



Show 99 - 10. Sept. 2010

www.skepticzone.tv

1
00:00:20,360 --> 00:00:09,520
welcome to the skeptic zone the podcast

2
00:00:25,370 --> 00:00:22,910
and welcome to the skeptics on an

3
00:00:27,790 --> 00:00:25,380
episode 99 for the tenth of sep tember

4
00:00:30,620 --> 00:00:27,800
2010 Richard Saunders here with you

5
00:00:33,230 --> 00:00:30,630
sitting at the most wonderfully

6
00:00:35,330 --> 00:00:33,240
beautiful spectacularly picturesque Lake

7
00:00:37,640 --> 00:00:35,340
up here in the Rocky Mountains I'm with

8
00:00:39,650 --> 00:00:37,650
my good friend you know him is the bad

9
00:00:44,770 --> 00:00:39,660
astronomer dr. Phil Plait hi Phil good

10
00:00:47,930 --> 00:00:44,780
day today where exactly are we we're a

11
00:00:52,100 --> 00:00:47,940
black lake which is in Rocky Mountain

12
00:00:53,390 --> 00:00:52,110
National Park in Colorado and it's if

13
00:00:56,329 --> 00:00:53,400

you know where Denver is if you look on

14

00:01:00,200 --> 00:00:56,339

a map you drive north about 0 100

15

00:01:01,640 --> 00:01:00,210

kilometers and then turn left and that

16

00:01:03,110 --> 00:01:01,650

takes you under the Rocky Mountains and

17

00:01:07,790 --> 00:01:03,120

these are magnificent peaks and they

18

00:01:09,920 --> 00:01:07,800

they top off it Oh 4,000 meters 4,500

19

00:01:12,230 --> 00:01:09,930

meters there they're pretty high up and

20

00:01:14,240 --> 00:01:12,240

so are we yeah we're up we're up about

21

00:01:15,950 --> 00:01:14,250

3,000 meters the air is noticeably

22

00:01:18,920 --> 00:01:15,960

thinner here's Richard and I are both

23

00:01:22,250 --> 00:01:18,930

struggling a little bit the trails

24

00:01:24,500 --> 00:01:22,260

aren't too bad but walking up hills you

25

00:01:27,610 --> 00:01:24,510

know you get to the top you know you're

26

00:01:31,010 --> 00:01:27,620

in thinner air yeah but for the for the

27

00:01:33,470 --> 00:01:31,020

views from one to land on by they just

28

00:01:35,690 --> 00:01:33,480

and the day is beautiful it's still

29

00:01:38,420 --> 00:01:35,700

there are scattered clouds the sun comes

30

00:01:40,640 --> 00:01:38,430

out and it just can't get much better

31

00:01:43,070 --> 00:01:40,650

than this yeah we've got some wildlife

32

00:01:44,870 --> 00:01:43,080

sitting right next to us yeah some

33

00:01:46,370 --> 00:01:44,880

squirrels and chipmunks and some

34

00:01:48,410 --> 00:01:46,380

interesting birds flying around it's

35

00:01:52,310 --> 00:01:48,420

really gorgeous here I don't get here

36

00:01:54,140 --> 00:01:52,320

enough no missing with me well coming up

37

00:01:56,710 --> 00:01:54,150

on this week's episode of the skeptic

38

00:02:00,380 --> 00:01:56,720

zone we have a special report from

39

00:02:02,690 --> 00:02:00,390

dragoncon dragoncon Atlanta Georgia a

40

00:02:04,160 --> 00:02:02,700

bit about overview of dragoncon

41

00:02:06,320 --> 00:02:04,170

interviewing lots of people here in

42

00:02:08,779 --> 00:02:06,330

there and that's followed by dr. Richie

43

00:02:12,050 --> 00:02:08,789

reports where she's reporting live from

44

00:02:15,979 --> 00:02:12,060

the vaccinations booth at dragoncon the

45

00:02:17,630 --> 00:02:15,989

skeptic set up a booster room and lots

46

00:02:20,420 --> 00:02:17,640

of people came in we'll hear more about

47

00:02:23,059 --> 00:02:20,430

that later as what is that that's a

48

00:02:30,319 --> 00:02:23,069

golden mental swirl I think that's ago

49

00:02:32,179 --> 00:02:30,329

look at me or label that thing is Wow it

50

00:02:33,420 --> 00:02:32,189

just ran right past that's too good to

51

00:02:36,089 --> 00:02:33,430

be true as it could have passed

52

00:02:39,300 --> 00:02:36,099

we have been well wipe it with why Phil

53

00:02:42,179 --> 00:02:39,310

and I catch our breath uh and have

54

00:02:46,470 --> 00:02:42,189

another sip of water what was that don't

55

00:02:48,539 --> 00:02:46,480

fall my my wife is uh with at the edge

56

00:02:50,520 --> 00:02:48,549

of this lake it flows into a stream and

57

00:02:53,520 --> 00:02:50,530

it makes beautiful waterfalls down the

58

00:02:59,220 --> 00:02:53,530

hill but there's a lot of from a lot of

59

00:03:03,000 --> 00:02:59,230

fallen don't you see why there's like a

60

00:03:04,890 --> 00:03:03,010

30 x 10 meter pile of dead bed one dead

61

00:03:07,199 --> 00:03:04,900

wood pine and aspen and i'm not sure

62

00:03:08,970 --> 00:03:07,209

what else and it's all she's kind of d

63

00:03:11,039 --> 00:03:08,980

barked and bleached in the Sun it's

64

00:03:13,170 --> 00:03:11,049

clearly been here for decades and she's

65

00:03:16,199 --> 00:03:13,180

scrambling over it well I feel and I

66

00:03:18,119 --> 00:03:16,209

actually go and rescue well we'll let

67

00:03:36,110 --> 00:03:18,129

you listen to this episode of the

68

00:03:43,680 --> 00:03:40,890

dragon con 2010 was held from the third

69

00:03:46,470 --> 00:03:43,690

to the sixth of the September in Atlanta

70

00:03:49,140 --> 00:03:46,480

Georgia it's the largest multimedia

71

00:03:51,630 --> 00:03:49,150

popular culture convention focusing on

72

00:03:56,190 --> 00:03:51,640

science fiction and fantasy gaming

73

00:03:59,520 --> 00:03:56,200

comics literature art music film and of

74

00:04:02,640 --> 00:03:59,530

course skepticism it was the pleasure of

75

00:04:04,830 --> 00:04:02,650

the skeptic zone to once again take part

76

00:04:06,960 --> 00:04:04,840

in Dragon Con as we've done now for

77

00:04:10,670 --> 00:04:06,970

three years and we pick up the story

78

00:04:19,179 --> 00:04:10,680

with me wandering about one of the mega

79

00:04:25,040 --> 00:04:22,219

I'm speaking to you from level 2 of the

80

00:04:28,219 --> 00:04:25,050

hilton hotel atlanta georgia where it's

81

00:04:31,939 --> 00:04:28,229

day 3 of dragoncon the great science

82

00:04:34,450 --> 00:04:31,949

fiction and fantasy convention my

83

00:04:37,999 --> 00:04:34,460

vantage point here i can overlook the

84

00:04:39,879 --> 00:04:38,009

lobby the main floor area where where

85

00:04:42,439 --> 00:04:39,889

hundreds of people are milling about i

86

00:04:44,719 --> 00:04:42,449

walk over to my left a little bit

87

00:04:47,270 --> 00:04:44,729

there's a sky bridge which connects this

88

00:04:51,999 --> 00:04:47,280

hotel to the marriott which is a

89

00:04:55,580 --> 00:04:52,009

constant stream of characters dressed up

90

00:04:59,839 --> 00:04:55,590

and see if we can spot some we've got

91

00:05:01,040 --> 00:04:59,849

three schoolgirls coming along I don't

92

00:05:02,869 --> 00:05:01,050

know what they're from maybe Harry

93

00:05:06,379 --> 00:05:02,879

Potter followed by some sort of and

94

00:05:07,850 --> 00:05:06,389

which and I looked over to my right eye

95

00:05:10,610 --> 00:05:07,860

can see somebody dressed up in the

96

00:05:13,659 --> 00:05:10,620

amazing steampunk outfit which is sort

97

00:05:17,800 --> 00:05:13,669

of like the Wild West meets technology

98

00:05:20,689 --> 00:05:17,810

lady with bright green hair followed by

99

00:05:25,070 --> 00:05:20,699

poison ivy from batman with a long red

100

00:05:27,890 --> 00:05:25,080

hair and green ivy we've got a sort of a

101
00:05:31,219 --> 00:05:27,900
New York cop complete with coffee

102
00:05:34,210 --> 00:05:31,229
stained trench coat last night I saw

103
00:05:39,260 --> 00:05:34,220
Darth Vader a couple of

104
00:05:42,950 --> 00:05:39,270
stormtroopers following I walk over ask

105
00:05:45,200 --> 00:05:42,960
the elevator shaft with its constantly

106
00:05:48,530 --> 00:05:45,210
packed elevators full of all sorts of

107
00:05:51,350 --> 00:05:48,540
characters sometimes it's quite a wait

108
00:05:55,250 --> 00:05:51,360
more steampunk people there's a little

109
00:05:58,970 --> 00:05:55,260
ferry over here with a long cape and I'm

110
00:06:02,810 --> 00:05:58,980
entering one of the main subsections

111
00:06:04,940 --> 00:06:02,820
here we have the walk of fame which is

112
00:06:08,960 --> 00:06:04,950
where all the celebrities hang out to

113
00:06:13,100 --> 00:06:08,970

get to meet people on my right is the I

114

00:06:17,750 --> 00:06:13,110

Dream of Jeannie room barbara eden Larry

115

00:06:19,940 --> 00:06:17,760

Hagman and William Daley who played the

116

00:06:22,670 --> 00:06:19,950

characters and I Dream of Jeannie are

117

00:06:24,260 --> 00:06:22,680

all there it's on my right if I walk

118

00:06:29,690 --> 00:06:24,270

over to my left it's the grand ballroom

119

00:06:33,110 --> 00:06:29,700

with all the stars past and present this

120

00:06:36,290 --> 00:06:33,120

is where the skeptic table is astronomy

121

00:06:38,750 --> 00:06:36,300

cast table the Center for inquiry are

122

00:06:41,010 --> 00:06:38,760

here just outside surly Amy the

123

00:06:43,230 --> 00:06:41,020

wonderful things

124

00:06:46,080 --> 00:06:43,240

so now I'm entering the Grand Ballroom

125

00:06:47,879 --> 00:06:46,090

as I did last year in here before to my

126

00:06:49,890 --> 00:06:47,889

right a lot of the characters from Star

127

00:06:55,080 --> 00:06:49,900

Trek The Next Generation we've got Brent

128

00:06:58,830 --> 00:06:55,090

Spinner LeVar Burton some people I don't

129

00:07:01,339 --> 00:06:58,840

know lots of people I don't know I guess

130

00:07:04,619 --> 00:07:01,349

they're stars of other TV shows and

131

00:07:06,540 --> 00:07:04,629

comic books or I don't not sure Peter

132

00:07:09,240 --> 00:07:06,550

Mayhew he's here he's the guy who paid

133

00:07:15,600 --> 00:07:09,250

Chewbacca the Wookiee and the Star Wars

134

00:07:19,680 --> 00:07:15,610

serious lots of lots of fans coming to

135

00:07:23,700 --> 00:07:19,690

meet their heroes Futurama table is the

136

00:07:27,939 --> 00:07:23,710

man over there really West who does a

137

00:07:38,779 --> 00:07:33,439

so I walk around the room who else is

138

00:07:43,339 --> 00:07:38,789

here Virginia hey from farscape she's an

139

00:07:46,600 --> 00:07:43,349

Australian Fraser Hines who played Jamie

140

00:07:52,689 --> 00:07:49,779

having a bite to eat lots of people

141

00:07:56,020 --> 00:07:52,699

milling about more Star Trek characters

142

00:07:59,540 --> 00:07:56,030

in this section of the room Jonathan

143

00:08:04,340 --> 00:07:59,550

Franks who played William Riker is here

144

00:08:09,370 --> 00:08:04,350

huge rod from buck rogers who else do we

145

00:08:14,440 --> 00:08:12,490

more fans milling about a couple of

146

00:08:18,910 --> 00:08:14,450

people from lost in space the original

147

00:08:21,430 --> 00:08:18,920

lost in space Marta Kristin and Mark got

148

00:08:25,570 --> 00:08:21,440

out who played major West mother Kristin

149

00:08:28,450 --> 00:08:25,580

played Judy Robinson don't see them that

150

00:08:31,660 --> 00:08:28,460

their names are here anyway Avery Brooks

151
00:08:33,820 --> 00:08:31,670
Captain Sisko forearm Deep Space nine as

152
00:08:36,310 --> 00:08:33,830
I passed three people dressed up as

153
00:08:38,080 --> 00:08:36,320
various Doctor Who characters this gives

154
00:08:40,779 --> 00:08:38,090
fans the opportunity not only to buy

155
00:08:43,750 --> 00:08:40,789
autograph see it simply to come up and

156
00:08:47,170 --> 00:08:43,760
just chat with their with their favorite

157
00:08:49,450 --> 00:08:47,180
celebrity which is really cool in fact

158
00:08:51,460 --> 00:08:49,460
avery brooks who played Captain Sisko is

159
00:08:54,010 --> 00:08:51,470
simply just chatting to a couple of

160
00:08:58,270 --> 00:08:54,020
people so I'll just leave the Grand

161
00:09:03,730 --> 00:08:58,280
Ballroom of all its celebrities come

162
00:09:07,600 --> 00:09:03,740
back out to the chamber outside where

163
00:09:10,420 --> 00:09:07,610

we've got the skeptic table with lots of

164

00:09:12,460 --> 00:09:10,430

