



1
00:00:08,070 --> 00:00:02,310
station this is houston are you ready

2
00:00:08,080 --> 00:00:12,070
i'm ready for the event

3
00:00:14,789 --> 00:00:13,669
mr shatner this is mission control

4
00:00:16,710 --> 00:00:14,799
houston

5
00:00:19,349 --> 00:00:16,720
please call station for a voice check

6
00:00:27,109 --> 00:00:19,359
i'm uh i'm calling this is shatner do

7
00:00:32,950 --> 00:00:29,589
mr shatner this is uh

8
00:00:35,110 --> 00:00:32,960
the space research vessel iss in earth

9
00:00:36,310 --> 00:00:35,120
orbit and yes i hear you loud and clear

10
00:00:38,150 --> 00:00:36,320
how do you hear me this is chris

11
00:00:40,310 --> 00:00:38,160
hadfield chris i hear you loud and clear

12
00:00:43,430 --> 00:00:40,320
it's such a pleasure to talk to you

13
00:00:45,190 --> 00:00:43,440

i i'm so moved to uh be able to speak to

14

00:00:47,510 --> 00:00:45,200

you for i'm so moved to be able to speak

15

00:00:50,069 --> 00:00:47,520

to you for this brief moment so i want

16

00:00:52,630 --> 00:00:50,079

to i want to ask you some questions that

17

00:00:54,470 --> 00:00:52,640

uh uh have deep

18

00:00:56,790 --> 00:00:54,480

have some deep meaning to me so let me

19

00:00:58,790 --> 00:00:56,800

start off right away um

20

00:01:00,470 --> 00:00:58,800

you you're in the international space

21

00:01:03,189 --> 00:01:00,480

station but you had to get there in a

22

00:01:05,030 --> 00:01:03,199

russian vehicle are we as america

23

00:01:10,310 --> 00:01:05,040

fallen behind or is this just a pause on

24

00:01:15,350 --> 00:01:13,109

the space business is an extremely

25

00:01:17,190 --> 00:01:15,360

difficult one and if i think the best

26

00:01:18,789 --> 00:01:17,200

way to answer that question

27

00:01:20,550 --> 00:01:18,799

is to look at history

28

00:01:23,510 --> 00:01:20,560

you know we've never had

29

00:01:25,510 --> 00:01:23,520

regular access to space we've had a

30

00:01:27,590 --> 00:01:25,520

space flight and then a landing and then

31

00:01:29,749 --> 00:01:27,600

we review everything and make sure it's

32

00:01:31,990 --> 00:01:29,759

safe and then we launch another one and

33

00:01:35,830 --> 00:01:32,000

the shuttle was tremendously vehicle a

34

00:01:37,510 --> 00:01:35,840

successful vehicle flying 135 times but

35

00:01:39,270 --> 00:01:37,520

it's not like in between flights we

36

00:01:41,190 --> 00:01:39,280

could just count on the next one every

37

00:01:43,429 --> 00:01:41,200

one was really much

38

00:01:46,389 --> 00:01:43,439

the the max level of effort that we

39

00:01:49,670 --> 00:01:46,399

could do and so it went from mercury to

40

00:01:52,230 --> 00:01:49,680

gemini to apollo to shuttle with many

41

00:01:53,910 --> 00:01:52,240

many lulls in between and the time it

42

00:01:54,870 --> 00:01:53,920

takes to build a new vehicle is quite

43

00:01:56,630 --> 00:01:54,880

long

44

00:01:58,789 --> 00:01:56,640

so

45

00:02:01,109 --> 00:01:58,799

it you could say we kind of lost our way

46

00:02:03,350 --> 00:02:01,119

in between every single launch but in

47

00:02:06,789 --> 00:02:03,360

truth that's not how it works what it

48

00:02:09,510 --> 00:02:06,799

takes is an enormous effort of will and

49

00:02:10,389 --> 00:02:09,520

technical know-how to build a spaceship

50

00:02:13,030 --> 00:02:10,399

and then

51
00:02:15,190 --> 00:02:13,040
to be brave enough to launch one because

52
00:02:17,270 --> 00:02:15,200
you risk lives every time you do

53
00:02:19,110 --> 00:02:17,280
and we're just right now in between

54
00:02:21,990 --> 00:02:19,120
vehicles much as we were

55
00:02:23,589 --> 00:02:22,000
after mercury after gemini after apollo

56
00:02:25,750 --> 00:02:23,599
we're just in the after shuttle era

57
00:02:27,350 --> 00:02:25,760
right now but fortunately

58
00:02:28,790 --> 00:02:27,360
because of international cooperation

59
00:02:31,910 --> 00:02:28,800
we're not grounded

60
00:02:33,509 --> 00:02:31,920
and this place is built by the world and

61
00:02:35,110 --> 00:02:33,519
very much put together with the united

62
00:02:36,630 --> 00:02:35,120
states as the

63
00:02:39,509 --> 00:02:36,640

as the foreman

64

00:02:41,990 --> 00:02:39,519

and uh and fortunately we didn't have to

65

00:02:43,830 --> 00:02:42,000

abandon it as we did skylab because we

66

00:02:45,589 --> 00:02:43,840

didn't have a vehicle or cooperation

67

00:02:47,430 --> 00:02:45,599

because of cooperation with other

68

00:02:49,509 --> 00:02:47,440

countries people are here living and

69

00:02:51,350 --> 00:02:49,519

working and the united states will build

70

00:02:54,710 --> 00:02:51,360

another vehicle and that will come up

71

00:02:57,830 --> 00:02:54,720

here also so it's by no means a lost way

72

00:03:00,790 --> 00:02:57,840

it's just a natural path i read that you

73

00:03:04,949 --> 00:03:00,800

have already volunteered to go on a mars

74

00:03:06,309 --> 00:03:04,959

mission uh is that have any reality to

75

00:03:09,350 --> 00:03:06,319

it and

76
00:03:11,990 --> 00:03:09,360
and and because of the uh uh the nature

77
00:03:13,190 --> 00:03:12,000
of this brief time let me add to that

78
00:03:15,670 --> 00:03:13,200
