



1  
00:01:17,330 --> 00:01:15,469  
we copy Roger of I 50 is telling me that

2  
00:01:19,459 --> 00:01:17,340  
they are complete with this fo but they

3  
00:01:21,499 --> 00:01:19,469  
would appreciate if you did not power

4  
00:01:23,349 --> 00:01:21,509  
down and just leave this going until you

5  
00:01:25,819 --> 00:01:23,359  
come back in the afternoon except for

6  
00:01:28,099 --> 00:01:25,829  
turning off the laser in the back light

7  
00:01:30,499 --> 00:01:28,109  
because they're both run by battery your

8  
00:01:34,099 --> 00:01:30,509  
DCE activity for this afternoon at three

9  
00:01:36,649 --> 00:01:34,109  
hours 52 minutes has been canceled you

10  
00:01:39,230 --> 00:01:36,659  
need to go to your tpr however you will

11  
00:01:47,240 --> 00:01:39,240  
have some cm1 power up procedures to do

12  
00:01:48,919 --> 00:01:47,250  
later on at approximately five hours 11

13  
00:02:05,250 --> 00:01:48,929

does that mean I don't have anything to

14

00:02:11,740 --> 00:02:08,820

is that what touch you responded to that

15

00:02:16,200 --> 00:02:11,750

it is affirmative that you have about an

16

00:02:21,370 --> 00:02:19,210

okay talk about 15 min to that but then

17

00:02:22,990 --> 00:02:21,380

I'd like to come back here go ahead and

18

00:02:24,580 --> 00:02:23,000

start with some as a high of 50

19

00:02:29,640 --> 00:02:24,590

activities for this afternoon if that's

20

00:02:32,050 --> 00:02:29,650

okay that's okay with us just sort of

21

00:02:35,650 --> 00:02:32,060

this sort of practice with it and stuff

22

00:02:39,190 --> 00:02:35,660

like that it I'll just give you a call

23

00:02:54,610 --> 00:02:39,200

when i come back in here okay sounds

24

00:02:56,440 --> 00:02:54,620

great I me Houston Janice I'm Houston

25

00:03:05,380 --> 00:02:56,450

Janice just a heads up your socks

26

00:03:07,000 --> 00:03:05,390

contacts in about eight minutes yes

27

00:03:09,580 --> 00:03:07,010

Janice we were just conferring on the

28

00:03:11,770 --> 00:03:09,590

big picture of the DCE activities have

29

00:03:13,420 --> 00:03:11,780

been deleted for this shift this is due

30

00:03:15,400 --> 00:03:13,430

to the limited amount of fuel they have

31

00:03:17,020 --> 00:03:15,410

available and they their science team

32

00:03:19,090 --> 00:03:17,030

would like to rethink their test points

33

00:03:20,979 --> 00:03:19,100

to be performed and ensure that they get

34

00:03:23,380 --> 00:03:20,989

maximum science return through the end

35

00:03:25,420 --> 00:03:23,390

of the mission and so they have pulled

36

00:03:27,820 --> 00:03:25,430

out all their activities in a timeline

37

00:03:30,610 --> 00:03:27,830

today we are trying to reschedule some

38

00:03:32,140 --> 00:03:30,620

cm-1 on you after your meal which is

39

00:03:43,509 --> 00:03:32,150

different than what we told you in daily

40

00:03:46,150 --> 00:03:43,519

status good evening hour mark we're

41

00:03:48,550 --> 00:03:46,160

right in the handover between the red

42

00:03:49,960 --> 00:03:48,560

chef who's just waking up in the blue

43

00:03:52,120 --> 00:03:49,970

chef who's getting ready to wind down

44

00:03:54,970 --> 00:03:52,130

Janice just finished your exercise for

45

00:03:56,380 --> 00:03:54,980

the day and Rogers still back in the lab

46

00:03:59,320 --> 00:03:56,390

doing some experiments but hopefully

47

00:04:00,759 --> 00:03:59,330

you'll be up here shortly and I guess

48

00:04:02,740 --> 00:04:00,769

we're approaching the halfway point in

49

00:04:05,170 --> 00:04:02,750

the mission and it really feels to us on

50

00:04:07,840 --> 00:04:05,180

board like we're falling into a steady

51  
00:04:09,490 --> 00:04:07,850  
routine but the minute you say the wood

52  
00:04:11,350 --> 00:04:09,500  
routine you have to step back and

53  
00:04:13,120 --> 00:04:11,360  
glanced out the window and when you do

54  
00:04:15,880 --> 00:04:13,130  
that and see the beautiful oras whizzing

55  
