



1
00:00:07,120 --> 00:00:10,549
this week at nasa

2
00:00:14,709 --> 00:00:12,549
the launch of space shuttle endeavor for

3
00:00:17,590 --> 00:00:14,719
mission sts-134

4
00:00:19,670 --> 00:00:17,600
has been rescheduled for may 16th

5
00:00:22,230 --> 00:00:19,680
during the mission endeavour and crew

6
00:00:24,870 --> 00:00:22,240
members commander mark kelly pilot greg

7
00:00:27,750 --> 00:00:24,880
johnson and mission specialist mike fink

8
00:00:30,310 --> 00:00:27,760
greg chamois drew coystal and european

9
00:00:32,069 --> 00:00:30,320
space agency astronaut roberto vittori

10
00:00:35,590 --> 00:00:32,079
will deliver the alpha magnetic

11
00:00:37,830 --> 00:00:35,600
spectrometer and spare parts to the iss

12
00:00:39,910 --> 00:00:37,840
this will be the 36th shuttle mission to

13
00:00:44,150 --> 00:00:39,920

the international space station and

14

00:00:49,110 --> 00:00:46,549

months after its completion the gravity

15

00:00:51,430 --> 00:00:49,120

pro-b mission has confirmed two aspects

16

00:00:55,189 --> 00:00:51,440

of albert einstein's theory of general

17

00:00:57,189 --> 00:00:55,199

relativity gpb is one of only a very few

18

00:00:59,349 --> 00:00:57,199

astrophysics missions dedicated to

19

00:01:01,670 --> 00:00:59,359

fundamental physics most science

20

00:01:04,710 --> 00:01:01,680

missions seek to make new observational

21

00:01:07,109 --> 00:01:04,720

discoveries the gpb mission measures and

22

00:01:09,830 --> 00:01:07,119

verifies two key predictions of

23

00:01:12,149 --> 00:01:09,840

einstein's theory of relativity

24

00:01:14,230 --> 00:01:12,159

he surmised that space and time are

25

00:01:15,350 --> 00:01:14,240

distorted by the presence of massive

26

00:01:18,469 --> 00:01:15,360

objects

27

00:01:21,030 --> 00:01:18,479

gpb explored this theory using four

28

00:01:23,830 --> 00:01:21,040

ultra-precise gyroscopes to measure the

29

00:01:26,630 --> 00:01:23,840

geodetic effect or the warping of space

30

00:01:28,550 --> 00:01:26,640

and time by a celestial body like earth

31

00:01:31,030 --> 00:01:28,560

and frame dragging the amount of

32

00:01:33,590 --> 00:01:31,040

spinning object like earth pulls space

33

00:01:35,670 --> 00:01:33,600

and time with it as it rotates so we

34

00:01:38,069 --> 00:01:35,680

completed this landmark experiment

35

00:01:38,950 --> 00:01:38,079

testing einstein's universe

36

00:01:41,030 --> 00:01:38,960

and

37

00:01:43,270 --> 00:01:41,040

einstein survives

38

00:01:45,830 --> 00:01:43,280

nasa partnered with stanford university

39

00:01:48,469 --> 00:01:45,840

on the gpb mission with data collection

40

00:01:51,590 --> 00:01:48,479

continuing for 17 months while it

41

00:01:54,230 --> 00:01:51,600

orbited earth ignition and liftoff of

42

00:01:54,950 --> 00:01:54,240

the delta rocket carrying gravity probe

43

00:02:01,749 --> 00:01:54,960

b

44

00:02:03,429 --> 00:02:01,759

and successfully decommissioned in

45

00:02:05,510 --> 00:02:03,439

december 2010

46

00:02:08,229 --> 00:02:05,520

the spacecraft continues to circle the

47

00:02:15,030 --> 00:02:08,239

earth in a polar orbit at an altitude of

48

00:02:20,229 --> 00:02:17,430

at the kennedy space center two events

49

00:02:22,869 --> 00:02:20,239

commemorated the 50th anniversary of u.s

50

00:02:25,990 --> 00:02:22,879

human space flight during a special

51
00:02:28,229 --> 00:02:26,000
ceremony at ksc's visitor complex the

52
00:02:30,550 --> 00:02:28,239
united states postal service unveiled

53
00:02:32,630 --> 00:02:30,560
two new stamps celebrating nasa's

54
00:02:34,710 --> 00:02:32,640
achievement now that we've had one pays

55
00:02:36,830 --> 00:02:34,720
tribute to project mercury and alan

56
00:02:40,710 --> 00:02:36,840
shepard's historic launch on may 5th

57
00:02:43,030 --> 00:02:40,720
1961 aboard the spacecraft freedom 7.

