



1
00:00:05,430 --> 00:00:02,070
station this is houston are you ready

2
00:00:05,440 --> 00:00:09,030
i am ready for the event

3
00:01:21,670 --> 00:00:11,350
w radio this is mission control houston

4
00:01:21,680 --> 00:01:29,749
at the station

5
00:01:33,830 --> 00:01:31,429
station this is houston acr just stand

6
00:01:38,310 --> 00:01:33,840
by one please

7
00:01:42,630 --> 00:01:39,670
yeah i have you loud and clear welcome

8
00:01:43,910 --> 00:01:42,640
aboard the space station

9
00:01:45,590 --> 00:01:43,920
what a pleasure captain i don't know

10
00:01:47,350 --> 00:01:45,600
what to say good morning good evening

11
00:01:51,270 --> 00:01:47,360
where are you what is night this day

12
00:01:55,910 --> 00:01:52,789
well it's about 6 30 in the evening

13
00:01:58,389 --> 00:01:55,920

we're on uh greenwich time and uh yeah i

14

00:01:59,590 --> 00:01:58,399

think we're in uh yeah we're in darkness

15

00:02:01,510 --> 00:01:59,600

and

16

00:02:03,910 --> 00:02:01,520

looks like somewhere over kind of

17

00:02:07,190 --> 00:02:03,920

approaching australia in the uh south

18

00:02:12,390 --> 00:02:09,910

commander a few days ago we saw a

19

00:02:13,430 --> 00:02:12,400

beautiful moon from the earth beautiful

20

00:02:16,229 --> 00:02:13,440

red moon

21

00:02:18,229 --> 00:02:16,239

you were closer 400 kilometers closer

22

00:02:23,830 --> 00:02:18,239

did you watch and what was the

23

00:02:29,430 --> 00:02:26,229

well on that uh that particular day of

24

00:02:32,630 --> 00:02:29,440

the lunar eclipse on unfortunately where

25

00:02:35,350 --> 00:02:32,640

was occurring with regards to our

26
00:02:37,030 --> 00:02:35,360
basically our sky and where our windows

27
00:02:38,790 --> 00:02:37,040
are located we really couldn't see it

28
00:02:40,150 --> 00:02:38,800
from the space station plus it was in

29
00:02:42,790 --> 00:02:40,160
the middle of the night

30
00:02:45,990 --> 00:02:42,800
uh so those two reasons why we didn't

31
00:02:48,229 --> 00:02:46,000
see it but in general you know the

32
00:02:50,710 --> 00:02:48,239
the moon and uh and the earth and the

33
00:02:51,750 --> 00:02:50,720
stars are very very beautiful to see

34
00:02:52,470 --> 00:02:51,760
from here

35
00:02:54,309 --> 00:02:52,480
and

36
00:02:57,830 --> 00:02:54,319
you know it's something we enjoy

37
00:03:01,430 --> 00:02:59,750
commander we are in south america in

38
00:03:03,589 --> 00:03:01,440

bogota colombia

39
00:03:05,430 --> 00:03:03,599
sometimes you look to the window and you

40
00:03:09,910 --> 00:03:05,440
try to find your house in the united

41
00:03:14,949 --> 00:03:13,270
well yeah but that's only because we

42
00:03:17,589 --> 00:03:14,959
have this giant

43
00:03:19,990 --> 00:03:17,599
lens camera and

44
00:03:23,190 --> 00:03:20,000
it's got like with the uh doubler on it

45
00:03:24,710 --> 00:03:23,200
like a 1200 millimeter lens

46
00:03:26,390 --> 00:03:24,720
otherwise we really couldn't see

47
00:03:28,710 --> 00:03:26,400
anything with the with the naked eye

48
00:03:31,190 --> 00:03:28,720
that is uh human made with the exception

49
00:03:33,270 --> 00:03:31,200
of you can kind of see you know airports

50
00:03:34,869 --> 00:03:33,280
you can see cities and tell their cities

51
00:03:37,350 --> 00:03:34,879
but it's not like you'd be able to see a

52
00:03:42,550 --> 00:03:37,360
particular building without the aid of a

53
00:03:46,949 --> 00:03:44,949
commander how is your day at what time

54
00:03:51,350 --> 00:03:46,959
do you wake up and how is your

55
00:03:55,190 --> 00:03:54,309
so we get up at uh you know between 6

56
00:03:58,070 --> 00:03:55,200
and

57
00:03:59,750 --> 00:03:58,080
6 45 in the morning we have a meeting

58
00:04:01,990 --> 00:03:59,760
with the ground called the daily

59
00:04:04,470 --> 00:04:02,000
