



1
00:00:07,040 --> 00:00:10,390
this week at nasa

2
00:00:13,509 --> 00:00:12,150
you can see the parachute coming down

3
00:00:16,230 --> 00:00:13,519
and the plume coming out from the soft

4
00:00:18,070 --> 00:00:16,240
landing engines the expedition 35 crew

5
00:00:20,230 --> 00:00:18,080
safely returned from the international

6
00:00:22,790 --> 00:00:20,240
space station with a parachute assistant

7
00:00:25,670 --> 00:00:22,800
landing of its soyuz spacecraft in

8
00:00:27,589 --> 00:00:25,680
kazakhstan on may 14th local time

9
00:00:30,390 --> 00:00:27,599
commander chris hadfield of the canadian

10
00:00:32,389 --> 00:00:30,400
space agency soyuz commander roman

11
00:00:35,110 --> 00:00:32,399
romanenko of the russian federal space

12
00:00:38,869 --> 00:00:35,120
agency and nasa flight engineer tom

13
00:00:41,430 --> 00:00:38,879

marshburn capped off 146 days in space

14

00:00:43,910 --> 00:00:41,440

full of activity for marshburn some of

15

00:00:46,709 --> 00:00:43,920

it just hours before the crew departed

16

00:00:48,869 --> 00:00:46,719

on may 11 he and fellow nasa astronaut

17

00:00:51,830 --> 00:00:48,879

chris cassidy completed a five-hour

18

00:00:55,029 --> 00:00:51,840

30-minute spacewalk to replace a faulty

19

00:00:56,709 --> 00:00:55,039

coolant pump on the station's p6 truss

20

00:00:59,110 --> 00:00:56,719

the quick turnaround spacewalk was

21

00:01:02,150 --> 00:00:59,120

orchestrated just 48 hours after a

22

00:01:04,229 --> 00:01:02,160

coolant leak developed on p6

23

00:01:06,550 --> 00:01:04,239

and during a nasa tv in flight event on

24

00:01:08,149 --> 00:01:06,560

may 7th mars byrne discussed the work

25

00:01:10,070 --> 00:01:08,159

being done on the international space

26

00:01:11,910 --> 00:01:10,080

station with members of the senate

27

00:01:14,310 --> 00:01:11,920

committee on commerce science and

28

00:01:16,870 --> 00:01:14,320

transportation subcommittee on science

29

00:01:19,190 --> 00:01:16,880

and space chaired by florida senator

30

00:01:21,429 --> 00:01:19,200

bill nelson the subcommittee conducts

31

00:01:23,990 --> 00:01:21,439

oversight of nasa and several other

32

00:01:25,749 --> 00:01:24,000

science and technology related agencies

33

00:01:28,070 --> 00:01:25,759

can you explain how

34

00:01:30,390 --> 00:01:28,080

you know u.s private space companies

35

00:01:31,350 --> 00:01:30,400

uh are using the iss as a technology

36

00:01:33,590 --> 00:01:31,360

platform

37

00:01:35,510 --> 00:01:33,600

if they can do it that is

38

00:01:37,510 --> 00:01:35,520

an incredibly impressive technology

39

00:01:39,510 --> 00:01:37,520

demonstration going into space is not

40

00:01:41,350 --> 00:01:39,520

easy they're coming up with great

41

00:01:43,350 --> 00:01:41,360

efficiencies great new technologies

42

00:01:44,870 --> 00:01:43,360

built on what nasa's already done so

43

00:01:46,950 --> 00:01:44,880

that they can get probably cheaper

44

00:01:49,749 --> 00:01:46,960

better faster get things up to the space

45

00:01:54,789 --> 00:01:51,590

meanwhile the next crew headed to the

46

00:01:56,069 --> 00:01:54,799

space station expedition 3637 soyuz

47

00:01:58,550 --> 00:01:56,079

commander for the order your chicken of

48

00:02:01,109 --> 00:01:58,560

the russian federal space agency nasa

49

00:02:03,190 --> 00:02:01,119

flight engineer karen nyberg and flight

50

00:02:05,510 --> 00:02:03,200

engineer luca parmitano of the european

51
00:02:07,670 --> 00:02:05,520
space agency fielded questions from the

52
00:02:09,589 --> 00:02:07,680
news media as part of their pre-launch

53
00:02:12,390 --> 00:02:09,599
activities at the gagarin cosmonaut

54
00:02:14,309 --> 00:02:12,400
training center in star city russia

55
00:02:17,030 --> 00:02:14,319