58
00:02:45,270 --> 00:02:43,040
the second stamp honors nasa's messenger

59
00:02:47,670 --> 00:02:45,280
spacecraft which reached mercury in

60
00:02:49,270 --> 00:02:47,680
march becoming the first spacecraft to

61
00:02:51,509 --> 00:02:49,280
orbit the planet

62
00:02:53,589 --> 00:02:51,519
both missions are part of a 50-year

63
00:02:55,670 --> 00:02:53,599

period that advanced american space

64

00:02:58,710 --> 00:02:55,680

exploration through more than fifteen

65

00:03:00,869 --> 00:02:58,720

hundred manned and unmanned flights

66

00:03:03,030 --> 00:03:00,879

mercury astronauts scott carpenter and

67

00:03:05,430 --> 00:03:03,040

members of the shepard family joined

68

00:03:07,830 --> 00:03:05,440

nasa administrator charles bolden for

69

00:03:10,470 --> 00:03:07,840

the unveiling so today we celebrate the

70

00:03:11,750 --> 00:03:10,480

inaugural manned flight of project

71

00:03:13,910 --> 00:03:11,760

mercury

72

00:03:15,830 --> 00:03:13,920

and our historic first orbital mission

73

00:03:17,830 --> 00:03:15,840

to the planet mercury

74

00:03:20,790 --> 00:03:17,840

these are two enormously important

75

00:03:22,149 --> 00:03:20,800

points separated by years on the nasa

76

00:03:24,710 --> 00:03:22,159

continuum

77

00:03:27,430 --> 00:03:24,720

they're joined by more than just a name

78

00:03:30,309 --> 00:03:27,440

they embody the spirit of innovation and

79

00:03:32,470 --> 00:03:30,319

doing big things for which nasa has

80

00:03:35,030 --> 00:03:32,480

always been known during the second

81

00:03:37,830 --> 00:03:35,040

event the administrator joined ksc

82

00:03:39,670 --> 00:03:37,840

director and former astronaut bob cabana

83

00:03:42,149 --> 00:03:39,680

and more than 200 workers from the

84

00:03:43,990 --> 00:03:42,159

original mercury program to watch a

85

00:03:46,869 --> 00:03:44,000

recreation of shepherd's flight and

86

00:03:49,030 --> 00:03:46,879

recovery the program also highlighted

87

00:03:55,110 --> 00:03:49,040

the former moonwalker's contributions

88

00:03:59,990 --> 00:03:57,670

young innovators from across the country

89

00:04:02,949 --> 00:04:00,000

converged on the conrad foundation's

90

00:04:09,030 --> 00:04:02,959

2011 innovation summit bringing with

91

00:04:13,910 --> 00:04:11,110

held at the ames research center the

92

00:04:16,069 --> 00:04:13,920

three-day event showcased the work of 27

93

00:04:18,550 --> 00:04:16,079

high school team finalists and their

94

00:04:21,189 --> 00:04:18,560

teachers in the areas of aerospace

95

00:04:24,070 --> 00:04:21,199

exploration clean energy and cyber

96

00:04:25,830 --> 00:04:24,080

security can everybody hear me

97

00:04:28,550 --> 00:04:25,840

a number of supporters were featured

98

00:04:30,629 --> 00:04:28,560

including mythbusters hosts adam savage

99

00:04:32,950 --> 00:04:30,639

and nancy conrad wife of the late

100

00:04:35,510 --> 00:04:32,960

astronaut pete conrad commander of

101

00:04:38,150 --> 00:04:35,520

apollo 12 and the third man to walk on

102

00:04:39,990 --> 00:04:38,160

the moon the spirit of innovation awards

103

00:04:42,790 --> 00:04:40,000

is here to grow an innovative workforce

104

00:04:45,430 --> 00:04:42,800

for the 21st century and we do that by

105

00:04:47,670 --> 00:04:45,440

combining education innovation and

106

00:04:49,670 --> 00:04:47,680

entrepreneurship the event concluded

107

00:04:52,310 --> 00:04:49,680

with the awarding of the coveted pete

108

00:04:54,870 --> 00:04:52,320

conrad spirit of innovation award to two

109

00:04:57,909 --> 00:04:54,880

teams from pennsylvania and another from

110

00:05:02,390 --> 00:05:00,070

the international space station program