magazines sort of skeptic magazines and

165

00:09:14,290 --> 00:09:12,470

books by Michael Shermer and this sort

166

00:09:19,090 --> 00:09:14,300

of thing and there's some strange dude

167

00:09:23,350 --> 00:09:19,100

it's dr. atlantis hi good afternoon in

168

00:09:25,930 --> 00:09:23,360

australia wacko wacko he's rubbing it in

169

00:09:28,450 --> 00:09:25,940

because i slept in today dr. atlantis

170

00:09:30,040 --> 00:09:28,460

from the monster talk podcast correct

171

00:09:32,800 --> 00:09:30,050

that's correct and you're from what

172

00:09:34,210 --> 00:09:32,810

skeptic zap is that is that yeah that's

173

00:09:36,700 --> 00:09:34,220

close enough

174

00:09:40,960 --> 00:09:36,710

how is your convention going it's been

175

00:09:44,470 --> 00:09:40,970

fantastic well and it's just been very

176

00:09:46,450 --> 00:09:44,480

rewarding I got a stoned with Brian

177

00:09:47,890 --> 00:09:46,460

Dunning no no I saw some stones when

178

00:09:49,830 --> 00:09:47,900

Brian dunny that's what it was I'm a

179

00:09:52,630 --> 00:09:49,840

little confused it's really early here

180

00:09:54,760 --> 00:09:52,640

well it's noon but it's early for a

181

00:10:00,150 --> 00:09:54,770

convention so yeah it's been fun so

182

00:10:04,199 --> 00:10:02,430

I better let him get back to the the

183

00:10:08,329 --> 00:10:04,209

queue of people who formed to ask him

184

00:10:11,960 --> 00:10:10,460

what what is seen it's hard to describe

185

00:10:16,579 --> 00:10:11,970

where's wally is over there a couple

186

00:10:18,920 --> 00:10:16,589

more witches over there next to him more

187

00:10:22,369 --> 00:10:18,930

steampunk steampunk is very popular very

188

00:10:27,139 --> 00:10:22,379

popular indeed and so many people

189

00:10:29,900 --> 00:10:27,149

dressed up as characters from comic

190

00:10:31,999 --> 00:10:29,910

books or TV shows or movies I haven't

191

00:10:33,439 --> 00:10:32,009

ever seen I have no clue they're wearing

192

00:10:38,869 --> 00:10:33,449

funny stripes and this that and the

193

00:10:42,710 --> 00:10:38,879

other and we're all left guessing what

194

00:10:47,199 --> 00:10:42,720

they are or what they represent as I

195

00:10:51,110 --> 00:10:47,209

walk back across the elevator shaft I'm

196

00:10:54,439 --> 00:10:51,120

just now outside the skeptics room the

197

00:10:57,379 --> 00:10:54,449

skip track room which has some talks

198

00:10:59,569 --> 00:10:57,389

going on at the moment walk past those

199

00:11:01,869 --> 00:10:59,579

we have other rooms for other tracks as

200

00:11:06,100 --> 00:11:01,879

they call them there's a science track

201
00:11:10,810 --> 00:11:08,470
skeptical room i'm pleased to say takes up

202
00:11:13,000 --> 00:11:10,820
three separate rooms all sort of merged

203
00:11:15,160 --> 00:11:13,010
together they took the barriers down

204
00:11:19,100 --> 00:11:15,170
right down the escalators let's see what

205
00:11:27,420 --> 00:11:23,090
there's super girl superwoman super girl

206
00:11:34,650 --> 00:11:30,389
it's about a noon so people are grabbing

207
00:11:38,010 --> 00:11:34,660
some lunch now I'm down right in the

208
00:11:39,950 --> 00:11:38,020
lowest section well I should say a lower

209
00:11:42,990 --> 00:11:39,960
section there are lower sections with

210
00:11:45,930 --> 00:11:43,000
gamers playing Dungeons and Dragons and

211
00:11:49,710 --> 00:11:45,940
all sorts of things it's a constant

212
00:11:51,630 --> 00:11:49,720
parade dragoncon almost 24 hours a day

213
00:11:55,440 --> 00:11:51,640

well it was a constant parade last night

214

00:11:59,769 --> 00:11:55,450

and three o'clock in the morning if you

215

00:12:06,699 --> 00:12:04,989

well dragon confer for the skeptic zone

216

00:12:10,030 --> 00:12:06,709

means a chance to catch up with our

217

00:12:12,100 --> 00:12:10,040

colleagues more or less i think take

218

00:12:14,530 --> 00:12:12,110

part in panels and talks which or which

219

00:12:16,540 --> 00:12:14,540

rachel kylie and i have been doing so

220

00:12:20,110 --> 00:12:16,550

far and we've had our skeptic zone life

221

00:12:24,400 --> 00:12:20,120

a little bit later today and a chance

222

00:12:26,949 --> 00:12:24,410

for a chance for listeners to the

223

00:12:28,480 --> 00:12:26,959

skeptic zone from united states to come

224

00:12:31,989 --> 00:12:28,490

up and say hi to us which is really

225

00:12:36,140 --> 00:12:31,999

really a lot of fun well there goes our

226

00:12:40,180 --> 00:12:36,150

Klingon scare

227

00:12:40,190 --> 00:12:50,130

very tiring kids none stop believe me

228

00:12:55,390 --> 00:12:52,630

and what are the fabulous people we bump

229

00:12:58,180 --> 00:12:55,400

into here is yes grinning like a

230

00:13:01,660 --> 00:12:58,190

Cheshire cat it's Tracy king hello hello

231

00:13:04,450 --> 00:13:01,670

sir hello now you you seem to be always

232

00:13:06,460 --> 00:13:04,460

bobbing up at these events yeah I can't

233

00:13:08,260 --> 00:13:06,470

understand why I'm not gonna pull in a

234

00:13:10,030 --> 00:13:08,270

barrel I like a rotten apple in a barrel

235

00:13:11,230 --> 00:13:10,040

I always probably this isn't even on is

236

00:13:13,770 --> 00:13:11,240

it this is just you're just showing up

237

00:13:16,690 --> 00:13:13,780

in to scale acum look at my iphone it on

238

00:13:19,150 --> 00:13:16,700

um well I'm here I'm here and I'm doing

239

00:13:21,100 --> 00:13:19,160

duties here yes I'm not just your

240

00:13:23,470 --> 00:13:21,110

regular guy yes now tell us about Tam

241

00:13:26,020 --> 00:13:23,480

London this is very exciting it is very

242

00:13:27,280 --> 00:13:26,030

exciting because it last year was the

243

00:13:28,870 --> 00:13:27,290

first one and we didn't know how that

244

00:13:30,760 --> 00:13:28,880

will go anytime that's a huge success so

245

00:13:33,160 --> 00:13:30,770

this year we've managed to kind of come

246

00:13:35,680 --> 00:13:33,170

back twice the size and twice as amazing

247

00:13:37,990 --> 00:13:35,690

and we've got the most ridiculous lineup

248

00:13:40,060 --> 00:13:38,000

of speakers that's kind of nothing else

249

00:13:41,650 --> 00:13:40,070

like it I think it skepticism suits

250

00:13:42,940 --> 00:13:41,660

because it's a bit more mainstream than

251
00:13:44,380 --> 00:13:42,950
usual it's not you know I mean there are

252
00:13:46,840 --> 00:13:44,390
incredible skeptical speakers there but

253
00:13:49,270 --> 00:13:46,850
also people who you know are skeptical

254
00:13:51,880 --> 00:13:49,280
people like Stephen Fry and Graham

255
00:13:53,320 --> 00:13:51,890
Linehan who does father ted and black

256
00:13:55,090 --> 00:13:53,330
books and IT Crowd you know those guys

257
00:13:56,770 --> 00:13:55,100
are skeptical from the output don't

258
00:13:57,880 --> 00:13:56,780
usually do skeptical events so it's

259
00:14:01,630 --> 00:13:57,890
really great to be able to kind of bring

260
00:14:04,540 --> 00:14:01,640
mainstream speakers and then tam

261
00:14:06,730 --> 00:14:04,550
Australia yes what's that gonna be like

262
00:14:10,900 --> 00:14:06,740
I can't imagine no side down and

263
00:14:13,450 --> 00:14:10,910

everything you've never had that before

264

00:14:16,150 --> 00:14:13,460

but I'll strain listeners will write you

265

00:14:17,710 --> 00:14:16,160

naughty you know I don't know if we get

266

00:14:20,320 --> 00:14:17,720

that all the time now that's very

267

00:14:22,170 --> 00:14:20,330

exciting for everybody yes I'm very much

268

00:14:24,550 --> 00:14:22,180

looking forward to that and obviously

269

00:14:26,800 --> 00:14:24,560

storm which is the movie aren't

270

00:14:28,930 --> 00:14:26,810

producing Tim Minchin storm will be

271

00:14:30,790 --> 00:14:28,940

finished by then how exciting is I will

272

00:14:32,860 --> 00:14:30,800

show it in its entirety on the screen

273

00:14:35,260 --> 00:14:32,870

hopefully fabulous if you've got a big

274

00:14:36,310 --> 00:14:35,270

enough screen for us yeah and that and

275

00:14:38,740 --> 00:14:36,320

that'll be really nice because obviously

276

00:14:40,210 --> 00:14:38,750

unless you come to Tam London where

277

00:14:41,590 --> 00:14:40,220

we're premiering it then that you won't

278

00:14:43,120 --> 00:14:41,600

be able to have seen it on a big screen

279

00:14:44,710 --> 00:14:43,130

so that'll be really exciting for people

280

00:14:45,040 --> 00:14:44,720

hopefully if they're like the movement

281

00:14:46,360 --> 00:14:45,050

they can

282

00:14:49,990 --> 00:14:46,370

in a car have you been to Australia

283

00:14:51,730 --> 00:14:50,000

before no I know I've always wanted to

284

00:14:54,759 --> 00:14:51,740

now you'll see what it's like it better

285

00:14:56,860 --> 00:14:54,769

be good how about that listeners what

286

00:14:59,170 --> 00:14:56,870

have you got why do you got home me not

287

00:15:00,940 --> 00:14:59,180

really excited about it free beer yeah

288

00:15:05,769 --> 00:15:00,950

i'm not i'm not a big drinker does that

289

00:15:07,449 --> 00:15:05,779

mean I'm not allowed in sorry don't

290

00:15:08,740 --> 00:15:07,459

worry will ply your vigilance stamp it

291

00:15:10,120 --> 00:15:08,750

with lightweight yeah I'm good with the

292

00:15:11,259 --> 00:15:10,130

butter with the vegetable now I'm really

293

00:15:13,389 --> 00:15:11,269

looking forward to I think that it's

294

00:15:15,910 --> 00:15:13,399

it's so amazing that tams are spreading

295

00:15:18,730 --> 00:15:15,920

and Australia I know has always had a

296

00:15:20,500 --> 00:15:18,740

huge really a bigger skeptical output

297

00:15:22,720 --> 00:15:20,510

than Britain has you know and I've

298

00:15:24,340 --> 00:15:22,730

always kind of watched footage of when

299

00:15:26,110 --> 00:15:24,350

Randy was in Australia so much stuff

300

00:15:27,280 --> 00:15:26,120

there yes you don't see the media in

301
00:15:28,420 --> 00:15:27,290
Australia it's always struck me as being

302
00:15:29,800 --> 00:15:28,430
you know there's quite a lot of

303
00:15:32,139 --> 00:15:29,810
skeptical programming perhaps not so

304
00:15:33,490 --> 00:15:32,149
much these days it did waffles it varies

305
00:15:34,780 --> 00:15:33,500
alright but at least you kind of you

306
00:15:36,759 --> 00:15:34,790
have that there seems to be a history of

307
00:15:38,410 --> 00:15:36,769
that and so I think it's perfect yeah

308
00:15:41,350 --> 00:15:38,420
we've had some we've had some success i

309
00:15:44,139 --> 00:15:41,360
must say what listeners who are coming

310
00:15:45,819 --> 00:15:44,149
to town australia you can meet tracy in

311
00:15:47,800 --> 00:15:45,829
person but before then where can people

312
00:15:49,420 --> 00:15:47,810
run with their fingers on the keyboards

313
00:15:51,880 --> 00:15:49,430

to visit your website i would recommend

314

00:15:55,150 --> 00:15:51,890

first part of call would be store movie

315

00:15:57,190 --> 00:15:55,160

dr. Mehta yes we're a little movie we

316

00:15:58,449 --> 00:15:57,200

put little bits of artwork and

317

00:16:01,210 --> 00:15:58,459

behind-the-scenes stuff up there every

318

00:16:02,769 --> 00:16:01,220

so often and also Tamland and dog if you

319

00:16:04,810 --> 00:16:02,779

fancy popping along in the next six

320

00:16:06,250 --> 00:16:04,820

weeks to London to to meet some

321

00:16:08,530 --> 00:16:06,260

luminaries and have a good time at the

322

00:16:10,660 --> 00:16:08,540

Brits um and also our blog for skeptic

323

00:16:14,850 --> 00:16:10,670

dog which is always worth visiting Thank

324

00:16:19,110 --> 00:16:17,190

I think they're right well some of the

325

00:16:20,730 --> 00:16:19,120

funny characters look at dressed up oh

326

00:16:22,800 --> 00:16:20,740

no they just just normally apart from

327

00:16:26,070 --> 00:16:22,810

the killer I suppose we've got dr.