question

79
00:03:18,149 --> 00:03:15,680
uh you volunteered to go but isn't that

80
00:03:22,229 --> 00:03:18,159
a fearful uh

81
00:03:30,390 --> 00:03:22,239
operation isn't that fraught with such

82
00:03:33,430 --> 00:03:32,470
you've taken a lot of risks in your life

83
00:03:34,630 --> 00:03:33,440
as well

84
00:03:35,830 --> 00:03:34,640
um

85
00:03:38,229 --> 00:03:35,840
and

86
00:03:40,070 --> 00:03:38,239
it was a risk that that i decided to

87
00:03:42,309 --> 00:03:40,080
take many many years ago really to

88
00:03:45,110 --> 00:03:42,319

accomplish anything worthwhile in life

89

00:03:46,869 --> 00:03:45,120

is going to take risk

90

00:03:49,110 --> 00:03:46,879

and even if you decide to stay at home

91

00:03:50,229 --> 00:03:49,120

and and sit at your kitchen table

92

00:03:51,990 --> 00:03:50,239

eventually

93

00:03:53,990 --> 00:03:52,000

uh the ceiling will fall or there'll be

94

00:03:56,229 --> 00:03:54,000

a hurricane or a tornado you can't live

95

00:03:58,949 --> 00:03:56,239

a worthwhile life without taking risks

96

00:04:00,470 --> 00:03:58,959

and some things are really worth

97

00:04:01,910 --> 00:04:00,480

directing your life towards and putting

98

00:04:05,030 --> 00:04:01,920

your life on the line for

99

00:04:07,910 --> 00:04:05,040

let me just say uh between the real life

100

00:04:10,470 --> 00:04:07,920

exploits of the first astronauts and the

101
00:04:13,270 --> 00:04:10,480
the visually fantasized and enlivened

102
00:04:14,789 --> 00:04:13,280
ones like you portrayed on star trek and

103
00:04:16,870 --> 00:04:14,799
so many other people have in in

104
00:04:19,189 --> 00:04:16,880
literature

105
00:04:20,469 --> 00:04:19,199
they inspire people like me to do things

106
00:04:22,469 --> 00:04:20,479
like this

107
00:04:24,230 --> 00:04:22,479
and without that inspiration

108
00:04:25,830 --> 00:04:24,240
um and then without the technological

109
00:04:27,590 --> 00:04:25,840
capability that comes along with it none

110
00:04:30,710 --> 00:04:27,600
of it would be possible

111
00:04:33,749 --> 00:04:30,720
and i i'm in a position to say that

112
00:04:35,510 --> 00:04:33,759
the risks are infinitely worthwhile when

113
00:04:37,590 --> 00:04:35,520

you look at the view that's just out

114

00:04:39,830 --> 00:04:37,600

these windows behind me and the things

115

00:04:42,950 --> 00:04:39,840

that lie just beyond and yes going to

116

00:04:45,270 --> 00:04:42,960

mars is inevitable uh just as

117

00:04:47,270 --> 00:04:45,280

sailing across the atlantic or flying

118

00:04:49,510 --> 00:04:47,280

across the atlantic or orbiting around

119

00:04:51,590 --> 00:04:49,520

the world or going to the moon it's just

120

00:04:53,590 --> 00:04:51,600

a matter of when we figure out how we

121

00:04:54,390 --> 00:04:53,600

put ourselves together enough we take

122

00:04:59,189 --> 00:04:54,400

those

123

00:05:01,830 --> 00:04:59,199

and turn them into reality which is what

124

00:05:03,830 --> 00:05:01,840

we're doing here right now you are uh

125

00:05:06,790 --> 00:05:03,840

you have many degrees in mechanical

126
00:05:09,189 --> 00:05:06,800
engineering and you must see the

127
00:05:12,150 --> 00:05:09,199
universe in terms of

128
00:05:13,590 --> 00:05:12,160
how extraordinary a mechanical

129
00:05:14,469 --> 00:05:13,600
engineering feat

130
00:05:17,110 --> 00:05:14,479
that

131
00:05:18,710 --> 00:05:17,120
is and how mystifying it is because we

132
00:05:20,230 --> 00:05:18,720
know nothing

133
00:05:23,830 --> 00:05:20,240
do you find yourself

134
00:05:28,310 --> 00:05:23,840
uh in the space station observing as a

135
00:05:31,029 --> 00:05:28,320
scientist a part of it uh a a a a

136
00:05:34,550 --> 00:05:31,039
removed from it or are you

137
00:05:36,550 --> 00:05:34,560
able to be to see the unifying parts of

138
00:05:42,070 --> 00:05:36,560

it so that you become at one with the

139

00:05:46,629 --> 00:05:44,710

luckily i think bill the answer is both

140

00:05:48,710 --> 00:05:46,639

um

141

00:05:50,710 --> 00:05:48,720

most people the highest they ever get is

142

00:05:52,150 --> 00:05:50,720

maybe to climb a tall hill or climb a

143

00:05:54,550 --> 00:05:52,160

mountain and look around or even get in

144

00:05:55,830 --> 00:05:54,560

an airplane and and start

145

00:05:57,590 --> 00:05:55,840

to see

146

00:05:59,510 --> 00:05:57,600

what lies beyond the normal two

147

00:06:01,510 --> 00:05:59,520

dimensions the surface of the world of

148

00:06:03,270 --> 00:06:01,520

normal life

149

00:06:05,670 --> 00:06:03,280

to have the opportunity

150

00:06:07,590 --> 00:06:05,680

to get as far away as we are here and

151
00:06:10,070 --> 00:06:07,600
not only that but to go around the world

152
00:06:12,230 --> 00:06:10,080
every 90 minutes and

153
00:06:14,629 --> 00:06:12,240
you never saw it on stage while you were

154
00:06:17,189 --> 00:06:14,639
filming um but the view that they used

155
00:06:19,590 --> 00:06:17,199
to put in for us watching star trek of

156
00:06:22,390 --> 00:06:19,600
how the world looks out of

157
00:06:24,790 --> 00:06:22,400
sulu and chekhov's windows there that's

158
00:06:28,309 --> 00:06:24,800