00:04:17,000 --> 00:04:15,890  
by it reminds you that this is anything

56  
00:04:19,760 --> 00:04:17,010  
but routine

57  
00:04:22,010 --> 00:04:19,770  
reminds me of Willie are and while we're

58  
00:04:24,170 --> 00:04:22,020  
here to makes us appreciate all the

59  
00:04:26,630 --> 00:04:24,180  
great work that the folks at miss

60  
00:04:28,280 --> 00:04:26,640  
control and the Marshall have done and

61  
00:04:30,710 --> 00:04:28,290  
for this mission together and support

62  
00:04:33,080 --> 00:04:30,720  
this through it's in the mexis realized

63  
00:04:35,660 --> 00:04:33,090

that a special mission is anything but

64

00:04:37,430 --> 00:04:35,670

routine and all aspects from the

65

00:04:40,070 --> 00:04:37,440

groundbreaking science we're doing to

66

00:04:42,560 --> 00:04:40,080

just what it takes to keep people flying

67

00:04:45,110 --> 00:04:42,570

safely in space so today we're going to

68

00:04:47,540 --> 00:04:45,120

give you this kind of a rundown of a

69

00:04:49,910 --> 00:04:47,550

half way through the mission type day in

70

00:04:52,850 --> 00:04:49,920

space and it turns out it was Janice's

71

00:04:54,170 --> 00:04:52,860

half day off so she got to do all kinds

72

00:04:56,180 --> 00:04:54,180

of these days and we'll show you what

73

00:04:57,680 --> 00:04:56,190

astronaut to do on their days off or at

74

00:05:01,040 --> 00:04:57,690

least what Janice did on street chaos

75

00:05:03,470 --> 00:05:01,050

and then I'm doing a little experiment

76

00:05:05,510 --> 00:05:03,480

in the back called the LIF sure so I'll

77

00:05:07,760 --> 00:05:05,520

show you that it is me doing the LIF

78

00:05:09,950 --> 00:05:07,770

scherstuhl experiment and big picture on

79

00:05:12,200 --> 00:05:09,960

this is the materials processing

80

00:05:15,020 --> 00:05:12,210

experiment ended measuring the diffusion

81

00:05:17,000 --> 00:05:15,030

coefficient of various atoms through

82

00:05:18,710 --> 00:05:17,010

different materials in space what you

83

00:05:20,990 --> 00:05:18,720

see me they're doing is rotating this

84

00:05:23,000 --> 00:05:21,000

your cell and what that does basically

85

00:05:26,120 --> 00:05:23,010

they won this darn thing up and then

86

00:05:28,520 --> 00:05:26,130

Adams diffuse through the materials and

87

00:05:30,830 --> 00:05:28,530

then at the end of the run we actually

88

00:05:33,230 --> 00:05:30,840

crank it which breaks it into small

89

00:05:35,150 --> 00:05:33,240

pieces and then on the ground they can

90

00:05:37,070 --> 00:05:35,160

measure how far the atoms to she is is

91

00:05:40,760 --> 00:05:37,080

from that really determine the diffusion

92

00:05:43,310 --> 00:05:40,770

bob far the atoms were able to migrate

93

00:05:46,490 --> 00:05:43,320

in on earth because Adams ways different

94

00:05:49,040 --> 00:05:46,500

amounts you can't ever totally measure

95

00:05:51,320 --> 00:05:49,050

that property knowing that property will

96

00:05:53,110 --> 00:05:51,330

help us design better material process

97

00:05:57,440 --> 00:05:53,120

for everything from computers to

98

00:06:00,710 --> 00:05:57,450

materials in here's Roger and this is a

99

00:06:03,470 --> 00:06:00,720

yield an experiment we're doing of how

100

00:06:07,010 --> 00:06:03,480

the internal flow of include an amex of

101

00:06:09,020 --> 00:06:07,020

droplets and at above the mantel

102

00:06:12,260 --> 00:06:09,030

pedestal there you can see a small

103

00:06:13,270 --> 00:06:12,270

Gotham mission and water levitate we're

104

00:06:16,190 --> 00:06:13,280

doing materials with different

105

00:06:17,660 --> 00:06:16,200

viscosities or different consistencies

106

00:06:20,030 --> 00:06:17,670

because they have different problems

107

00:06:24,410 --> 00:06:20,040

limitations applications for this would

108

00:06:27,830 --> 00:06:24,420

be to the shapes of planets that are

109

00:06:30,380 --> 00:06:27,840

gaseous like Saturn and Jupiter and for

110