111

00:05:04,710 --> 00:05:02,400

office has been awarded the 2011

112

00:05:07,749 --> 00:05:04,720

smithsonian's national air and space

113

00:05:10,310 --> 00:05:07,759

museum trophy for current achievement

114

00:05:12,710 --> 00:05:10,320

the iss is recognized as the most

115

00:05:15,029 --> 00:05:12,720

complex feat ever attempted in earth

116

00:05:18,070 --> 00:05:15,039

orbit and the largest peacetime

117

00:05:21,110 --> 00:05:18,080

technological endeavor in space history

118

00:05:23,430 --> 00:05:21,120

iss program manager michael suffradini

119

00:05:25,430 --> 00:05:23,440

accepted the award at a black tie dinner

120

00:05:27,749 --> 00:05:25,440

in washington dc we're part of a

121

00:05:31,029 --> 00:05:27,759

distinguished group of individuals

122

00:05:33,670 --> 00:05:31,039

and uh and programs and we're uh

123

00:05:36,310 --> 00:05:33,680

we're blessed that you have

124

00:05:38,310 --> 00:05:36,320

seen fit to honor us tonight receiving

125

00:05:41,270 --> 00:05:38,320

this year's lifetime achievement award

126
00:05:43,189 --> 00:05:41,280
from air and space was george mueller as

127
00:05:47,029 --> 00:05:43,199
head of nasa's human space flight

128
00:05:49,029 --> 00:05:47,039
program from 1963 to 1969

129
00:05:51,110 --> 00:05:49,039
mueller led the successful apollo

130
00:05:54,230 --> 00:05:51,120
program that landed the first humans on

131
00:05:55,830 --> 00:05:54,240
the moon in july 1969

132
00:06:00,309 --> 00:05:55,840
one of the greatest engineering

133
00:06:00,319 --> 00:06:06,870
and now centerpieces

134
00:06:10,870 --> 00:06:09,110
approximately 84th to 12th grade

135
00:06:12,870 --> 00:06:10,880
students gathered at nasa's wallace

136
00:06:15,749 --> 00:06:12,880
flight facility for inspire the next

137
00:06:17,670 --> 00:06:15,759
generation day on april 28th today is

138
00:06:19,670 --> 00:06:17,680

national take your children to work day

139

00:06:21,110 --> 00:06:19,680

and that means that parents can take

140

00:06:23,029 --> 00:06:21,120

their kids with them to work and show

141

00:06:25,590 --> 00:06:23,039

them what they're doing and here at nasa

142

00:06:27,990 --> 00:06:25,600

we're trying to inspire kids to learn

143

00:06:29,670 --> 00:06:28,000

about stem topics science technology

144

00:06:31,749 --> 00:06:29,680

engineering and math students got

145

00:06:34,390 --> 00:06:31,759

hands-on and up close experiences with

146

00:06:36,790 --> 00:06:34,400

model rocketry kite building nasa

147

00:06:39,189 --> 00:06:36,800

aircraft and much more i learned how to

148

00:06:42,230 --> 00:06:39,199

build a mile rocket

149

00:06:44,710 --> 00:06:42,240

i learned about the engines a little bit

150

00:06:47,590 --> 00:06:44,720

my favorite part was the rocket launcher

151

00:06:50,870 --> 00:06:47,600

because i actually got to

152

00:06:53,670 --> 00:06:50,880

let a rocket go up into there and we

153

00:06:55,270 --> 00:06:53,680

made it by hand so that was also fun

154

00:06:57,749 --> 00:06:55,280

inspire the next generation day is

155

00:06:59,510 --> 00:06:57,759

sponsored by nasa navy surface combat

156

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

systems center and marine science

157

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

consortiums who all came together to

158

00:07:06,710 --> 00:07:03,199

make it a special day for these students

159

00:07:09,350 --> 00:07:06,720

what it means to us is a nazrock program

160

00:07:10,710 --> 00:07:09,360

it lets us reach out and it makes us

161

00:07:13,029 --> 00:07:10,720

feel good because we get to share some

162

00:07:14,309 --> 00:07:13,039