how the world looks it's an enormous

159
00:06:30,710 --> 00:06:28,319
wonderful rolling earth below us but all

160
00:06:31,670 --> 00:06:30,720
you have to do is flip yourself upside

161
00:06:32,790 --> 00:06:31,680
down

162
00:06:35,350 --> 00:06:32,800
and

163
00:06:38,629 --> 00:06:35,360

suddenly the rest of the universe

164

00:06:40,629 --> 00:06:38,639

is right there um at your feet below you

165

00:06:43,189 --> 00:06:40,639

and that's where

166

00:06:45,110 --> 00:06:43,199

the the engineer in me of course is is

167

00:06:47,029 --> 00:06:45,120

very much thinking about the ship and

168

00:06:48,629 --> 00:06:47,039

and how we got here and the problems and

169

00:06:51,749 --> 00:06:48,639

the difficulties

170

00:06:54,230 --> 00:06:51,759

but the human within me recognizes what

171

00:06:56,309 --> 00:06:54,240

we are in between we've gone from

172

00:06:57,670 --> 00:06:56,319

climbing a hill getting in an airplane

173

00:06:59,749 --> 00:06:57,680

to now actually

174

00:07:01,909 --> 00:06:59,759

being right on the cusp of permanently

175

00:07:03,110 --> 00:07:01,919

leaving our planet to everything else

176
00:07:04,790 --> 00:07:03,120
that exists

177
00:07:07,749 --> 00:07:04,800
and and i feel

178
00:07:10,150 --> 00:07:07,759
uh hugely connected to that it's what it

179
00:07:12,469 --> 00:07:10,160
was inspired in me as a kid and i've

180
00:07:14,230 --> 00:07:12,479
kind of directed my whole life i became

181
00:07:16,469 --> 00:07:14,240
an engineer and a fighter pilot and a

182
00:07:18,309 --> 00:07:16,479
test pilot to try and gain the skills to

183
00:07:21,430 --> 00:07:18,319
maybe someday do this

184
00:07:23,670 --> 00:07:21,440
and now i'm doing my absolute best to

185
00:07:26,230 --> 00:07:23,680
help people see that to help us

186
00:07:28,629 --> 00:07:26,240
understand where we are

187
00:07:30,790 --> 00:07:28,639
kind of philosophically and historically

188
00:07:32,790 --> 00:07:30,800

in our increased human understanding of

189

00:07:35,189 --> 00:07:32,800

where we do lie in the universe those

190

00:07:37,670 --> 00:07:35,199

are great big words for for you know a

191

00:07:39,589 --> 00:07:37,680

lab technician on a space station

192

00:07:41,110 --> 00:07:39,599

i definitely get a sense of that all the

193

00:07:43,830 --> 00:07:41,120

time

194

00:07:46,710 --> 00:07:43,840

it's inspiring to hear let me go back to

195

00:07:49,430 --> 00:07:46,720

a moment uh you've tested many airplanes

196

00:07:52,230 --> 00:07:49,440

you've you've uh been a test pilot which

197

00:07:54,790 --> 00:07:52,240

is like the utmost of uh uh

198

00:07:56,950 --> 00:07:54,800

example of courage in that you're flying

199

00:07:59,270 --> 00:07:56,960

something uh unknown and you don't know

200

00:08:01,350 --> 00:07:59,280

what characteristics is going to have

201
00:08:03,830 --> 00:08:01,360
how do you deal with the fear which is

202
00:08:06,230 --> 00:08:03,840
also applicable to going up into space

203
00:08:11,589 --> 00:08:06,240
and returning which is perhaps even more

204
00:08:16,629 --> 00:08:14,869
um i read somewhere that uh

205
00:08:18,629 --> 00:08:16,639
you always knew your lines

206
00:08:20,710 --> 00:08:18,639
whenever you had a job in the acting

207
00:08:23,270 --> 00:08:20,720
profession i have tried to always know

208
00:08:24,390 --> 00:08:23,280
my lines whether it was as as a fighter

209
00:08:28,629 --> 00:08:24,400
pilot

210
00:08:29,670 --> 00:08:28,639
and and the way i the way i deal with

211
00:08:31,670 --> 00:08:29,680
fear

212
00:08:33,990 --> 00:08:31,680
is i try to define what it is that's

213
00:08:36,310 --> 00:08:34,000

scaring me and what i'm scared most of

214

00:08:39,430 --> 00:08:36,320

is not knowing what to do next you know

215

00:08:41,829 --> 00:08:39,440

to be struck dumb on stage or to to be

216

00:08:43,509 --> 00:08:41,839

uh responsible for a vehicle and not

217

00:08:46,070 --> 00:08:43,519

know the right actions to take with my

218

00:08:48,470 --> 00:08:46,080

hands or with the spaceship and so

219

00:08:50,470 --> 00:08:48,480

i spent almost my entire adult life

220

00:08:52,870 --> 00:08:50,480

making sure that that i knew my lines

221

00:08:55,670 --> 00:08:52,880

that that when the soyuz spaceship which

222

00:08:57,590 --> 00:08:55,680

i helped fly up here that ev i spent

223

00:08:59,829 --> 00:08:57,600

years of course learning to speak

224

00:09:02,070 --> 00:08:59,839

russian and then learning to fly that

225

00:09:04,150 --> 00:09:02,080

spaceship and even though it flew itself

226

00:09:06,790 --> 00:09:04,160

basically flawlessly up here no matter

227

00:09:08,790 --> 00:09:06,800

what happened roman romanenko and i were

228

00:09:10,389 --> 00:09:08,800

ready to jump in and fly it and take

229

00:09:13,190 --> 00:09:10,399

over and do it all manually and fly at

230

00:09:15,350 --> 00:09:13,200

home and that that's a terrifying thing

231

00:09:17,350 --> 00:09:15,360

initially but after years of training

232

00:09:19,509 --> 00:09:17,360

where you you practice everything right

233

00:09:21,590 --> 00:09:19,519

down to the nth details so you know you

234