00:06:35,290 --> 00:06:30,390

the formation of stars

111

00:06:39,320 --> 00:06:35,300

discern and other kinds of Astrophysical

112

00:06:44,150 --> 00:06:39,330

bodies as well as any kind of bridge and

113

00:06:45,470 --> 00:06:44,160

garbage here on the ground this is

114

00:06:49,010 --> 00:06:45,480

something else I like to do on my day

115

00:06:50,360 --> 00:06:49,020

off I first got interested in flying in

116

00:06:51,920 --> 00:06:50,370

space from reading science fiction you

117

00:06:53,300 --> 00:06:51,930

can't leak where we go we call it time

118

00:06:54,770 --> 00:06:53,310

is name of that book that's the first

119

00:06:56,540 --> 00:06:54,780

science fiction book I ever read by

120

00:06:57,860 --> 00:06:56,550

Madeleine L'Engle when I was in sixth

121

00:06:59,960 --> 00:06:57,870

grade I got me it's been the space

122

00:07:01,700 --> 00:06:59,970

program I reading science fiction I like

123

00:07:03,740 --> 00:07:01,710

to bring science fiction up with me and

124

00:07:05,090 --> 00:07:03,750

read it by Earth's light which is summer

125

00:07:07,040 --> 00:07:05,100

I reflected off the earth you can

126

00:07:08,450 --> 00:07:07,050

detergent on this top and it is bright

127

00:07:10,940 --> 00:07:08,460

enough to read that I this is like

128

00:07:12,230 --> 00:07:10,950

meeting in a room at home is having that

129

00:07:14,990 --> 00:07:12,240

connection having read science fiction

130

00:07:16,430 --> 00:07:15,000

to get me started on this path close by

131

00:07:18,560 --> 00:07:16,440

reading science fiction space is really

132

00:07:20,450 --> 00:07:18,570

special well good morning with Jenna

133

00:07:22,700 --> 00:07:20,460

commander Susan still in commander Jim

134

00:07:25,220 --> 00:07:22,710

Howell is peggy O'Leary with channel 12

135

00:07:33,380 --> 00:07:25,230

in Augusta how are you this morning or

136

00:07:35,210 --> 00:07:33,390

evening in your cave up there friday we

137

00:07:37,310 --> 00:07:35,220

celebrated the birth of a nation but

138

00:07:39,140 --> 00:07:37,320

also this weekend we celebrated the

139

00:07:41,360 --> 00:07:39,150

rebirth of the excitement of space

140

00:07:43,010 --> 00:07:41,370

exploration Susan if you're so proud

141

00:07:44,780 --> 00:07:43,020

that someone from Augusta can be a part

142

00:07:55,540 --> 00:07:44,790

of that tell us a little bit about your

143

00:07:58,340 --> 00:07:55,550

mission here for 16 days studying the

144

00:08:02,510 --> 00:07:58,350

effects of microgravity on combustion

145

00:08:05,290 --> 00:08:02,520

and material science the purpose is to

146

00:08:08,690 --> 00:08:05,300

fall but the main purpose is to let

147

00:08:11,270 --> 00:08:08,700

somehow make life on Earth perhaps for

148

00:08:14,450 --> 00:08:11,280

efficient fuel burning less bullets in

149

00:08:17,900 --> 00:08:14,460

the air center medals for aircraft

150

00:08:20,120 --> 00:08:17,910

engines and that sort of thing Jesus is

151  
00:08:21,740 --> 00:08:20,130  
a very important mission when it came

152  
00:08:23,960 --> 00:08:21,750  
down early in April of course we were

153  
00:08:25,640 --> 00:08:23,970  
all disappointed but were you surprised

154  
00:08:32,120 --> 00:08:25,650  
at the quick turnaround for your crew

155  
00:08:34,490 --> 00:08:32,130  
the payload in Columbia an awesome job

156  
00:08:36,710 --> 00:08:34,500  
getting this or that are ready to fly

157  
00:08:39,380 --> 00:08:36,720  
again so quickly this is the quickest

158  
00:08:40,500 --> 00:08:39,390  
turnaround ever for space shuttle and

159  
00:08:43,409 --> 00:08:40,510  
the crew

160  
00:08:46,260 --> 00:08:43,419  
ready to go we were well trained for sts

161  
00:08:50,130 --> 00:08:46,270  
83 and so we just needed to maintain our

162  
00:08:51,570 --> 00:08:50,140  
proficiency Leland SPF 90 park to talk

163  
00:08:57,420 --> 00:08:51,580

with your family at all since you've

164

00:09:00,480 --> 00:08:57,430

