



1  
00:00:27,530 --> 00:01:49,960

I

2  
00:01:56,060 --> 00:01:53,390

good morning discovery and Nancy were

3  
00:01:57,980 --> 00:01:56,070

pretty sure that you recognize that from

4  
00:01:59,690 --> 00:01:57,990

the second grade class at Ferguson

5  
00:02:06,109 --> 00:01:59,700

Elementary where your daughter Stephanie

6  
00:02:09,469 --> 00:02:06,119

is in South Shore Harbor come on a mask

7  
00:02:11,510 --> 00:02:09,479

and Magda went to the kids in the books

8  
00:02:14,510 --> 00:02:11,520

a lil Missy they did a wonderful job

9  
00:02:16,340 --> 00:02:14,520

with admits and it's a great way to wake

10  
00:02:17,930 --> 00:02:16,350

up on all that listening so beautiful

11  
00:02:59,040 --> 00:02:17,940

song like that from a bunch of beautiful

12  
00:03:04,860 --> 00:03:01,059

discovery Houston that's a good-looking

13  
00:03:10,360 --> 00:03:08,650

discoveries ready que se PA oh this is

14

00:03:13,809 --> 00:03:10,370

Houston please call discovery for a

15

00:03:17,559 --> 00:03:13,819

voice check discovery this is que se PA

16

00:03:19,839 --> 00:03:17,569

oh how do you hear me discovery read you

17

00:03:23,620 --> 00:03:19,849

loud clear does the flight crew have an

18

00:03:25,059 --> 00:03:23,630

opening statement that like to make we

19

00:03:27,670 --> 00:03:25,069

like to welcome you aboard discovery

20

00:03:30,729 --> 00:03:27,680

it's been a spectacular mission for us

21

00:03:33,490 --> 00:03:30,739

so far watching within 60 seconds of a

22

00:03:36,490 --> 00:03:33,500

scheduled time after a short delay was

23

00:03:39,070 --> 00:03:36,500

spectacular beginning of the mission our

24

00:03:42,520 --> 00:03:39,080

first day was the screw this day I've

25

00:03:44,530 --> 00:03:42,530

seen in any mission the deployment went

26  
00:03:47,070 --> 00:03:44,540  
off without a hitch our primary mission

27  
00:03:51,009 --> 00:03:47,080  
is complete with the tea dress on its

28  
00:03:53,410 --> 00:03:51,019  
proper orbit now we're working this week

29  
00:03:55,240 --> 00:03:53,420  
on the secondary experiments will be

30  
00:03:58,330 --> 00:03:55,250  
glad to talk to those during the

31  
00:04:01,390 --> 00:03:58,340  
conference and we're looking with

32  
00:04:02,860 --> 00:04:01,400  
optimistic pleasure to joining everyone

33  
00:04:05,590 --> 00:04:02,870  
back on the ground this coming Friday

34  
00:04:08,410 --> 00:04:05,600  
and we're just now approaching the coast

35  
00:04:12,370 --> 00:04:08,420  
of Baja 160 miles above the ocean and

36  
00:04:14,050 --> 00:04:12,380  
can go ahead with your questions or

37  
00:04:16,659 --> 00:04:14,060  
done of the associated press for Don

38  
00:04:18,400 --> 00:04:16,669

Tomas I'm wondering if you feel like

39

00:04:20,050 --> 00:04:18,410

you're on a talk show circuit up there

40

00:04:21,969 --> 00:04:20,060

considering some of the questions you've

41

00:04:23,680 --> 00:04:21,979

been asked and doesn't matter what kind

42

00:04:25,029 --> 00:04:23,690

of questions people ask as long as

43

00:04:30,520 --> 00:04:25,039

they're interested in why is it

44

00:04:33,190 --> 00:04:30,530

important to NASA yeah we're happy to

45

00:04:35,529 --> 00:04:33,200

answer any question that the press or

46

00:04:37,510 --> 00:04:35,539

public might have up here we were having

47

00:04:38,710 --> 00:04:37,520

a great time and we're up here to share

48

00:04:39,730 --> 00:04:38,720

this with the rest of the country and

49

00:04:44,170 --> 00:04:39,740

the rest of the world is spectacular

50

00:04:47,529 --> 00:04:44,180

experience of flying its paces Cyrene

51  
00:04:49,960 --> 00:04:47,539  
brown with UPI your colleagues on sts 71

52  
00:04:52,270 --> 00:04:49,970  
and mere 18 had some insightful and

53  
00:04:54,400 --> 00:04:52,280  
poignant remarks on a long-duration low

54  
00:04:55,840 --> 00:04:54,410  
Earth orbit spaceflight I'm wondering

55  
00:04:57,760 --> 00:04:55,850  
how you would feel about a three or four

56  
00:04:59,230 --> 00:04:57,770  
months Space Station research assignment

57  
00:05:06,100 --> 00:04:59,240  
and if any of you have your names in the

58  
00:05:08,440 --> 00:05:06,110  
hopper for the shuttle Mir missions at

59  
00:05:09,880 --> 00:05:08,450  
the scenario of rubber and I would

60  
00:05:11,950 --> 00:05:09,890  
certainly like to go for three or four

61  
00:05:14,350 --> 00:05:11,960  
months aboard the mirror

62  
00:05:17,860 --> 00:05:14,360  
or the International Space Station that

63  
00:05:19,390 --> 00:05:17,870