planning conference generally at a about

60
00:04:07,589 --> 00:04:04,480
7 30 in the morning and again that's on

61
00:04:09,350 --> 00:04:07,599
greenwich mean time because it's very

62
00:04:11,350 --> 00:04:09,360
i wouldn't say convenient but it's a

63
00:04:13,110 --> 00:04:11,360

time that works for all the different

64

00:04:14,550 --> 00:04:13,120

control centers around the world that

65

00:04:16,710 --> 00:04:14,560

have to work together

66

00:04:18,469 --> 00:04:16,720

and uh you know then our day progresses

67

00:04:20,550 --> 00:04:18,479

from there we work

68

00:04:23,270 --> 00:04:20,560

basically until

69

00:04:24,070 --> 00:04:23,280

seven o'clock 7 15 in the evening

70

00:04:25,749 --> 00:04:24,080

and

71

00:04:27,909 --> 00:04:25,759

you know have a lot of activities to do

72

00:04:30,310 --> 00:04:27,919

scientific experiments maintenance on

73

00:04:32,469 --> 00:04:30,320

the space station just general you know

74

00:04:35,270 --> 00:04:32,479

housekeeping keeping this orbiting

75

00:04:38,310 --> 00:04:35,280

laboratory running as well as the the

76

00:04:41,350 --> 00:04:38,320

exercise time we have up here is done

77

00:04:46,629 --> 00:04:44,070

commander kelly nasa have plans to send

78

00:04:48,390 --> 00:04:46,639

humans to mars in 2030

79

00:04:51,030 --> 00:04:48,400

but with the latest discovery of liquid

80

00:04:53,030 --> 00:04:51,040

water and knowing that water means fuel

81

00:04:55,670 --> 00:04:53,040

for your spaceship is there a chance

82

00:04:58,230 --> 00:04:55,680

that that goal can be reduced few years

83

00:05:04,070 --> 00:04:58,240

and if so you will be or would you like

84

00:05:10,070 --> 00:05:07,110

well i i don't think uh us finding water

85

00:05:11,990 --> 00:05:10,080

would uh accelerate

86

00:05:13,749 --> 00:05:12,000

our mission to mars maybe if we found a

87

00:05:16,070 --> 00:05:13,759

bunch of money that would that would

88

00:05:17,590 --> 00:05:16,080

probably help a lot more because

89

00:05:20,310 --> 00:05:17,600

uh you know that's

90

00:05:22,870 --> 00:05:20,320

one of the things we really need

91

00:05:24,629 --> 00:05:22,880

uh to go to mars is

92

00:05:26,310 --> 00:05:24,639

is the funding

93

00:05:28,629 --> 00:05:26,320

um

94

00:05:30,550 --> 00:05:28,639

and you know the technology we we

95

00:05:32,870 --> 00:05:30,560

understand i think a lot of what we need

96

00:05:35,029 --> 00:05:32,880

to to do to get there

97

00:05:37,430 --> 00:05:35,039

but you know funding is one of the the

98

00:05:38,870 --> 00:05:37,440

things in the in the critical path so i

99

00:05:40,870 --> 00:05:38,880

don't think the water helps us in that

100

00:05:42,390 --> 00:05:40,880

regard but it is very exciting it does

101
00:05:44,230 --> 00:05:42,400
help us in other ways you know once we

102
00:05:46,950 --> 00:05:44,240
get there having water is very important

103
00:05:48,310 --> 00:05:46,960
obviously you need water uh to sustain

104
00:05:49,830 --> 00:05:48,320
life it'd be great if we didn't have to

105
00:05:51,590 --> 00:05:49,840
bring it all with us we could maybe get

106
00:05:54,469 --> 00:05:51,600
it out of the martian atmosphere or out

107
00:05:55,350 --> 00:05:54,479
of the out of the soil and like you said

108
00:05:58,309 --> 00:05:55,360
um

109
00:06:00,150 --> 00:05:58,319
you know you can use liquid oxygen

110
00:06:02,230 --> 00:06:00,160
and liquid hydrogen

111
00:06:03,430 --> 00:06:02,240
to propel a rocket so

112
00:06:06,230 --> 00:06:03,440
you know having

113
00:06:09,189 --> 00:06:06,240

available water may be a source to be

114

00:06:11,749 --> 00:06:09,199

able to uh use for for your rocket

115

00:06:16,550 --> 00:06:13,909

commander kelly your current mission is

116

00:06:18,390 --> 00:06:16,560