of our passion and we love what we do

163

00:07:16,870 --> 00:07:14,319

and we want to be able to show these

164

00:07:19,510 --> 00:07:16,880

kids how much fun it really is it's not

165

00:07:21,350 --> 00:07:19,520

all fun all the time obviously but

166

00:07:23,189 --> 00:07:21,360

they can share with us a little bit and

167

00:07:25,110 --> 00:07:23,199

it gives us a day that we can kind of

168

00:07:27,270 --> 00:07:25,120

get up away from our desks and enjoy

169

00:07:33,589 --> 00:07:27,280

ourselves and remember ourselves what

170

00:07:38,710 --> 00:07:36,309

it's not every day that a marine v22

171

00:07:40,950 --> 00:07:38,720

osprey lands in a convention center

172

00:07:42,629 --> 00:07:40,960

parking lot the tilt rotor made a

173

00:07:45,110 --> 00:07:42,639

special appearance at the american

174

00:07:46,629 --> 00:07:45,120

helicopter society forum in virginia

175

00:07:48,710 --> 00:07:46,639

beach virginia

176

00:07:51,029 --> 00:07:48,720

the annual event is where the who's who

177

00:07:53,909 --> 00:07:51,039

in rotorcraft research and technology

178

00:07:56,550 --> 00:07:53,919

showcase the latest in vertical flight

179

00:07:58,710 --> 00:07:56,560

among the presentations 31 papers from

180

00:08:00,869 --> 00:07:58,720

researchers at nasa's langley ames and

181

00:08:02,869 --> 00:08:00,879

glenn research centers

182

00:08:05,270 --> 00:08:02,879

langley's susan gorton leads nasa's

183

00:08:07,110 --> 00:08:05,280

rotorcraft efforts she's also the first

184

00:08:10,070 --> 00:08:07,120

female technical director of the

185

00:08:12,710 --> 00:08:10,080

helicopter society we look at

186

00:08:15,270 --> 00:08:12,720

advanced ways for new rotor blades new

187

00:08:17,350 --> 00:08:15,280

transmissions new engines everything

188

00:08:19,110 --> 00:08:17,360

that can contribute to making things

189

00:08:20,790 --> 00:08:19,120

quieter safer

190

00:08:23,110 --> 00:08:20,800

easier to operate

191

00:08:24,950 --> 00:08:23,120

and cost effective nasa uses wind

192

00:08:27,189 --> 00:08:24,960

tunnels and other laboratories to try to

193

00:08:29,430 --> 00:08:27,199

radically improve rotorcraft performance

194

00:08:30,550 --> 00:08:29,440

and efficiency and reduce noise and

195

00:08:32,790 --> 00:08:30,560

emissions

196

00:08:34,230 --> 00:08:32,800

the goal is to help make helicopters or

197

00:08:36,790 --> 00:08:34,240

other vertical takeoff and landing

198

00:08:39,269 --> 00:08:36,800

vehicles more mainstream

199

00:08:42,550 --> 00:08:39,279

able to carry more passengers and cargo

200

00:08:43,990 --> 00:08:42,560

quicker quieter safer and greener

201
00:08:47,110 --> 00:08:44,000
that could help relieve air traffic

202
00:08:49,590 --> 00:08:47,120
congestion reduce delays and make more

203
00:08:51,509 --> 00:08:49,600
efficient use of air space

204
00:08:55,030 --> 00:08:51,519
when we look at different configurations

205
00:08:57,190 --> 00:08:55,040
and how airports work the ability to

206
00:08:59,030 --> 00:08:57,200
take off without the runway means that

207
00:09:00,949 --> 00:08:59,040
you can get off the ground faster you

208
00:09:02,150 --> 00:09:00,959
can turn around the airplanes faster so

209
00:09:04,230 --> 00:09:02,160
if you could move a large amount of

210
00:09:06,389 --> 00:09:04,240
people without waiting for a runway slot

211
00:09:07,910 --> 00:09:06,399
you can make a big difference up to 30

212
00:09:09,590 --> 00:09:07,920
percent more people through the airport

213
00:09:11,110 --> 00:09:09,600

system

214

00:09:12,790 --> 00:09:11,120

the research to make vertical lift

215

00:09:15,430 --> 00:09:12,800

aircraft more acceptable as everyday