we're going to be building it's there's

64

00:05:21,339 --> 00:05:19,400

some challenges to doing that but I

65

00:05:23,770 --> 00:05:21,349

think the excitement and the benefits

66

00:05:31,490 --> 00:05:23,780

all of to all of the world would be well

67

00:05:37,350 --> 00:05:34,170

so Seth Borenstein to orlando sentinel

68

00:05:39,059 --> 00:05:37,360

anderson online asked our users to send

69

00:05:41,939 --> 00:05:39,069

in question for you in gorge below

70

00:05:43,409 --> 00:05:41,949

Satellite Beach Florida asked how do you

71

00:05:45,330 --> 00:05:43,419

feel about completing the mission space

72

00:05:54,480 --> 00:05:45,340

shuttle chick space shuttle Challenger

73

00:05:56,070 --> 00:05:54,490

started over nine years ago privileged

74

00:05:57,839 --> 00:05:56,080

to be assigned any space shuttle mission

75

00:05:59,700 --> 00:05:57,849

this one had particular meeting for all

76

00:06:01,260 --> 00:05:59,710

of us because it was a replacement

77

00:06:03,870 --> 00:06:01,270

satellite for the teachers that was lost

78

00:06:05,790 --> 00:06:03,880

on challenger and I think it just speaks

79

00:06:08,640 --> 00:06:05,800

very highly of the way that the agency

80

00:06:11,249 --> 00:06:08,650

has recovered from that I have to do is

81

00:06:14,670 --> 00:06:11,259

look at our first day just absolutely

82

00:06:17,460 --> 00:06:14,680

flawless countdown no problem at all

83

00:06:20,640 --> 00:06:17,470

right on time everything the first day

84

00:06:22,800 --> 00:06:20,650

look as well as I've ever seen anything

85

00:06:25,350 --> 00:06:22,810

on any mission work and we just said

86

00:06:30,270 --> 00:06:25,360

that very very pleased with how the

87

00:06:32,100 --> 00:06:30,280

fishing is gone this is Jim Bank

88

00:06:36,360 --> 00:06:32,110

eoforwic today I guess I'll ask this one

89

00:06:38,550 --> 00:06:36,370

of Tom norm coming back Ameer talked

90

00:06:41,060 --> 00:06:38,560

about psychological aspects cultural

91

00:06:43,589 --> 00:06:41,070

ISIL is isolation and that kind of stuff

92

00:06:45,959 --> 00:06:43,599

could you just talk generically when

93

00:06:48,360 --> 00:06:45,969

you're on a shuttle mission how you guys

94

00:06:52,170 --> 00:06:48,370

on the orbiter stay in touch with what's

95

00:06:54,089 --> 00:06:52,180

going on on space-related world down

96

00:06:55,649 --> 00:06:54,099

here on the ground and how you stay in

97

00:06:57,060 --> 00:06:55,659

touch with your families and could you

98

00:06:59,399 --> 00:06:57,070

give a specific example of how you

99

00:07:04,080 --> 00:06:59,409

exchanged greetings perhaps with your

100

00:07:06,839 --> 00:07:04,090

families we have a computer program that

101  
00:07:11,070 --> 00:07:06,849  
allows us to transmit messages between

102  
00:07:13,080 --> 00:07:11,080  
the orbiter and Houston and our family

103  
00:07:15,450 --> 00:07:13,090  
escorts that are helping the families on

104  
00:07:18,719 --> 00:07:15,460  
the ground will collect and distribute

105  
00:07:20,969 --> 00:07:18,729  
those messages so once a day we transmit

106  
00:07:23,309 --> 00:07:20,979  
personal messages from the orbiter to

107  
00:07:26,040 --> 00:07:23,319  
our families and when those messages are

108  
00:07:28,680 --> 00:07:26,050  
uplink to us they also include updates

109  
00:07:30,180 --> 00:07:28,690  
on major news events sporting events and

110  
00:07:32,779 --> 00:07:30,190  
anything else that may be of interest to

111  
00:07:36,719 --> 00:07:32,789  
the crew we also have what we call

112  
00:07:38,550 --> 00:07:36,729  
private family conferences which give us

113  
00:07:41,430 --> 00:07:38,560

an opportunity once during the mission

114

00:07:42,559 --> 00:07:41,440

to talk directly to our immediate family

115

00:07:45,529 --> 00:07:42,569

members through

116

00:07:47,659 --> 00:07:45,539

control and we also have socks on board

117

00:07:49,369 --> 00:07:47,669

this flight and that also gives us one

118

00:07:52,809 --> 00:07:49,379

opportunity during the mission to make a

119

00:07:54,949 --> 00:07:52,819

personal phone call to a family member

120

00:07:58,309 --> 00:07:54,959

peterhall Terry with the West Kentucky

121

00:08:01,189 --> 00:07:58,319

news for Mary Ellen being a rookie on

122

00:08:03,859 --> 00:08:01,199

board when you're here on earth you

123

00:08:05,600 --> 00:08:03,869

don't have to worry about things float

124

00:08:07,790 --> 00:08:05,610

around in front of you do you have to

125

00:08:09,019 --> 00:08:07,800

