00,950 --> 00:05:58,880

more current high-performance sail

146

00:06:02,390 --> 00:06:00,960

planes his record is all the more

147

00:06:04,469 --> 00:06:02,400

remarkable

148

00:06:06,629 --> 00:06:04,479

pickle's eldest son hugh recalled that

149

00:06:08,629 --> 00:06:06,639

bickel's tenure at the helm of the nasa

150

00:06:10,629 --> 00:06:08,639

field center was marked by amazing

151
00:06:12,469 --> 00:06:10,639
advances in aeronautical achievement

152
00:06:13,990 --> 00:06:12,479
during his career paul bickle helped to

153
00:06:16,950 --> 00:06:14,000
move aviation

154
00:06:18,950 --> 00:06:16,960
from 450 miles an hour to 4

155
00:06:22,070 --> 00:06:18,960
500 miles an hour

156
00:06:23,590 --> 00:06:22,080
and from 60 000 feet to the edge of

157
00:06:30,390 --> 00:06:23,600
space

158
00:06:34,710 --> 00:06:32,390
for the past 10 years the reach out for

159
00:06:36,550 --> 00:06:34,720
the rainbow science fair has inspired

160
00:06:38,469 --> 00:06:36,560
students in the hunters point community

161
00:06:40,870 --> 00:06:38,479
in san francisco

162
00:06:42,710 --> 00:06:40,880
this year nasa ames research center

163
00:06:44,550 --> 00:06:42,720

joined the celebration and supported the

164

00:06:46,870 --> 00:06:44,560

effort to help energize the next

165

00:06:48,469 --> 00:06:46,880

generation of space explorers we're

166

00:06:50,790 --> 00:06:48,479

bringing it to them we brought our

167

00:06:52,150 --> 00:06:50,800

people out here to serve as ambassadors

168

00:06:53,830 --> 00:06:52,160

we're doing everything we can to let

169

00:06:55,510 --> 00:06:53,840

them know that science technology

170

00:06:57,430 --> 00:06:55,520

engineering and math is where it is as

171

00:06:59,510 --> 00:06:57,440

far as the foundation and if you want to

172

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

explore and go into new places within

173

00:07:03,029 --> 00:07:01,280

the universe this is the way you go

174

00:07:04,870 --> 00:07:03,039

about doing it

175

00:07:07,110 --> 00:07:04,880

the festival featured several guest

176

00:07:09,350 --> 00:07:07,120

speakers performances by students

177

00:07:11,589 --> 00:07:09,360

interactive science exhibits as well as

178

00:07:13,909 --> 00:07:11,599

a number of hands-on activities provided

179

00:07:15,189 --> 00:07:13,919

by the traveling space museum it was a

180

00:07:17,909 --> 00:07:15,199

wonderful

181

00:07:18,710 --> 00:07:17,919

experience for us having nasa come out

182

00:07:20,390 --> 00:07:18,720

and

183

00:07:22,390 --> 00:07:20,400

present these wonderful exhibits to the

184

00:07:23,990 --> 00:07:22,400

kids and this is so important because

185

00:07:26,469 --> 00:07:24,000

the kids need to see

186

00:07:27,270 --> 00:07:26,479

examples of what the their possibilities

187

00:07:29,589 --> 00:07:27,280

are

188

00:07:32,629 --> 00:07:29,599

all of our kids got to i think gain

189

00:07:34,710 --> 00:07:32,639

something from this today

190

00:07:36,950 --> 00:07:34,720

the event provides a large community of

191

00:07:39,029 --> 00:07:36,960

children and their families a valuable

192

00:07:41,430 --> 00:07:39,039

opportunity to discover a personal

193

00:07:44,230 --> 00:07:41,440

interest in science at a nearby venue

194

00:07:47,430 --> 00:07:44,240

it's all about the children is all about

195

00:07:49,909 --> 00:07:47,440

the community and it is just so

196

00:07:53,430 --> 00:07:49,919

exhilarating to have this experience

197

00:07:56,150 --> 00:07:53,440

today and i just i am so grateful to the

198

00:07:58,790 --> 00:07:56,160

nasa ames research center

199

00:07:59,909 --> 00:07:58,800

i just have deep

200

00:08:01,270 --> 00:07:59,919

respect

201
00:08:09,189 --> 00:08:01,280
for what they have brought to the

202
00:08:13,189 --> 00:08:10,869
nasa teamed up with the central

203
00:08:16,710 --> 00:08:13,199
intercollegiate athletic association

204
00:08:19,270 --> 00:08:16,720
ciaa to promote nasa awareness week in

205
00:08:21,749 --> 00:08:19,280
charlotte north carolina a series of

206
00:08:23,909 --> 00:08:21,759
agency-sponsored activities that promote

207
00:08:27,350 --> 00:08:23,919
the value of science technology

208
00:08:29,589 --> 00:08:27,360
engineering and math or stem education

209
00:08:31,830 --> 00:08:29,599
astronaut lee morin kicked off the week

210
00:08:33,990 --> 00:08:31,840