328

00:16:28,200 --> 00:16:26,080

beggar hello hello and gender but narrow

329

00:16:30,870 --> 00:16:28,210

Jennifer hello Jennifer hi how are you

330

00:16:32,370 --> 00:16:30,880

doing I'm fine now this is I've been

331

00:16:34,020 --> 00:16:32,380

trying to explain to my listeners what

332

00:16:35,940 --> 00:16:34,030

dragoncon is like now look around us

333

00:16:38,610 --> 00:16:35,950

it's a passing parade isn't it never

334

00:16:40,710 --> 00:16:38,620

anything it is it's a 35,000 of your

335

00:16:44,100 --> 00:16:40,720

closest friends it really is isn't that

336

00:16:47,610 --> 00:16:44,110

fast and you this is your third year for

337

00:16:49,560 --> 00:16:47,620

this is my night through ninth year nice

338

00:16:52,200 --> 00:16:49,570

dragon con is fantastic donkey boy

339

00:16:54,390 --> 00:16:52,210

radford he's over here to its bed in

340

00:16:56,490 --> 00:16:54,400

redford don't talk to me talk to these

341

00:17:01,530 --> 00:16:56,500

important people it did it in water

342

00:17:03,780 --> 00:17:01,540

that's by 16 what makes 16 really yeah

343

00:17:06,180 --> 00:17:03,790

wow very must have seen a lot of changes

344

00:17:08,760 --> 00:17:06,190

yeah actually originally it was just in

345

00:17:12,780 --> 00:17:08,770

this one hotel way back in the day very

346

00:17:15,870 --> 00:17:12,790

small it's exploded yes we tried to get

347

00:17:18,030 --> 00:17:15,880

to the hill the hyatt yesterday we've

348

00:17:20,670 --> 00:17:18,040

done it would turn back to many people

349

00:17:22,830 --> 00:17:20,680

it's almost easier to go around outside

350

00:17:28,890 --> 00:17:22,840

the building's that's how we got back

351

00:17:30,360 --> 00:17:28,900

there you go and but now we have in the

352

00:17:33,120 --> 00:17:30,370

last few years we have the skeptical

353

00:17:35,400 --> 00:17:33,130

Alamo and the room behind us is almost

354

00:17:37,620 --> 00:17:35,410

full I think which is gonna be good this

355

00:17:39,630 --> 00:17:37,630

is part of dragoncon for the skeptics is

356

00:17:41,700 --> 00:17:39,640

another you go to the great panels and

357

00:17:43,770 --> 00:17:41,710

learn stuff and then you hang out yeah

358

00:17:46,890 --> 00:17:43,780

the like-minded people we've had some

359

00:17:49,530 --> 00:17:46,900

great conversations too and let me give

360

00:17:51,780 --> 00:17:49,540

a shout out to nyan tio tommy jax

361

00:17:53,490 --> 00:17:51,790

scanlon you're out there for sure yeah

362

00:17:55,190 --> 00:17:53,500

you did you come someday you'd love it

363

00:17:57,769 --> 00:17:55,200

jack

364

00:17:59,810 --> 00:17:57,779

so what but um what I love about this is

365

00:18:02,149 --> 00:17:59,820

that we can all there's not a there's no

366

00:18:03,799 --> 00:18:02,159

ego or agenda or anything like that we

367

00:18:06,440 --> 00:18:03,809

can all really get together share ideas

368

00:18:08,659 --> 00:18:06,450

and absolutely and while you're doing

369

00:18:10,279 --> 00:18:08,669

that you glance to the other side and

370

00:18:12,110 --> 00:18:10,289

you see the passing right now what's

371

00:18:16,580 --> 00:18:12,120

that character with a little like all

372

00:18:19,310 --> 00:18:16,590

the West with little devil wings scenes

373

00:18:21,049 --> 00:18:19,320

around here the cow a prophecy the Gulf

374

00:18:22,850 --> 00:18:21,059

southern yeah therefore coughing then

375

00:18:24,799 --> 00:18:22,860

there's a steampunk and there's a speed

376

00:18:28,279 --> 00:18:24,809

fun later going like yeah that's like

377

00:18:29,870 --> 00:18:28,289

Lord of the Rings just a little bit of

378

00:18:31,970 --> 00:18:29,880

everything yes but if everything

379

00:18:33,289 --> 00:18:31,980

actually I saw I saw some airline pilots

380

00:18:37,190 --> 00:18:33,299

last night I didn't know if they were

381

00:18:40,039 --> 00:18:37,200

real oh you haven't seen the of and I

382

00:18:41,840 --> 00:18:40,049

guess I'll be very not PC but the sexy

383

00:18:44,919 --> 00:18:41,850

korean store just convention that comes

384

00:18:48,769 --> 00:18:44,929

through here like like there is like a a

385

00:18:52,940 --> 00:18:48,779

just on our me like I'm talion of really

386

00:18:55,549 --> 00:18:52,950

really awesome fembot looking Korean

387

00:18:57,919 --> 00:18:55,559

stewardesses that come through every

388

00:18:59,539 --> 00:18:57,929

year engine starts right after this one

389

00:19:01,310 --> 00:18:59,549

so if you stay around the necks today

390

00:19:02,870 --> 00:19:01,320

there's a little bit convention this

391

00:19:04,669 --> 00:19:02,880

from from Korea naris fantastic I'll

392

00:19:07,370 --> 00:19:04,679

keep an eye out I'll kick know what are

393

00:19:08,960 --> 00:19:07,380

these carradine all space invaders it is

394

00:19:13,430 --> 00:19:08,970

awful something like that you will see

395

00:19:15,560 --> 00:19:13,440

officers from all the sims other sins a

396

00:19:17,000 --> 00:19:15,570

lot of Star Trek well that's half the

397

00:19:18,350 --> 00:19:17,010

battle is is you know trying to figure

398

00:19:20,240 --> 00:19:18,360

out just what the hell these people are

399

00:19:21,830 --> 00:19:20,250

sometimes it's obvious miss Harry Potter

400

00:19:25,370 --> 00:19:21,840

but then you're like you know you're

401
00:19:27,710 --> 00:19:25,380
that one that guy from that one movie in

402
00:19:30,110 --> 00:19:27,720
the 82 that yeah no matter how broadly

403
00:19:32,779 --> 00:19:30,120
experienced you think you are as a geek

404
00:19:35,060 --> 00:19:32,789
or a nerd there's someone who is like

405
00:19:38,970 --> 00:19:35,070
this guy for example the eye patch in

406
00:19:41,770 --> 00:19:38,980
the skin tight suit your white tape it

407
00:19:44,500 --> 00:19:41,780
this is going to clone trooper from Star

408
00:19:48,070 --> 00:19:44,510
Wars and a tiny little Jedi all of what

409
00:19:51,340 --> 00:19:48,080
five years old time yeah remember

410
00:19:52,690 --> 00:19:51,350
everything fantastic and it's just

411
00:19:55,270 --> 00:19:52,700
everyone being able to express

412
00:19:59,290 --> 00:19:55,280
themselves in a way that in daily in

413
00:20:01,060 --> 00:19:59,300

Norton normal society you just can't do

414

00:20:04,480 --> 00:20:01,070

this no room for it there's no room for

415

00:20:06,430 --> 00:20:04,490

a nine-foot-tall off his mom or a Mad

416

00:20:08,230 --> 00:20:06,440

Hatter right I like there's nothing but

417

00:20:12,100 --> 00:20:08,240

wow there's no there's no room for a Mad

418

00:20:13,330 --> 00:20:12,110

Hatter at your office job no like and I

419

00:20:14,890 --> 00:20:13,340

must take my head off to all the

420

00:20:17,950 --> 00:20:14,900

characters who dress up and then go

421

00:20:20,500 --> 00:20:17,960

outside in this heat oh yeah Wow shows

422

00:20:21,970 --> 00:20:20,510

are three and dedication seasonably cool

423

00:20:24,940 --> 00:20:21,980

it's still hot but it's it's a

424

00:20:26,770 --> 00:20:24,950

seasonably cool usually it's together

425

00:20:28,180 --> 00:20:26,780

this time of year well they're lucky I

426

00:20:29,590 --> 00:20:28,190

guess because I wouldn't want to walk

427

00:20:31,750 --> 00:20:29,600

down the street as a storm trooper and

428

00:20:34,170 --> 00:20:31,760

man how hard it can get it at lunch I

429

00:20:37,420 --> 00:20:34,180

want to walk across the room those are

430

00:20:39,340 --> 00:20:37,430

really but a lot of the people who is a

431

00:20:41,440 --> 00:20:39,350

mean this is one another aspect about

432

00:20:43,210 --> 00:20:41,450

Dragon Con is awesome you have people

433

00:20:45,190 --> 00:20:43,220

who are professionals and people are

434

00:20:47,230 --> 00:20:45,200

amateurs and they work together and so

435

00:20:50,020 --> 00:20:47,240

you get a lot of technological

436

00:20:51,490 --> 00:20:50,030

advancements in costume making where

437

00:20:53,320 --> 00:20:51,500

they have like for instance then people

438

00:20:55,240 --> 00:20:53,330

you see with halo costumes or with iron

439

00:20:59,530 --> 00:20:55,250

man costumes like they look really good

440

00:21:00,880 --> 00:20:59,540

like a real thing they tend to have like

441

00:21:02,650 --> 00:21:00,890

they didn't have like personal air

442

00:21:06,010 --> 00:21:02,660

conditioning systems underneath their

443

00:21:08,590 --> 00:21:06,020

shoes and how they can do it oh yeah

444

00:21:10,960 --> 00:21:08,600

some of them actually work in special

445

00:21:13,360 --> 00:21:10,970

effects or costuming for Hollywood so

446

00:21:15,190 --> 00:21:13,370

there's there's amateurs and there's

447

00:21:16,810 --> 00:21:15,200

professionals well that makes me feel

448

00:21:19,060 --> 00:21:16,820

better for some of these people walking

449

00:21:21,370 --> 00:21:19,070

by in the full outfit of what about

450

00:21:24,840 --> 00:21:21,380

right i saw one

451
00:21:27,190 --> 00:21:24,850
chewbacca last night oh very nice Wow

452
00:21:29,080 --> 00:21:27,200
will they go Supergirl again she's been

453
00:21:31,300 --> 00:21:29,090
wandering around a lot oh well I'm gonna

454
00:21:35,650 --> 00:21:31,310
go participate other con tradition which

455
00:21:40,080 --> 00:21:35,660
is waiting in line for coffee okay thank

456
00:21:45,180 --> 00:21:42,840
it's the last day of dragoncon monday

457
00:21:47,610 --> 00:21:45,190
labor day here in the United States and

458
00:21:49,140 --> 00:21:47,620
I'm here with dr. rates you dr. hu we

459
00:21:51,810 --> 00:21:49,150
found ourselves in one of the massive

460
00:21:53,460 --> 00:21:51,820
trading rooms we have and it's not as

461
00:21:55,470 --> 00:21:53,470
busy as it was yesterday which is that

462
00:21:58,409 --> 00:21:55,480
it's still pretty pretty busy on the

463
00:22:01,440 --> 00:21:58,419

last day of dragoncon there there are no

464

00:22:04,560 --> 00:22:01,450

end of our amazing paraphernalia

465

00:22:06,899 --> 00:22:04,570

t-shirts models there was big kit models

466

00:22:08,490 --> 00:22:06,909

of Tomb Raider over there Star Trek's

467

00:22:10,890 --> 00:22:08,500

everywhere all sorts of things to buy

468

00:22:12,779 --> 00:22:10,900

yeah and I noticed just off to the left

469

00:22:16,169 --> 00:22:12,789

here there's an author signing his books

470

00:22:18,570 --> 00:22:16,179

his name's Brandon Sanderson and he

471

00:22:19,889 --> 00:22:18,580

wrote some sort of sci-fi series as well

472

00:22:21,630 --> 00:22:19,899

so there's all kinds of stuff happening

473

00:22:24,389 --> 00:22:21,640

here today and we just had some good

474

00:22:28,860 --> 00:22:24,399

luck you came across the stand selling

475

00:22:31,889 --> 00:22:28,870

germs yeah the standards of giant

476
00:22:34,560 --> 00:22:31,899
microbes which of these sort of plush

477
00:22:37,169 --> 00:22:34,570
soft toys of different kinds of viruses

478
00:22:39,810 --> 00:22:37,179
bacteria and parasites and all kinds of

479
00:22:41,820 --> 00:22:39,820
shirts when you got there well the one

480
00:22:44,279 --> 00:22:41,830
I've got here Richard is called the pox

481
00:22:46,730 --> 00:22:44,289
but it's actually syphilis which is

482
00:22:49,860 --> 00:22:46,740
trippin i'ma pal pal a whole item

483
00:22:51,899 --> 00:22:49,870
treponema colada room so yeah it

484
00:22:54,269 --> 00:22:51,909
actually looks like a curled up quite a

485
00:22:58,529 --> 00:22:54,279
cute snake person does it it causes

486
00:23:00,419 --> 00:22:58,539
syphilis yeah fascinating we walk around

487
00:23:04,289 --> 00:23:00,429
the corner here still so many people

488
00:23:05,789 --> 00:23:04,299

here buying things all sorts of toys you

489

00:23:07,860 --> 00:23:05,799

can get from your favorite TV show I

490

00:23:11,880 --> 00:23:07,870

just picked up the complete Batman

491

00:23:13,500 --> 00:23:11,890

series on DVD yeah from the 1960s from

492

00:23:16,570 --> 00:23:13,510

the original master tapes apparently

493

00:23:18,190 --> 00:23:16,580

right and early MC we're also

494

00:23:20,980 --> 00:23:18,200

you know with our microbes we also

495

00:23:23,799 --> 00:23:20,990

bought pertussis yeah and measles all

496

00:23:26,289 --> 00:23:23,809

the set yeah we've got the set and the

497

00:23:32,740 --> 00:23:26,299

guy told us that if you buy six STDs you

498

00:23:34,870 --> 00:23:32,750

get penicillin for free leather seems to

499

00:23:38,740 --> 00:23:34,880

be quite popular and steampunk which is

500

00:23:40,750 --> 00:23:38,750

sort of Wild West meets technology sorts

501
00:23:44,320 --> 00:23:40,760
of leather and things your wrap around

502
00:23:46,480 --> 00:23:44,330
your head and it's quite something I

503
00:23:49,389 --> 00:23:46,490
mean I've never seen it outside of

504
00:23:51,789 --> 00:23:49,399
dragoncon though what steampunk yeah no

505
00:23:53,860 --> 00:23:51,799
I haven't either except on stage shows

506
00:23:56,500 --> 00:23:53,870
and stuff like that but it's incredibly

507
00:23:59,470 --> 00:23:56,510
popular of dragoncon mind you I think

508
00:24:01,899 --> 00:23:59,480
you'd want a cooler climate to really

509
00:24:05,350 --> 00:24:01,909
wear steampunk yeah I mean a lot of the

510
00:24:09,039 --> 00:24:05,360
clothes here yeah not really designed

511
00:24:11,649 --> 00:24:09,049
for blondie 115 degrees Fahrenheit yeah

512
00:24:13,450 --> 00:24:11,659
so most people stay in the hotels for

513
00:24:15,490 --> 00:24:13,460

that reason I think Richard I look at

514

00:24:17,529 --> 00:24:15,500

all these patches iron on patches we've

515

00:24:20,529 --> 00:24:17,539

got here in front of us what a

516

00:24:23,889 --> 00:24:20,539

collection Superman the flash Green

517

00:24:26,500 --> 00:24:23,899

Lantern Smallville lots of things I

518

00:24:28,389 --> 00:24:26,510

don't recognize all this Star Trek

519

00:24:32,520 --> 00:24:28,399

Captain America Wonder Woman

520

00:24:38,160 --> 00:24:35,970

endless endless array of really really

521

00:24:39,600 --> 00:24:38,170

top quality pine on patches but that's

522

00:24:41,940 --> 00:24:39,610

just a sort of thing that you would

523

00:24:43,170 --> 00:24:41,950

expect here at DragonCon it it attracts

524

00:24:45,660 --> 00:24:43,180

these sort of people who would love to

525

00:24:47,850 --> 00:24:45,670

wear these things yeah you know what I

526

00:24:49,380 --> 00:24:47,860

noticed and I observed this I made this

527

00:24:52,350 --> 00:24:49,390

observation to you before Richard that

528

00:24:56,700 --> 00:24:52,360

although there's a lot of sort of sci-fi

529

00:24:58,620 --> 00:24:56,710

stuff here and also some you know a lot

530

00:25:01,430 --> 00:24:58,630

of wizardry kind of things and some of

531

00:25:03,870 --> 00:25:01,440

the drawings that you might see with the

532

00:25:06,600 --> 00:25:03,880

dragons on the top of a mountain there's

533

00:25:08,940 --> 00:25:06,610

no woo here at all there's no room there

534

00:25:12,060 --> 00:25:08,950

is no isn't that interesting because

535

00:25:14,130 --> 00:25:12,070

there's no tarot readers as no not

536

00:25:15,270 --> 00:25:14,140

anything like that no and I'm I don't

537

00:25:17,310 --> 00:25:15,280

know whether I should be surprised by

538

00:25:19,680 --> 00:25:17,320

that I'm not but some of the stuff here

539

00:25:21,470 --> 00:25:19,690

does lend to that sort of maybe it's

540

00:25:24,300 --> 00:25:21,480

because we're so used to going to

541

00:25:26,970 --> 00:25:24,310

festivals which it's always rude but

542

00:25:28,170 --> 00:25:26,980

when we don't live it seems strange yeah

543

00:25:30,060 --> 00:25:28,180

but then some of the stuff here you

544

00:25:32,880 --> 00:25:30,070

would find it a wave festival yeah so

545

00:25:35,160 --> 00:25:32,890

the drawings of the the wall between a

546

00:25:38,670 --> 00:25:35,170

mystical kind of stuff earlier you know

547

00:25:41,550 --> 00:25:38,680

the statues of wizards and wolves and

548

00:25:43,230 --> 00:25:41,560

that's all maybe the average fantasy and

549

00:25:47,480 --> 00:25:43,240

science fiction fan has a better grasp

550

00:25:50,520 --> 00:25:47,490

of reality maybe they do let's hope so

551
00:25:52,680 --> 00:25:50,530
and of course one of the highlights for

552
00:25:55,529 --> 00:25:52,690
any skeptic coming to dragoncon is the

553
00:25:58,140 --> 00:25:55,539
chance to glimpse or even meet James

554
00:26:00,870 --> 00:25:58,150
Randi hi James hello very Richard GoM's

555
00:26:03,330 --> 00:26:00,880
good to see you thank you and this is I

556
00:26:05,370 --> 00:26:03,340
think your second dragoncon although you

557
00:26:08,789 --> 00:26:05,380
were here virtually last year virtually

558
00:26:10,560 --> 00:26:08,799
as I was in the hospital last year with

559
00:26:13,260 --> 00:26:10,570
tubes down my throat which rather

560
00:26:15,680 --> 00:26:13,270
inhibits their presence at conventions

561
00:26:17,820 --> 00:26:15,690
and things like this it's a remarkable

562
00:26:20,460 --> 00:26:17,830
event I must say this dragon Connor

563
00:26:22,260 --> 00:26:20,470

minutes ago walking spectacle walking