take any special precautions while

126

00:08:11,959 --> 00:08:09,029

you're breathing make sure you don't

127

00:08:17,239 --> 00:08:11,969

suck in and mms strolling around up

128

00:08:19,070 --> 00:08:17,249

there or maybe a fly maybe well

129

00:08:21,799 --> 00:08:19,080

sometimes I try to second end of any

130

00:08:24,320 --> 00:08:21,809

animals that are floating around but in

131

00:08:28,519 --> 00:08:24,330

general the air is pretty clean up here

132

00:08:30,649 --> 00:08:28,529

and you just live and go about your

133

00:08:32,089 --> 00:08:30,659

business normally there's always a

134

00:08:33,709 --> 00:08:32,099

little bit more of a risk of you getting

135

00:08:36,829 --> 00:08:33,719

something in your eye or getting

136

00:08:43,519 --> 00:08:36,839

something up your nose but we we can

137

00:08:44,930 --> 00:08:43,529

take care of that this is dave lure with

138

00:08:47,660 --> 00:08:44,940

the columbus dispatch in columbus ohio

139

00:08:50,449 --> 00:08:47,670

for commander hendrix today is the

140

00:08:53,240 --> 00:08:50,459

anniversary of the launch of Apollo 11

141

00:08:55,670 --> 00:08:53,250

and I'd like your views anybody else who

142

00:08:57,889 --> 00:08:55,680

wants to comment on whether you would

143

00:09:04,040 --> 00:08:57,899

put a priority on returning to the moon

144

00:09:06,470 --> 00:09:04,050

and why I think nASA has had that as a

145

00:09:09,319 --> 00:09:06,480

goal for at least a decade now is to

146

00:09:12,980 --> 00:09:09,329

return to the moon with the fiscal

147

00:09:14,509 --> 00:09:12,990

reality of the present economy we aren't

148

00:09:15,800 --> 00:09:14,519

going to be able to do that in the near

149

00:09:18,079 --> 00:09:15,810

future and that's why we're

150

00:09:19,910 --> 00:09:18,089

concentrating on endeavors like the

151

00:09:22,370 --> 00:09:19,920

International Space Station and

152

00:09:24,829 --> 00:09:22,380

cooperating with the Russians to make

153

00:09:26,900 --> 00:09:24,839

that an affordable project but long

154

00:09:30,829 --> 00:09:26,910

range definitely we will be going back

155

00:09:33,499 --> 00:09:30,839

to the moon and beyond she'd done at the

156

00:09:34,819 --> 00:09:33,509

AP again for Colonel Henrik's I'm

157

00:09:36,829 --> 00:09:34,829

wondering if you're starting to feel

158

00:09:39,019 --> 00:09:36,839

more like a space salesman than an

159

00:09:42,319 --> 00:09:39,029

astronaut because of all the budget cuts

160

00:09:43,819 --> 00:09:42,329

to the program and when do when does

161

00:09:45,800 --> 00:09:43,829

talking about all this sort of stuff to

162

00:09:51,379 --> 00:09:45,810

people like us start to be intrusive to

163

00:09:53,329 --> 00:09:51,389

your job in orbit well the budget cuts

164

00:09:54,800 --> 00:09:53,339

aren't affecting this mission we're

165

00:09:58,550 --> 00:09:54,810

completing

166

00:10:02,590 --> 00:09:58,560

cedrus system and we were scheduled

167

00:10:06,310 --> 00:10:02,600

years before the cuts began to

168

00:10:09,290 --> 00:10:06,320

materialize as far as this becoming a

169

00:10:11,930 --> 00:10:09,300

generic or everyday activity I think

170

00:10:14,600 --> 00:10:11,940

that still years away but the research

171

00:10:17,120 --> 00:10:14,610

that were conducting now does have

172

00:10:20,060 --> 00:10:17,130

immediate benefit to researchers on the

173

00:10:22,870 --> 00:10:20,070

ground and the experiments that relating

174

00:10:25,130 --> 00:10:22,880

directly now include the bioreactor

175

00:10:27,470 --> 00:10:25,140

experiment the protein crystal growth

176

00:10:31,010 --> 00:10:27,480

experiment and hercules which is a

177

00:10:32,690 --> 00:10:31,020

device that can geolocate images while

178

00:10:34,940 --> 00:10:32,700

we're opening the earth so I think there

179

00:10:37,730 --> 00:10:34,950

is returned that's being generated now

180

00:10:41,870 --> 00:10:37,740

but the majority of the return is yet to

181

00:10:44,329 --> 00:10:41,880

be seen this is irene brown with GPI i

182

00:10:46,300 --> 00:10:44,339

just be interested in Nancy's response

183

00:10:49,430 --> 00:10:46,310

to my earlier question about

184

00:10:51,860 --> 00:10:49,440

long-duration low-earth orbit missions

185

00:10:53,360 --> 00:10:51,870

and how you'd feel if you would take

186

00:10:54,710 --> 00:10:53,370

such a thing would that be too much of a

187

00:11:00,079 --> 00:10:54,720

hardship with separation from your

188

00:11:02,060 --> 00:11:00,089

daughter and your family I taken a