with a special education day at the

211
00:08:35,829 --> 00:08:34,000
charlotte convention center hundreds of

212
00:08:38,230 --> 00:08:35,839
local middle and high school students

213
00:08:40,790 --> 00:08:38,240

turned out to hear how stem classes can

214

00:08:43,190 --> 00:08:40,800

lead to exciting careers and futures

215

00:08:45,030 --> 00:08:43,200

technology engineering science and math

216

00:08:46,870 --> 00:08:45,040

and that's why we're here today to

217

00:08:48,630 --> 00:08:46,880

encourage you to study science

218

00:08:50,630 --> 00:08:48,640

technology engineering and math so that

219

00:08:53,670 --> 00:08:50,640

you can do something like help build a

220

00:08:55,509 --> 00:08:53,680

space station one day each year the ciaa

221

00:08:57,910 --> 00:08:55,519

tournament brings together men's and

222

00:08:59,509 --> 00:08:57,920

women's basketball teams from 13

223

00:09:02,070 --> 00:08:59,519

historically black colleges and

224

00:09:03,269 --> 00:09:02,080

universities to compete in a six-day

225

00:09:05,430 --> 00:09:03,279

tournament

226

00:09:07,829 --> 00:09:05,440

at an arena in downtown charlotte

227

00:09:10,150 --> 00:09:07,839

tournament attendees visited nasa booths

228

00:09:12,870 --> 00:09:10,160

for hands-on activities games and

229

00:09:15,190 --> 00:09:12,880

educational materials also college

230

00:09:17,509 --> 00:09:15,200

students interested in nasa internships

231

00:09:19,910 --> 00:09:17,519

could investigate opportunities at the

232

00:09:22,150 --> 00:09:19,920

ciaa career expo

233

00:09:25,030 --> 00:09:22,160

officials believe nasa's presence at the

234

00:09:27,829 --> 00:09:25,040

ciaa helped promote the importance of

235

00:09:32,230 --> 00:09:27,839

science technology engineering and math

236

00:09:38,790 --> 00:09:36,550

85 years ago on march 16 1926

237

00:09:41,430 --> 00:09:38,800

robert goddard successfully launched the

238

00:09:43,990 --> 00:09:41,440

world's first liquid fuel rocket from a

239

00:09:46,150 --> 00:09:44,000

field in auburn massachusetts

240

00:09:48,070 --> 00:09:46,160

goddard continued his rocket development

241

00:09:50,710 --> 00:09:48,080

work throughout the remainder of his

242

00:09:52,949 --> 00:09:50,720

life achieving numerous milestones and

243

00:09:54,230 --> 00:09:52,959

helping pave the way for contemporary

244

00:09:57,190 --> 00:09:54,240

space flight

245

00:09:59,670 --> 00:09:57,200

established in 1959 the goddard space

246

00:10:04,069 --> 00:09:59,680

flight center in greenbelt maryland was

247

00:10:09,430 --> 00:10:07,269

and that same day 40 years later the

248

00:10:12,069 --> 00:10:09,440

gemini titan 8 launched from cape

249

00:10:15,110 --> 00:10:12,079

canaveral florida on its way to becoming

250

00:10:18,310 --> 00:10:15,120

nasa's first manned docking mission

251
00:10:20,230 --> 00:10:18,320
astronauts neil armstrong and dave scott

252
00:10:22,230 --> 00:10:20,240
docked their capsule with an unmanned

253
00:10:24,550 --> 00:10:22,240
agena target vehicle

254
00:10:26,630 --> 00:10:24,560
while docked a thruster malfunctioned

255
00:10:29,350 --> 00:10:26,640
causing a near fatal tumbling of the

256
00:10:31,990 --> 00:10:29,360
craft the crew was able to stabilize the

257
00:10:33,030 --> 00:10:32,000
vehicle but used up too much fuel in the

258
00:10:35,509 --> 00:10:33,040
process

259
00:10:37,990 --> 00:10:35,519
plans for spacewalk and other activities

260
00:10:39,750 --> 00:10:38,000
were immediately abandoned as armstrong

261
00:10:42,230 --> 00:10:39,760
and scott prepared to make the first

262
00:10:45,110 --> 00:10:42,240
emergency landing of a manned u.s

263
00:10:47,750 --> 00:10:45,120

spacecraft just over 10 hours after

264

00:10:50,470 --> 00:10:47,760

launch jiminy 8 splashed safely down in

265

00:10:52,470 --> 00:10:50,480

the western pacific ocean about 500

266

00:10:54,630 --> 00:10:52,480

miles west of okinawa

267

00:10:57,269 --> 00:10:54,640

gemini served as the bridge between the

268

00:10:59,590 --> 00:10:57,279

mercury and apollo programs testing

269

00:11:02,150 --> 00:10:59,600

equipment and procedures and preparing

270

00:11:04,230 --> 00:11:02,160

astronauts and ground crews for future

271

00:11:07,350 --> 00:11:04,240

missions to the moon

272

00:11:10,069 --> 00:11:07,360

and that's this week at nasa for more on