



1
00:00:10,200 --> 00:00:07,480
ah sweet rice family and that beer good

2
00:00:12,820 --> 00:00:10,210
to see you hey welcome aboard everybody

3
00:00:15,009 --> 00:00:12,830
welcome to our little zero-g fantasy

4
00:00:17,679 --> 00:00:15,019
land and it's great to have you guys in

5
00:00:18,370 --> 00:00:17,689
Mission Control yeah we understand

6
00:00:20,050 --> 00:00:18,380
you're gonna provide us some

7
00:00:22,359 --> 00:00:20,060
entertainment this evening you know

8
00:00:24,609 --> 00:00:22,369
that's the flights like need us close

9
00:00:27,309 --> 00:00:24,619
our windows today we can't even look out

10
00:00:30,639 --> 00:00:27,319
the windows all night oh yeah that's

11
00:00:32,380 --> 00:00:30,649
that's right you're guilty so it's good

12
00:00:33,670 --> 00:00:32,390
to see you guys and have somebody to

13
00:00:36,069 --> 00:00:33,680

talk to you on the planet Earth how're

14

00:00:37,720 --> 00:00:36,079

you guys doing we're doing fantastically

15

00:00:40,810 --> 00:00:37,730

we're having an amazing day down here

16

00:00:44,380 --> 00:00:40,820

and all the more exciting for seeing you

17

00:00:50,259 --> 00:00:44,390

guys and I gather we could drums and

18

00:00:52,840 --> 00:00:50,269

guitar loaded up there is that right we

19

00:00:55,660 --> 00:00:52,850

have we don't have Brahms but we have

20

00:00:56,770 --> 00:00:55,670

from stick and we have things to bang on

21

00:00:58,329 --> 00:00:56,780

but I can't tell you what they are

22

00:01:01,270 --> 00:00:58,339

because if I director sitting next to

23

00:01:04,689 --> 00:01:01,280

you again but we do have musical talent

24

00:01:06,790 --> 00:01:04,699

on board first verses like he has almost

25

00:01:10,450 --> 00:01:06,800

a living as a musician as a second life

26

00:01:13,660 --> 00:01:10,460

I love to have the talent to do that but

27

00:01:16,570 --> 00:01:13,670

I don't have it and Tom has it that but

28

00:01:18,820 --> 00:01:16,580

we we all we all share the love of it

29

00:01:21,430 --> 00:01:18,830

and we like seeing you on the ground I'm

30

00:01:23,230 --> 00:01:21,440

gonna look guys is it such a pleasure to

31

00:01:25,150 --> 00:01:23,240

have you on board hopefully we'll get to

32

00:01:26,410 --> 00:01:25,160

spend just a little time and maybe the

33

00:01:29,650 --> 00:01:26,420

kids can have some questions or

34

00:01:32,230 --> 00:01:29,660

something if they want to I can see it's

35

00:01:47,200 --> 00:01:32,240

a Jimi Hendrix eat your heart out right

36

00:01:58,670 --> 00:01:49,550

there you go playing your song way up

37

00:02:11,380 --> 00:01:58,680

here I think I played it in D hopefully

38

00:02:11,390 --> 00:02:36,880

hello hello good to hear your voice

39

00:02:46,060 --> 00:02:38,450

a very nerve

40

00:02:50,300 --> 00:02:47,780

that's okay

41

00:02:53,150 --> 00:02:50,310

if that's right every day you have

42

00:02:55,010 --> 00:02:53,160

backup on TV but it's really nice most

43

00:02:56,510 --> 00:02:55,020

of the time we don't get back to Mission

44

00:02:58,430 --> 00:02:56,520

Control so it's really nice to see you

45

00:03:01,220 --> 00:02:58,440

guys there today and I see you've got a

46

00:03:02,960 --> 00:03:01,230

lot of followers usually special guests

47

00:03:04,730 --> 00:03:02,970

only have one astronaut to escort them

48

00:03:07,550 --> 00:03:04,740

but I'm seeing multiple astronauts in

49

00:03:10,000 --> 00:03:07,560

there today so this they must want to

50

00:03:12,230 --> 00:03:10,010

pay special attention and of course

51
00:03:14,840 --> 00:03:12,240
forceps it's great always great to have

52
00:03:16,580 --> 00:03:14,850
people come visit Mission Control we

53
00:03:19,310 --> 00:03:16,590
know you come from kind of from a

54