189

00:11:04,160 --> 00:11:02,070

father like that the heartbeat I think a

190

00:11:05,960 --> 00:11:04,170

of us were the were the program is well

191

00:11:07,820 --> 00:11:05,970

looking forward to the years that we're

192

00:11:10,310 --> 00:11:07,830

going to be assembling and then later on

193

00:11:12,320 --> 00:11:10,320

flying on the space station particularly

194

00:11:16,190 --> 00:11:12,330

because it's now such an international

195

00:11:18,260 --> 00:11:16,200

effort as far as any of our families I

196

00:11:20,060 --> 00:11:18,270

think I speaks almost everybody on the

197

00:11:22,700 --> 00:11:20,070

crew that all our families are very

198

00:11:24,770 --> 00:11:22,710

supportive of what we do understand that

199

00:11:27,910 --> 00:11:24,780

we're here to do the job that we do and

200

00:11:30,470 --> 00:11:27,920

accept the separation as a part of that

201  
00:11:33,470 --> 00:11:30,480  
this is seth borestein from the Orlando

202  
00:11:35,180 --> 00:11:33,480  
Sentinel for Colonel Hendricks I believe

203  
00:11:37,490 --> 00:11:35,190  
you're doing these vision tests on

204  
00:11:38,990 --> 00:11:37,500  
people who are in their early 40s and I

205  
00:11:41,300 --> 00:11:39,000  
guess you qualify as the oldest crew

206  
00:11:43,190 --> 00:11:41,310  
member have you noticed any vision

207  
00:11:47,199 --> 00:11:43,200  
deterioration and are those vision tests

208  
00:11:49,699 --> 00:11:47,209  
pretty easy or are they uncomfortable

209  
00:11:51,530 --> 00:11:49,709  
well the vision function test is a

210  
00:11:53,360 --> 00:11:51,540  
follow-on this is actually number four

211  
00:11:55,430 --> 00:11:53,370  
in a series and I had the pleasure of

212  
00:11:57,320 --> 00:11:55,440  
flying it on one of my previous flights

213  
00:12:00,530 --> 00:11:57,330

on a different version and yes I have

214

00:12:04,610 --> 00:12:00,540

noticed some change in my vision on all

215

00:12:07,760 --> 00:12:04,620

that one of the tests that forces us to

216

00:12:08,329 --> 00:12:07,770

react quickly from a far target to a

217

00:12:10,699 --> 00:12:08,339

near-term

218

00:12:13,150 --> 00:12:10,709

it is changing my response time has

219

00:12:16,369 --> 00:12:13,160

changed and I think that's due to the

220

00:12:18,290 --> 00:12:16,379

fluid shifting and changing the shape in

221

00:12:20,210 --> 00:12:18,300

the eyeball a little bit of course we

222

00:12:22,129 --> 00:12:20,220

are doing some sleep shifting so we're

223

00:12:24,679 --> 00:12:22,139

not completely arrest at the moment so

224

00:12:26,720 --> 00:12:24,689

we're not sure exactly which factors

225

00:12:31,189 --> 00:12:26,730

will affect division in this test will

226

00:12:34,579 --> 00:12:31,199

help determine that this is Jim Bankia

227

00:12:36,319 --> 00:12:34,589

Florida today again a question maybe for

228

00:12:39,110 --> 00:12:36,329

Kevin Kriegel since we haven't heard

229

00:12:40,910 --> 00:12:39,120

them yet I think there's still a feeling

230

00:12:43,160 --> 00:12:40,920

here among the general public that once

231

00:12:45,139 --> 00:12:43,170

you guys deployed tea dress the mission

232

00:12:47,360 --> 00:12:45,149

was essentially over of course you're up

233

00:12:49,850 --> 00:12:47,370

there another week why are you still in

234

00:12:51,170 --> 00:12:49,860

space and which one of those secondaries

235

00:12:53,900 --> 00:12:51,180

that you're doing do you think offers

236

00:12:58,489 --> 00:12:53,910

the most practical and immediate benefit

237

00:13:00,199 --> 00:12:58,499

for the average guy on the street well

238

00:13:01,970 --> 00:13:00,209

the reason that we're still up there

239

00:13:04,549 --> 00:13:01,980

space is the initial cost the big

240

00:13:06,439 --> 00:13:04,559

upfront cost is the launch and once you

241

00:13:09,319 --> 00:13:06,449

get that out of the way you might as

242

00:13:10,910 --> 00:13:09,329

well stay up for a while and use a space

243

00:13:13,129 --> 00:13:10,920

and the weight that we have to do some

244

00:13:14,780 --> 00:13:13,139

of these experiments especially some of

245

00:13:16,970 --> 00:13:14,790

the experiments that couldn't justify

246

00:13:19,040 --> 00:13:16,980

the cost of a shuttle mission as Tom

247

00:13:21,319 --> 00:13:19,050

said we've got the crystal growth

248

00:13:23,900 --> 00:13:21,329

experiment which which was flown several

249

00:13:25,879 --> 00:13:23,910

times and and we are seeing some

250

00:13:28,460 --> 00:13:25,889

benefits with any if you're on type