the crew is scheduled to travel to the

56
00:02:18,869 --> 00:02:17,040
kazakhstan launch site may 16th to

57
00:02:21,270 --> 00:02:18,879
complete training in advance of its

58
00:02:24,150 --> 00:02:21,280
launch to the station on may 29th local

59
00:02:28,309 --> 00:02:26,150
nasa administrator charlie bolden

60
00:02:30,390 --> 00:02:28,319
delivered opening remarks at the humans

61
00:02:31,509 --> 00:02:30,400
to mars summit at george washington

62
00:02:34,229 --> 00:02:31,519
university

63
00:02:37,430 --> 00:02:34,239

the three-day event held by explore mars

64

00:02:39,670 --> 00:02:37,440

and gw's space policy institute provided

65

00:02:41,670 --> 00:02:39,680

a forum for nasa and the space community

66

00:02:44,150 --> 00:02:41,680

to discuss technical scientific and

67

00:02:46,790 --> 00:02:44,160

policy-related challenges associated

68

00:02:48,790 --> 00:02:46,800

with sending humans to mars by the 2030s

69

00:02:51,509 --> 00:02:48,800

there are technological gaps to sending

70

00:02:53,910 --> 00:02:51,519

humans to an asteroid and to mars

71

00:02:56,229 --> 00:02:53,920

and so every single

72

00:02:58,070 --> 00:02:56,239

moment of our time and every single

73

00:03:00,070 --> 00:02:58,080

dollar of our assets

74

00:03:02,470 --> 00:03:00,080

must be dedicated to developing those

75

00:03:04,550 --> 00:03:02,480

technologies that allow us to go beyond

76

00:03:06,790 --> 00:03:04,560

low earth orbit also discussed the

77

00:03:08,869 --> 00:03:06,800

planned nasa initiative to send humans

78

00:03:11,110 --> 00:03:08,879

to an asteroid and the importance of

79

00:03:12,790 --> 00:03:11,120

work by astronauts during long-duration

80

00:03:15,110 --> 00:03:12,800

missions aboard the international space

81

00:03:17,430 --> 00:03:15,120

station while not specifically designed

82

00:03:19,270 --> 00:03:17,440

to send humans to mars these endeavors

83

00:03:21,509 --> 00:03:19,280

will provide invaluable experience

84

00:03:23,350 --> 00:03:21,519

useful in planning and completing a

85

00:03:25,270 --> 00:03:23,360

successful human journey to the red

86

00:03:26,869 --> 00:03:25,280

planet also we need to think about what

87

00:03:28,789 --> 00:03:26,879

we carry in terms of medical equipment

88

00:03:31,270 --> 00:03:28,799

for the crew other things along those

89

00:03:33,110 --> 00:03:31,280

lines so we get a chance to experience

90

00:03:35,670 --> 00:03:33,120

a different risk environment where we

91

00:03:37,670 --> 00:03:35,680

have you know a protracted return

92

00:03:38,789 --> 00:03:37,680

capability back to the earth and i think

93

00:03:41,750 --> 00:03:38,799

that's what we're going to have to do as

94

00:03:46,949 --> 00:03:44,470

sky lab the nation's first space station

95

00:03:50,229 --> 00:03:46,959

launched the board of saturn 5 rocket 40

96

00:03:52,149 --> 00:03:50,239

years ago on may 14 1973

97

00:03:54,309 --> 00:03:52,159

the three crews that completed missions

98

00:03:56,390 --> 00:03:54,319

aboard the experimental facility not

99

00:03:59,030 --> 00:03:56,400

only set successive new records for long

100

00:04:01,750 --> 00:03:59,040

duration space flight but also completed

101
00:04:03,750 --> 00:04:01,760
about 300 experiments covering physical

102
00:04:06,390 --> 00:04:03,760
and biomedical science and earth and

103
00:04:07,830 --> 00:04:06,400
space applications the skylab program

104
00:04:09,830 --> 00:04:07,840
also yielded knowledge that was

105
00:04:11,830 --> 00:04:09,840
eventually used in development of the

106
00:04:14,470 --> 00:04:11,840
international space station just as the

107
00:04:16,469 --> 00:04:14,480
work being performed on the iss now is

108
00:04:18,469 --> 00:04:16,479
helping nasa develop new missions that