unique your twin brother is here on

117

00:06:20,629 --> 00:06:18,400

earth and the idea is to compare your

118

00:06:23,270 --> 00:06:20,639

health with his to see the variations

119

00:06:25,029 --> 00:06:23,280

during this year on space so far have

120

00:06:30,950 --> 00:06:25,039

you learned something special do you

121

00:06:35,110 --> 00:06:33,110

well i hope i look younger but i don't

122

00:06:36,390 --> 00:06:35,120

know that i feel younger

123

00:06:37,510 --> 00:06:36,400

um

124

00:06:39,990 --> 00:06:37,520

you know that

125

00:06:41,029 --> 00:06:40,000

science is uh

126

00:06:43,590 --> 00:06:41,039

it's very

127

00:06:47,830 --> 00:06:43,600

sophisticated uh complicated it's

128

00:06:49,270 --> 00:06:47,840

looking at us on a genetic level

129

00:06:50,950 --> 00:06:49,280

and

130

00:06:52,710 --> 00:06:50,960

much of the way we do that is through

131

00:06:54,150 --> 00:06:52,720

samples of

132

00:06:57,749 --> 00:06:54,160

blood and other

133

00:06:59,589 --> 00:06:57,759

bodily substances both taken here on

134

00:07:01,189 --> 00:06:59,599

orbit and on the ground and

135

00:07:03,589 --> 00:07:01,199

in the case of mine they're sent back to

136

00:07:05,430 --> 00:07:03,599

the ground and a whole lot of analysis

137

00:07:07,510 --> 00:07:05,440

has to be done a whole lot of research

138

00:07:10,950 --> 00:07:07,520

and you know publishing

139

00:07:12,870 --> 00:07:10,960

of the results so i i don't know of any

140

00:07:14,390 --> 00:07:12,880

particular findings thus far doesn't

141

00:07:17,270 --> 00:07:14,400

mean

142

00:07:19,510 --> 00:07:17,280

there aren't any really but uh

143

00:07:20,710 --> 00:07:19,520

you know that that will take time but

144

00:07:24,469 --> 00:07:20,720

i'm sure we're going to learn some

145

00:07:28,390 --> 00:07:25,909

commander

146

00:07:31,189 --> 00:07:28,400

could you describe for our listeners

147

00:07:37,670 --> 00:07:31,199

what is the most amazing and surprising

148

00:07:41,510 --> 00:07:39,670

well you know through the

149

00:07:44,869 --> 00:07:41,520

through the window

150

00:07:47,830 --> 00:07:44,879

there's a lot of beautiful sights but

151
00:07:49,270 --> 00:07:47,840
you know a few months ago we saw some um

152
00:07:50,790 --> 00:07:49,280
aurora

153
00:07:53,430 --> 00:07:50,800
australis

154
00:07:54,710 --> 00:07:53,440
the southern aurora aurora it's hard to

155
00:07:55,589 --> 00:07:54,720
say sometimes

156
00:07:59,510 --> 00:07:55,599
that

157
00:08:02,230 --> 00:07:59,520
you know just really

158
00:08:04,629 --> 00:08:02,240
enveloped the space station and not only

159
00:08:06,230 --> 00:08:04,639
could you see the green colors of of

160
00:08:08,629 --> 00:08:06,240
this particular aurora but you could

161
00:08:10,150 --> 00:08:08,639
also see the red colors with with your

162
00:08:11,270 --> 00:08:10,160
naked eye

163
00:08:13,110 --> 00:08:11,280

so

164

00:08:15,830 --> 00:08:13,120

um you know that's

165

00:08:17,749 --> 00:08:15,840

that on this particular flight was one

166

00:08:19,029 --> 00:08:17,759

of the uh or you know the most

167

00:08:21,510 --> 00:08:19,039

incredible thing i've seen out the

168

00:08:26,550 --> 00:08:23,670

commander kelly recently you said via

169

00:08:28,710 --> 00:08:26,560

twitter you're so active be via twitter

170

00:08:31,670 --> 00:08:28,720

that your favorite color looking the

171

00:08:34,070 --> 00:08:31,680

planet is blue but it's green the one

172

00:08:37,029 --> 00:08:34,080

you miss the most and then you said that

173

00:08:39,990 --> 00:08:37,039

from space you can see a very thin and

174

00:08:42,389 --> 00:08:40,000

weak line of the atmosphere how about is

175

00:08:50,550 --> 00:08:42,399

climate change affecting our planet and

176