251  
00:13:30,889 --> 00:13:28,470  
drugs which is going to help the common

252  
00:13:33,530 --> 00:13:30,899  
person on the streets this a bioreactor

253  
00:13:35,269 --> 00:13:33,540  
is has great potential for growing

254  
00:13:37,879 --> 00:13:35,279  
different tissues and maybe organs in

255  
00:13:39,710 --> 00:13:37,889  
the future they're doing the NIH

256  
00:13:42,799 --> 00:13:39,720  
experiment to look at several different

257  
00:13:44,749 --> 00:13:42,809  
things on the exoskeletal system and the

258  
00:13:47,239 --> 00:13:44,759  
nervous system so we're doing a lawn out

259  
00:13:50,569 --> 00:13:47,249  
here and I think it's well worth the

260  
00:13:52,579 --> 00:13:50,579  
time spent up Pete call Terry with the

261  
00:13:55,460 --> 00:13:52,589  
West Kentucky news this for anyone who

262  
00:13:57,379 --> 00:13:55,470  
had a good window seat during the ascent

263  
00:14:00,410 --> 00:13:57,389

there was quite a spectacular show

264

00:14:03,230 --> 00:14:00,420

during the max Q when there was a lot of

265

00:14:04,790 --> 00:14:03,240

condensation coming off the shuttle it

266

00:14:12,730 --> 00:14:04,800

look real spectacular from here how to

267

00:14:17,870 --> 00:14:15,320

we couldn't see anything out of the

268

00:14:19,370 --> 00:14:17,880

front window but during a cent I had my

269

00:14:20,930 --> 00:14:19,380

little hand mirror out and I was able to

270

00:14:23,300 --> 00:14:20,940

look out of the overhead windows and I

271

00:14:25,670 --> 00:14:23,310

could see some of the plumes coming off

272

00:14:30,410 --> 00:14:25,680

their condensation plumes and it was

273

00:14:32,210 --> 00:14:30,420

pretty spectacular from the inside this

274

00:14:35,510 --> 00:14:32,220

state of lawson columbus dispatch for

275

00:14:38,480 --> 00:14:35,520

dr. Webber um as a skydiver are you

276

00:14:40,610 --> 00:14:38,490

looking for any chance to put on the

277

00:14:43,190 --> 00:14:40,620

suit and get outside and is that

278

00:14:44,780 --> 00:14:43,200

possible if the mission remains

279

00:14:50,960 --> 00:14:44,790

trouble-free do you have any influence

280

00:14:53,810 --> 00:14:50,970

on doing that kind of activity of course

281

00:14:56,060 --> 00:14:53,820

doc Pomus and myself would love to get

282

00:14:58,100 --> 00:14:56,070

outside and see what it's like out there

283

00:15:00,170 --> 00:14:58,110

but we'll only do that make it in the

284

00:15:02,900 --> 00:15:00,180

case of an equipment malfunction and

285

00:15:07,090 --> 00:15:02,910

none of us on board are hoping that that

286

00:15:11,050 --> 00:15:07,100

happened so maybe the next slide

287

00:15:13,730 --> 00:15:11,060

discovery stand by now for Louis PA oh

288

00:15:18,440 --> 00:15:13,740

good morning discovery this is luis PA

289

00:15:24,319 --> 00:15:18,450

oh how do you hear me come on Cleveland

290

00:15:26,210 --> 00:15:24,329

Ron Claire good morning this is Harry

291

00:15:28,370 --> 00:15:26,220

boomer from Cleveland television news

292

00:15:32,900 --> 00:15:28,380

channels 19 and 43 how are you this

293

00:15:34,550 --> 00:15:32,910

morning we're having a great day here

294

00:15:37,340 --> 00:15:34,560

and orbit our things and Cleveland a

295

00:15:41,120 --> 00:15:37,350

little hot but it's kind of nice how do

296

00:15:48,260 --> 00:15:41,130

you guys pull off getting an all Ohio

297

00:15:50,600 --> 00:15:48,270

crew up there well it's not Italian Ohio

298

00:15:53,810 --> 00:15:50,610

crew the governor helped make it in Ohio

299

00:15:57,110 --> 00:15:53,820

crew by christening Kevin kriegel as an

300

00:15:59,569 --> 00:15:57,120

honorary Buckeye it's quite by a

301

00:16:01,670 --> 00:15:59,579

coincidence the one thing it does

302

00:16:03,470 --> 00:16:01,680

influence it is the fact that Ohio has

303

00:16:05,660 --> 00:16:03,480

produced more astronauts than any other

304

00:16:08,360 --> 00:16:05,670

state and it was just by coincidence

305

00:16:11,460 --> 00:16:08,370

that four out of five of us claim Ohio

306

00:16:15,720 --> 00:16:13,620

yo Froelich from the Cleveland Plain

307

00:16:18,240 --> 00:16:15,730

Dealer for Mary Ellen Weber and Kevin

308

00:16:22,440 --> 00:16:18,250

kriegel but before you fly you here a

309

00:16:24,690 --> 00:16:22,450

lot before you fly you hear a lot from

310

00:16:27,120 --> 00:16:24,700

other astronauts about the experience of

311

00:16:28,650 --> 00:16:27,130

law on tune of being in space what are

312

00:16:29,850 --> 00:16:28,660