564

00:26:23,820 --> 00:26:22,270

sideshow all the time but it is a good

565

00:26:26,640 --> 00:26:23,830

opportunity for skeptics to get together

566

00:26:29,700 --> 00:26:26,650

oh it is indeed the fact that the

567

00:26:32,460 --> 00:26:29,710

skeptical presence at Dragon Con is so

568

00:26:34,919 --> 00:26:32,470

very pervasive and it is it's all over

569

00:26:36,539 --> 00:26:34,929

the place rather cheers me and I

570

00:26:38,310 --> 00:26:36,549

understand those standing room only for

571

00:26:39,960 --> 00:26:38,320

your talk was sitting room only awesome

572

00:26:42,210 --> 00:26:39,970

yeah it's talking a falling-down room

573

00:26:45,200 --> 00:26:42,220

all day yes and I got a standing ovation

574

00:26:49,470 --> 00:26:45,210

as well so I'm very proud of that but

575

00:26:52,250 --> 00:26:49,480

these people are just great dragoncon

576
00:26:55,740 --> 00:26:52,260
rules as far as I'm concerned these are

577
00:26:59,310 --> 00:26:55,750
generally speaking mystics who don't fit

578
00:27:02,520 --> 00:26:59,320
into society easily oh because of

579
00:27:05,940 --> 00:27:02,530
various problems that they might have or

580
00:27:08,610 --> 00:27:05,950
or whatever it's highly variable but

581
00:27:10,890 --> 00:27:08,620
they do fit here and they look forward

582
00:27:13,080 --> 00:27:10,900
I'm sure to this every year as I do

583
00:27:15,779 --> 00:27:13,090
because I'm a bit of a list of it myself

584
00:27:18,350 --> 00:27:15,789
yeah I just think you are too rigid in a

585
00:27:20,760 --> 00:27:18,360
way I think so yeah and no one is

586
00:27:22,860 --> 00:27:20,770
discriminated against here on sequence

587
00:27:25,080 --> 00:27:22,870
and everybody helps everyone else

588
00:27:27,419 --> 00:27:25,090

they're all very cooperative they're

589

00:27:29,399 --> 00:27:27,429

lovely folks and I'm very happy to be in

590

00:27:31,470 --> 00:27:29,409

this crowd well we look forward to

591

00:27:34,080 --> 00:27:31,480

seeing you very soon in Australia for

592

00:27:36,600 --> 00:27:34,090

that deal the first amazing meeting yes

593

00:27:38,700 --> 00:27:36,610

really how exciting the very except for

594

00:27:40,799 --> 00:27:38,710

two with great enthusiasm and I'll be

595

00:27:43,200 --> 00:27:40,809

rubbing shoulders with Dick Smith again

596

00:27:44,730 --> 00:27:43,210

now what else could a guy ask that's

597

00:27:47,520 --> 00:27:44,740

about that's that's the highest you can

598

00:27:49,440 --> 00:27:47,530

go on exactly I'm sure it is thank you

599

00:27:59,320 --> 00:27:49,450

James great pleasure Richard thank you

600

00:28:05,330 --> 00:28:02,660

hi i am Gavroche co-president of the

601
00:28:06,950 --> 00:28:05,340
Hungarian skeptics society this year we

602
00:28:09,650 --> 00:28:06,960
are organizing the 14th european

603
00:28:12,650 --> 00:28:09,660
skeptics congress it will be held in

604
00:28:15,890 --> 00:28:12,660
Budapest Hungary between 17 and 19 s of

605
00:28:18,140 --> 00:28:15,900
September in Europe skeptic groups has

606
00:28:21,200 --> 00:28:18,150
an umbrella organization the European

607
00:28:23,900 --> 00:28:21,210
Council of skeptical organizations XO it

608
00:28:25,970 --> 00:28:23,910
was founded 16 years ago in Ostend

609
00:28:28,270 --> 00:28:25,980
Belgium during the 6th annual congress

610
00:28:31,130 --> 00:28:28,280
of the european skeptical organizations

611
00:28:34,070 --> 00:28:31,140
currently 15 organizations are members

612
00:28:37,370 --> 00:28:34,080
of EXO EXO supports a bi-annual congress

613
00:28:39,260 --> 00:28:37,380

and the symposium every other year the

614

00:28:42,710 --> 00:28:39,270

first European skeptics congress was

615

00:28:45,440 --> 00:28:42,720

held 21 years ago in battles germany the

616

00:28:47,570 --> 00:28:45,450

last one in 2007 was organized by the

617

00:28:49,520 --> 00:28:47,580

irish skeptical society in dublin and

618

00:28:52,520 --> 00:28:49,530

this year the congress is held in

619

00:28:54,980 --> 00:28:52,530

budapest hungary between 17 and 19 s of

620

00:28:59,270 --> 00:28:54,990

sep tember check for detailed

621

00:29:01,070 --> 00:28:59,280

information at dub dub kappa tau there

622

00:29:03,260 --> 00:29:01,080

will be more than 20 lectures about

623

00:29:06,410 --> 00:29:03,270

alternative medicine the paranormal

624

00:29:09,020 --> 00:29:06,420

miracles and more lecturers include

625

00:29:12,230 --> 00:29:09,030

Simon Singh joe nickell massimo polidoro

626
00:29:14,870 --> 00:29:12,240
villain bets Christopher C French amar

627
00:29:16,940 --> 00:29:14,880
desh Sharma Michael heap Tim Cratchit

628
00:29:19,010 --> 00:29:16,950
and many more there will be lectures

629
00:29:21,770 --> 00:29:19,020
about a so Terry and pseudoscience in

630
00:29:24,410 --> 00:29:21,780
nowadays Hungary and Romania each Tuan

631
00:29:26,419 --> 00:29:24,420
vago a devoted skeptic who hosted the TV

632
00:29:28,220 --> 00:29:26,429
show Who Wants to Be a Millionaire in

633
00:29:30,410 --> 00:29:28,230
Hungary for eight consecutive years

634
00:29:32,810 --> 00:29:30,420
speaks about to the science and the

635
00:29:34,340 --> 00:29:32,820
media one of the main goals of the

636
00:29:36,380 --> 00:29:34,350
Congress is to strengthen the

637
00:29:39,110 --> 00:29:36,390
cooperation among the European skeptic

638
00:29:41,180 --> 00:29:39,120

organizations they face international

639

00:29:43,310 --> 00:29:41,190

challenges alternative medicine

640

00:29:45,799 --> 00:29:43,320

proponents are aggressively lobbying at

641

00:29:48,620 --> 00:29:45,809

Brussels and influence european union

642

00:29:50,750 --> 00:29:48,630

legislation rather effectively bogus

643

00:29:52,610 --> 00:29:50,760

products are marketed internationally

644

00:29:56,419 --> 00:29:52,620

and are using international references

645

00:30:00,140 --> 00:29:56,429

and certificates we skeptics should also

646

00:30:02,690 --> 00:30:00,150

work more internationally register for

647

00:30:04,250 --> 00:30:02,700

the congress a dub dub dub the skeptics

648

00:30:06,470 --> 00:30:04,260

that age you

649

00:30:08,450 --> 00:30:06,480

registration fee is only 30 euros of

650

00:30:10,430 --> 00:30:08,460

course we cannot cover all the

651
00:30:14,030 --> 00:30:10,440
organizational costs from these low fees

652
00:30:16,970 --> 00:30:14,040
we also accept donations you can pay and

653
00:30:18,920 --> 00:30:16,980
donate through paypal don't forget for

654
00:30:21,290 --> 00:30:18,930
teens European skeptics Congress in

655
00:30:28,130 --> 00:30:21,300
Hungary see you in Budapest dis

656
00:30:33,830 --> 00:30:28,140
September now it's time for dr. Richie

657
00:30:36,590 --> 00:30:33,840
reports with dr. Rachel Dunlop and I'm

658
00:30:39,350 --> 00:30:36,600
dr. H E and here we are at the free

659
00:30:41,960 --> 00:30:39,360
vaccine clinic at dragon con 2010 in

660
00:30:44,690 --> 00:30:41,970
Atlanta Georgia and i'm here with Bill

661
00:30:47,060 --> 00:30:44,700
Atkinson hello bill welcome to the

662
00:30:49,820 --> 00:30:47,070
skeptic zone what would you allow thank

663
00:30:51,800 --> 00:30:49,830

you very much now you are in

664

00:30:53,810 --> 00:30:51,810

immunization from the Centers for

665

00:30:56,600 --> 00:30:53,820

Disease Control the CDC it's great

666

00:30:59,360 --> 00:30:56,610

you're an MD with a master's in public

667

00:31:02,530 --> 00:30:59,370

health yes and you helped to set up the

668

00:31:04,460 --> 00:31:02,540

vaccine clinic here at Dragon Con yes

669

00:31:09,050 --> 00:31:04,470

can you tell me about your role in

670

00:31:11,300 --> 00:31:09,060

setting it up my job day-to-day is

671

00:31:17,300 --> 00:31:11,310

mainly training doctors and nurses how

672

00:31:20,300 --> 00:31:17,310

to get vaccines I met I met Maria

673

00:31:23,060 --> 00:31:20,310

Walters at tam and introduced myself and

674

00:31:26,000 --> 00:31:23,070

she remembered me when she got back here

675

00:31:29,120 --> 00:31:26,010

and initiated the idea of doing a

676
00:31:30,950 --> 00:31:29,130
program like this and I was the one who

677
00:31:32,810 --> 00:31:30,960
sort of knew the contacts who had the

678
00:31:34,430 --> 00:31:32,820
vaccine and the nurses and the skills to

679
00:31:36,020 --> 00:31:34,440
actually give it so I was sort of the

680
00:31:37,520 --> 00:31:36,030
intermediary between the people with the

681
00:31:39,950 --> 00:31:37,530
idea and the people who are doing the

682
00:31:42,890 --> 00:31:39,960
vaccinating right so at the city CEO

683
00:31:45,830 --> 00:31:42,900
role is in epidemiology immunization

684
00:31:48,350 --> 00:31:45,840
epidemiology or vaccine epidemiology yes

685
00:31:51,440 --> 00:31:48,360
I have in the past work in measles

686
00:31:53,270 --> 00:31:51,450
vaccine epidemiology and now I primarily

687
00:31:55,340 --> 00:31:53,280
try to train doctors and nurses about

688
00:31:56,690 --> 00:31:55,350

vaccine there's a lot of constant

689

00:31:59,810 --> 00:31:56,700
changes as you know and in the

690

00:32:01,700 --> 00:31:59,820
vaccination realm and so my job is to

691

00:32:04,400 --> 00:32:01,710
make sure that doctors and nurses in the

692

00:32:05,630 --> 00:32:04,410
US are kept up to date on what the new

693

00:32:07,490 --> 00:32:05,640
recommendations are and what they should

694

00:32:09,620 --> 00:32:07,500
be doing and there's a good reason why

695

00:32:11,660 --> 00:32:09,630
we are here today in the vaccine clinic

696

00:32:13,610 --> 00:32:11,670
at dragoncon there's currently an

697

00:32:15,320 --> 00:32:13,620
epidemic of whooping cough in California

698

00:32:16,640 --> 00:32:15,330
can you tell us a little bit about that

699

00:32:20,510 --> 00:32:16,650
we've already had deaths

700

00:32:22,700 --> 00:32:20,520
seven or eight young children how bad is

701
00:32:25,640 --> 00:32:22,710
that epidemic at the moment we've seen

702
00:32:27,710 --> 00:32:25,650
quite a lot of pertussis in in several

703
00:32:32,030 --> 00:32:27,720
states California being the most notable

704
00:32:34,580 --> 00:32:32,040
there have been 10 15 deaths countrywide

705
00:32:36,140 --> 00:32:34,590
what we're seeing is a lot of the cases

706
00:32:38,180 --> 00:32:36,150
have been in children but they're being

707
00:32:41,390 --> 00:32:38,190
affected by their parents and their

708
00:32:42,830 --> 00:32:41,400
siblings and their babysitter's so we

709
00:32:44,540 --> 00:32:42,840
thought this was a good idea here

710
00:32:45,980 --> 00:32:44,550
because this is a lot of the age of the

711
00:32:47,900 --> 00:32:45,990
people that may have children at home

712
00:32:50,330 --> 00:32:47,910
may have contacts with children at home

713
00:32:52,160 --> 00:32:50,340

and thought this was a very fertile area

714

00:32:54,620 --> 00:32:52,170

likely and a lot of these kids have not

715

00:32:56,630 --> 00:32:54,630

had pertussis vaccine before or at least

716

00:32:58,760 --> 00:32:56,640

recently and the thing is with the

717

00:33:00,920 --> 00:32:58,770

Petoskey spec seen it wears off after a

718

00:33:03,080 --> 00:33:00,930

number of years right so as an adult you

719

00:33:04,730 --> 00:33:03,090

need to get a booster because you can be

720

00:33:05,960 --> 00:33:04,740

a carrier but then you can pass it on to

721

00:33:07,580 --> 00:33:05,970

young children who are particularly

722

00:33:10,130 --> 00:33:07,590

susceptible is that right absolutely

723

00:33:11,750 --> 00:33:10,140

correct probably most of us got our last

724

00:33:14,030 --> 00:33:11,760

dose of pertussis vaccine when we were

725

00:33:16,520 --> 00:33:14,040

five or six and it's only been since

726

00:33:18,020 --> 00:33:16,530

2005 that we've had this new vaccine we

727

00:33:19,970 --> 00:33:18,030

could give to adolescents and adults so

728

00:33:21,470 --> 00:33:19,980

it's a relatively new vaccine and we

729

00:33:24,200 --> 00:33:21,480

hope it will make a big difference in

730

00:33:26,330 --> 00:33:24,210

put us both in the US and elsewhere as

731

00:33:27,800 --> 00:33:26,340

well so who is the most susceptible to

732

00:33:30,410 --> 00:33:27,810

pertussis we're talking about young kids

733

00:33:31,910 --> 00:33:30,420

but we're also talking about people with

734

00:33:34,460 --> 00:33:31,920

immune suppression are we what who are

735

00:33:36,770 --> 00:33:34,470

the people that are most at risk the

736

00:33:38,480 --> 00:33:36,780

most really anybody can be infected who

737

00:33:41,540 --> 00:33:38,490

hasn't been who hasn't been vaccinated

738

00:33:45,230 --> 00:33:41,550

recently adults because of our the size

739

00:33:46,880 --> 00:33:45,240

of our Airways tend to have fewer severe

740

00:33:49,190 --> 00:33:46,890

symptoms they could be pretty sick but

741

00:33:50,570 --> 00:33:49,200

it's mostly really young children who

742

00:33:52,550 --> 00:33:50,580

have the most severe disease because

743

00:33:54,620 --> 00:33:52,560

their Airways are very tiny and because

744

00:33:57,590 --> 00:33:54,630

they likely have not had all their doses

745

00:33:59,360 --> 00:33:57,600

of their pediatric childhood vaccine

746

00:34:01,280 --> 00:33:59,370

series yet so we worry most about

747

00:34:03,110 --> 00:34:01,290

children that's most likely to die most

748

00:34:05,270 --> 00:34:03,120

likely to have very severe illness but

749

00:34:07,010 --> 00:34:05,280

really any of us can cough it on

750

00:34:08,419 --> 00:34:07,020

anybody else that we haven't if we

751
00:34:10,790 --> 00:34:08,429
haven't had a vaccine within a few years

752
00:34:12,710 --> 00:34:10,800
and how is it transmitted transmitted by

753
00:34:15,560 --> 00:34:12,720
by droplets by air with my respiratory

754
00:34:17,659 --> 00:34:15,570
droplets when people cough sneeze talk

755
00:34:20,540 --> 00:34:17,669
anything it's a very efficiently

756
00:34:22,780 --> 00:34:20,550
transmitted bacteria and it is it very

757
00:34:26,380 --> 00:34:22,790
easily transmitted from person to person

758
00:34:27,970 --> 00:34:26,390
so what what role do you think the low

759
00:34:30,430 --> 00:34:27,980
levels of vaccinations are having in

760
00:34:32,320 --> 00:34:30,440
this epidemic if any because I know that

761
00:34:35,320 --> 00:34:32,330
some people are now choosing not to

762
00:34:36,850 --> 00:34:35,330
vaccinate their children for all sorts

763
00:34:38,680 --> 00:34:36,860

of reasons but some of this is to do

764

00:34:40,240 --> 00:34:38,690

with the anti backs movement getting

765

00:34:42,130 --> 00:34:40,250

quite active in America we have the same

766

00:34:43,600 --> 00:34:42,140

problem in Australia do you think that's

767

00:34:45,970 --> 00:34:43,610

contributed all to these recent

768

00:34:48,909 --> 00:34:45,980

outbreaks it probably does I think

769

00:34:51,520 --> 00:34:48,919

probably the bigger problem that tends

770

00:34:53,110 --> 00:34:51,530

to be a fairly small proportion except

771

00:34:55,180 --> 00:34:53,120

they tend to cluster together folks who

772

00:34:56,710 --> 00:34:55,190

who haven't been vaccinated we think

773

00:34:58,960 --> 00:34:56,720

probably in the u.s. is not more than

774

00:35:01,000 --> 00:34:58,970

one or two percent of people but in some

775

00:35:02,530 --> 00:35:01,010

areas it can be much much higher than

776

00:35:05,440 --> 00:35:02,540

that because they sort of have

777

00:35:06,850 --> 00:35:05,450

communities if you will and but the

778

00:35:08,710 --> 00:35:06,860

biggest problem I think right now is the

779

00:35:10,870 --> 00:35:08,720

fact that most adults and adolescents

780

00:35:13,300 --> 00:35:10,880

have not had a dose of pertussis vaccine

781

00:35:15,430 --> 00:35:13,310

for so long so the kind of vaccine we're

782

00:35:17,620 --> 00:35:15,440

doing here is exactly i think what we

783

00:35:19,270 --> 00:35:17,630

need to do to raise the level of

784

00:35:20,770 --> 00:35:19,280

immunity in the population and help

785

00:35:22,720 --> 00:35:20,780

stomp out this outbreak we're having

786

00:35:25,390 --> 00:35:22,730

never so what's the response been like

787

00:35:26,710 --> 00:35:25,400

here in the clinic at dragoncon it's

788

00:35:28,000 --> 00:35:26,720

been very good we didn't really know

789

00:35:30,640 --> 00:35:28,010

what was going to happen is the first

790

00:35:32,200 --> 00:35:30,650

time this has been tried but we are

791

00:35:33,970 --> 00:35:32,210

probably going to use all our vaccine

792

00:35:35,650 --> 00:35:33,980

today we came with we came with a

793

00:35:37,360 --> 00:35:35,660

hundred doses yesterday gave almost all

794

00:35:38,920 --> 00:35:37,370

of them came with more than 100 today

795

00:35:41,170 --> 00:35:38,930

and it looks like we're going to

796

00:35:42,760 --> 00:35:41,180

probably give out all those too so it's

797

00:35:44,920 --> 00:35:42,770

actually been quite successful since we

798

00:35:47,380 --> 00:35:44,930

didn't really know what to suspect but

799

00:35:48,400 --> 00:35:47,390

the uptake has been very good yeah so

800

00:35:50,470 --> 00:35:48,410

we're very happy with the way it turned

801