109
00:04:21,990 --> 00:04:18,479
will extend our reach farther into the

110
00:04:23,749 --> 00:04:22,000
solar system as humans move outward into

111
00:04:24,870 --> 00:04:23,759
deeper space exploration we'll probably

112
00:04:27,189 --> 00:04:24,880
learn things that we weren't expecting

113
00:04:30,950 --> 00:04:27,199

to learn just as we did in sky lab in

114

00:04:32,870 --> 00:04:30,960

iss and the next things we do will be

115

00:04:35,749 --> 00:04:32,880

just as astounding as the step from

116

00:04:38,870 --> 00:04:35,759

skylab to iss is after the final crew

117

00:04:41,110 --> 00:04:38,880

left sky lab in february 1974

118

00:04:46,150 --> 00:04:41,120

the empty spacecraft circled the earth

119

00:04:49,350 --> 00:04:47,909

after being incommunicado with the

120

00:04:51,990 --> 00:04:49,360

ground during the recent solar

121

00:04:54,070 --> 00:04:52,000

conjunction the mars curiosity rover is

122

00:04:56,230 --> 00:04:54,080

preparing to get back to wheeling around

123

00:04:58,790 --> 00:04:56,240

the red planet and thanks to a software

124

00:05:01,029 --> 00:04:58,800

update the rover now has the ability to

125

00:05:03,590 --> 00:05:01,039

navigate more on its own

126
00:05:05,909 --> 00:05:03,600
the new autonomous navigation capability

127
00:05:08,870 --> 00:05:05,919
or auto nav enables the rover to

128
00:05:10,870 --> 00:05:08,880
evaluate and select safe paths of travel

129
00:05:11,990 --> 00:05:10,880
with less input from the rover team on

130
00:05:13,990 --> 00:05:12,000
the ground

131
00:05:15,510 --> 00:05:14,000
curiosity also received a software

132
00:05:18,310 --> 00:05:15,520
update to prevent the sensitive

133
00:05:20,629 --> 00:05:18,320
telescopic eye of the chemcam instrument

134
00:05:22,390 --> 00:05:20,639
from being burned by the sun

135
00:05:24,950 --> 00:05:22,400
the update is designed to make sure

136
00:05:26,629 --> 00:05:24,960
kimcam's eye is never pointed directly

137
00:05:28,870 --> 00:05:26,639
at the sun

138
00:05:30,469 --> 00:05:28,880

and the rover team is also confirming

139

00:05:32,629 --> 00:05:30,479

the calibration of curiosity's

140

00:05:34,070 --> 00:05:32,639

navigation cameras before driving to a

141

00:05:36,070 --> 00:05:34,080

new location

142

00:05:38,469 --> 00:05:36,080

plans are in the works for a short drive

143

00:05:40,230 --> 00:05:38,479

to a new drill site called cumberland

144

00:05:42,629 --> 00:05:40,240

about nine feet west of where

145

00:05:46,469 --> 00:05:42,639

curiosity's drill first touched martian

146

00:05:51,029 --> 00:05:48,870

a new google earth engine time lapse

147

00:05:54,310 --> 00:05:51,039

made from landsat satellite imagery

148

00:05:57,430 --> 00:05:54,320

captures the rapid growth from 1984 to

149

00:05:59,430 --> 00:05:57,440

2012 of las vegas nevada the fastest

150

00:06:00,870 --> 00:05:59,440

growing city in the u.s over the past

151

00:06:02,629 --> 00:06:00,880

two decades

152

00:06:05,270 --> 00:06:02,639

each frame of the time lapse is

153

00:06:08,710 --> 00:06:05,280

constructed from a year of landsat data

154

00:06:10,070 --> 00:06:08,720

and equates to about a 1.7 terapixel

155

00:06:12,070 --> 00:06:10,080

snapshot

156

00:06:14,870 --> 00:06:12,080

jointly managed by nasa and the u.s

157

00:06:16,950 --> 00:06:14,880

geological survey the landsat program

158

00:06:20,230 --> 00:06:16,960

has acquired images of the earth's

159

00:06:21,909 --> 00:06:20,240

surface since 1972 providing critical

160

00:06:23,830 --> 00:06:21,919

scientific information about our

161

00:06:29,990 --> 00:06:23,840

changing planet the time lapse is

162

00:06:35,830 --> 00:06:31,350

intro

163

00:06:41,430 --> 00:06:38,870

these bugs flightless fruit flies may