00:09:24,310 --> 00:09:21,600

have the confidence that comes with that

235

00:09:26,550 --> 00:09:24,320

then the fear diminishes it feels

236

00:09:28,949 --> 00:09:26,560

like you're on the crest of a wave of

237

00:09:31,750 --> 00:09:28,959

ability and that really diminishes fear

238

00:09:32,949 --> 00:09:31,760

you've poised that perfectly as a an

239

00:09:34,870 --> 00:09:32,959

actor

240

00:09:36,630 --> 00:09:34,880

who is fearful of the audience but as

241

00:09:38,710 --> 00:09:36,640

long as you practice enough

242

00:09:41,350 --> 00:09:38,720

you learn what to expect

243

00:09:43,829 --> 00:09:41,360

the fear comes from

244

00:09:45,910 --> 00:09:43,839

uh something unexpected happening like

245

00:09:47,190 --> 00:09:45,920

forgetting your words or an audience

246

00:09:49,509 --> 00:09:47,200

reaction

247

00:09:52,790 --> 00:09:49,519

that's unexpected

248

00:09:55,590 --> 00:09:52,800

in my case uh your face flushes and you

249

00:10:00,949 --> 00:09:55,600

get a sheen of uh flop sweat in your

250

00:10:04,230 --> 00:10:03,030

yeah well in both cases you go down in

251
00:10:07,910 --> 00:10:04,240
flames

252
00:10:08,630 --> 00:10:07,920
but one's figurative and one is not

253
00:10:11,110 --> 00:10:08,640
but

254
00:10:12,949 --> 00:10:11,120
my wife my wife bill

255
00:10:14,949 --> 00:10:12,959
my wife is actually when people ask her

256
00:10:16,470 --> 00:10:14,959
if she's scared of what i do for a

257
00:10:18,710 --> 00:10:16,480
living

258
00:10:20,630 --> 00:10:18,720
as you say prior to this i was i was a

259
00:10:22,710 --> 00:10:20,640
test pilot that was a much more risky

260
00:10:24,470 --> 00:10:22,720
profession i basically lost one good

261
00:10:26,310 --> 00:10:24,480
friend a year for the whole time that i

262
00:10:28,710 --> 00:10:26,320
was a professional high performance

263
00:10:29,750 --> 00:10:28,720

pilot and um so

264

00:10:32,310 --> 00:10:29,760

yes this

265

00:10:34,550 --> 00:10:32,320

this job has has risk and a level that

266

00:10:36,310 --> 00:10:34,560

is fairly high but uh there are lots of

267

00:10:39,430 --> 00:10:36,320

professions on earth that have a lot of

268

00:10:41,110 --> 00:10:39,440

risk the people firemen and soldiers and

269

00:10:42,389 --> 00:10:41,120

and some of the professions on earth and

270

00:10:43,990 --> 00:10:42,399

i respect them all for them

271

00:10:45,509 --> 00:10:44,000

understanding their job

272

00:10:47,590 --> 00:10:45,519

really applying themselves and

273

00:10:49,750 --> 00:10:47,600

professionally getting their particular

274

00:10:51,269 --> 00:10:49,760

uh piece of work done in the world well

275

00:10:52,949 --> 00:10:51,279

there's another risk involved here as

276

00:10:58,710 --> 00:10:52,959

well you're up there for six months

277

00:11:02,550 --> 00:11:00,710

uh it is um

278

00:11:03,910 --> 00:11:02,560

we have pretty good communications that

279

00:11:05,590 --> 00:11:03,920

think of what you and i are doing right

280

00:11:08,470 --> 00:11:05,600

now you know you think about

281

00:11:10,630 --> 00:11:08,480

about uh the stuff that was portrayed on

282

00:11:13,110 --> 00:11:10,640

television 40 years ago

283

00:11:15,110 --> 00:11:13,120

of uh people with a small handheld

284

00:11:17,590 --> 00:11:15,120

device standing on the surface of a

285

00:11:19,269 --> 00:11:17,600

planet talking to someone effortlessly

286

00:11:21,990 --> 00:11:19,279

who's orbiting that planet that's what

287

00:11:23,910 --> 00:11:22,000

you and i are doing right now and so i

288

00:11:25,829 --> 00:11:23,920

can do the same with my friends and

289

00:11:27,670 --> 00:11:25,839

family i can talk to them pretty much

290

00:11:29,110 --> 00:11:27,680

every day and

291

00:11:31,350 --> 00:11:29,120

so it's not that much different than

292

00:11:33,350 --> 00:11:31,360

just being on a long business trip and

293

00:11:35,269 --> 00:11:33,360

and training as an international space

294

00:11:37,509 --> 00:11:35,279

station astronaut takes you all around

295

00:11:39,990 --> 00:11:37,519

the world for years so

296

00:11:42,630 --> 00:11:40,000

in truth it's it's a four or five year

297

00:11:45,430 --> 00:11:42,640

period of which five or six months

298

00:11:47,670 --> 00:11:45,440

you're in orbit but uh with the level of

299

00:11:50,069 --> 00:11:47,680

technology we have right now it removes

300

00:11:52,710 --> 00:11:50,079

a lot of the of the sense of remoteness

301
00:11:56,629 --> 00:11:52,720
to it so it's so it's uh we're busy

302
00:11:57,750 --> 00:11:56,639
happy hard-working and we still that's

303
00:11:59,670 --> 00:11:57,760
that's wonderful to hear chris i'm

304
00:12:01,750 --> 00:11:59,680
getting a little nudging uh that we're

305
00:12:03,829 --> 00:12:01,760
running over time so many questions

306
00:12:06,310 --> 00:12:03,839
about the future of space and and and

307
00:12:08,389 --> 00:12:06,320
the mars mission and all i would look

308
00:12:09,190 --> 00:12:08,399
forward to another time to speak to you

309
00:12:13,990 --> 00:12:09,200
in

310
00:12:16,949 --> 00:12:14,000
larger implications of the questions

311