00:08:56,389 --> 00:08:53,110

well you know i believe uh you know

177

00:09:00,550 --> 00:08:56,399

climate change is real i

178

00:09:02,790 --> 00:09:00,560

believe that uh you know humans

179

00:09:03,990 --> 00:09:02,800

have an effect on it i don't know

180

00:09:05,430 --> 00:09:04,000

exactly

181

00:09:07,269 --> 00:09:05,440

uh you know

182

00:09:10,070 --> 00:09:07,279

what level that effect is but i think it

183

00:09:13,670 --> 00:09:10,080

is significant um

184

00:09:16,150 --> 00:09:13,680

and you know nasa studies the earth and

185

00:09:17,910 --> 00:09:16,160

we have a lot of scientists that do this

186

00:09:19,430 --> 00:09:17,920

type of research and

187

00:09:21,030 --> 00:09:19,440

you know we're part of the larger

188

00:09:23,030 --> 00:09:21,040

community of

189

00:09:25,509 --> 00:09:23,040

you know scientific investigators that

190

00:09:27,509 --> 00:09:25,519

have you know documented the

191

00:09:28,870 --> 00:09:27,519

impacts of uh

192

00:09:33,110 --> 00:09:28,880

you know the

193

00:09:37,190 --> 00:09:35,110

commander kelly we all hope to be alive

194

00:09:39,190 --> 00:09:37,200

to see a long-term mission to mars but

195

00:09:40,949 --> 00:09:39,200

radiation effects and the absence of

196

00:09:43,590 --> 00:09:40,959

gravity are a big challenge for the

197

00:09:45,509 --> 00:09:43,600

human body i wonder why the current

198

00:09:48,389 --> 00:09:45,519

designs don't include some sort of

199

00:09:50,310 --> 00:09:48,399

artificial centrifugal gravity are you

200

00:09:55,430 --> 00:09:50,320

doing some experiments about that on the

201

00:10:00,550 --> 00:09:57,750

so um

202

00:10:03,030 --> 00:10:00,560

you know that would be great um

203

00:10:05,509 --> 00:10:03,040

and maybe that would be part of the the

204

00:10:08,630 --> 00:10:05,519

design of a spacecraft to use artificial

205

00:10:10,710 --> 00:10:08,640

gravity you know it's been documented in

206

00:10:13,910 --> 00:10:10,720

in many movies and

207

00:10:16,470 --> 00:10:13,920

certainly uh you know in theory that

208

00:10:18,389 --> 00:10:16,480

would be that would work

209

00:10:21,190 --> 00:10:18,399

we do have negative effects on our

210

00:10:23,829 --> 00:10:21,200

physiology from the absence of gravity

211

00:10:25,750 --> 00:10:23,839

but we do have ways to mitigate those by

212

00:10:27,509 --> 00:10:25,760

exercise and diet

213

00:10:29,829 --> 00:10:27,519

uh you know maybe there are there'll be

214

00:10:32,069 --> 00:10:29,839

other ways found in the future so yeah

215

00:10:34,470 --> 00:10:32,079

that is an option and uh you know

216

00:10:36,150 --> 00:10:34,480

possibly that'll be designed in uh

217

00:10:37,990 --> 00:10:36,160

into the vehicle that'll hopefully go to

218

00:10:39,750 --> 00:10:38,000

mars in my lifetime i'd love to see it

219

00:10:40,870 --> 00:10:39,760

and

220

00:10:42,790 --> 00:10:40,880

you know i probably won't be able to

221

00:10:44,870 --> 00:10:42,800

participate in it directly as a crew

222

00:10:47,910 --> 00:10:44,880

member but maybe in some other

223

00:10:47,920 --> 00:10:53,829

commander this is our last question

224

00:10:57,750 --> 00:10:55,670

station this is houston acr that

225

00:10:59,990 --> 00:10:57,760

concludes the w radio portion of the

226
00:11:02,870 --> 00:11:00,000
event please stand by for a voice check

227
00:11:04,630 --> 00:11:02,880
from wgn radio

228
00:11:08,150 --> 00:11:04,640
station this is wgn radio how do you

229
00:11:11,750 --> 00:11:10,550
have you loud and clear

230
00:11:13,990 --> 00:11:11,760
excellent

231
00:11:15,190 --> 00:11:14,000
well on the super celebrity satellite i

232
00:11:16,470 --> 00:11:15,200
think there's no other way to put this

233
00:11:18,790 --> 00:11:16,480