00:35:51,760 --> 00:35:50,480
out and so what kind of people have you

802
00:35:54,310 --> 00:35:51,770
been vaccinating are you talking about

803
00:35:56,410 --> 00:35:54,320
the the people that you really want to

804
00:35:59,410 --> 00:35:56,420
target which is the adolescents and the

805
00:36:00,850 --> 00:35:59,420
young parents kind of what sort of

806
00:36:04,480 --> 00:36:00,860
demographic that's been coming has been

807
00:36:07,540 --> 00:36:04,490
it's been it looks like about half men

808
00:36:09,640 --> 00:36:07,550
and women about half of each and we have

809
00:36:11,110 --> 00:36:09,650
seen mostly it looks just we haven't

810
00:36:12,970 --> 00:36:11,120
actually crunched the numbers all yet

811
00:36:15,310 --> 00:36:12,980
but it looks like it's been people in

812
00:36:17,860 --> 00:36:15,320
their 30s 20s 30s and 40s it's who's

813
00:36:19,120 --> 00:36:17,870

exactly the folks that we were hoping to

814

00:36:21,880 --> 00:36:19,130

be able to vaccinate while we were here

815

00:36:22,900 --> 00:36:21,890

so I'm fascinated by this but the fact

816

00:36:24,280 --> 00:36:22,910

that you can actually do this bill

817

00:36:25,750 --> 00:36:24,290

because in Australia I don't know if

818

00:36:27,700 --> 00:36:25,760

it's that common that you can kind of I

819

00:36:29,860 --> 00:36:27,710

mean this was set up by the skeptics as

820

00:36:32,440 --> 00:36:29,870

you said Maria Walters and they rented

821

00:36:34,299 --> 00:36:32,450

out a shopfront and for the weekend and

822

00:36:37,239 --> 00:36:34,309

got you guys on board and

823

00:36:40,329 --> 00:36:37,249

terms of liability and health issues and

824

00:36:41,769 --> 00:36:40,339

stuff is that's already in place that in

825

00:36:43,599 --> 00:36:41,779

America to do that sort of thing is it

826

00:36:45,249 --> 00:36:43,609

it is we do a lot of that in public

827

00:36:48,069 --> 00:36:45,259

health in the United States and

828

00:36:49,749 --> 00:36:48,079

fortunately the state of Georgia and one

829

00:36:52,120 --> 00:36:49,759

of the local County Health Department's

830

00:36:56,410 --> 00:36:52,130

really have a lot of experience doing

831

00:36:58,630 --> 00:36:56,420

remote immunization operations they had

832

00:37:00,189 --> 00:36:58,640

a protocol set up they had the equipment

833

00:37:02,319 --> 00:37:00,199

and the people who are willing to come

834

00:37:04,929 --> 00:37:02,329

down and spend their weekend down here

835

00:37:07,420 --> 00:37:04,939

and volunteer so they we actually have a

836

00:37:08,920 --> 00:37:07,430

very good infrastructure we some places

837

00:37:11,319 --> 00:37:08,930

are better at doing that than others we

838

00:37:13,359 --> 00:37:11,329

got lucky we have a very good group here

839

00:37:15,519 --> 00:37:13,369

in the Atlanta area that was able to

840

00:37:17,319 --> 00:37:15,529

come out and do this for us and you see

841

00:37:18,910 --> 00:37:17,329

them sitting out back there behind us

842

00:37:20,439 --> 00:37:18,920

now and they'd been busy all day they're

843

00:37:22,179 --> 00:37:20,449

very busy at the moment but i noticed

844

00:37:24,880 --> 00:37:22,189

behind us also there's free HIV testing

845

00:37:28,059 --> 00:37:24,890

here how does she how do you conduct

846

00:37:30,489 --> 00:37:28,069

that it's actually a saliva test for

847

00:37:32,739 --> 00:37:30,499

antibodies and that was kind of an

848

00:37:34,929 --> 00:37:32,749

afterthought it turns out that the the

849

00:37:37,689 --> 00:37:34,939

folks doing the HIV testing work in the

850

00:37:39,910 --> 00:37:37,699

same office as the nurses back there

851

00:37:42,189 --> 00:37:39,920

doing the vaccinating so they it was

852

00:37:43,900 --> 00:37:42,199

word of mouth again kind of right place

853

00:37:45,219 --> 00:37:43,910

right time they said well we're going

854

00:37:47,039 --> 00:37:45,229

down would you like to come with us and

855

00:37:50,410 --> 00:37:47,049

there may be some high-risk folks there

856

00:37:52,120 --> 00:37:50,420

lots of tattoos lots of things and yeah

857

00:37:53,559 --> 00:37:52,130

and they thought good opportunity to do

858

00:37:54,910 --> 00:37:53,569

this and really they've had a good

859

00:37:56,890 --> 00:37:54,920

response even though we didn't really

860

00:37:59,140 --> 00:37:56,900

advertise this at all they just kind of

861

00:38:01,509 --> 00:37:59,150

came and set up shopping we just kind of

862

00:38:03,880 --> 00:38:01,519

let it run so what about the counseling

863

00:38:07,719 --> 00:38:03,890

sort of aspect of the HIV testing do you

864

00:38:10,120 --> 00:38:07,729

get a result right here or do you send

865

00:38:12,249 --> 00:38:10,130

that test away and then it's done all it

866

00:38:14,469 --> 00:38:12,259

takes 20 minutes it's all done right on

867

00:38:17,289 --> 00:38:14,479

the spot we ask the person to come back

868

00:38:18,969 --> 00:38:17,299

we won't email it or anything we want to

869

00:38:21,370 --> 00:38:18,979

come back and be able to counsel them as

870

00:38:23,829 --> 00:38:21,380

to what the results mean we interesting

871

00:38:25,870 --> 00:38:23,839

they are using the dressing rooms for

872

00:38:27,519 --> 00:38:25,880

our little counseling offices oh I say

873

00:38:29,349 --> 00:38:27,529

right yeah when getting out of those

874

00:38:31,660 --> 00:38:29,359

little rooms this was a former clothing

875

00:38:33,579 --> 00:38:31,670

store I say and they've been using the

876

00:38:36,039 --> 00:38:33,589

the dressing rooms as the counseling

877

00:38:38,169 --> 00:38:36,049

rooms so I say the results for the HIV

878

00:38:40,029 --> 00:38:38,179

are given in the dressing room and right

879

00:38:42,189 --> 00:38:40,039

yeah right here 20 minutes interesting

880

00:38:43,840 --> 00:38:42,199

interesting well thank you so much bill

881

00:38:46,060 --> 00:38:43,850

for joining us today what

882

00:38:47,740 --> 00:38:46,070

I think this is a fantastic initiative I

883

00:38:49,150 --> 00:38:47,750

don't know if we have anything like this

884

00:38:50,770 --> 00:38:49,160

in Australia I wish we could have

885

00:38:52,180 --> 00:38:50,780

something like this I don't know if you

886

00:38:54,610 --> 00:38:52,190

know but we've had measles outbreaks

887

00:38:57,340 --> 00:38:54,620

recently and we've had australia-wide

888

00:38:59,680 --> 00:38:57,350

we've had pertussis epidemics as well so

889

00:39:01,150 --> 00:38:59,690

we have similar problems to America in

890

00:39:03,250 --> 00:39:01,160

that sense I think this is a great thing

891

00:39:06,460 --> 00:39:03,260

to do great thanks for joining us today

892

00:39:09,370 --> 00:39:06,470

you're welcome and now I'm talking to

893

00:39:11,800 --> 00:39:09,380

Brian Anders hello Brian and also met

894

00:39:14,410 --> 00:39:11,810

Larry hi Matt how are you now Matt you

895

00:39:16,210 --> 00:39:14,420

are involved setting up the free vaccine

896

00:39:19,810 --> 00:39:16,220

clinic tell me what was your role in

897

00:39:21,850 --> 00:39:19,820

setting this up well Brian and I are

898

00:39:23,920 --> 00:39:21,860

here as a as representatives for the

899

00:39:27,310 --> 00:39:23,930

women think thinking free foundation and

900

00:39:28,960 --> 00:39:27,320

that's a that's a group that has gotten

901
00:39:31,090 --> 00:39:28,970
started within the last few months to

902
00:39:33,850 --> 00:39:31,100
promote skepticism critical thinking

903
00:39:35,170 --> 00:39:33,860
among young parents young women and so

904
00:39:37,840 --> 00:39:35,180
on and so forth we thought what better

905
00:39:40,810 --> 00:39:37,850
way to to help out at DragonCon than to

906
00:39:42,670 --> 00:39:40,820
get this vaccination clinic working my

907
00:39:44,500 --> 00:39:42,680
specific role besides you know being

908
00:39:47,500 --> 00:39:44,510
behind the counter being hands-on and

909
00:39:50,800 --> 00:39:47,510
helping out I helped write a copy for

910
00:39:52,480 --> 00:39:50,810
our brochure and now this is really key

911
00:39:54,700 --> 00:39:52,490
can you just hold that up yeah this is

912
00:39:56,320 --> 00:39:54,710
the logo yeah I kept inning yeah I can

913
00:39:58,450 --> 00:39:56,330

vaccinate it yeah I can't take credit

914

00:40:00,190 --> 00:39:58,460

for that that was a Lisa Andrews idea or

915

00:40:02,830 --> 00:40:00,200

who was up saying yes certainly Amy's

916

00:40:05,260 --> 00:40:02,840

run with the actual logo for her but

917

00:40:07,740 --> 00:40:05,270

exciting a lot of us were involved in

918

00:40:11,460 --> 00:40:07,750

writing the copy for this and so on

919

00:40:13,710 --> 00:40:11,470

and then we are here just basically

920

00:40:16,130 --> 00:40:13,720

being present as representatives of

921

00:40:18,300 --> 00:40:16,140

women thinking free foundation and

922

00:40:20,520 --> 00:40:18,310

helping answer people's questions and

923

00:40:21,690 --> 00:40:20,530

getting literature handed out and so on

924

00:40:24,660 --> 00:40:21,700

we're hoping to make this a regular

925

00:40:28,170 --> 00:40:24,670

thing at Dragon Con Wow so Brian your

926

00:40:29,700 --> 00:40:28,180

lovely wife Elise is not able to be here

927

00:40:31,740 --> 00:40:29,710

this weekend because you just had

928

00:40:33,870 --> 00:40:31,750

another baby haven't you yes and because

929

00:40:35,400 --> 00:40:33,880

of the risk of pertussis she isn't

930

00:40:38,070 --> 00:40:35,410

wasn't able to come can you tell us a

931

00:40:39,900 --> 00:40:38,080

little bit about that yes our our

932

00:40:42,840 --> 00:40:39,910

youngest daughter Delaney is three

933

00:40:44,400 --> 00:40:42,850

months old and she felt it was in her

934

00:40:47,160 --> 00:40:44,410

best interest not to bring her into a

935

00:40:49,760 --> 00:40:47,170

situation where she's exposed to a lot

936

00:40:52,830 --> 00:40:49,770

of people we've actually been very

937

00:40:55,890 --> 00:40:52,840

cautious with how we're letting her be

938

00:40:57,720 --> 00:40:55,900

exposed to general population and even

939

00:41:01,080 --> 00:40:57,730

family wiser keeping it to smaller

940

00:41:04,620 --> 00:41:01,090

family events so that she's not catching

941

00:41:06,240 --> 00:41:04,630

anything so Lisa's this has been her

942

00:41:07,680 --> 00:41:06,250

mission for about two years he's been

943

00:41:09,840 --> 00:41:07,690

trying to launch the whole hug me

944

00:41:12,840 --> 00:41:09,850

campaign and it just it finally all came

945

00:41:15,480 --> 00:41:12,850

together thanks to just the last year of

946

00:41:18,630 --> 00:41:15,490

success we've had with the moon thinking

947

00:41:20,670 --> 00:41:18,640

free foundation yeah it's such a

948

00:41:22,830 --> 00:41:20,680

fantastic idea and so obviously you've

949

00:41:24,240 --> 00:41:22,840

got the cdc involved you guys aren't

950

00:41:27,060 --> 00:41:24,250

giving the vaccinations right we've got

951
00:41:29,940 --> 00:41:27,070
qualified health professionals on site

952
00:41:32,550 --> 00:41:29,950
to do this so how did you how did you

953
00:41:34,440 --> 00:41:32,560
get them involved oh well actually it

954
00:41:36,780 --> 00:41:34,450
was real that was Maria yeah Maria

955
00:41:39,090 --> 00:41:36,790
Walters from skeptic and at least know

956
00:41:41,370 --> 00:41:39,100
each other very well so when we really

957
00:41:42,960 --> 00:41:41,380
started to get rolling with the idea at

958
00:41:45,810 --> 00:41:42,970
least talk to Maria and since Maria was

959
00:41:49,230 --> 00:41:45,820
here in Atlanta she had contacts with

960
00:41:50,970 --> 00:41:49,240
the CDC and she talked to a bill and

961
00:41:53,040 --> 00:41:50,980
some other people and

962
00:41:54,840 --> 00:41:53,050
they got it all hooked up so that's how

963
00:41:56,609 --> 00:41:54,850

I work yeah so I believe you're probably

964

00:41:58,710 --> 00:41:56,619

going to run out of vaccines today bill

965

00:42:00,180 --> 00:41:58,720

says he'd bought up a hundred for today

966

00:42:03,720 --> 00:42:00,190

and they've already used something like

967

00:42:05,370 --> 00:42:03,730

85 so that's good that's that's good

968

00:42:06,720 --> 00:42:05,380

news editor and they said they can run

969

00:42:08,310 --> 00:42:06,730

and go get more in that would be a good

970

00:42:09,750 --> 00:42:08,320

problem to have yeah don't be awesome

971

00:42:11,700 --> 00:42:09,760

because they would exceed our

972

00:42:13,170 --> 00:42:11,710

expectations I mean this is just you

973

00:42:16,200 --> 00:42:13,180

yeah it was explaining to us yesterday

974

00:42:17,910 --> 00:42:16,210

that zeerid that in events like this

975

00:42:20,190 --> 00:42:17,920

it's not uncommon to walk away with

976
00:42:23,400 --> 00:42:20,200
nobody getting vaccinated and family yes

977
00:42:26,490 --> 00:42:23,410
and for the the fact that we are using

978
00:42:29,280 --> 00:42:26,500
up our supply is just astounding so it's

979
00:42:32,010 --> 00:42:29,290
it's a credit to not just the people who

980
00:42:34,200 --> 00:42:32,020
work in the foundation in Chicago but to

981
00:42:36,210 --> 00:42:34,210
just getting the word out and all the

982
00:42:39,000 --> 00:42:36,220
skeptics coming together and just just

983
00:42:40,770 --> 00:42:39,010
spreading the word and helping us you

984
00:42:42,510 --> 00:42:40,780
know launch this if it's been absolutely

985
00:42:45,690 --> 00:42:42,520
wonderful we've gotten a huge amount of

986
00:42:47,940 --> 00:42:45,700
support from just all kinds of folks to

987
00:42:49,770 --> 00:42:47,950
get the word out about this and it's

988
00:42:51,090 --> 00:42:49,780

been wonderful but it's true that

989

00:42:52,710 --> 00:42:51,100

there's not just skeptics here right i

990

00:42:54,359 --> 00:42:52,720

mean there's something like 50,000

991

00:42:55,950 --> 00:42:54,369

people here i guess you're getting

992

00:42:57,270 --> 00:42:55,960

people coming through the door he you

993

00:43:00,060 --> 00:42:57,280

don't know all of them there's there's

994

00:43:01,349 --> 00:43:00,070

just strangers as well yeah we've had a

995

00:43:02,910 --> 00:43:01,359

lot of people who have just been

996

00:43:04,980 --> 00:43:02,920

complete strangers coming in because

997

00:43:07,920 --> 00:43:04,990

they've heard by word of mouth or

998

00:43:10,050 --> 00:43:07,930

they've seen the posters or or they've

999

00:43:12,000 --> 00:43:10,060

seen the stickers and and that's that's

1000

00:43:15,090 --> 00:43:12,010

what we want we want to get as many

1001
00:43:16,859 --> 00:43:15,100
people to come as possible I i think the

1002
00:43:19,230 --> 00:43:16,869
posters that Jill Powell put together

1003
00:43:20,670 --> 00:43:19,240
have been a huge influence I believe me

1004
00:43:22,560 --> 00:43:20,680
we've had people just standing out there

1005
00:43:25,080 --> 00:43:22,570
reading them and I think it's the

1006
00:43:28,020 --> 00:43:25,090
pictures that are drying them in and it

1007
00:43:30,150 --> 00:43:28,030
was just a fantastic combination and

1008
00:43:32,400 --> 00:43:30,160
helping launch this the pictures are of

1009
00:43:35,670 --> 00:43:32,410
sort of characters from science fiction

1010
00:43:36,849 --> 00:43:35,680
right yes yeah we have Princess Leia of

1011
00:43:39,079 --> 00:43:36,859
dr. mercola

1012
00:43:40,519 --> 00:43:39,089
Starbuck from Battlestar Galactica and

1013
00:43:42,499 --> 00:43:40,529

the really great thing about this is is

1014

00:43:44,839 --> 00:43:42,509

even even if they walk by even if they

1015

00:43:46,640 --> 00:43:44,849

do not come in to get the vaccination

1016

00:43:47,569 --> 00:43:46,650

they're stopping in there reading us so

1017

00:43:48,739 --> 00:43:47,579

they're still getting the information

1018

00:43:50,299 --> 00:43:48,749

they're still getting they're still

1019

00:43:51,380 --> 00:43:50,309

learning that wow whooping cough is

1020

00:43:52,729 --> 00:43:51,390

coming back and it could be a really

1021

00:43:56,089 --> 00:43:52,739

serious thing they actually go talk to

1022

00:43:57,499 --> 00:43:56,099

my doctor so it's it's it's spreading

1023

00:43:59,450 --> 00:43:57,509

the word in more ways than just getting

1024

00:44:02,269 --> 00:43:59,460

some people come in here for them for

1025

00:44:04,759 --> 00:44:02,279

them for the shot yeah well thanks very

1026

00:44:06,319 --> 00:44:04,769

much Brian and Matt for joining us today

1027

00:44:08,059 --> 00:44:06,329

on the skeptic zone and I think this is

1028

00:44:10,880 --> 00:44:08,069

a wonderful initiative and I wish you

1029

00:44:26,630 --> 00:44:10,890

all success in future vaccine clinics

1030

00:44:28,779 --> 00:44:26,640

thank thank you very much this is des

1031

00:44:31,069 --> 00:44:28,789

Rochelle hosted skeptically speaking

1032

00:44:33,589 --> 00:44:31,079

check out our website at skeptically

1033

00:44:37,880 --> 00:44:33,599

speaking calm and listen to us live on

1034

00:44:46,489 --> 00:44:37,890

CJ sr 88.5 FM in Edmonton Alberta Canada

1035

00:44:49,519 --> 00:44:46,499

I now return you to the skeptic zone dr.