00:03:22,550 --> 00:03:19,320
different world and we in the technical

55
00:03:24,980 --> 00:03:22,560
world and at NASA really even even

56
00:03:26,600 --> 00:03:24,990
though even though we spend most of our

57
00:03:28,250 --> 00:03:26,610
time and technical pursuits we do

58
00:03:29,990 --> 00:03:28,260
appreciate now what you're all about and

59
00:03:33,200 --> 00:03:30,000
what you do well we really appreciate

60
00:03:37,220 --> 00:03:33,210
what you guys are doing and it's it's

61
00:03:42,559 --> 00:03:37,230
very exciting for us so yep thank you so

62
00:03:47,089 --> 00:03:45,229
yes you bet we can do some astronaut

63
00:03:48,649 --> 00:03:47,099

tricks for you and you guys could use

64

00:03:50,270 --> 00:03:48,659

some tricks there stand up on top of the

65

00:03:56,220 --> 00:03:50,280

console and do a back flip do something

66

00:03:56,230 --> 00:04:01,610

very cool

67

00:04:11,220 --> 00:04:03,950

i'ma gather you record

68

00:04:17,430 --> 00:04:15,210

actually yeah a couple my brother and I

69

00:04:19,920 --> 00:04:17,440

wrote a space Christmas Carol called

70

00:04:22,830 --> 00:04:19,930

jewel in the night and it was released

71

00:04:25,320 --> 00:04:22,840

just before Christmas and then with the

72

00:04:27,360 --> 00:04:25,330

Canadian band called the Barenaked

73

00:04:29,400 --> 00:04:27,370

Ladies we recorded a school a song

74

00:04:31,560 --> 00:04:29,410

that's being used in schools all across

75

00:04:35,370 --> 00:04:31,570

Canada with the Coalition for music

76
00:04:37,020 --> 00:04:35,380
education song called ISS is somebody

77
00:04:39,060 --> 00:04:37,030
singing and it came out really nicely

78
00:04:41,219 --> 00:04:39,070
was just released I think last week and

79
00:04:44,400 --> 00:04:41,229
we're really proud of it where it's

80
00:04:46,770 --> 00:04:44,410
lovely to be able to tie the newness of

81
00:04:48,540 --> 00:04:46,780
this experience with the the long

82
00:04:50,279 --> 00:04:48,550
tradition and love of music on earth and

83
00:04:51,420 --> 00:04:50,289
it's just natural but it's really

84
00:04:54,029 --> 00:04:51,430
beautiful when it happens

85
00:05:01,620 --> 00:04:54,039
sounds fantastic I look forward to

86
00:05:04,920 --> 00:05:03,030
alright well they're treating you well

87
00:05:07,830 --> 00:05:04,930
down there what else you got beep oh

88
00:05:09,390 --> 00:05:07,840

yeah no we have to keep the youngest of

89

00:05:13,770 --> 00:05:09,400

our clan here

90

00:05:16,320 --> 00:05:13,780

well-fed but he's doing very well and

91

00:05:17,700 --> 00:05:16,330

we've been fed and and look I think

92

00:05:33,579 --> 00:05:17,710

Luke's just showing off what we're

93

00:05:37,979 --> 00:05:36,239

we just wanted to ask I think it's

94

00:05:41,279 --> 00:05:37,989

interested in scuba diving before you

95

00:05:46,319 --> 00:05:41,289

did your training if you had in any

96

00:05:50,600 --> 00:05:46,329

divers interested in in diving a marine

97

00:05:55,459 --> 00:05:53,540

as a matter of fact yes you know we love

98

00:05:57,679 --> 00:05:55,469

exploration we love going places where

99

00:05:59,809 --> 00:05:57,689

humans don't usually go and it takes a

100

00:06:01,550 --> 00:05:59,819

little bit of technology and a little

101
00:06:03,529 --> 00:06:01,560
special training to go there as a matter

102
00:06:05,360 --> 00:06:03,539
of fact at Phil's and I when we started

103
00:06:07,640 --> 00:06:05,370
training for this mission two and a half

104
00:06:10,399 --> 00:06:07,650
feet almost three years ago we started

105
00:06:12,050 --> 00:06:10,409
off on a scuba trip we lived underwater

106
00:06:14,779 --> 00:06:12,060
in a laboratory on the bottom of the

107
00:06:19,119 --> 00:06:14,789
ocean for two weeks and we left the

108