00:12:20,550 --> 00:12:16,959
that i was uh i've briefly been able to

312
00:12:23,910 --> 00:12:22,150
you know those scenes when you were in

313
00:12:26,230 --> 00:12:23,920

boston legal where at the end of the

314

00:12:29,509 --> 00:12:26,240

show and you sit out sort of on the

315

00:12:32,470 --> 00:12:29,519

veranda or the balcony and maybe over a

316

00:12:34,310 --> 00:12:32,480

a cigar and a whiskey and talk of life

317

00:12:35,670 --> 00:12:34,320

i i you ought to come to my cottage and

318

00:12:38,710 --> 00:12:35,680

sit on a porch i would love the chance

319

00:12:40,550 --> 00:12:38,720

to talk with you about this and

320

00:12:42,310 --> 00:12:40,560

is a fabulous experience northern

321

00:12:46,710 --> 00:12:42,320

ontario is one of my favorite places

322

00:12:49,750 --> 00:12:48,550

yeah we have an ontario cottage and yeah

323

00:12:51,750 --> 00:12:49,760

you ought to come visit it's a great

324

00:12:54,069 --> 00:12:51,760

place to think about the world and watch

325

00:12:56,150 --> 00:12:54,079

satellites go over and uh and really

326

00:12:57,990 --> 00:12:56,160

reflect on where we are

327

00:12:58,870 --> 00:12:58,000

i know we were short on time i know the

328

00:13:00,629 --> 00:12:58,880

area

329

00:13:02,629 --> 00:13:00,639

it's a pleasure chris i look forward to

330

00:13:07,190 --> 00:13:02,639

meeting you in person and sitting down

331

00:13:10,870 --> 00:13:08,629

all right very nice talking with you

332

00:13:14,629 --> 00:13:10,880

thanks very much and uh all the best

333

00:13:18,710 --> 00:13:16,870

station this is houston acr that

334

00:13:20,550 --> 00:13:18,720

concludes your conversation with mr

335

00:13:26,870 --> 00:13:20,560

shatner please stand by for a voice

336

00:13:31,030 --> 00:13:28,949

greetings chris it's jeremy here with

337

00:13:35,670 --> 00:13:31,040

you at the at our home the kane space

338

00:13:39,189 --> 00:13:37,509

jeremy i have you loud i think that yeah

339

00:13:41,350 --> 00:13:39,199

great to hear your voice and hello to

340

00:13:46,069 --> 00:13:41,360

everybody and hello to everybody and

341

00:13:46,079 --> 00:13:55,189

we've got you loud and clear too chris

342

00:13:58,150 --> 00:13:56,949

we've got a number of questions here for

343

00:13:59,670 --> 00:13:58,160

you we're going to get started with that

344

00:14:01,350 --> 00:13:59,680

chris but before we do that i just

345

00:14:03,590 --> 00:14:01,360

wanted to pass along some words on

346

00:14:04,790 --> 00:14:03,600

behalf of the agency we're we're so

347

00:14:06,870 --> 00:14:04,800

incredibly proud of what you've been

348

00:14:08,470 --> 00:14:06,880

doing on behalf of canada up there and

349

00:14:10,710 --> 00:14:08,480

we're following you along every step of

350

00:14:12,069 --> 00:14:10,720

the way so keep up the great work and we

351
00:14:56,790 --> 00:14:12,079
really enjoyed listening to you this

352
00:14:56,800 --> 00:15:50,310
uh

353
00:15:50,320 --> 00:16:00,069
foreign

354
00:16:03,590 --> 00:16:02,230
hi chris this is ryan caverley uh my

355
00:16:06,150 --> 00:16:03,600
question is considering the recent

356
00:16:07,509 --> 00:16:06,160
success of the spacex dragon spacecraft

357
00:16:08,550 --> 00:16:07,519
do you think that the private sector

358
00:16:14,629 --> 00:16:08,560
will play a greater role in the

359
00:16:17,749 --> 00:16:16,230
well that the private sector has always

360
00:16:21,189 --> 00:16:17,759
played the biggest role in canadian

361
00:16:26,550 --> 00:16:23,269
com dev and uh

362
00:16:28,790 --> 00:16:26,560
spar and mdr mda and uh

363
00:16:30,389 --> 00:16:28,800

neptek and all those companies uh

364

00:16:32,150 --> 00:16:30,399

they've always been private sector

365

00:16:34,949 --> 00:16:32,160

companies the real question is who's the

366

00:16:37,110 --> 00:16:34,959

customer and uh to be able to of course

367

00:16:39,269 --> 00:16:37,120

sell at the canadian space agency and

368

00:16:41,430 --> 00:16:39,279

through the government which is the big

369

00:16:43,030 --> 00:16:41,440

uh purchaser in the united states too

370

00:16:45,350 --> 00:16:43,040

where we're headed we're sort of like in

371

00:16:47,030 --> 00:16:45,360

the railroad days building the

372

00:16:49,030 --> 00:16:47,040

trans-canada railway or building the

373

00:16:50,870 --> 00:16:49,040

airports building the infrastructure so

374

00:16:52,470 --> 00:16:50,880

that then businesses can open we're

375

00:16:54,790 --> 00:16:52,480

still in that stage the biggest customer

376

00:16:56,629 --> 00:16:54,800

is still the government but where spacex

377

00:16:58,389 --> 00:16:56,639

is headed where we're all headed that's

378

00:17:00,470 --> 00:16:58,399

where we ought to be going and

379

00:17:03,110 --> 00:17:00,480

eventually of course it will pay off for

380

00:17:04,949 --> 00:17:03,120

canadian private sector even more so but

381

00:17:07,990 --> 00:17:04,959

it's a long process it's not easy to get

382

00:17:08,000 --> 00:17:12,150

okay thank you chris

383

00:17:16,630 --> 00:17:15,270

hi chris i'm rob from toronto um

384

00:17:18,309 --> 00:17:16,640

you've been doing a great job connecting