164

00:06:42,550 --> 00:06:41,440

someday help make airplanes more fuel

165

00:06:44,150 --> 00:06:42,560

efficient

166

00:06:46,230 --> 00:06:44,160

their work starts in a wind tunnel at

167

00:06:48,469 --> 00:06:46,240

nasa's langley research center where

168

00:06:50,390 --> 00:06:48,479

technicians install the edge of a wing

169

00:06:52,710 --> 00:06:50,400

that's covered with a special coating

170

00:06:55,189 --> 00:06:52,720

the task is to

171

00:06:57,189 --> 00:06:55,199

design a surface that prevents insect

172

00:06:59,029 --> 00:06:57,199

residues from sticking okay and the

173

00:07:01,270 --> 00:06:59,039

reason is

174

00:07:04,150 --> 00:07:01,280

that if you have any residue sticking it

175

00:07:06,790 --> 00:07:04,160

trips the airflow over it rough airflow

176

00:07:08,790 --> 00:07:06,800

increases airplane fuel usage as much as

177

00:07:10,950 --> 00:07:08,800

30 percent says nasa's environmentally

178

00:07:12,550 --> 00:07:10,960

responsible aviation project between the

179

00:07:14,870 --> 00:07:12,560

commercial coatings you've looked at and

180

00:07:17,029 --> 00:07:14,880

new coatings or and surfaces that we've

181

00:07:18,950 --> 00:07:17,039

engineered and modified we've looked at

182

00:07:22,390 --> 00:07:18,960

about 60 different

183

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

surfaces for the bugs it's up close

184

00:07:27,110 --> 00:07:24,000

they're launched at the coated wing at

185

00:07:29,430 --> 00:07:27,120

about 150 miles an hour the researchers

186

00:07:30,390 --> 00:07:29,440

goal to narrow the field of coatings to

187

00:07:32,309 --> 00:07:30,400

a few

188

00:07:40,309 --> 00:07:32,319

that are effective enough to test on an

189

00:07:45,350 --> 00:07:42,830

it was ready set soar at the

190

00:07:46,469 --> 00:07:45,360

2012-2013 nasa student launch projects

191

00:07:48,869 --> 00:07:46,479

challenge

192

00:07:50,790 --> 00:07:48,879

more than 600 students launched rockets

193

00:07:53,029 --> 00:07:50,800

of their own design complete with

194

00:07:54,950 --> 00:07:53,039

working science or engineering payloads

195

00:08:00,550 --> 00:07:54,960

at the event sponsored by marshall space

196

00:08:04,790 --> 00:08:02,550

the goal was to see which rocket could

197

00:08:07,189 --> 00:08:04,800

come closest to the one mile mark and

198

00:08:09,670 --> 00:08:07,199

safely return its payload to earth of

199

00:08:12,150 --> 00:08:09,680

the 54 teams that participated 10

200

00:08:14,469 --> 00:08:12,160

received preliminary awards the grand

201

00:08:17,189 --> 00:08:14,479

prize of five thousand dollars from atk

202

00:08:19,270 --> 00:08:17,199

aerospace group will be awarded may 17th

203

00:08:24,830 --> 00:08:19,280

after final post flight analysis and

204

00:08:31,430 --> 00:08:27,749

complete roger have left off and the

205

00:08:34,230 --> 00:08:31,440

clock is operating on may 15 1963

206

00:08:36,230 --> 00:08:34,240

mercury atlas 9 the final manned space

207

00:08:40,070 --> 00:08:36,240

mission of the u.s mercury program

208

00:08:42,870 --> 00:08:40,080

launched from cape canaveral florida

209

00:08:45,110 --> 00:08:42,880

on board the spacecraft named faith 7

210

00:08:47,110 --> 00:08:45,120

was astronaut gordon cooper

211

00:08:49,110 --> 00:08:47,120

despite technical problems near the end

212

00:08:51,670 --> 00:08:49,120

of the flight cooper and faith 7

213

00:08:53,509 --> 00:08:51,680

completed 22 orbits of earth and

214

00:08:55,030 --> 00:08:53,519

splashed down safely in the pacific

215

00:08:57,750 --> 00:08:55,040

ocean

216

00:08:59,829 --> 00:08:57,760

and that's this week at nasa for more on

217

00:09:02,630 --> 00:08:59,839

these and other stories or to follow us