been in Spain touch with our nation have

165

00:09:03,360 --> 00:09:00,490

you do today on the radio and I talked

166

00:09:05,580 --> 00:09:03,370

with my boyfriend on air-to-ground what

167

00:09:09,870 --> 00:09:05,590

time and I have to speak with my dad and

168

00:09:11,310 --> 00:09:09,880

a couple of days well you know Susan you

169

00:09:12,990 --> 00:09:11,320

don't have to wait a couple of days to

170

00:09:15,840 --> 00:09:13,000

speak to your father he's here with us

171

00:09:17,550 --> 00:09:15,850

now live in the studios dr. Joseph still

172

00:09:20,580 --> 00:09:17,560

do you have any questions for your

173

00:09:23,070 --> 00:09:20,590

daughter Susan I have any questions I

174

00:09:25,350 --> 00:09:23,080

just like to tell a hello from a mother

175

00:09:33,210 --> 00:09:25,360

and myself I'm glad to see that she's

176

00:09:37,680 --> 00:09:33,220

doing well what laughs and his name is

177

00:09:50,490 --> 00:09:37,690

Astro what have you done today what are

178

00:09:56,330 --> 00:09:50,500

they been like what we call the WCS we

179

00:10:00,870 --> 00:09:56,340

just kind of the bathroom it up swing

180

00:10:03,330 --> 00:10:00,880

dance on our radio system to get it

181

00:10:10,110 --> 00:10:03,340

working a little bit better and we'll go

182

00:10:13,100 --> 00:10:10,120

out on the computers project called wdi

183

00:10:15,090 --> 00:10:13,110

rot which is a wireless data acquisition

184

00:10:17,040 --> 00:10:15,100

system and it's something that we're

185

00:10:19,800 --> 00:10:17,050

going to be using while we assemble

186

00:10:21,930 --> 00:10:19,810

space station what has is there some

187

00:10:24,570 --> 00:10:21,940

temperature probes out at the payload oh

188

00:10:26,400 --> 00:10:24,580

and we listed somewhere we can monitor

189

00:10:29,070 --> 00:10:26,410

the temperatures out there this will be

190

00:10:31,530 --> 00:10:29,080

very important during Space Station

191

00:10:35,220 --> 00:10:31,540

because it's so cold up in space where

192

00:10:37,050 --> 00:10:35,230

the sun's not shining on you you ain't

193

00:10:43,260 --> 00:10:37,060

of Athens a woman's work is never done

194

00:10:46,200 --> 00:10:43,270

even in faith fascinator dress that

195

00:10:48,480 --> 00:10:46,210

woman's work part it's because I'm a

196

00:10:50,310 --> 00:10:48,490

pirate that I do all this job I just

197

00:10:53,519 --> 00:10:50,320

wanted to make sure that was clear not

198

00:10:59,579 --> 00:10:53,529

because I'm a woman the Pirates job is

199

00:11:01,470 --> 00:10:59,589

cleanliness that's a slap for I should I

200

00:11:03,329 --> 00:11:01,480

could never what this device does force

201  
00:11:05,369 --> 00:11:03,339  
is very valuable allows us to practice

202  
00:11:08,460 --> 00:11:05,379  
the landing task all throughout this

203  
00:11:10,259 --> 00:11:08,470  
extended duration mission so that 60

204  
00:11:12,210 --> 00:11:10,269  
days after launch and maybe 80 days

205  
00:11:14,309 --> 00:11:12,220  
after last opportunity to practice of

206  
00:11:16,769 --> 00:11:14,319  
the shuttle training aircraft we're not

207  
00:11:18,989 --> 00:11:16,779  
trying to land for the first time every

208  
00:11:20,879 --> 00:11:18,999  
day yes is a buyer but she and I make a

209  
00:11:22,379 --> 00:11:20,889  
run or two on there on the pilot

210  
00:11:25,290 --> 00:11:22,389  
simulator Christie to see from the

211  
00:11:26,999 --> 00:11:25,300  
screen here that it's for desktop kind

212  
00:11:29,579 --> 00:11:27,009  
of simulators acting pretty high

213  
00:11:31,499 --> 00:11:29,589

fidelity control response is certainly

214

00:11:33,299 --> 00:11:31,509

not exactly the same as a shuttle or as

215

00:11:36,179 --> 00:11:33,309

a shuttle training aircraft so you can't

216

00:11:37,710 --> 00:11:36,189

really hang your hat on its flying

217

00:11:39,749 --> 00:11:37,720

qualities but it does get your brain

218