00:06:21,409 --> 00:06:19,129
habitat with our deep-sea suits on and

109
00:06:24,740 --> 00:06:21,419
did some research and did some

110
00:06:26,929 --> 00:06:24,750
exploration down there so the two are

111
00:06:28,640 --> 00:06:26,939
very similar in a lot of ways living in

112
00:06:30,200 --> 00:06:28,650
little modules and tight spaces but

113
00:06:32,089 --> 00:06:30,210

seeing absolutely incredible and

114

00:06:34,879 --> 00:06:32,099

beautiful things that are very rare just

115

00:06:37,189 --> 00:06:34,889

to have a chance to see so yeah I think

116

00:06:40,519 --> 00:06:37,199

for most astronauts scuba diving is very

117

00:06:45,279 --> 00:06:40,529

much a part of their past and is a is a

118

00:06:51,180 --> 00:06:45,289

love that many of them have fantastic

119

00:06:53,040 --> 00:06:51,190

and for Dwayne is that Kevin

120

00:06:56,370 --> 00:06:53,050

because no I used to spend quite a long

121

00:06:59,370 --> 00:06:56,380

time in full when and we had a promoter

122

00:07:00,810 --> 00:06:59,380

from full Wayne and so I think they

123

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

would book us when no one else was

124

00:07:11,160 --> 00:07:08,600

well the truth is I just got off of

125

00:07:13,410 --> 00:07:11,170

talking to a school at Fort Wayne

126
00:07:15,810 --> 00:07:13,420
tonight and my sister lives there and

127
00:07:17,400 --> 00:07:15,820
she supplied me with this shirt so I I

128
00:07:19,710 --> 00:07:17,410
knew I would be in trouble when I went

129
00:07:21,210 --> 00:07:19,720
back when it if I didn't show up or at

130
00:07:23,580 --> 00:07:21,220
least part of the event in this four way

131
00:07:24,900 --> 00:07:23,590
in t-shirts and so I just finished that

132
00:07:26,490 --> 00:07:24,910
and we were just having a bite when we

133
00:07:28,890 --> 00:07:26,500
got called at you're in Mission Control

134
00:07:31,440 --> 00:07:28,900
so that's why we just didn't that with

135
00:07:32,970 --> 00:07:31,450
we usually dress up just a little bit

136
00:07:35,580 --> 00:07:32,980
more for the events tonight we're kind

137
00:07:37,650 --> 00:07:35,590
of heading toward bed in about an hour

138
00:07:39,270 --> 00:07:37,660

we'd burn in and everything has to be

139

00:07:41,610 --> 00:07:39,280

quite on the space station tonight for a

140

00:07:44,010 --> 00:07:41,620

very special experiment going on where

141

00:07:46,620 --> 00:07:44,020

we have to be really careful so we're

142

00:07:48,900 --> 00:07:46,630

just kind of in our wind down this once

143

00:07:51,090 --> 00:07:48,910

yeah this is this is called Space

144

00:07:53,370 --> 00:07:51,100

Station casual right here it's very

145

00:07:59,820 --> 00:07:53,380

elegant what's the what's the experiment

146

00:08:04,860 --> 00:08:02,070

it's called Baron goñi and what it is

147

00:08:07,740 --> 00:08:04,870

actually is a liquid bridge so what they

148

00:08:09,719 --> 00:08:07,750

do is actually make a tube-like

149

00:08:12,510 --> 00:08:09,729

structure made of liquid something you

150

00:08:15,600 --> 00:08:12,520

absolutely cannot do on the ground you

151

00:08:17,279 --> 00:08:15,610

need two very very fine zero gravity to

152

00:08:19,439 --> 00:08:17,289

do it and then they apply a temperature

153

00:08:20,909 --> 00:08:19,449

gradient across it so basically what

154

00:08:23,159 --> 00:08:20,919

this is doing is looking at fluid

155

00:08:25,499 --> 00:08:23,169

physics things you can only talk about

156

00:08:29,070 --> 00:08:25,509

in a physics textbook they're actually

157

00:08:31,110 --> 00:08:29,080

looking at it and studying it and able

158

00:08:33,029 --> 00:08:31,120

to determine exactly how the fluid and

159

00:08:34,829 --> 00:08:33,039

the temperature differences behave and