385

00:17:19,829 --> 00:17:18,319

with a lot of people worldwide through

386

00:17:21,829 --> 00:17:19,839

social media and other means like this

387

00:17:24,069 --> 00:17:21,839

event today what's the number one

388

00:17:31,430 --> 00:17:24,079

message that you really want people to

389

00:17:34,230 --> 00:17:32,789

you know people always ask what's it

390

00:17:36,390 --> 00:17:34,240

like in space and what's your favorite

391

00:17:37,669 --> 00:17:36,400

thing the favorite thing is looking out

392

00:17:39,350 --> 00:17:37,679

the window and that's not just because

393

00:17:41,669 --> 00:17:39,360

it's pretty it's because it's

394

00:17:43,510 --> 00:17:41,679

fundamental to your soul

395

00:17:45,350 --> 00:17:43,520

to see the world this way

396

00:17:47,270 --> 00:17:45,360

to be able to just you know what i was

397

00:17:49,590 --> 00:17:47,280

waiting for this to start you can't help

398

00:17:51,830 --> 00:17:49,600

but go to the window and look and think

399

00:17:54,789 --> 00:17:51,840

about where we are and my fundamental

400

00:17:57,029 --> 00:17:54,799

goal is to get people as best as i can

401
00:18:01,110 --> 00:17:57,039
to be able to see the world that way to

402
00:18:02,870 --> 00:18:01,120
see it as one small place one bubble of

403
00:18:05,029 --> 00:18:02,880
air that keeps us all alive that we're

404
00:18:07,430 --> 00:18:05,039
responsible for and just how close we

405
00:18:09,190 --> 00:18:07,440
are to each other and

406
00:18:11,510 --> 00:18:09,200
it's a perspective that is healthy for

407
00:18:13,510 --> 00:18:11,520
us as a species and it's one that we are

408
00:18:15,430 --> 00:18:13,520
very privileged to see and i'm doing my

409
00:18:19,350 --> 00:18:15,440
very best to let everybody see that as

410
00:18:19,360 --> 00:18:24,150
you're doing a great job of it thank you

411
00:18:27,909 --> 00:18:26,390
hey chris it's uh katrina from the royal

412
00:18:31,270 --> 00:18:27,919
astronomical society of canada we all

413
00:18:32,870 --> 00:18:31,280

say hi um astro yyz here anyway um as an

414

00:18:35,110 --> 00:18:32,880

amateur astronomer i'm interested in

415

00:18:37,510 --> 00:18:35,120

knowing what astronomical objects can be

416

00:18:39,029 --> 00:18:37,520

seen from the iss given you have so many

417

00:18:41,110 --> 00:18:39,039

lights around you lights and machines

418

00:18:43,270 --> 00:18:41,120

and so when you wear dark you can go on

419

00:18:45,750 --> 00:18:43,280

station where you can look out and

420

00:18:51,029 --> 00:18:45,760

really get dark adapted and see what's

421

00:18:54,789 --> 00:18:52,710

yes sort of like a little kid leaving

422

00:18:57,110 --> 00:18:54,799

home most of our glances are back

423

00:18:58,870 --> 00:18:57,120

towards mother earth but we do have

424

00:19:01,190 --> 00:18:58,880

windows that face the rest of the

425

00:19:03,110 --> 00:19:01,200

universe and i spent some time looking

426
00:19:05,029 --> 00:19:03,120
at at some actually yesterday looking

427
00:19:07,029 --> 00:19:05,039
out one yesterday

428
00:19:09,029 --> 00:19:07,039
and remarking on actually just your

429
00:19:12,310 --> 00:19:09,039
question that

430
00:19:13,669 --> 00:19:12,320
the sky is almost white with with the

431
00:19:17,029 --> 00:19:13,679
light of the universe with the

432
00:19:18,870 --> 00:19:17,039
uncountable number of stars but it has a

433
00:19:20,870 --> 00:19:18,880
lot of variation to it even just with

434
00:19:23,590 --> 00:19:20,880
the naked eye when we're in the shade of

435
00:19:26,150 --> 00:19:23,600
the earth so we can really see it

436
00:19:29,190 --> 00:19:26,160
you can see the whole dark sections

437
00:19:30,710 --> 00:19:29,200
where there's dark matter or or dust or

438
00:19:32,310 --> 00:19:30,720

whatever it is that's between us and the

439

00:19:33,990 --> 00:19:32,320

rest of the universe you can see the

440

00:19:36,230 --> 00:19:34,000

gradations of it like looking into the

441

00:19:37,510 --> 00:19:36,240

deepest ocean and you can see very

442

00:19:39,830 --> 00:19:37,520

bright spots you can't see the

443

00:19:42,710 --> 00:19:39,840

constellations because the sky is just

444

00:19:45,510 --> 00:19:42,720

so alive with stars

445

00:19:47,830 --> 00:19:45,520

it turns everyone into an

446

00:19:49,909 --> 00:19:47,840

amateur astronomer to uh to be able to

447

00:19:51,669 --> 00:19:49,919

see the sky this way i i hope you get a

448

00:19:53,669 --> 00:19:51,679

chance someday to come up and just let

449

00:19:57,590 --> 00:19:53,679

it fill your head through your eyeballs

450

00:19:57,600 --> 00:20:02,390

me too thank you

451
00:20:06,390 --> 00:20:04,390
hi chris my name is jennifer nichols i'm

452
00:20:08,149 --> 00:20:06,400
an elementary school teacher and the

453
00:20:10,710 --> 00:20:08,159
question i have for you today is um

454
00:20:12,630 --> 00:20:10,720
being in a position that so much uh

455
00:20:15,029 --> 00:20:12,640
attention is focused in you and you what

456
00:20:16,310 --> 00:20:15,039
you have achieved on your career so far

457
00:20:17,909 --> 00:20:16,320
what message you would like to give to

458
00:20:19,270 --> 00:20:17,919