216

00:09:17,350 --> 00:09:15,440

transportation is not without challenges

217

00:09:20,070 --> 00:09:17,360

say nasa engineers

218

00:09:21,750 --> 00:09:20,080

but advancements being worked on now

219

00:09:24,150 --> 00:09:21,760

could make a difference for future

220

00:09:34,310 --> 00:09:24,160

generations of helicopters

221

00:09:38,550 --> 00:09:37,509

nine and ten i've got eight but not

222

00:09:41,670 --> 00:09:38,560

seven

223

00:09:44,070 --> 00:09:41,680

the 2011 first championships have ended

224

00:09:47,030 --> 00:09:44,080

after three days of exciting competition

225

00:09:51,509 --> 00:09:47,040

between more than 600 teams representing

226
00:09:55,990 --> 00:09:53,670
over three days during three levels of

227
00:09:58,389 --> 00:09:56,000
events the teams fought it out on the

228
00:09:59,910 --> 00:09:58,399
floors of the edward jones dome in st

229
00:10:01,910 --> 00:09:59,920
louis missouri

230
00:10:05,269 --> 00:10:01,920
this year's first robotics game for

231
00:10:06,389 --> 00:10:05,279
players ages 14 to 18 was called logo

232
00:10:08,949 --> 00:10:06,399
motion

233
00:10:11,269 --> 00:10:08,959
with their self-made robots competing

234
00:10:13,910 --> 00:10:11,279
teams were required to maneuver and hang

235
00:10:16,790 --> 00:10:13,920
as many inflated triangles circles and

236
00:10:19,829 --> 00:10:16,800
squares all elements of the first logo

237
00:10:22,550 --> 00:10:19,839
on grids as fast and high as they could

238
00:10:24,310 --> 00:10:22,560

during two-minute 15-second intervals

239

00:10:27,269 --> 00:10:24,320

the higher the teams hung their game

240

00:10:29,910 --> 00:10:27,279

pieces the more points they received

241

00:10:32,230 --> 00:10:29,920

three teams from san jose california

242

00:10:34,949 --> 00:10:32,240

schomburg illinois and atascadero

243

00:10:36,870 --> 00:10:34,959

california won the final showdown

244

00:10:38,949 --> 00:10:36,880

earning the coveted first robotics

245

00:10:40,150 --> 00:10:38,959

competition championship winning

246

00:10:42,230 --> 00:10:40,160

alliance

247

00:10:44,790 --> 00:10:42,240

several other teams receive honors for

248

00:10:47,190 --> 00:10:44,800

design excellence competitive play

249

00:10:49,350 --> 00:10:47,200

teamwork and partnerships

250

00:10:51,910 --> 00:10:49,360

the first organization and competitions

251
00:10:53,829 --> 00:10:51,920
were founded by inventor dean kamen to

252
00:10:55,829 --> 00:10:53,839
inspire young people's interest in

253
00:10:58,230 --> 00:10:55,839
science and technology

254
00:11:00,710 --> 00:10:58,240
the first acronym stands for for

255
00:11:02,230 --> 00:11:00,720
inspiration and recognition of science

256
00:11:04,470 --> 00:11:02,240
and technology

257
00:11:06,870 --> 00:11:04,480
this year's championship honored dean

258
00:11:09,509 --> 00:11:06,880
cayman's father the late jack cayman

259
00:11:16,870 --> 00:11:09,519
comic cover artist and designer of the

260
00:11:21,430 --> 00:11:19,110
headquarters employees have a new place

261
00:11:23,430 --> 00:11:21,440
to connect and commune with each other

262
00:11:25,910 --> 00:11:23,440
administrator charlie bolden and deputy

263
00:11:28,790 --> 00:11:25,920

administrator lori garger presided at

264

00:11:31,430 --> 00:11:28,800

the reopening of the columbia cafe

265

00:11:34,069 --> 00:11:31,440

the space now provides an informal cyber

266

00:11:36,790 --> 00:11:34,079

cafe setting on opening day the first

267

00:11:39,750 --> 00:11:36,800

100 attendees received a complimentary

268

00:11:42,949 --> 00:11:39,760

cup of gourmet coffee or tea

269

00:11:45,750 --> 00:11:42,959

and that's this week at nasa for more on