your sort of initial impressions on that

313

00:16:31,680 --> 00:16:29,860

what are you going to be telling other

314

00:16:36,930 --> 00:16:31,690

astronauts other future astronauts when

315

00:16:39,660 --> 00:16:36,940

you get back well now I have to go

316

00:16:41,610 --> 00:16:39,670

having gone through it I understand why

317

00:16:44,340 --> 00:16:41,620

everybody has said that is just

318

00:16:46,710 --> 00:16:44,350

spectacular and indescribable and it

319

00:16:49,140 --> 00:16:46,720

really is it's it's just an incredible

320

00:16:51,780 --> 00:16:49,150

feeling being on top of this rock and

321

00:16:55,520 --> 00:16:51,790

feeling doing the sheer power and force

322

00:16:58,560 --> 00:16:55,530

of it as far as the weightlessness it's

323

00:17:02,160 --> 00:16:58,570

again until you actually experience it

324

00:17:03,660 --> 00:17:02,170

words can't quite describe it so I have

325

00:17:05,220 --> 00:17:03,670

a few more days to work out how I'll

326

00:17:11,010 --> 00:17:05,230

explain that down to the folks to the

327

00:17:13,710 --> 00:17:11,020

ground this is puerile Wilkinson with WJ

328

00:17:16,980 --> 00:17:13,720

WTVB here in Cleveland I have a question

329

00:17:19,130 --> 00:17:16,990

for you i can remember back when men was

330

00:17:21,900 --> 00:17:19,140

trying to get to the moon when

331

00:17:24,630 --> 00:17:21,910

astronauts were trying to reach out and

332

00:17:26,640 --> 00:17:24,640

and just take the universe and bring it

333

00:17:29,240 --> 00:17:26,650

closer to earth are you something that

334

00:17:31,920 --> 00:17:29,250

same sort of excitement or has the

335

00:17:34,620 --> 00:17:31,930

excitement about dust they shuttles and

336

00:17:41,790 --> 00:17:34,630

mission to other planets died down a bit

337

00:17:43,620 --> 00:17:41,800

i think i speak for everyone we wouldn't

338

00:17:45,810 --> 00:17:43,630

be in this job if the excitement had

339

00:17:48,420 --> 00:17:45,820

died down we still think that we're on

340

00:17:50,280 --> 00:17:48,430

the frontier and part of building the

341

00:17:52,620 --> 00:17:50,290

future for us and going out to space

342

00:17:55,740 --> 00:17:52,630

with the space station back to the moon

343

00:17:57,930 --> 00:17:55,750

back to Mars it's it's a long haul and

344

00:18:02,850 --> 00:17:57,940

we're still real excited about being

345

00:18:05,490 --> 00:18:02,860

part of that this is steve green from

346

00:18:08,640 --> 00:18:05,500

3wd radio in Cleveland I got a question

347

00:18:10,350 --> 00:18:08,650

about music every morning that there's a

348

00:18:12,270 --> 00:18:10,360

mission with the spate any of the space

349

00:18:14,240 --> 00:18:12,280

shuttle so you guys wake up to music in

350

00:18:18,780 --> 00:18:14,250

the morning and being that you guys have

351

00:18:21,510 --> 00:18:18,790

mostly Ohio crew you've got your new

352

00:18:22,350 --> 00:18:21,520

york crew member as well how you know it

353

00:18:24,570 --> 00:18:22,360

seems like you've got the perfect

354

00:18:25,139 --> 00:18:24,580

promotional team for the Rock and Roll

355

00:18:26,669 --> 00:18:25,149

Hall

356

00:18:32,279 --> 00:18:26,679

bring over us what you got to say about

357

00:18:34,320 --> 00:18:32,289

the rock hall in Cleveland well as a

358

00:18:36,869 --> 00:18:34,330

matter of fact we are flying an item in

359

00:18:38,659 --> 00:18:36,879

our special flight data file for the

360

00:18:41,070 --> 00:18:38,669

Rock and Roll Hall of flame same and

361

00:18:44,579 --> 00:18:41,080

after the flight we plan on visiting

362

00:18:53,339 --> 00:18:44,589

Cleveland to help commemorate the grand

363

00:18:55,589 --> 00:18:53,349

opening and return that item hi this is

364

00:18:57,539 --> 00:18:55,599

jackal mclean from channel 5 right

365

00:19:05,579 --> 00:18:57,549

question is really basic what's it like

366

00:19:07,229 --> 00:19:05,589

to be up to space well it's a very

367

00:19:09,989 --> 00:19:07,239

pleasant experience to be here in

368

00:19:13,079 --> 00:19:09,999

microgravity it's physically effortless

369

00:19:14,849 --> 00:19:13,089

as you can see we're floating free here

370

00:19:16,379 --> 00:19:14,859

the only thing we're doing to making a

371

00:19:19,169 --> 00:19:16,389

position is flying our feet under

372

00:19:22,109 --> 00:19:19,179

something the experience of looking out

373

00:19:24,149 --> 00:19:22,119

the window is absolutely spectacular you

374

00:19:26,549 --> 00:19:24,159

cannot get enough of it even on a dark