the people down here or the students

459
00:20:20,310 --> 00:20:19,280
down here that can maybe see their

460
00:20:27,990 --> 00:20:20,320
dreams but don't have the

461
00:20:32,149 --> 00:20:30,149
uh you know i read somewhere once an

462
00:20:34,950 --> 00:20:32,159
interview with sir paul mccartney paul

463
00:20:35,909 --> 00:20:34,960

mccartney of the beatles and he said

464

00:20:37,990 --> 00:20:35,919

that

465

00:20:40,070 --> 00:20:38,000

he feels insecure

466

00:20:43,510 --> 00:20:40,080

sometimes he feels

467

00:20:45,669 --> 00:20:43,520

a lack of confidence sometimes and

468

00:20:47,990 --> 00:20:45,679

he said to himself gosh if i feel that

469

00:20:49,590 --> 00:20:48,000

way everybody must feel that way and i

470

00:20:53,270 --> 00:20:49,600

really took something away from that i

471

00:20:55,110 --> 00:20:53,280

thought if if one of the beatles that uh

472

00:20:57,270 --> 00:20:55,120

occasionally doesn't feel confident

473

00:20:59,909 --> 00:20:57,280

doesn't have self-confidence then that's

474

00:21:03,270 --> 00:20:59,919

universal everybody feels that way

475

00:21:05,750 --> 00:21:03,280

and it's really uh only with

476
00:21:07,669 --> 00:21:05,760
each individual step of accomplishment

477
00:21:09,990 --> 00:21:07,679
that you start to build a sense of

478
00:21:11,669 --> 00:21:10,000
confidence in your own abilities when i

479
00:21:14,549 --> 00:21:11,679
decided to be an astronaut i had

480
00:21:16,630 --> 00:21:14,559
virtually no skills i was nine years old

481
00:21:18,549 --> 00:21:16,640
but i thought hey i'm only nine i'm not

482
00:21:20,230 --> 00:21:18,559
supposed to have very many skills yet

483
00:21:22,230 --> 00:21:20,240
but i'm going to start working on it i

484
00:21:23,590 --> 00:21:22,240
mean i want to someday

485
00:21:25,750 --> 00:21:23,600
live on a space station i want to

486
00:21:27,990 --> 00:21:25,760
command a spaceship what what do i do

487
00:21:29,510 --> 00:21:28,000
how do i get there and so i just

488
00:21:31,270 --> 00:21:29,520

every day started thinking about well

489

00:21:33,750 --> 00:21:31,280

how do i get there what do i have to do

490

00:21:35,270 --> 00:21:33,760

well i need to do well in middle school

491

00:21:37,909 --> 00:21:35,280

i need to do well in high school i need

492

00:21:40,070 --> 00:21:37,919

to understand what's going on i need to

493

00:21:41,909 --> 00:21:40,080

learn to scuba dive i need to not let my

494

00:21:43,750 --> 00:21:41,919

body get fat i need to

495

00:21:45,110 --> 00:21:43,760

decide what i'm going to watch and read

496

00:21:47,990 --> 00:21:45,120

and just start

497

00:21:49,750 --> 00:21:48,000

turning myself into who i want to be and

498

00:21:51,669 --> 00:21:49,760

with each one of those steps learning to

499

00:21:53,750 --> 00:21:51,679

fly through the air cadets

500

00:21:55,990 --> 00:21:53,760

each one of those little levels of

501
00:21:58,470 --> 00:21:56,000
accomplishment i used to race downhill

502
00:21:59,590 --> 00:21:58,480
on various teams with every small

503
00:22:02,230 --> 00:21:59,600
success

504
00:22:04,230 --> 00:22:02,240
comes a little bit of self-confidence in

505
00:22:05,510 --> 00:22:04,240
the things that you can accomplish so

506
00:22:07,510 --> 00:22:05,520
that then when you're faced with a

507
00:22:09,510 --> 00:22:07,520
problem that's new to you you can look

508
00:22:11,270 --> 00:22:09,520
at it and go gosh i don't know how to do

509
00:22:12,789 --> 00:22:11,280
that but i'm pretty sure i'm going to be

510
00:22:15,190 --> 00:22:12,799
able to figure it out

511
00:22:16,470 --> 00:22:15,200
and and i treat everything the same way

512
00:22:18,070 --> 00:22:16,480
whether it's learning to operate a

513
00:22:20,149 --> 00:22:18,080

camera like this one

514

00:22:22,149 --> 00:22:20,159

which i'm not really all that good at

515

00:22:23,830 --> 00:22:22,159

but i've learned well enough to be able

516

00:22:26,470 --> 00:22:23,840

to take some very good looking pictures

517

00:22:27,909 --> 00:22:26,480

of the world or to fly a spaceship

518

00:22:29,990 --> 00:22:27,919

or to uh

519

00:22:31,110 --> 00:22:30,000

i mean tomorrow i'm recording a song

520

00:22:32,789 --> 00:22:31,120

with uh

521

00:22:34,470 --> 00:22:32,799

or playing a song with ed robertson and

522

00:22:36,630 --> 00:22:34,480

the barenaked ladies that's a pretty

523

00:22:39,190 --> 00:22:36,640

daunting thing and those guys are scare

524

00:22:40,870 --> 00:22:39,200

anybody but you practice and you learn

525

00:22:41,909 --> 00:22:40,880

you prepare and you think about it you

526

00:22:44,230 --> 00:22:41,919

visualize

527

00:22:46,070 --> 00:22:44,240

and it's amazing if you just take one

528

00:22:47,350 --> 00:22:46,080

little step of self-improvement at a

529

00:22:48,870 --> 00:22:47,360

time

530

00:22:52,830 --> 00:22:48,880

where it can lead you in and how much

531

00:22:52,840 --> 00:22:56,549

you thank you

532

00:23:01,110 --> 00:22:58,470

hi chris my name is laura austin from

533

00:23:03,510 --> 00:23:01,120

sarnia ontario and i was wondering if

534

00:23:09,510 --> 00:23:03,520