1036

00:44:52,069 --> 00:44:49,529

Phil Plait PhD is no stranger to the

1037

00:44:54,380 --> 00:44:52,079

skeptic zone or fans of skepticism

1038

00:44:57,950 --> 00:44:54,390

worldwide he is a renowned astronomer

1039

00:45:04,759 --> 00:44:57,960

and now he stars in his own TV series

1040

00:45:08,269 --> 00:45:04,769

Phil plates bad universe I'm sitting

1041

00:45:11,209 --> 00:45:08,279

here in Bad Astronomy central gazing

1042

00:45:13,009 --> 00:45:11,219

over to the screen of dr. Phil played

1043

00:45:15,819 --> 00:45:13,019

with a beautiful picture or a moody

1044

00:45:19,459 --> 00:45:15,829

picture you were saying of Saturn Phil

1045

00:45:21,349 --> 00:45:19,469

yeah it's as we're speaking there was a

1046

00:45:23,079 --> 00:45:21,359

new picture released there were pictures

1047

00:45:25,549 --> 00:45:23,089

released all the time from Saturn

1048

00:45:27,859 --> 00:45:25,559

Carolyn Porco who is the team leader for

1049

00:45:30,049 --> 00:45:27,869

a Cassini imaging the probe that's

1050

00:45:32,539 --> 00:45:30,059

orbiting Saturn right now is on Twitter

1051
00:45:33,709 --> 00:45:32,549
and she will occasionally say Oh take a

1052
00:45:35,239 --> 00:45:33,719
look at this here's a nice picture of

1053
00:45:37,219 --> 00:45:35,249
Titan or here's a picture of the Rings

1054
00:45:38,749 --> 00:45:37,229
or whatever and she said here's an

1055
00:45:41,120 --> 00:45:38,759
incredible picture of Saturn's rings

1056
00:45:42,140 --> 00:45:41,130
with four moons and I clicked on it and

1057
00:45:45,410 --> 00:45:42,150
it's this really it's this really

1058
00:45:46,640 --> 00:45:45,420
beautiful wide shot of a crescent Saturn

1059
00:45:49,250 --> 00:45:46,650
which we can't see from the earth

1060
00:45:51,080 --> 00:45:49,260
because you have to be off to the side

1061
00:45:52,700 --> 00:45:51,090
and the earth is always between Saturn

1062
00:45:54,200 --> 00:45:52,710
and the Sun because we're we're really

1063
00:45:56,480 --> 00:45:54,210

close to the Sun Saturn's really far

1064

00:45:57,740 --> 00:45:56,490

away we can't get off to Saturn side

1065

00:45:59,990 --> 00:45:57,750

here on earth you have to send a space

1066

00:46:03,110 --> 00:46:00,000

probe to do that I say you've got this

1067

00:46:05,360 --> 00:46:03,120

beautiful crescent Saturn and it was

1068

00:46:07,100 --> 00:46:05,370

taken with a filter that picks out

1069

00:46:09,140 --> 00:46:07,110

methane in the atmosphere of the planet

1070

00:46:11,300 --> 00:46:09,150

and it makes the picture look a little

1071

00:46:13,400 --> 00:46:11,310

funny and I remember I was this morning

1072

00:46:15,320 --> 00:46:13,410

when when Carolyn tweeted the the image

1073

00:46:16,820 --> 00:46:15,330

and I looked at it and I was taken I

1074

00:46:18,830 --> 00:46:16,830

wasn't interesting the picture shadow is

1075

00:46:20,030 --> 00:46:18,840

a little weird within a minute somebody

1076
00:46:21,470 --> 00:46:20,040
had tweeted me and said why does the

1077
00:46:23,660 --> 00:46:21,480
shadow it look weird and I thought well

1078
00:46:27,020 --> 00:46:23,670
maybe I should look into this for us

1079
00:46:29,300 --> 00:46:27,030
shadows actually seems to be it's not

1080
00:46:30,740 --> 00:46:29,310
cold old dipping dimple is that you know

1081
00:46:34,040 --> 00:46:30,750
when you see when you look at a crescent

1082
00:46:35,570 --> 00:46:34,050
moon the Crescent the curved shadow what

1083
00:46:37,280 --> 00:46:35,580
you're seeing is that is that is the

1084
00:46:39,050 --> 00:46:37,290
line between day and night on the moon

1085
00:46:41,720 --> 00:46:39,060
yeah it's the same on Saturn and you

1086
00:46:44,840 --> 00:46:41,730
expect that to be a nice smooth curve

1087
00:46:46,490 --> 00:46:44,850
because the planet is roughly a sphere

1088
00:46:49,610 --> 00:46:46,500

and it's not right in the middle there's

1089

00:46:53,090 --> 00:46:49,620

a huge dip and it's almost like a very

1090

00:46:54,710 --> 00:46:53,100

broad smooth em on its side I it's hard

1091

00:46:57,050 --> 00:46:54,720

to explain explain you have to see the

1092

00:46:58,640 --> 00:46:57,060

picture but I kind of figured right away

1093

00:47:00,050 --> 00:46:58,650

that must have to do with the the

1094

00:47:02,150 --> 00:47:00,060

methane in the atmosphere and it absorbs

1095

00:47:03,680 --> 00:47:02,160

light and so you're seeing things a

1096

00:47:05,570 --> 00:47:03,690

little bit differently and in fact it's

1097

00:47:07,940 --> 00:47:05,580

the same thing on the moon when you look

1098

00:47:09,710 --> 00:47:07,950

at the terminator this line between day

1099

00:47:10,700 --> 00:47:09,720

night on the moon it looks smooth to

1100

00:47:12,860 --> 00:47:10,710

your eye but you pull out a pair of

1101
00:47:14,420 --> 00:47:12,870
binoculars or telescope and it's bumpy

1102
00:47:16,100 --> 00:47:14,430
and wiggly because the moon isn't a

1103
00:47:18,320 --> 00:47:16,110
perfect sphere it's got craters and

1104
00:47:20,660 --> 00:47:18,330
mountains and things that break up that

1105
00:47:21,800 --> 00:47:20,670
so you can imagine a sunset is you're

1106
00:47:23,540 --> 00:47:21,810
standing on the ground the Sun might

1107
00:47:25,100 --> 00:47:23,550
already be set but if you're standing on

1108
00:47:27,680 --> 00:47:25,110
a mountain top you're up higher you can

1109
00:47:30,080 --> 00:47:27,690
still see the Sun so irregularities in

1110
00:47:32,060 --> 00:47:30,090
the surface change the shadow and that's

1111
00:47:33,830 --> 00:47:32,070
what's going on here of guessing that

1112
00:47:36,650 --> 00:47:33,840
we're seeing cloud tops at different

1113
00:47:38,090 --> 00:47:36,660

heights above Saturn's average size and

1114

00:47:40,790 --> 00:47:38,100

some of them are still catching sunlight

1115

00:47:43,220 --> 00:47:40,800

some art screw it up the kresson and you

1116

00:47:45,350 --> 00:47:43,230

get that effect there is dramatic now if

1117

00:47:46,790 --> 00:47:45,360

people are sitting by their computers at

1118

00:47:48,890 --> 00:47:46,800

the moment Phil what is this site you're

1119

00:47:50,810 --> 00:47:48,900

using to study all these pictures well

1120

00:47:54,020 --> 00:47:50,820

if you if you just look for carolyn

1121

00:47:58,070 --> 00:47:54,030

porco VOR CEO on the web you'll find ur

1122

00:48:00,830 --> 00:47:58,080

but this is the Cassini raw data

1123

00:48:02,279 --> 00:48:00,840

database it's just images that they come

1124

00:48:03,269 --> 00:48:02,289

down from the machine they from the

1125

00:48:08,999 --> 00:48:03,279

space probe they stick and write in

1126

00:48:11,039 --> 00:48:09,009

database and it's Saturn JPL nasa gov so

1127

00:48:14,789 --> 00:48:11,049

Saturn the planet JPL is Jet Propulsion

1128

00:48:16,799 --> 00:48:14,799

Laboratory and then NASA gov and you'll

1129

00:48:18,659 --> 00:48:16,809

see that there is a raw image archive

1130

00:48:20,609 --> 00:48:18,669

and you can go in there and type you

1131

00:48:23,189 --> 00:48:20,619

know show me wide angle shots of Saturn

1132

00:48:25,019 --> 00:48:23,199

taking on for example in this case if

1133

00:48:28,559 --> 00:48:25,029

you set the search parameters for july

1134

00:48:30,509 --> 00:48:28,569

seventeenth 2010 and you look for wide

1135

00:48:32,309 --> 00:48:30,519

angle shots of Saturn BAM these will

1136

00:48:34,829 --> 00:48:32,319

come up and you'll see that some of them

1137

00:48:36,269 --> 00:48:34,839

are very odd-looking and they have

1138

00:48:39,120 --> 00:48:36,279

different filters which is different

1139

00:48:41,099 --> 00:48:39,130

they respond differently to methane some

1140

00:48:42,479 --> 00:48:41,109

of them methane absorbs a little bit of

1141

00:48:44,549 --> 00:48:42,489

light in that that color some of it

1142

00:48:45,809 --> 00:48:44,559

absorbs a huge amount and the one we're

1143

00:48:47,489 --> 00:48:45,819

looking at here is where methane is

1144

00:48:49,949 --> 00:48:47,499

really strongly absorbing and so you get

1145

00:48:51,659 --> 00:48:49,959

these really dramatic features on the

1146

00:48:52,829 --> 00:48:51,669

pond the planets well the cloud tops I

1147

00:48:55,079 --> 00:48:52,839

was going to say the surface that's me

1148

00:48:57,539 --> 00:48:55,089

it's a big old gas giant planet you're

1149

00:48:59,009 --> 00:48:57,549

not seeing a surface and you really see

1150

00:49:00,900 --> 00:48:59,019

the storm bands and all that stuff is

1151
00:49:02,999 --> 00:49:00,910
totally I would like you definitely see

1152
00:49:04,979 --> 00:49:03,009
a wonderful just to the right of the

1153
00:49:06,959 --> 00:49:04,989
ring there that's incredible dip which

1154
00:49:08,429 --> 00:49:06,969
must be a gigantic storm right near the

1155
00:49:09,809 --> 00:49:08,439
equator something going on I you

1156
00:49:11,159 --> 00:49:09,819
actually don't understand how all that

1157
00:49:13,559 --> 00:49:11,169
stuff works i'm not a planetary

1158
00:49:15,299 --> 00:49:13,569
scientist and so it's funny i'll post

1159
00:49:16,979 --> 00:49:15,309
these pictures and this one's beautiful

1160
00:49:19,319 --> 00:49:16,989
as you can see Titan you can see the

1161
00:49:20,309 --> 00:49:19,329
mood teeth us in there or thethe this I

1162
00:49:22,169 --> 00:49:20,319
don't know how to pronounce all these

1163
00:49:24,209 --> 00:49:22,179

some did there's get causal to confuse

1164

00:49:26,909 --> 00:49:24,219

and all these all these words all these

1165

00:49:28,559 --> 00:49:26,919

Greek moon names and everything but i'll

1166

00:49:30,029 --> 00:49:28,569

post something i posted some of the

1167

00:49:31,439 --> 00:49:30,039

other day saying oh look at this picture

1168

00:49:33,299 --> 00:49:31,449

of the rings and you can't really see

1169

00:49:35,789 --> 00:49:33,309

what's going on here and i got an email

1170

00:49:37,890 --> 00:49:35,799

from a friend says oh actually you can

1171

00:49:39,599 --> 00:49:37,900

see what's going on here if you're

1172

00:49:41,309 --> 00:49:39,609

trained to do it so it comes to these

1173

00:49:43,769 --> 00:49:41,319

pictures on you know i'm a scientist and

1174

00:49:45,120 --> 00:49:43,779

i can puzzle a few things out but when

1175

00:49:46,769 --> 00:49:45,130

it comes to the details i don't know

1176

00:49:49,229 --> 00:49:46,779

well what's going it's a good argument

1177

00:49:51,419 --> 00:49:49,239

it's a good case that scientists need to

1178

00:49:52,919 --> 00:49:51,429

specialize because oh absolutely your

1179

00:49:54,359 --> 00:49:52,929

specialist in your field but once you

1180

00:49:56,459 --> 00:49:54,369

see something like this which isn't

1181

00:49:58,289 --> 00:49:56,469

quite your field you have to run to the

1182

00:50:00,630 --> 00:49:58,299

people to know more about it sure and

1183

00:50:02,219 --> 00:50:00,640

there are times i don't and then you

1184

00:50:03,749 --> 00:50:02,229

know I wind up saying something is wrong

1185

00:50:05,880 --> 00:50:03,759

and I did corrected that's happened

1186

00:50:07,679 --> 00:50:05,890

several times with Saturn things I

1187

00:50:09,749 --> 00:50:07,689

thought I knew and I was totally wrong

1188

00:50:11,039 --> 00:50:09,759

and it's funny these these a lot of

1189

00:50:11,569 --> 00:50:11,049

these pictures I know how digital

1190

00:50:13,249 --> 00:50:11,579

imagery

1191

00:50:15,680 --> 00:50:13,259

works i worked on I did that for Hubble

1192

00:50:17,329 --> 00:50:15,690

for a decade.the these different filters

1193

00:50:19,459 --> 00:50:17,339

that they use I know how that works

1194

00:50:21,410 --> 00:50:19,469

really well so when I saw the picture I

1195

00:50:23,089 --> 00:50:21,420

knew almost right away what was going on

1196

00:50:24,739 --> 00:50:23,099

I just had to confirm it I did we did

1197

00:50:25,819 --> 00:50:24,749

yeah well you confirmed it right when I

1198

00:50:28,670 --> 00:50:25,829

was sitting here you went for another

1199

00:50:30,829 --> 00:50:28,680

shot of another another angle of the

1200

00:50:32,299 --> 00:50:30,839

planet and you could confirm your or

1201
00:50:34,219 --> 00:50:32,309
less that's what was going on well I

1202
00:50:35,930 --> 00:50:34,229
made a prediction as if this is caused

1203
00:50:37,849 --> 00:50:35,940
by methane absorption then there's

1204
00:50:39,769 --> 00:50:37,859
another filter which shows that more

1205
00:50:41,959 --> 00:50:39,779
strongly we should see the feature even

1206
00:50:43,130 --> 00:50:41,969
more obviously pop that up and that's

1207
00:50:44,449 --> 00:50:43,140
what we're looking at now and now that

1208
00:50:47,690 --> 00:50:44,459
dip in the middle of the Crescent is

1209
00:50:50,809 --> 00:50:47,700
incredibly obvious so I my prediction

1210
00:50:52,609 --> 00:50:50,819
was supported and I don't I don't know

1211
00:50:53,839 --> 00:50:52,619
if I'm right but it lends credence to

1212
00:50:55,579 --> 00:50:53,849
the phone yeah I was writing this is due

1213
00:50:58,160 --> 00:50:55,589

to methane it's something you can

1214

00:50:59,269 --> 00:50:58,170

explore from here on in right and I

1215

00:51:00,529 --> 00:50:59,279

would have to I'd have to figure out

1216

00:51:02,029 --> 00:51:00,539

what you were the one who said you

1217

00:51:02,839 --> 00:51:02,039

should look at it at different well you

1218

00:51:04,099 --> 00:51:02,849

know what it would look like in a

1219

00:51:05,569 --> 00:51:04,109

different user and I thought it was sure

1220

00:51:07,400 --> 00:51:05,579

yeah and so there are other ways we

1221

00:51:08,839 --> 00:51:07,410

could try to work this out but the best

1222

00:51:10,640 --> 00:51:08,849

way in this case would be to talk to an

1223

00:51:12,589 --> 00:51:10,650

expert yeah I hate to argue from

1224

00:51:14,660 --> 00:51:12,599

authority but on the other hand you know

1225

00:51:17,209 --> 00:51:14,670

Carolyn or my friend Emily lock dawala

1226

00:51:19,249 --> 00:51:17,219

who is with the Planetary Society a very

1227

00:51:21,319 --> 00:51:19,259

big public outreach group about

1228

00:51:23,359 --> 00:51:21,329

planetary exploration she knows all this

1229

00:51:24,769 --> 00:51:23,369

stuff too and she's one who corrected me

1230

00:51:26,299 --> 00:51:24,779

on my post the other day as she's

1231

00:51:29,359 --> 00:51:26,309

writing something up today I think about

1232

00:51:31,160 --> 00:51:29,369

it um but they I mean there's reason

1233

00:51:33,019 --> 00:51:31,170

these people are experts they know what

1234

00:51:35,479 --> 00:51:33,029

they're talking about and they may be

1235

00:51:37,459 --> 00:51:35,489

wrong too but you know statistically

1236

00:51:39,769 --> 00:51:37,469

speaking they're wrong a lot less than I

1237

00:51:42,410 --> 00:51:39,779

am when it comes to this I find it quite

1238

00:51:44,839 --> 00:51:42,420

interesting sometimes to consider that

1239

00:51:49,069 --> 00:51:44,849

the what's available to the average

1240

00:51:50,569 --> 00:51:49,079

smell like me in Australia or an expert

1241

00:51:53,569 --> 00:51:50,579

in the field like you sitting here in

1242

00:51:55,910 --> 00:51:53,579

Bad Astronomy central we all have access

1243

00:51:57,229 --> 00:51:55,920

I have to say no no no come on my bad

1244

00:51:59,569 --> 00:51:57,239

astronomy central means you're sitting

1245

00:52:01,430 --> 00:51:59,579

in my home office you know I'm still

1246

00:52:03,979 --> 00:52:01,440

wearing my pajama bottoms oh you've just

1247

00:52:05,390 --> 00:52:03,989

bought the illusions now yeah you can

1248

00:52:07,609 --> 00:52:05,400

hear the computer clicking away a

1249

00:52:09,439 --> 00:52:07,619

crowned actually I'm making sure my dog

1250

00:52:12,589 --> 00:52:09,449

isn't scratching at the door and ruining

1251

00:52:14,190 --> 00:52:12,599

the interview this is that this this

1252

00:52:16,410 --> 00:52:14,200

image of you know

1253

00:52:18,270 --> 00:52:16,420

men and in behind glass screens and

1254

00:52:19,650 --> 00:52:18,280

white lab coats you know you could call

1255

00:52:21,270 --> 00:52:19,660

on but no honestly what oh there's a

1256

00:52:24,150 --> 00:52:21,280

picture of Stewie from family guy on

1257

00:52:25,740 --> 00:52:24,160

beyond that you're saying yeah um but

1258

00:52:27,300 --> 00:52:25,750

you can sit there and I can sit in

1259

00:52:28,950 --> 00:52:27,310

Australian all our listeners can do the

1260

00:52:30,720 --> 00:52:28,960

same thing go to this website and say oh

1261

00:52:32,520 --> 00:52:30,730

I wonder what satin would look like from

1262

00:52:34,260 --> 00:52:32,530

this angle prep is it ever you have a

1263

00:52:37,680 --> 00:52:34,270

pinch yourself and thinking my goodness

1264

00:52:39,480 --> 00:52:37,690

me yeah what's available to everybody on

1265

00:52:41,670 --> 00:52:39,490

the planet who has a half decent

1266

00:52:43,710 --> 00:52:41,680

internet connection are you crazy and

1267

00:52:46,319 --> 00:52:43,720

you can do this with Mars yeah Rovers

1268

00:52:47,970 --> 00:52:46,329

the data spoke um if if you're looking

1269

00:52:50,370 --> 00:52:47,980

at Hubble images if they're older than a

1270

00:52:53,510 --> 00:52:50,380

year there's a database called mast it's

1271

00:52:56,760 --> 00:52:53,520

the it's the something archive spaced

1272

00:52:58,440 --> 00:52:56,770

mast you look at mast and Hubble mas tu

1273

00:53:00,420 --> 00:52:58,450

find it you'll find the archive and you

1274

00:53:03,079 --> 00:53:00,430