anna we've got

234
00:11:20,310 --> 00:11:18,800
awesome one of the great american heroes

235
00:11:22,069 --> 00:11:20,320
commander scott kelly onboard the

236
00:11:24,790 --> 00:11:22,079
international space station and uh

237
00:11:26,069 --> 00:11:24,800
commander uh first of all uh

238
00:11:29,430 --> 00:11:26,079

congratulations you just made the

239

00:11:31,670 --> 00:11:29,440

halfway point of your year in space and

240

00:11:34,470 --> 00:11:31,680

physically do you feel

241

00:11:41,509 --> 00:11:34,480

better than you did 190 days ago or

242

00:11:45,829 --> 00:11:43,430

that's a that's a tough question you

243

00:11:47,910 --> 00:11:45,839

definitely i feel better in some ways in

244

00:11:50,150 --> 00:11:47,920

that you know gravity uh you know and

245

00:11:52,790 --> 00:11:50,160

the effects on your joints and and

246

00:11:55,430 --> 00:11:52,800

things on earth as you as you get older

247

00:11:57,829 --> 00:11:55,440

and i'm you know in my early 50s now is

248

00:11:59,430 --> 00:11:57,839

uh is something that i don't experience

249

00:12:01,670 --> 00:11:59,440

up here so

250

00:12:03,269 --> 00:12:01,680

you know in that regard it's it's better

251
00:12:04,069 --> 00:12:03,279
um

252
00:12:05,430 --> 00:12:04,079
so

253
00:12:07,430 --> 00:12:05,440
you know i think

254
00:12:10,150 --> 00:12:07,440
i don't i i wouldn't say i feel bad

255
00:12:13,190 --> 00:12:10,160
because i'm i've been up here for you

256
00:12:16,629 --> 00:12:13,200
know over six months

257
00:12:18,310 --> 00:12:16,639
so uh when you return to earth

258
00:12:19,829 --> 00:12:18,320
they've talked to you now obviously a

259
00:12:21,670 --> 00:12:19,839
year in space gonna it's gonna take a

260
00:12:23,350 --> 00:12:21,680
toll on in terms of all that what will

261
00:12:25,829 --> 00:12:23,360
you experience when you come back to

262
00:12:27,829 --> 00:12:25,839
earth in terms of how your joints are

263
00:12:28,790 --> 00:12:27,839

going to feel or vertigo or anything

264

00:12:32,389 --> 00:12:28,800

like that what have they told you to

265

00:12:37,990 --> 00:12:35,110

well i flew a flight

266

00:12:40,230 --> 00:12:38,000

about four or five years ago now

267

00:12:42,150 --> 00:12:40,240

to the space station that was 159 days

268

00:12:43,670 --> 00:12:42,160

long when i got back from that flight

269

00:12:45,509 --> 00:12:43,680

you know vertigo was something you

270

00:12:48,870 --> 00:12:45,519

experienced initially

271

00:12:51,509 --> 00:12:48,880

um for me that kind of cleared up

272

00:12:53,670 --> 00:12:51,519

pretty quickly you know within

273

00:12:56,949 --> 00:12:53,680

you know several hours

274

00:12:59,590 --> 00:12:56,959

i was feeling much better uh what took a

275

00:13:02,069 --> 00:12:59,600

much longer time was the soreness of

276

00:13:05,190 --> 00:13:02,079

muscles and and joints

277

00:13:08,470 --> 00:13:05,200

that for me lasted um you know about a

278

00:13:09,910 --> 00:13:08,480

month also you're pretty fatigued when

279

00:13:12,629 --> 00:13:09,920

you get home

280

00:13:14,310 --> 00:13:12,639

and um you know for a number of reasons

281

00:13:16,150 --> 00:13:14,320

and

282

00:13:18,470 --> 00:13:16,160

you know i expect that that'll be the

283

00:13:20,150 --> 00:13:18,480

same or maybe even worse this time

284

00:13:22,150 --> 00:13:20,160

commander um i want to ask about the

285

00:13:24,790 --> 00:13:22,160

twin experiments and your brother mark

286

00:13:27,509 --> 00:13:24,800

here on earth is uh mirroring a lot of

287

00:13:30,069 --> 00:13:27,519

the activities you're doing there

288

00:13:31,430 --> 00:13:30,079

um and i guess so

289

00:13:33,509 --> 00:13:31,440

how do you know he's doing a good job at

290

00:13:34,949 --> 00:13:33,519