00:11:41,129 --> 00:11:39,759

working again as to what you ought to be

219

00:11:44,220 --> 00:11:41,139

looking at and when you need to be

220

00:11:46,019 --> 00:11:44,230

looking at certain parameters we r you

221

00:11:48,090 --> 00:11:46,029

know lining up the balm are working on

222

00:11:50,309 --> 00:11:48,100

the airspeed working on the side picture

223

00:11:51,749 --> 00:11:50,319

just the mechanics of planning to show

224

00:11:54,210 --> 00:11:51,759

and I think this is a valuable tool

225

00:11:56,519 --> 00:11:54,220

you'll see a Susan's blabbing here just

226

00:11:58,290 --> 00:11:56,529

a door BRB a touchdown partners which is

227

00:12:02,100 --> 00:11:58,300

where we try to touch the shuttle down

228

00:12:03,960 --> 00:12:02,110

down days so I can supply runs together

229

00:12:06,090 --> 00:12:03,970

as a crew here's died in here I'm just

230

00:12:07,799 --> 00:12:06,100

going to show you is just the path from

231

00:12:09,269 --> 00:12:07,809

the fight back over to the lab here's

232

00:12:11,429 --> 00:12:09,279

the mid-deck he goes to the airlock

233

00:12:13,470 --> 00:12:11,439

hatch and there you'll see there's a

234

00:12:17,699 --> 00:12:13,480

high to be 180 pass Susan coming the

235

00:12:21,240 --> 00:12:17,709

other way 700 there has a lot of our

236

00:12:23,040 --> 00:12:21,250

laundry in it both clean and dirty and

237

00:12:25,049 --> 00:12:23,050

that's a good storage place for a number

238

00:12:27,480 --> 00:12:25,059

of different items two rebounds up into

239

00:12:29,129 --> 00:12:27,490

the lab you can see the the blueshift RT

240

00:12:34,199 --> 00:12:29,139

at work there Jenna from the left and

241

00:12:35,939 --> 00:12:34,209

Roger at the far end people told me that

242

00:12:38,429 --> 00:12:35,949

fresh food was really nice to happen

243

00:12:40,230 --> 00:12:38,439

that it ran out after a few days so I

244

00:12:41,639 --> 00:12:40,240

did that growing sprouts on the ground

245

00:12:43,049 --> 00:12:41,649

was pretty easy to do and I thought that

246

00:12:45,210 --> 00:12:43,059

the growing amount orbit might be

247

00:12:46,650 --> 00:12:45,220

possible people in the Food Lab really

248

00:12:49,499 --> 00:12:46,660

helped out alot we got some alfalfa

249

00:12:51,059 --> 00:12:49,509

seeds into a food bag and devised a

250

00:12:53,249 --> 00:12:51,069

system for adding water to it without

251  
00:12:55,769 --> 00:12:53,259  
letting the sprouts out and then all we

252  
00:12:57,509 --> 00:12:55,779  
needed was a way to get the water out

253  
00:12:58,980 --> 00:12:57,519  
without gravity so and that connecting

254  
00:13:00,780 --> 00:12:58,990  
bags together and creating a little bit

255  
00:13:02,759 --> 00:13:00,790  
of significant force we could squeeze

256  
00:13:04,860 --> 00:13:02,769  
the water out of the bags so the spots

257  
00:13:06,090 --> 00:13:04,870  
are growing along and a little bit of

258  
00:13:11,790 --> 00:13:06,100  
luck we'll be able a time soon

259  
00:13:14,699 --> 00:13:11,800  
oh I end up here with a couple of Bob

260  
00:13:16,439 --> 00:13:14,709  
chats this is the the border between the

261  
00:13:20,309 --> 00:13:16,449  
United States between Texas and Mexico

262  
00:13:22,710 --> 00:13:20,319  
at Brownsville area right below us a

263  
00:13:25,769 --> 00:13:22,720

brownsville texas area and the border

264

00:13:27,930 --> 00:13:25,779

with mexico and this is what everybody

265

00:13:30,420 --> 00:13:27,940

has commented several times is probably

266

00:13:31,949 --> 00:13:30,430

the most beautiful island sat that we

267

00:13:35,100 --> 00:13:31,959

get anywhere around our read these of

268

00:13:37,590 --> 00:13:35,110

the Bahamas Florida South to strip down

269

00:13:40,769 --> 00:13:37,600

to the screen and Florida's off to the

270

00:13:42,629 --> 00:13:40,779

right and just the beautifully blue

271

00:13:44,160 --> 00:13:42,639

colors and we get it was fine with the