375

00:19:28,799 --> 00:19:26,559

path with the Moodle at night that we

376

00:19:31,349 --> 00:19:28,809

are experiencing now we can see cloud

377

00:19:34,200 --> 00:19:31,359

tops you look down and you see how

378

00:19:37,709 --> 00:19:34,210

fragile our atmosphere is you realize

379

00:19:40,049 --> 00:19:37,719

that even you at the Lewis Research

380

00:19:41,459 --> 00:19:40,059

Center are traveling on a spaceship and

381

00:19:45,299 --> 00:19:41,469

it's the one way all shared called the

382

00:19:49,169 --> 00:19:45,309

planet Earth Harry boomer from channels

383

00:19:51,389 --> 00:19:49,179

19 and 43 again see you guys are having

384

00:19:53,430 --> 00:19:51,399

to try and scary yourselves there how

385

00:19:55,379 --> 00:19:53,440

difficult is it for you maintain the

386

00:20:01,019 --> 00:19:55,389

posture you have right now instead of

387

00:20:02,579 --> 00:20:01,029

floating around the cabin there it's

388

00:20:03,779 --> 00:20:02,589

pretty difficult we learned that

389

00:20:05,909 --> 00:20:03,789

yesterday during one of our events

390

00:20:08,190 --> 00:20:05,919

that's why the three of us in the back I

391

00:20:10,529 --> 00:20:08,200

thought against the wall secured by the

392

00:20:13,649 --> 00:20:10,539

sleeping bags that we use and Tom

393

00:20:16,680 --> 00:20:13,659

Mariona and foot restraints so the first

394

00:20:18,959 --> 00:20:16,690

couple days to get your rates down it's

395

00:20:21,060 --> 00:20:18,969

very easy to as somewhat get out of

396

00:20:25,619 --> 00:20:21,070

control particularly at the mid deck of

397

00:20:29,669 --> 00:20:25,629

the wide open area Carol Wilkinson was

398

00:20:31,859 --> 00:20:29,679

wjw tv8 again a question for the ladies

399

00:20:36,359 --> 00:20:31,869

on board do you think emissions like

400

00:20:37,520 --> 00:20:36,369

this are the pathway to us seeing more

401  
00:20:39,500 --> 00:20:37,530  
women in space

402  
00:20:42,980 --> 00:20:39,510  
more women as part of the space program

403  
00:20:48,140 --> 00:20:42,990  
and more women traveling in space in the

404  
00:20:53,330 --> 00:20:48,150  
future yes I think more and more women

405  
00:21:01,280 --> 00:20:53,340  
will be traveling in space to health

406  
00:21:02,900 --> 00:21:01,290  
careers in the background open as more

407  
00:21:04,720 --> 00:21:02,910  
and more women go into those kinds of

408  
00:21:07,280 --> 00:21:04,730  
fields and get the necessary education

409  
00:21:10,130 --> 00:21:07,290  
they will more and more will be selected

410  
00:21:21,230 --> 00:21:10,140  
as astronauts so I think the future is

411  
00:21:26,420 --> 00:21:23,720  
this is a jackal McLean against chap I

412  
00:21:29,330 --> 00:21:26,430  
you guys are in your fourth day right

413  
00:21:31,460 --> 00:21:29,340

now how would you rate it so far is

414

00:21:37,990 --> 00:21:31,470

eight days too long to be up there or do

415

00:21:45,830 --> 00:21:41,510

was on a 15-day flight a year ago up in

416

00:21:48,500 --> 00:21:45,840

orbit on sts 65 and they keep us so busy

417

00:21:49,850 --> 00:21:48,510

on these missions at 15 days was a

418

00:21:51,880 --> 00:21:49,860

pretty good workout we were all

419

00:21:54,290 --> 00:21:51,890

exhausted when we landed on that one and

420

00:21:56,000 --> 00:21:54,300

talking to other crew members and I

421

00:21:57,710 --> 00:21:56,010

thought with some Russians and everybody

422

00:21:59,180 --> 00:21:57,720

seems to agree about a seven or eight de

423

00:22:02,870 --> 00:21:59,190

mission such as we have here is just

424

00:22:04,220 --> 00:22:02,880

about perfect eat green from three w/e

425

00:22:06,500 --> 00:22:04,230

again you guys have had some troubles

426  
00:22:07,670 --> 00:22:06,510  
with woodpeckers on your way up are you

427  
00:22:09,410 --> 00:22:07,680  
looking forward to them when you get

428  
00:22:15,710 --> 00:22:09,420  
back and maybe will you bring a

429  
00:22:17,600 --> 00:22:15,720  
woodpecker Ricky in the future so as a

430  
00:22:19,250 --> 00:22:17,610  
matter of fact we do have a mascot on

431  
00:22:23,030 --> 00:22:19,260  
board and there's also one in Mission

432  
00:22:25,760 --> 00:22:23,040  
Control we realize that the Kennedy

433  
00:22:28,880 --> 00:22:25,770  
Space Center shares that territory with

434  
00:22:31,550 --> 00:22:28,890  
a bird sanctuary and the birds took

435  
00:22:33,830 --> 00:22:31,560  
their toll on this flight but again the

436  
00:22:35,690 --> 00:22:33,840  
troops there at the Kennedy Space Center