it are you in constant contact with them

291

00:13:36,790 --> 00:13:34,959

and we also wanted to ask what if he

292

00:13:38,310 --> 00:13:36,800

like slips in a corona or cheats a

293

00:13:43,910 --> 00:13:38,320

little bit are you able to do that in

294

00:13:48,470 --> 00:13:45,750

well uh you know part of the the

295

00:13:50,870 --> 00:13:48,480

research is not him being on a similar

296

00:13:51,990 --> 00:13:50,880

diet that was you know really not deemed

297

00:13:55,030 --> 00:13:52,000

practical

298

00:13:57,590 --> 00:13:55,040

he wouldn't want to eat this food by

299

00:14:00,069 --> 00:13:57,600

although it's not bad if you had to eat

300

00:14:02,150 --> 00:14:00,079

this this stuff by choice

301
00:14:04,629 --> 00:14:02,160
for a whole year when you're you know

302
00:14:07,269 --> 00:14:04,639
your friends and family are you know

303
00:14:09,189 --> 00:14:07,279
diving into a stake that would be

304
00:14:10,949 --> 00:14:09,199
i think considered cruel and unusual

305
00:14:13,670 --> 00:14:10,959
punishment but uh

306
00:14:16,389 --> 00:14:13,680
so most of what he does

307
00:14:19,509 --> 00:14:16,399
is uh you know the same type of blood

308
00:14:22,470 --> 00:14:19,519
and other uh bodily samples

309
00:14:25,110 --> 00:14:22,480
that are getting from me and mris and

310
00:14:27,350 --> 00:14:25,120
other type of uh you know imaging

311
00:14:29,030 --> 00:14:27,360
technology that's used on him

312
00:14:30,470 --> 00:14:29,040
um

313
00:14:33,110 --> 00:14:30,480

yeah so

314

00:14:35,030 --> 00:14:33,120

do i know if he's he if he's cheating i

315

00:14:37,670 --> 00:14:35,040

don't think there's a whole lot of me be

316

00:14:39,990 --> 00:14:37,680

cheating on and i know he is keeping up

317

00:14:41,750 --> 00:14:40,000

with getting the samples

318

00:14:45,750 --> 00:14:41,760

he was he was in houston just the other

319

00:14:46,790 --> 00:14:45,760

day uh doing some of that uh so now

320

00:14:48,069 --> 00:14:46,800

let's talk a little bit about this

321

00:14:51,430 --> 00:14:48,079

incredible year

322

00:14:53,269 --> 00:14:51,440

for nasa and uh for the space program i

323

00:14:54,710 --> 00:14:53,279

think in a lot of ways and just for a

324

00:14:57,590 --> 00:14:54,720

human's understanding of what's going on

325

00:15:00,310 --> 00:14:57,600

you had pluto you had the intercept of a

326

00:15:01,829 --> 00:15:00,320

comet uh and now the water on mars and i

327

00:15:03,350 --> 00:15:01,839

think that certainly some of the

328

00:15:04,550 --> 00:15:03,360

experiments that you guys are doing here

329

00:15:05,430 --> 00:15:04,560

that you and your brother are doing and

330

00:15:07,430 --> 00:15:05,440

that you're doing up on the

331

00:15:10,470 --> 00:15:07,440

international space station is duration

332

00:15:12,069 --> 00:15:10,480

that's intended to be a part of uh that

333

00:15:15,590 --> 00:15:12,079

research will go into whatever the

334

00:15:17,910 --> 00:15:15,600

manned mars mission is uh how important

335

00:15:21,110 --> 00:15:17,920

do you think in terms of funding

336

00:15:28,069 --> 00:15:21,120

uh these these discoveries have been and

337

00:15:33,110 --> 00:15:29,990

you know hopefully it's uh you know it's

338

00:15:35,749 --> 00:15:33,120

a positive thing um

339

00:15:38,310 --> 00:15:35,759

you know like any government agency nasa

340

00:15:41,189 --> 00:15:38,320

needs uh funding at an appropriate level

341

00:15:43,430 --> 00:15:41,199

and uh you know demonstrating success in

342

00:15:45,110 --> 00:15:43,440

in you know anything whether it's nasa

343

00:15:46,870 --> 00:15:45,120

or other government agencies i think

344

00:15:49,990 --> 00:15:46,880

it's important to

345

00:15:51,110 --> 00:15:50,000

get the uh you know the the political