can go in there and tight spiral

1275

00:53:06,150 --> 00:53:03,089

galaxies and you don't find a hundred

1276

00:53:07,829 --> 00:53:06,160

rod images of gift spiral galaxies from

1277

00:53:09,319 --> 00:53:07,839

Hubble it's incredible but 10 years ago

1278

00:53:12,120 --> 00:53:09,329

20 years ago this would have been

1279

00:53:14,280 --> 00:53:12,130

fantasy just 20 years ago 80 years ago

1280

00:53:16,920 --> 00:53:14,290

okay yeah 10 years ago when I was let's

1281

00:53:19,050 --> 00:53:16,930

see it's 2010 sister than 2,000 yeah I'd

1282

00:53:22,200 --> 00:53:19,060

already been working on Hubble for four

1283

00:53:24,780 --> 00:53:22,210

years ten years ago and and in 96 when

1284

00:53:28,109 --> 00:53:24,790

our camera finished building it it

1285

00:53:30,210 --> 00:53:28,119

launched in 97 so that archive was

1286

00:53:32,190 --> 00:53:30,220

already there were already public okay

1287

00:53:33,900 --> 00:53:32,200

data even in the mid-90s more really

1288

00:53:35,550 --> 00:53:33,910

yeah from Hubble that you could look up

1289

00:53:37,620 --> 00:53:35,560

and do your own processing and all that

1290

00:53:39,900 --> 00:53:37,630

was incredible do i do you happen to

1291

00:53:42,180 --> 00:53:39,910

know because of the widespread

1292

00:53:43,559 --> 00:53:42,190

availability of this information are

1293

00:53:44,960 --> 00:53:43,569

there people sitting in their armchairs

1294

00:53:47,609 --> 00:53:44,970

making interesting discoveries

1295

00:53:50,160 --> 00:53:47,619

absolutely and and what's really funny

1296

00:53:52,470 --> 00:53:50,170

is is that it's a coincidence that you

1297

00:53:54,980 --> 00:53:52,480

would ask this right now but a press

1298

00:53:57,359 --> 00:53:54,990

release came out like an hour ago

1299

00:53:58,710 --> 00:53:57,369

there's a still in bed an hour ago yeah

1300

00:54:01,589 --> 00:53:58,720

well i mean and i was just reading

1301

00:54:04,020 --> 00:54:01,599

reading my email and there are these

1302

00:54:06,720 --> 00:54:04,030

objects well i need to back up there is

1303

00:54:09,900 --> 00:54:06,730

a there's a guy named chris linn taught

1304

00:54:12,059 --> 00:54:09,910

who is a stronger in england and he does

1305

00:54:15,569 --> 00:54:12,069

the sky at night with a weed a very

1306

00:54:17,400 --> 00:54:15,579

famous BBC production and patrick moore

1307

00:54:19,620 --> 00:54:17,410

doesn't do that anymore he does he does

1308

00:54:22,109 --> 00:54:19,630

and chris is there is co-host I see um

1309

00:54:23,970 --> 00:54:22,119

and so chris chris is a really good

1310

00:54:25,800 --> 00:54:23,980

astronomer he's a nice guy known him for

1311

00:54:27,300 --> 00:54:25,810

a few years and he and a few other

1312

00:54:30,300 --> 00:54:27,310

people started this idea called

1313

00:54:32,040 --> 00:54:30,310

Galaxy Zoo where there is a survey of

1314

00:54:35,760 --> 00:54:32,050

the sky that was taken years ago and all

1315

00:54:37,590 --> 00:54:35,770

that data is online and so they course

1316

00:54:40,380 --> 00:54:37,600

Davis plural so although all those data

1317

00:54:42,390 --> 00:54:40,390

are online whatever astronomers use data

1318

00:54:44,700 --> 00:54:42,400

plural and singular its grammar grammar

1319

00:54:47,550 --> 00:54:44,710

people who get all upset about it and I

1320

00:54:49,560 --> 00:54:47,560

don't I don't care but all of those

1321

00:54:51,240 --> 00:54:49,570

images all the spectra are online you

1322

00:54:53,640 --> 00:54:51,250

can grab them so what they did is they

1323

00:54:56,340 --> 00:54:53,650

wrote software that finds galaxies in

1324

00:54:58,290 --> 00:54:56,350

the data and then you can sign up to

1325

00:55:01,050 --> 00:54:58,300

register it's called Galaxy Zoo you can

1326

00:55:02,610 --> 00:55:01,060

find it online easily and then you after

1327

00:55:04,590 --> 00:55:02,620

a brief training period where you click

1328

00:55:07,680 --> 00:55:04,600

on a few galaxy pictures and say this is

1329

00:55:09,120 --> 00:55:07,690

a spiral it's it's rotating clockwise do

1330

00:55:12,180 --> 00:55:09,130

you say anti-clockwise muster their

1331

00:55:13,470 --> 00:55:12,190

counter clock oh but okay but we say

1332

00:55:15,780 --> 00:55:13,480

counterclockwise in America and in

1333

00:55:17,310 --> 00:55:15,790

England it's anti clockwise and if this

1334

00:55:19,260 --> 00:55:17,320

is an elliptical it's an irregular they

1335

00:55:20,820 --> 00:55:19,270

it trains you and tests you to make sure

1336

00:55:22,050 --> 00:55:20,830

you know what you're doing and then let

1337

00:55:23,790 --> 00:55:22,060

you go and you can sit there and

1338

00:55:25,950 --> 00:55:23,800

classify galaxies after galaxy for

1339

00:55:27,960 --> 00:55:25,960

galaxy it's hard for computers to do

1340

00:55:30,390 --> 00:55:27,970

this it's easy for humans to do it and

1341

00:55:33,300 --> 00:55:30,400

you're crowdsourcing it the more people

1342

00:55:35,670 --> 00:55:33,310

doing it the more classifications you

1343

00:55:37,890 --> 00:55:35,680

have and they tested it on tens of

1344

00:55:39,960 --> 00:55:37,900

thousands of galaxies is incredible

1345

00:55:41,490 --> 00:55:39,970

their statistics are really good and

1346

00:55:43,260 --> 00:55:41,500

what they found is that people are

1347

00:55:44,460 --> 00:55:43,270

really good at classifying galaxies with

1348

00:55:46,080 --> 00:55:44,470

very little training and they're not

1349

00:55:47,340 --> 00:55:46,090

going to run out of galaxies to class no

1350

00:55:48,960 --> 00:55:47,350

there are millions and millions millions

1351

00:55:50,430 --> 00:55:48,970

I've class and it's addicting I've

1352

00:55:51,870 --> 00:55:50,440

classified I'll even know how many

1353

00:55:53,820 --> 00:55:51,880

hundreds are you just sit down start

1354

00:55:55,140 --> 00:55:53,830

doing it yeah it's just you know oh my

1355

00:55:57,390 --> 00:55:55,150

god it's been eight hours and i'm hungry

1356

00:55:58,800 --> 00:55:57,400

and my you know my dog is so you you

1357

00:56:01,680 --> 00:55:58,810

know the carpet you know I need to get

1358

00:56:04,110 --> 00:56:01,690

out it's really easy to get lost do even

1359

00:56:05,040 --> 00:56:04,120

a region to work on is that I don't know

1360

00:56:07,080 --> 00:56:05,050

how I don't know how they pick the

1361

00:56:09,900 --> 00:56:07,090

galaxies actually I mean they have some

1362

00:56:12,570 --> 00:56:09,910

some software algorithm that they use to

1363

00:56:13,920 --> 00:56:12,580

do all this and once you classify it it

1364

00:56:16,050 --> 00:56:13,930

goes into a database with the other

1365

00:56:18,540 --> 00:56:16,060

classifications and it it checks it says

1366

00:56:20,520 --> 00:56:18,550

Wow 75 people have looked at this in 74

1367

00:56:22,680 --> 00:56:20,530

say it's anti clockwise and one guy says

1368

00:56:24,630 --> 00:56:22,690

it's clockwise can throw the clockwise

1369

00:56:27,420 --> 00:56:24,640

out right right so it does all that and

1370

00:56:29,760 --> 00:56:27,430

people have found stuff in this data

1371

00:56:31,230 --> 00:56:29,770

that that you can't that you know one

1372

00:56:33,030 --> 00:56:31,240

person looking at the data never would

1373

00:56:37,140 --> 00:56:33,040

have seen and the result there was a

1374

00:56:40,170 --> 00:56:37,150

woman at Brian May the the guitar clean

1375

00:56:41,970 --> 00:56:40,180

yeah Brian May dictatorship we enroll

1376

00:56:43,530 --> 00:56:41,980

we will rock you and we have a Champions

1377

00:56:46,920 --> 00:56:43,540

I mean you know relatively famous

1378

00:56:49,470 --> 00:56:46,930

relatively thing was an astronomer and

1379

00:56:51,569 --> 00:56:49,480

then he left to he left he left school

1380

00:56:53,520 --> 00:56:51,579

to join some rock band which worked out

1381

00:56:56,760 --> 00:56:53,530

fairly well for him I suppose and then

1382

00:56:58,589 --> 00:56:56,770

he just got his PhD recently and so he

1383

00:57:00,270 --> 00:56:58,599

he does some public outreach for

1384

00:57:03,030 --> 00:57:00,280

astronomy talks about it he writes about

1385

00:57:04,799 --> 00:57:03,040

it sometimes so he mentioned Galaxy Zoo

1386

00:57:06,210 --> 00:57:04,809

he works with chris linn taught and

1387

00:57:08,309 --> 00:57:06,220

patrick moore they do think so yeah they

1388

00:57:11,069 --> 00:57:08,319

wrote a book together and so they he

1389

00:57:13,710 --> 00:57:11,079

mentioned it some young woman in oh gosh

1390

00:57:16,650 --> 00:57:13,720

denmark oh i don't remember her name is

1391

00:57:18,420 --> 00:57:16,660

Hani or Hanny I don't know how she

1392

00:57:22,589 --> 00:57:18,430

pronounces her name but she found this

1393

00:57:25,200 --> 00:57:22,599

this sort of weird green smudgy thing

1394

00:57:28,049 --> 00:57:25,210

next to a galaxy which they were calling

1395

00:57:31,349 --> 00:57:28,059

Hanny's object which in Dutch is honey's

1396

00:57:34,170 --> 00:57:31,359

for fair and that's what they're calling

1397

00:57:35,910 --> 00:57:34,180

it and it turns out nobody knew it was

1398

00:57:37,290 --> 00:57:35,920

they want to looking at using Hubble to

1399

00:57:38,670 --> 00:57:37,300

look at if some professional astronomers

1400

00:57:41,040 --> 00:57:38,680

got involved and they found it it's a

1401

00:57:44,309 --> 00:57:41,050

cloud of gas that's being lit up by

1402

00:57:46,470 --> 00:57:44,319

nearby quasar so there's this black hole

1403

00:57:48,480 --> 00:57:46,480

a gazillion light-years away that's

1404

00:57:50,339 --> 00:57:48,490

sucking down material that material gets

1405

00:57:52,319 --> 00:57:50,349

hot and glows and that glow is bright

1406

00:57:53,609 --> 00:57:52,329

enough to have lit up this gas cloud

1407

00:57:55,650 --> 00:57:53,619

it's like a hundred thousand light years

1408

00:57:57,450 --> 00:57:55,660

away it looks like it's just floating

1409

00:57:59,640 --> 00:57:57,460

out there in space and she discovered it

1410

00:58:01,109 --> 00:57:59,650

it's her object I was thinking the old

1411

00:58:04,230 --> 00:58:01,119

Star Trek when you mention him is this

1412

00:58:06,329 --> 00:58:04,240

strange green blob in space in the notch

1413

00:58:08,819 --> 00:58:06,339

or was the end it winds up being a space

1414

00:58:11,309 --> 00:58:08,829

of evil it takes over Scottie you know

1415

00:58:13,020 --> 00:58:11,319

what else does it do yeah and so there's

1416

00:58:15,410 --> 00:58:13,030

a what I do just talked about earlier

1417

00:58:17,819 --> 00:58:15,420

there was a press release a lot of these

1418

00:58:23,520 --> 00:58:17,829

galaxies do people we're finding these

1419

00:58:25,380 --> 00:58:23,530

compact green disc-like objects and they

1420

00:58:27,480 --> 00:58:25,390

were calling him green pea galaxies and

1421

00:58:28,799 --> 00:58:27,490

nobody knew what they were and now there

1422

00:58:31,440 --> 00:58:28,809

was a press release came out literally

1423

00:58:33,210 --> 00:58:31,450

an hour ago that says that these are

1424

00:58:34,890 --> 00:58:33,220

compact galaxies are about a billion

1425

00:58:37,950 --> 00:58:34,900

light years away a billion with a be

1426

00:58:41,099 --> 00:58:37,960

1000 million light years away and they

1427

00:58:43,140 --> 00:58:41,109

are deficient in heavy elements they got

1428

00:58:44,910 --> 00:58:43,150

plenty of hydrogen and helium but very

1429

00:58:46,710 --> 00:58:44,920

little iron very little carbon oxygen

1430

00:58:49,829 --> 00:58:46,720

which is what's made those are made

1431

00:58:51,539 --> 00:58:49,839

inside of stars that then blow them out

1432

00:58:53,580 --> 00:58:51,549

into the galaxy through winds or they

1433

00:58:56,790 --> 00:58:53,590

explode and like a supernova

1434

00:58:59,040 --> 00:58:56,800

and evidently these galaxies just are

1435

00:59:01,680 --> 00:58:59,050

metal what astronomers call metals

1436

00:59:03,000 --> 00:59:01,690

they're metal deficient and when you

1437

00:59:05,460 --> 00:59:03,010

look at the spectrum of them that makes

1438

00:59:07,980 --> 00:59:05,470

them look green and it's a new type of

1439

00:59:10,320 --> 00:59:07,990

galaxies well not a new type of galaxies

1440

00:59:12,120 --> 00:59:10,330

it's just it's a it's a very brief phase

1441

00:59:15,450 --> 00:59:12,130

in a galaxy's life that had never been

1442

00:59:16,440 --> 00:59:15,460

seen before it because it's just like if

1443

00:59:18,180 --> 00:59:16,450

you were to go out on the street and

1444

00:59:19,920 --> 00:59:18,190

take a bunch of pictures it would be

1445

00:59:22,350 --> 00:59:19,930

very rare for you to see a baby one day

1446

00:59:23,310 --> 00:59:22,360

old but if you kept taking pictures kept

1447

00:59:25,380 --> 00:59:23,320

taking pictures kept taking pictures

1448

00:59:27,720 --> 00:59:25,390

eventually you will see loot those rare

1449

00:59:28,980 --> 00:59:27,730

instances and that's what happened here

1450

00:59:31,260 --> 00:59:28,990

this is a very brief moment in a

1451

00:59:32,220 --> 00:59:31,270

galaxy's life and not in every galaxy

1452

00:59:33,600 --> 00:59:32,230

but if you take enough pictures

1453

00:59:35,370 --> 00:59:33,610

eventually you see it and they've got

1454

00:59:36,750 --> 00:59:35,380

they found dozens of these things and

1455

00:59:39,270 --> 00:59:36,760

now they've got a published paper man

1456

00:59:41,220 --> 00:59:39,280

does it is in science it makes you mind

1457

00:59:43,320 --> 00:59:41,230

race when you stop to speculate well

1458

00:59:45,510 --> 00:59:43,330

what sort of life would this slightly

1459

00:59:48,360 --> 00:59:45,520

different sort of galaxies produce and

1460

00:59:49,950 --> 00:59:48,370

no wonder this good a wealth of

1461

00:59:51,720 --> 00:59:49,960

information for riders and science

1462

00:59:54,030 --> 00:59:51,730

fiction oh yeah well back then these

1463

00:59:55,380 --> 00:59:54,040

these plant these galaxies probably

1464

00:59:58,200 --> 00:59:55,390

don't have many planets because you need

1465

00:59:59,400 --> 00:59:58,210

iron and calcium and silicon and

1466

01:00:01,740 --> 00:59:59,410

everything to make planets at least

1467

01:00:04,050 --> 01:00:01,750

planets like the earth yeah well life in

1468

01:00:05,820 --> 01:00:04,060

the German yeah exactly you can make

1469

01:00:07,130 --> 01:00:05,830

Jupiter's gas giants and stuff out of

1470

01:00:09,690 --> 01:00:07,140

hydrogen to helium but that's about it

1471

01:00:14,100 --> 01:00:09,700

but that was a billion years ago so no

1472

01:00:15,210 --> 01:00:14,110

yes no no in these galaxies there's some

1473

01:00:16,470 --> 01:00:15,220

dude on the sitting on one of those

1474

01:00:18,630 --> 01:00:16,480

plans looking at us saying well that's

1475

01:00:19,890 --> 01:00:18,640

so strange woman yeah what is our galaxy

1476

01:00:21,780 --> 01:00:19,900

much like a million years ago probably

1477

01:00:23,550 --> 01:00:21,790

pretty much like it does now but yes

1478

01:00:24,960 --> 01:00:23,560

yeah you know there were there are

1479

01:00:26,550 --> 01:00:24,970

differences a million years is a long

1480

01:00:29,910 --> 01:00:26,560

time it's a ten percent of the galaxy's

1481

01:00:31,970 --> 01:00:29,920

life so the exchange and in look its

1482

01:00:33,750 --> 01:00:31,980

citizens found that and you know what

1483

01:00:37,980 --> 01:00:33,760

citizens have looked at pictures of

1484

01:00:40,140 --> 01:00:37,990

Saturn of Mars of the earth of the moon

1485

01:00:42,600 --> 01:00:40,150

and there's moon zoom now along with

1486

01:00:44,700 --> 01:00:42,610

Galaxy Zoo they're working on one for

1487

01:00:48,060 --> 01:00:44,710

the Sun didn't somebody recently

1488

01:00:50,010 --> 01:00:48,070

observed from Australia a an impact on

1489

01:00:51,840 --> 01:00:50,020

Jupiter yeah Anthony Wesley as an

1490

01:00:55,080 --> 01:00:51,850

Australian amateur astronomer and he

1491

01:00:58,800 --> 01:00:55,090

detected actually I think it's he's

1492

01:01:00,510 --> 01:00:58,810

detected two I can't remember I don't

1493

01:01:03,870 --> 01:01:00,520

care member who got the discovery

1494

01:01:05,029 --> 01:01:03,880

pictures last year in July there was an

1495

01:01:06,949 --> 01:01:05,039

impact on Jupiter

1496

01:01:08,929 --> 01:01:06,959

and I remember I came out and I looked

1497

01:01:10,999 --> 01:01:08,939

at it went well maybe maybe it's just a

1498

01:01:12,349 --> 01:01:11,009

little storm it's just a black spot and

1499

01:01:13,489 --> 01:01:12,359

then a couple of days later they

1500

01:01:14,630 --> 01:01:13,499

observed it with a big infrared

1501

01:01:16,549 --> 01:01:14,640

telescope and it was like this big

1502

01:01:19,759 --> 01:01:16,559

glowing hot spot on Jupiter's like holy

1503

01:01:22,459 --> 01:01:19,769

crap no Jupiter got hit and then again

1504

01:01:24,259 --> 01:01:22,469

just a few weeks ago the Jupiter

1505

01:01:26,179 --> 01:01:24,269

Jupiter's been hit twice this year and

1506

01:01:28,880 --> 01:01:26,189

it's been caught by amateur astronomers

1507

01:01:31,219 --> 01:01:28,890

both times they were taking video using

1508

01:01:33,559 --> 01:01:31,229

all basically off-the-shelf equipment

1509

01:01:34,699 --> 01:01:33,569

telescopes you would buy from the back

1510

01:01:37,189 --> 01:01:34,709

of a magazine I mean these are nice

1511