160

00:08:36,779 --> 00:08:34,839

in some ways you know discovering new

161

00:08:37,920 --> 00:08:36,789

physical principles based on that you

162

00:08:39,600 --> 00:08:37,930

know we don't have to guess anymore they

163

00:08:54,570 --> 00:08:39,610

can actually find out what it's like up

164

00:08:59,620 --> 00:08:57,100

well we think what you

165

00:09:01,139 --> 00:08:59,630

yup this is amazing and it's wonderful

166

00:09:07,269 --> 00:09:01,149

to see people from so many countries

167

00:09:12,800 --> 00:09:07,279

involved and we feel very honored to be

168

00:09:17,660 --> 00:09:15,440

well it was it was great but and it is

169

00:09:20,030 --> 00:09:17,670

that the big thanks to all the countries

170

00:09:21,650 --> 00:09:20,040

who take the time to do this thumbs

171

00:09:23,180 --> 00:09:21,660

blonde and getting boys to play with

172

00:09:24,830 --> 00:09:23,190

here they're all coming coming this way

173

00:09:26,960 --> 00:09:24,840

some of it's a little dangerous these

174

00:09:28,760 --> 00:09:26,970

all toys could fly apart and suspect

175

00:09:31,160 --> 00:09:28,770

guys a lot of having their take close

176

00:09:33,020 --> 00:09:31,170

with great big bill so just in case but

177

00:09:35,600 --> 00:09:33,030

anyway yeah all the all the countries

178

00:09:38,330 --> 00:09:35,610

participating in this thing I think it's

179

00:09:39,680 --> 00:09:38,340

just a wonderful thing that bad 15 of

180

00:09:40,910 --> 00:09:39,690

the most affluent countries got together

181

00:09:42,620 --> 00:09:40,920

and said you know what we're going to do

182

00:09:44,000 --> 00:09:42,630

something for people 100 years from now

183

00:09:45,620 --> 00:09:44,010

some of this stuff

184

00:09:48,140 --> 00:09:45,630

well maybe we may not see it in five

185

00:09:49,550 --> 00:09:48,150

years might not see it in 50 years but a

186

00:09:50,420 --> 00:09:49,560

hundred years from now what we're doing

187

00:09:53,420 --> 00:09:50,430

today I think it's going to make a

188

00:09:56,390 --> 00:09:53,430

difference so we are very lucky yep

189

00:09:58,010 --> 00:09:56,400

they're very very lucky to be up here we

190

00:10:00,890 --> 00:09:58,020

wish everybody could come and spend some

191

00:10:03,200 --> 00:10:00,900

time up here and we have to get there

192

00:10:04,640 --> 00:10:03,210

with you today one of these days baby

193

00:10:06,740 --> 00:10:04,650

those those kids sitting right down

194

00:10:08,870 --> 00:10:06,750

there will get to make the trip I do I

195

00:10:11,600 --> 00:10:08,880

really do hope they can if they want to

196

00:10:13,580 --> 00:10:11,610

and see what this is all about it's a

197

00:10:14,960 --> 00:10:13,590

it's a it's a wonderful place and there

198

00:10:16,490 --> 00:10:14,970

are a lot of people on the grounds that

199

00:10:18,350 --> 00:10:16,500

put their hearts and souls and lives

200

00:10:19,730 --> 00:10:18,360

into it and it's it's going to make a

201
00:10:20,360 --> 00:10:19,740
difference someday to those future

202
00:10:21,680 --> 00:10:20,370
generations

203
00:10:23,840 --> 00:10:21,690
once we're seeing on the screen right

204
00:10:27,410 --> 00:10:23,850
there so great life is a great pleasure

205
00:10:30,079 --> 00:10:27,420
for us this opportunity and thank you so

206
00:10:32,300 --> 00:10:30,089
much and best of luck to all of you for

207
00:10:39,260 --> 00:10:32,310
the rest of your time up there and safe

208
00:10:43,810 --> 00:10:39,270
travels back thank you so much thank you

209
00:10:48,640 --> 00:10:46,000
bye-bye to all of you it's great to hear

210
00:10:50,650 --> 00:10:48,650
your voices have a great day he has a

211
00:10:51,970 --> 00:10:50,660
better now what the planet Earth - can't