346

00:15:53,110 --> 00:15:51,120

support

347

00:15:55,189 --> 00:15:53,120

that you need to to get the you know

348

00:15:57,749 --> 00:15:55,199

funded at the appropriate level so yeah

349

00:16:00,389 --> 00:15:57,759

i think it's a great thing and

350

00:16:02,069 --> 00:16:00,399

you know each of those uh

351

00:16:03,269 --> 00:16:02,079

you know different uh missions you

352

00:16:05,590 --> 00:16:03,279

mentioned

353

00:16:08,310 --> 00:16:05,600

uh you know have captured people's

354

00:16:09,670 --> 00:16:08,320

imaginations in their own way and you

355

00:16:11,910 --> 00:16:09,680

know like you said with the last one

356

00:16:12,949 --> 00:16:11,920

with the water on mars uh you know

357

00:16:15,269 --> 00:16:12,959

really

358

00:16:16,949 --> 00:16:15,279

um you know hopefully someday it'll help

359

00:16:18,870 --> 00:16:16,959

when we get there and we we don't have

360

00:16:21,670 --> 00:16:18,880

to bring all this water with us and you

361

00:16:23,590 --> 00:16:21,680

know water is important for life and you

362

00:16:25,269 --> 00:16:23,600

know maybe means that there you know is

363

00:16:27,990 --> 00:16:25,279

life there somewhere to be found or

364

00:16:30,550 --> 00:16:28,000

ancient ancient life and provides

365

00:16:33,910 --> 00:16:30,560

possibly a way to make fuel to get home

366

00:16:35,910 --> 00:16:33,920

so it's a it's a big it's a great thing

367

00:16:37,590 --> 00:16:35,920

um commander also i wanted to ask you

368

00:16:39,590 --> 00:16:37,600

you know anybody who's seen the martian

369

00:16:42,949 --> 00:16:39,600

with matt damon has seen how he was

370

00:16:44,150 --> 00:16:42,959

growing his own food um up in in on mars

371

00:16:46,470 --> 00:16:44,160

as it were

372

00:16:52,470 --> 00:16:46,480

are you guys growing food there on the

373

00:16:58,230 --> 00:16:54,870

yeah so we grew some lettuce a few

374

00:16:59,189 --> 00:16:58,240

months ago and it uh it went great and

375

00:17:01,350 --> 00:16:59,199

uh

376

00:17:04,150 --> 00:17:01,360

you know hopefully from that experiment

377

00:17:06,630 --> 00:17:04,160

and experiments to come we'll learn to

378

00:17:09,189 --> 00:17:06,640

to you know grow more uh

379

00:17:11,270 --> 00:17:09,199

food on orbit and potentially use that

380

00:17:13,669 --> 00:17:11,280

technology to uh

381

00:17:15,350 --> 00:17:13,679

to go to mars someday or or elsewhere or

382

00:17:17,510 --> 00:17:15,360

just you know to be able to sustain

383

00:17:20,949 --> 00:17:17,520

ourselves here in low earth orbit

384

00:17:22,789 --> 00:17:20,959

a couple of days ago you you tweeted a

385

00:17:26,069 --> 00:17:22,799

picture of chicago with the aurora

386

00:17:29,029 --> 00:17:26,079

borealis over uh it was a great shot

387

00:17:30,549 --> 00:17:29,039

from your vantage point uh of the the

388

00:17:33,190 --> 00:17:30,559

southern part of lake michigan at night

389

00:17:34,630 --> 00:17:33,200

with the urban uh all the urban light of

390

00:17:37,110 --> 00:17:34,640

chicago and milwaukee and then that

391

00:17:39,430 --> 00:17:37,120

great green over that i know that you've

392

00:17:41,110 --> 00:17:39,440

talked about uh you know how incredible

393

00:17:43,590 --> 00:17:41,120

it is to see earth

394

00:17:49,750 --> 00:17:43,600

from that vantage point but what do you

395

00:17:53,350 --> 00:17:51,270

you know you miss the you know the

396

00:17:56,230 --> 00:17:53,360

people uh your friends your family

397

00:17:57,510 --> 00:17:56,240

people you love at home certainly

398

00:17:58,870 --> 00:17:57,520

not that you don't like the people up

399

00:18:00,390 --> 00:17:58,880

here but uh

400

00:18:01,669 --> 00:18:00,400

you know variety

401
00:18:03,270 --> 00:18:01,679