437  
00:22:38,390 --> 00:22:35,700  
did the correct thing and patch those up

438  
00:22:40,190 --> 00:22:38,400

and got us off safely as far as they're

439

00:22:41,600 --> 00:22:40,200

looking forward to our return to Earth

440

00:22:43,670 --> 00:22:41,610

we're looking forward to going back to

441

00:22:46,040 --> 00:22:43,680

the Kennedy Space Center and thanking

442

00:22:49,220 --> 00:22:46,050

those thousands of people that have made

443

00:22:50,990 --> 00:22:49,230

this vehicle Wallace we have not had one

444

00:22:54,320 --> 00:22:51,000

anomaly on this flight its operating

445

00:22:55,940 --> 00:22:54,330

perfectly and whether they're having fun

446

00:23:03,620 --> 00:22:55,950

with the birds or not they're doing a

447

00:24:34,419 --> 00:24:00,310

you

448

00:24:34,429 --> 00:24:39,330

this is Mission Control Houston this

449

00:24:51,190 --> 00:24:46,840

discovery go ahead Don Tom I'm at step 5

450

00:24:55,149 --> 00:24:51,200

on page 17 I just put the g3 plus

451

00:24:58,149 --> 00:24:55,159

cartridge into the TCPA and I got a

452

00:25:04,690 --> 00:24:58,159

message it says to replace with another

453

00:25:06,879 --> 00:25:04,700

cartridge it says analyzer interrupted

454

00:25:13,899 --> 00:25:06,889

use another cartridge code number eight

455

00:25:15,399 --> 00:25:13,909

the copy let us check sis Mission

456

00:25:17,619 --> 00:25:15,409

Control Houston this television shows

457

00:25:20,049 --> 00:25:17,629

the bioreactor development system of

458

00:25:22,869 --> 00:25:20,059

which shed on Thomas onboard discovery

459

00:25:25,480 --> 00:25:22,879

was just talking with Mission Control

460

00:25:27,129 --> 00:25:25,490

about that's one of the secondary

461

00:25:29,739 --> 00:25:27,139

experiments are currently on the lower

462

00:25:31,899 --> 00:25:29,749

deck of the spacecraft it does studies

463

00:25:33,749 --> 00:25:31,909

the growth of cell cultures in

464

00:25:37,440 --> 00:25:33,759

weightlessness I using a cylindrical

465

00:25:40,930 --> 00:25:37,450

vessel for their growth cell cultures I

466

00:25:42,940 --> 00:25:40,940

believe to be able to be grown night in

467

00:25:46,299 --> 00:25:42,950

a much more precise and the identical

468

00:25:48,430 --> 00:25:46,309

fashion in weightlessness said then can

469

00:25:50,289 --> 00:25:48,440

be performed in our gravity due to the

470

00:25:53,649 --> 00:25:50,299

fact that pain weightlessness they can

471

00:25:55,359 --> 00:25:53,659

be flown again in this grown in this

472

00:25:56,980 --> 00:25:55,369

cylindrical vessel with no pressure

473

00:25:59,859 --> 00:25:56,990

points I since they're floating in the

474

00:26:03,009 --> 00:25:59,869

middle and the rotating cylinder serves

475

00:26:07,799 --> 00:26:03,019

to provide nutrients constantly

476

00:26:10,659 --> 00:26:07,809

surrounding those samples currently

477

00:26:12,369 --> 00:26:10,669

Thomas is working to take a standard

478

00:26:15,460 --> 00:26:12,379

daily sample of the medium in the

479

00:26:25,660 --> 00:26:15,470

bioreactor development tet system that's

480

00:26:25,670 --> 00:27:28,899

you

481

00:27:32,589 --> 00:27:30,820

this is Mission Control Houston this

482

00:27:37,359 --> 00:27:32,599

television view from discovery shows

483

00:27:40,119 --> 00:27:37,369

mission specialist Nancy Korea taking a

484

00:27:43,089 --> 00:27:40,129

microbial sample of water supply on

485

00:27:45,430 --> 00:27:43,099

board the spacecraft this experiment is

486

00:27:48,489 --> 00:27:45,440

being done as a method of evaluating us

487

00:27:50,589 --> 00:27:48,499

and surgeons really interested in this

488

00:28:12,110 --> 00:27:50,599

video and appreciates the time spent

489

00:28:18,560 --> 00:28:14,660

I use discovery now you should be seeing

490

00:28:25,100 --> 00:28:18,570

live downlink of BDS and we have that

491

00:28:27,940 --> 00:28:25,110

discovery looks fine this view shows the

492

00:28:31,940 --> 00:28:27,950

medium in the bioreactor development

493

00:28:35,060 --> 00:28:31,950

system the rotating cylinder that's uh

494

00:28:41,420 --> 00:28:35,070

being studied as a cell culture growth

495

00:28:43,550 --> 00:28:41,430

the device on board shuttle again this

496

00:28:45,620 --> 00:28:43,560

device allows a cell cultures to grow

497

00:28:48,860 --> 00:28:45,630

with no pressure points at in the

498

00:28:57,070 --> 00:28:48,870

weightlessness of orbit which cannot be

499

00:28:57,080 --> 00:29:03,850

discovery Houston teachers even now