fractures or wounds heal faster in zero

535

00:23:15,750 --> 00:23:13,909

boy i hope we never find out um

536

00:23:17,270 --> 00:23:15,760

you know we're living up here is quite

537

00:23:19,029 --> 00:23:17,280

different it's a very sterile

538

00:23:20,789 --> 00:23:19,039

environment i read somewhere that you're

539

00:23:22,390 --> 00:23:20,799

never more on the surface of the earth

540

00:23:24,630 --> 00:23:22,400

you're never more than 10 feet away from

541

00:23:26,149 --> 00:23:24,640

a spider

542

00:23:28,710 --> 00:23:26,159

just if you count the number of spiders

543

00:23:30,310 --> 00:23:28,720

around but i think on space station

544

00:23:31,909 --> 00:23:30,320

we i don't think i'm

545

00:23:34,070 --> 00:23:31,919

i think the nearest spider is 400

546

00:23:36,710 --> 00:23:34,080

kilometers away we ever live in a very

547

00:23:38,070 --> 00:23:36,720

sterile environment up here and for

548

00:23:40,230 --> 00:23:38,080

whatever reason

549

00:23:42,630 --> 00:23:40,240

it changes our body's physiology not

550

00:23:44,950 --> 00:23:42,640

just bone density and muscle strength

551
00:23:46,950 --> 00:23:44,960
but also our immune system our immune

552
00:23:48,470 --> 00:23:46,960
system tends to depress a little and we

553
00:23:50,230 --> 00:23:48,480
don't load our bones up as heavily

554
00:23:51,830 --> 00:23:50,240
because as you can see everything just

555
00:23:55,269 --> 00:23:51,840
floats i don't even have to hold my head

556
00:23:56,470 --> 00:23:55,279
up my head is floating on top of my neck

557
00:23:58,710 --> 00:23:56,480
so

558
00:24:00,630 --> 00:23:58,720
uh we haven't broken a major bone up

559
00:24:02,549 --> 00:24:00,640
here

560
00:24:05,750 --> 00:24:02,559
but my guess is they would heal more

561
00:24:08,070 --> 00:24:05,760
slowly just because they're not

562
00:24:10,310 --> 00:24:08,080
subject to the all of the

563
00:24:12,230 --> 00:24:10,320

regular stressors that help our bodies

564

00:24:13,990 --> 00:24:12,240

be tough and strong and that we've

565

00:24:16,390 --> 00:24:14,000

evolved to over the last you know

566

00:24:17,990 --> 00:24:16,400

however many million years this is

567

00:24:19,029 --> 00:24:18,000

almost like trying to recover from

568

00:24:20,549 --> 00:24:19,039

something

569

00:24:22,710 --> 00:24:20,559

while you're floating in gelatin or

570

00:24:24,310 --> 00:24:22,720

maybe in on a on a water bed

571

00:24:25,750 --> 00:24:24,320

and even though some things may look

572

00:24:27,110 --> 00:24:25,760

like they're happening quicker whether

573

00:24:29,510 --> 00:24:27,120

they'll get that toughness and that

574

00:24:31,269 --> 00:24:29,520

tenacity and that interwoven strength

575

00:24:33,590 --> 00:24:31,279

that we need in order to stay healthy on

576

00:24:35,750 --> 00:24:33,600

earth i'm not sure but we work really

577

00:24:40,390 --> 00:24:35,760

hard not to have any major wounds or to

578

00:24:40,400 --> 00:24:43,510

thank you

579

00:24:46,630 --> 00:24:45,110

okay chris that's going to be our last

580

00:24:48,070 --> 00:24:46,640

question i think your break is over it's

581

00:24:49,669 --> 00:24:48,080

time for you to get back to work i know

582

00:24:51,909 --> 00:24:49,679

you got a lot to do today

583

00:24:53,830 --> 00:24:51,919

uh one big thank you to you from all of

584

00:24:55,110 --> 00:24:53,840

us here we really appreciate it and

585

00:24:56,310 --> 00:24:55,120

really we only have one other word to

586

00:24:57,990 --> 00:24:56,320

describe what you're doing and that's

587

00:25:01,430 --> 00:24:58,000

amazing all the best to you we'll talk

588

00:25:06,149 --> 00:25:03,350

hey thanks jeremy let me let me just

589

00:25:07,590 --> 00:25:06,159

jump in before people applaud here um

590

00:25:09,029 --> 00:25:07,600

let me just say

591

00:25:11,830 --> 00:25:09,039

that i'm sorry i didn't get to all the

592

00:25:14,070 --> 00:25:11,840

questions if there were more but jeremy

593

00:25:16,710 --> 00:25:14,080

is one of our crew support astronauts

594

00:25:20,230 --> 00:25:16,720

i've known jeremy gosh for

595

00:25:22,230 --> 00:25:20,240

over a decade um he's immensely capable

596

00:25:23,909 --> 00:25:22,240

and qualified and i'm sure he'll be able

597

00:25:26,070 --> 00:25:23,919

to answer your questions and thank you

598

00:25:27,990 --> 00:25:26,080

very much jeremy for coming all the way

599

00:25:30,230 --> 00:25:28,000

up to host today and for taking care of

600

00:25:33,190 --> 00:25:30,240

the visitors to the space agency it's an

601
00:25:35,350 --> 00:25:33,200
amazing place the canadian space agency

602
00:25:37,590 --> 00:25:35,360
it makes this possible

603
00:25:39,029 --> 00:25:37,600
and uh and so we take a lot of pride in

604
00:25:40,789 --> 00:25:39,039
it and have a good look around today

605
00:25:43,110 --> 00:25:40,799
everybody thanks a lot jeremy hi to

606
00:25:53,909 --> 00:25:43,120
everybody at the space agency and i need

607
00:26:02,149 --> 00:25:56,390
station this is houston acr

608
00:26:05,830 --> 00:26:03,590
thank you william shatner and twitter

609
00:26:07,669 --> 00:26:05,840
followers of the canadian space agency