is uh

402
00:18:05,350 --> 00:18:03,280
just kind of important

403
00:18:07,110 --> 00:18:05,360
in that regard but the other thing

404
00:18:09,669 --> 00:18:07,120
the other thing is just being outside i

405
00:18:11,350 --> 00:18:09,679
mean we don't go outside at all you know

406
00:18:13,510 --> 00:18:11,360
occasionally you get to do a spacewalk

407
00:18:15,590 --> 00:18:13,520
we got one coming up here actually two

408
00:18:17,430 --> 00:18:15,600
coming up here in the next several weeks

409
00:18:19,909 --> 00:18:17,440
but it's not the same thing and just the

410
00:18:21,750 --> 00:18:19,919
freedom to kind of do what you want walk

411
00:18:23,669 --> 00:18:21,760
outside your house

412
00:18:25,909 --> 00:18:23,679
is uh you know is something we

413
00:18:28,390 --> 00:18:25,919

definitely miss

414

00:18:30,549 --> 00:18:28,400

is there uh what's the most spectacular

415

00:18:31,750 --> 00:18:30,559

thing that uh you think you've seen what

416

00:18:39,990 --> 00:18:31,760

are the what are some of the images that

417

00:18:45,029 --> 00:18:42,789

you know i i think the

418

00:18:46,950 --> 00:18:45,039

what you know i will learn from this

419

00:18:48,950 --> 00:18:46,960

let's talk about that first is just you

420

00:18:50,789 --> 00:18:48,960

know the the the

421

00:18:52,870 --> 00:18:50,799

i think the potential for us to do

422

00:18:54,710 --> 00:18:52,880

things that are really really hard

423

00:18:56,870 --> 00:18:54,720

uh you know building the space station

424

00:19:00,390 --> 00:18:56,880

was hard this is an amazing facility we

425

00:19:02,070 --> 00:19:00,400

do amazing research up here it takes uh

426

00:19:03,510 --> 00:19:02,080

you know an army of people on the ground

427

00:19:06,230 --> 00:19:03,520

not only in the united states but all

428

00:19:07,990 --> 00:19:06,240

around the world to to make this uh

429

00:19:09,270 --> 00:19:08,000

this program happen

430

00:19:12,150 --> 00:19:09,280

you know that's

431

00:19:14,470 --> 00:19:12,160

you know just the the limit uh

432

00:19:16,710 --> 00:19:14,480

of human potential i think is incredible

433

00:19:20,070 --> 00:19:16,720

and the you know the space

434

00:19:22,470 --> 00:19:20,080

program is a is a great uh place for for

435

00:19:24,549 --> 00:19:22,480

our nation and other nations to do that

436

00:19:25,669 --> 00:19:24,559

as far as visually seeing you know the

437

00:19:28,310 --> 00:19:25,679

earth

438

00:19:30,630 --> 00:19:28,320

never disappoints you know when i think

439

00:19:33,190 --> 00:19:30,640

i've seen it all i see something you

440

00:19:35,029 --> 00:19:33,200

know new and spectacular and

441

00:19:36,870 --> 00:19:35,039

hopefully i'll be able to keep those

442

00:19:39,430 --> 00:19:36,880

images with me for a while

443

00:19:40,950 --> 00:19:39,440

yeah uh commander thank you so much uh

444

00:19:43,110 --> 00:19:40,960

appreciate everything you're doing not

445

00:19:44,870 --> 00:19:43,120

only for the united states

446

00:19:47,909 --> 00:19:44,880

but for the world at the international

447

00:19:50,950 --> 00:19:47,919

space station and uh i hope that all the

448

00:19:52,470 --> 00:19:50,960

whatever it is that uh that comes out of

449

00:19:54,710 --> 00:19:52,480

this whether it's a mission to mars or

450

00:19:56,310 --> 00:19:54,720

whatever it happens to be that uh

451

00:19:58,070 --> 00:19:56,320

you know you take a very very important

452

00:19:59,669 --> 00:19:58,080

place in in the history of the american

453

00:20:02,950 --> 00:19:59,679

space program so we thank you for that

454

00:20:02,960 --> 00:20:05,669

thank you

455

00:20:13,029 --> 00:20:07,350

station this is houston acr that

456

00:20:17,510 --> 00:20:16,070

thank you radio and wgn radio station we