01:01:39,829 --> 01:01:37,199

fancy telescopes but you know they're

1512

01:01:42,109 --> 01:01:39,839

not professional you know five meter

1513

01:01:45,939 --> 01:01:42,119

mirror telescopes these are your 40

1514

01:01:48,829 --> 01:01:45,949

centimeter telescopes are smaller and

1515

01:01:50,989 --> 01:01:48,839

they had a video hooked up and you see a

1516

01:01:53,209 --> 01:01:50,999

flash of light on Jupiter and it could

1517

01:01:54,979 --> 01:01:53,219

be anything it could be a defect in the

1518

01:01:56,449 --> 01:01:54,989

camera could be this could be that but

1519

01:01:59,749 --> 01:01:56,459

then another one came up from another

1520

01:02:01,039 --> 01:01:59,759

astronomer in Japan I think it was Japan

1521

01:02:02,209 --> 01:02:01,049

and you can you can look all this up

1522

01:02:04,579 --> 01:02:02,219

I've even wrote about it when it

1523

01:02:06,349 --> 01:02:04,589

happened a few months ago confirming it

1524

01:02:07,939 --> 01:02:06,359

and so Jupiter's been hit twice both

1525

01:02:09,799 --> 01:02:07,949

times they pointed bigger telescopes and

1526

01:02:11,239 --> 01:02:09,809

see nothing so whatever this thing was

1527

01:02:13,219 --> 01:02:11,249

it just you know it exploded in

1528

01:02:15,589 --> 01:02:13,229

Jupiter's atmosphere and that was it but

1529

01:02:17,409 --> 01:02:15,599

last year's left a big impact and then

1530

01:02:19,759 --> 01:02:17,419

of course there was shoemaker-levy 9

1531

01:02:21,169 --> 01:02:19,769

will remember this comet that hit

1532

01:02:22,729 --> 01:02:21,179

Jupiter over and over again it broke up

1533

01:02:24,799 --> 01:02:22,739

into pieces and slammed it they named

1534

01:02:28,009 --> 01:02:24,809

all the pieces yeah Andrew you know

1535

01:02:29,630 --> 01:02:28,019

whatever a letter and heck uh you know

1536

01:02:30,769 --> 01:02:29,640

amateur astronomers are doing this now

1537

01:02:32,959 --> 01:02:30,779

because the amateur astronomers have

1538

01:02:34,819 --> 01:02:32,969

good equipment and they can discover

1539

01:02:37,099 --> 01:02:34,829

stuff away and there's only that is she

1540

01:02:38,719 --> 01:02:37,109

a number of people who at any given time

1541

01:02:40,909 --> 01:02:38,729

we've got their equipment trained on

1542

01:02:43,009 --> 01:02:40,919

sages yeah Jupiter is being observed you

1543

01:02:45,439 --> 01:02:43,019

know essentially 24 hours a day when

1544

01:02:47,539 --> 01:02:45,449

it's when it's in a position like it is

1545

01:02:51,769 --> 01:02:47,549

now or it's up all night so right now

1546

01:02:54,319 --> 01:02:51,779

we're work it's it's what 930am and

1547

01:02:56,390 --> 01:02:54,329

Boulder so it's it's like two in the

1548

01:02:58,489 --> 01:02:56,400

morning roughly in Australia so right

1549

01:03:00,439 --> 01:02:58,499

now the Sun is up here but on Australia

1550

01:03:01,729 --> 01:03:00,449

for somebody Jupiter's overhead they can

1551

01:03:03,559 --> 01:03:01,739

get serving we have sets there it's

1552

01:03:04,909 --> 01:03:03,569

rising here yeah so people can observe

1553

01:03:07,339 --> 01:03:04,919

it all the time you're bound to see it

1554

01:03:09,859 --> 01:03:07,349

but you can't see anything if nothing's

1555

01:03:12,739 --> 01:03:09,869

happening so what this has taught us is

1556

01:03:14,779 --> 01:03:12,749

that since 1994 we've seen four separate

1557

01:03:16,170 --> 01:03:14,789

impact events 3 of which have happened

1558

01:03:17,370 --> 01:03:16,180

in the past year and

1559

01:03:20,069 --> 01:03:17,380

and when something when you start seeing

1560

01:03:22,530 --> 01:03:20,079

more of something as time goes on you

1561

01:03:25,200 --> 01:03:22,540

start the thing is it happening more

1562

01:03:27,270 --> 01:03:25,210

often probably not but what else has

1563

01:03:29,640 --> 01:03:27,280

changed is that the equipment's getting

1564

01:03:31,770 --> 01:03:29,650

better and you can buy video cameras for

1565

01:03:34,079 --> 01:03:31,780

cheap you know you can go to you can go

1566

01:03:35,010 --> 01:03:34,089

to some store for 200 bucks by a video

1567

01:03:37,349 --> 01:03:35,020

camera that you can hook on your

1568

01:03:39,690 --> 01:03:37,359

telescope people are doing that now and

1569

01:03:41,609 --> 01:03:39,700

they're catching this stuff and so

1570

01:03:43,049 --> 01:03:41,619

they're still missing a lot you have to

1571

01:03:45,180 --> 01:03:43,059

look through hours of videotape to see

1572

01:03:47,670 --> 01:03:45,190

it so you sought to coincidentally catch

1573

01:03:49,140 --> 01:03:47,680

it but the point here is that citizen

1574

01:03:50,970 --> 01:03:49,150

science is taking off and it's

1575

01:03:52,609 --> 01:03:50,980

especially in astronomy it's happening

1576

01:03:56,730 --> 01:03:52,619

in other fields too but in astronomy its

1577

01:03:58,530 --> 01:03:56,740

skies the way the sky is not the limit

1578

01:04:00,359 --> 01:03:58,540

in this case but we're going to see more

1579

01:04:02,339 --> 01:04:00,369

of this and we're going to see we're

1580

01:04:03,990 --> 01:04:02,349

gonna see impacts on the moon we know

1581

01:04:05,339 --> 01:04:04,000

that meteorites hit the moon we've got

1582

01:04:06,809 --> 01:04:05,349

video tape of that but it's very rare

1583

01:04:10,140 --> 01:04:06,819

we're gonna start seeing more of that

1584

01:04:12,540 --> 01:04:10,150

the more you see the better your

1585

01:04:14,160 --> 01:04:12,550

statistical database gets and then at

1586

01:04:15,270 --> 01:04:14,170

some point instead of its being a super

1587

01:04:17,099 --> 01:04:15,280

rare event that you don't know that much

1588

01:04:19,530 --> 01:04:17,109

about suddenly you've got thousands of

1589

01:04:21,720 --> 01:04:19,540

cases and you can start doing statistics

1590

01:04:23,339 --> 01:04:21,730

how what's the average size of an object

1591

01:04:24,539 --> 01:04:23,349

what's the average speed when it's

1592

01:04:26,220 --> 01:04:24,549

hitting can you tell the difference

1593

01:04:28,049 --> 01:04:26,230

between a chunk of ice on a chunk of

1594

01:04:30,870 --> 01:04:28,059

rock and a chunk of metal hitting the

1595

01:04:32,220 --> 01:04:30,880

surface of another world and this is all

1596

01:04:33,480 --> 01:04:32,230

important stuff we're gonna start

1597

01:04:35,099 --> 01:04:33,490

traveling to other planets we need to

1598

01:04:36,720 --> 01:04:35,109

know what's out there and if it turns

1599

01:04:39,000 --> 01:04:36,730

out that there's way too much debris out

1600

01:04:39,990 --> 01:04:39,010

there and we build a big ship yeah we're

1601
01:04:42,599 --> 01:04:40,000
going to have to deal with it yeah

1602
01:04:44,640 --> 01:04:42,609
deflective deflector shields up I can

1603
01:04:46,859 --> 01:04:44,650
exist on track references this is real

1604
01:04:49,140 --> 01:04:46,869
science and real explorers a great segue

1605
01:04:51,690 --> 01:04:49,150
of course talking about dangers from

1606
01:04:53,520 --> 01:04:51,700
space last time we interviewed you you

1607
01:04:57,480 --> 01:04:53,530
weren't at liberty to say too much or

1608
01:04:59,609 --> 01:04:57,490
too much about of course your television

1609
01:05:03,510 --> 01:04:59,619
show which I didn't even know was called

1610
01:05:05,730 --> 01:05:03,520
this bad universe which ad just the

1611
01:05:08,579 --> 01:05:05,740
other week it's actually fill plates bad

1612
01:05:11,039 --> 01:05:08,589
you know oh excuse mom that was not my

1613
01:05:14,849 --> 01:05:11,049

idea I didn't object too strenuously

1614

01:05:18,270 --> 01:05:14,859

when they suggested that but in fact um

1615

01:05:20,220 --> 01:05:18,280

I the reason I went for it it's it's

1616

01:05:23,579 --> 01:05:20,230

awfully self-serving even for me to have

1617

01:05:27,450 --> 01:05:23,589

my name in a TV show title but in fact I

1618

01:05:29,970 --> 01:05:27,460

liked it because the show is supposed to

1619

01:05:32,400 --> 01:05:29,980

be personal it's not one of the

1620

01:05:34,080 --> 01:05:32,410

is interviewing scientists where they're

1621

01:05:35,250 --> 01:05:34,090

in a hotel room with a splash of light

1622

01:05:37,920 --> 01:05:35,260

behind them and they're looking off to

1623

01:05:39,750 --> 01:05:37,930

the side of the camera I wanted to make

1624

01:05:41,190 --> 01:05:39,760

a TV show where I'm involved are you

1625

01:05:42,960 --> 01:05:41,200

addressed the camera don't you oh yeah

1626

01:05:45,450 --> 01:05:42,970

explaining yeah I'm talking to the

1627

01:05:47,460 --> 01:05:45,460

audience here look at this or I mean I'm

1628

01:05:49,380 --> 01:05:47,470

having fun yeah you know when running

1629

01:05:51,210 --> 01:05:49,390

around interviewing people we we blow a

1630

01:05:52,980 --> 01:05:51,220

lot of stuff up we made maybe we blow up

1631

01:05:55,410 --> 01:05:52,990

too much stuff in the first episode oh I

1632

01:05:57,450 --> 01:05:55,420

hope well the first episode is about

1633

01:05:58,920 --> 01:05:57,460

asteroid impact that I had some I had

1634

01:06:00,000 --> 01:05:58,930

some friends of mine who do asteroid

1635

01:06:02,400 --> 01:06:00,010

stuff and they're like really did you

1636

01:06:04,800 --> 01:06:02,410

have to have that many explosion is it

1637

01:06:06,599 --> 01:06:04,810

will Janna because we were showing I

1638

01:06:08,580 --> 01:06:06,609

mean we were showing first of all what

1639

01:06:10,920 --> 01:06:08,590

an impact is like and you need a big

1640

01:06:12,750 --> 01:06:10,930

bomb for that and then it turns out that

1641

01:06:15,300 --> 01:06:12,760

to push these things out of the way

1642

01:06:17,310 --> 01:06:15,310

we're talking about blowing up nuclear

1643

01:06:19,380 --> 01:06:17,320

weapons near them or smacking them at

1644

01:06:21,540 --> 01:06:19,390

high speed with what are called kinetic

1645

01:06:24,080 --> 01:06:21,550

impactors we're talking about asteroids

1646

01:06:27,180 --> 01:06:24,090

and comets another yeah I'm sorry

1647

01:06:29,280 --> 01:06:27,190

devastating objects right ways that

1648

01:06:30,930 --> 01:06:29,290

could impact with the earth you see a

1649

01:06:32,220 --> 01:06:30,940

rock 300 meters across and it's going to

1650

01:06:33,660 --> 01:06:32,230

hit the earth and you know what do you

1651

01:06:35,670 --> 01:06:33,670

do well you got to keep it from hitting

1652

01:06:37,580 --> 01:06:35,680

you know it's hard to move the earth out

1653

01:06:39,840 --> 01:06:37,590

of the way you go into the basement

1654

01:06:42,060 --> 01:06:39,850

exactly yeah you run is what you do or

1655

01:06:43,650 --> 01:06:42,070

you panic um but we want to push these

1656

01:06:45,480 --> 01:06:43,660

things out of the way how do you do that

1657

01:06:46,830 --> 01:06:45,490

so you can blow up a bomb near them or

1658

01:06:49,140 --> 01:06:46,840

you can impact them with a space probe

1659

01:06:52,200 --> 01:06:49,150

at high speed and it's like it's like

1660

01:06:53,280 --> 01:06:52,210

you know if you can imagine somebody

1661

01:06:55,320 --> 01:06:53,290

standing in the middle of the road in a

1662

01:06:56,640 --> 01:06:55,330

car is coming what do you do you run and

1663

01:06:57,990 --> 01:06:56,650

grab them and push them out of the way

1664

01:07:00,000 --> 01:06:58,000

and that's kind of what we're doing here

1665

01:07:02,070 --> 01:07:00,010

you know you hit the the asteroid with

1666

01:07:03,750 --> 01:07:02,080

it with a space probe it impacts a

1667

01:07:06,060 --> 01:07:03,760

little little bit of momentum momentum

1668

01:07:07,830 --> 01:07:06,070

and moves in this case if the cars

1669

01:07:09,780 --> 01:07:07,840

coming for the person you you run and

1670

01:07:11,430 --> 01:07:09,790

push the person yeah it's sort of the

1671

01:07:12,990 --> 01:07:11,440

opposite of awkward on kiddos the car

1672

01:07:14,460 --> 01:07:13,000

but it's all relative what do that mean

1673

01:07:15,780 --> 01:07:14,470

the earth is moving the asteroids moving

1674

01:07:17,070 --> 01:07:15,790

your spaceships moving so whatever

1675

01:07:19,950 --> 01:07:17,080

whatever frame of reference you know

1676

01:07:23,010 --> 01:07:19,960

take you take your pick but we're

1677

01:07:24,450 --> 01:07:23,020

talking about a basically explosion so

1678

01:07:28,560 --> 01:07:24,460

we blow a lot of stuff up in the episode

1679

01:07:30,630 --> 01:07:28,570

including sadly oh yes Sydney oh yeah

1680

01:07:33,660 --> 01:07:30,640

now must tell your story about this dr.

1681

01:07:36,120 --> 01:07:33,670

ray and I'm flying out to to drag him

1682

01:07:38,099 --> 01:07:36,130

come the other week we're sitting in the

1683

01:07:40,420 --> 01:07:38,109

plane they haven't shut the doors yet

1684

01:07:42,490 --> 01:07:40,430

we're waiting to taxi up to our

1685

01:07:44,440 --> 01:07:42,500

and Sydney Airport and we're looking at

1686

01:07:45,730 --> 01:07:44,450

our tweets and few last-minute emails

1687

01:07:48,130 --> 01:07:45,740

he's suddenly getting all these tweets

1688

01:07:50,310 --> 01:07:48,140

Richard Rachel get out of Sydney now get

1689

01:07:54,070 --> 01:07:50,320

out get what Sydney's being destroyed by

1690

01:07:57,010 --> 01:07:54,080

asteroids and comets it wasn't until I

1691

01:07:58,630 --> 01:07:57,020

was visiting Brian Dunning the next day

1692

01:08:00,880 --> 01:07:58,640

and we watched it we were just rolling

1693

01:08:03,370 --> 01:08:00,890

on the floor watching Sydney get creamed

1694

01:08:04,660 --> 01:08:03,380

degree again and again but it's so well

1695

01:08:06,850 --> 01:08:04,670

done I have somebody pull the

1696

01:08:08,770 --> 01:08:06,860

special-effects crew really good in the

1697

01:08:10,720 --> 01:08:08,780

show and they did some they did some

1698

01:08:12,910 --> 01:08:10,730

astonishing stuff and we you know we

1699

01:08:15,550 --> 01:08:12,920

blew up Sydney and then when I was

1700

01:08:18,310 --> 01:08:15,560

talking with the the producer who was

1701

01:08:20,410 --> 01:08:18,320

running the show basically and making it

1702

01:08:21,850 --> 01:08:20,420

he's the person who sort of in charge of

1703

01:08:23,650 --> 01:08:21,860

everything and he and I worked together

1704

01:08:25,870 --> 01:08:23,660

very closely of course on the science

1705

01:08:27,160 --> 01:08:25,880

and the narrative of all this and he

1706

01:08:29,260 --> 01:08:27,170

said we're going to do Sydney and I said

1707

01:08:33,640 --> 01:08:29,270

well why Sydney I love Sydney I was in

1708

01:08:34,930 --> 01:08:33,650

Sydney in 2001 for for the the skeptics

1709

01:08:39,190 --> 01:08:34,940

conference and I had a terrific time

1710

01:08:40,570 --> 01:08:39,200

there and and I felt bad you know it's

1711

01:08:42,700 --> 01:08:40,580

like oh we're blowing up the Opera House

1712

01:08:44,980 --> 01:08:42,710

I went to the Opera House with Richard

1713

01:08:47,290 --> 01:08:44,990

we walked all over Sydney went to the

1714

01:08:49,540 --> 01:08:47,300

botanical gardens entering and he said

1715

01:08:52,240 --> 01:08:49,550

well you know we're look we need a major

1716

01:08:53,560 --> 01:08:52,250

city because you know the odds of a

1717

01:08:57,700 --> 01:08:53,570

major city getting hit by the guy really

1718

01:08:59,320 --> 01:08:57,710

really slim even you know how big is

1719

01:09:02,380 --> 01:08:59,330

Sydney even if it's the own three

1720

01:09:04,270 --> 01:09:02,390

kilometres across the planet is you know

1721

01:09:05,920 --> 01:09:04,280

a hundred million square incoming or

1722

01:09:07,660 --> 01:09:05,930

something crazy like that so the odds

1723

01:09:09,220 --> 01:09:07,670

are low but you want something visually

1724

01:09:10,600 --> 01:09:09,230

interesting for somebody if it impacts

1725

01:09:13,990 --> 01:09:10,610

over the ocean it's not that interesting

1726

01:09:15,790 --> 01:09:14,000

and we needed a big city with a major

1727

01:09:18,460 --> 01:09:15,800

landmark something iconic he would

1728

01:09:20,620 --> 01:09:18,470

recognize instantly and Paris has the

1729

01:09:22,720 --> 01:09:20,630

Eiffel Tower and New York has the

1730

01:09:24,130 --> 01:09:22,730

stature literally Washington Monument

1731

01:09:25,660 --> 01:09:24,140

they've been done over and over again

1732

01:09:28,300 --> 01:09:25,670

every movie blows up the Golden Gate

1733

01:09:29,410 --> 01:09:28,310

Bridge so we went international and we

1734

01:09:31,540 --> 01:09:29,420

weren't we said Nina it's like well

1735

01:09:32,620 --> 01:09:31,550

alright but i'm still getting tweets

1736

01:09:34,810 --> 01:09:32,630

from people saying what do you have

1737

01:09:36,220 --> 01:09:34,820

against sin really because you guys

1738

01:09:38,830 --> 01:09:36,230

don't send me enough Minty's that's what

1739

01:09:40,810 --> 01:09:38,840

I have against in film India no but I'm

1740

01:09:42,130 --> 01:09:40,820

apart from the fact that I've seen

1741

01:09:44,500 --> 01:09:42,140

things I know very well getting

1742

01:09:46,270 --> 01:09:44,510

completely smashed and destroyed it did

1743

01:09:47,770 --> 01:09:46,280

serve you well because a little bit

1744

01:09:49,600 --> 01:09:47,780

later in the episode where you use

1745

01:09:52,510 --> 01:09:49,610

mock-ups of the bridge in the Opera

1746

01:09:53,690 --> 01:09:52,520

House when you yeah that was a bit of

1747

01:09:55,190 --> 01:09:53,700

fun I mean we usually got the

1748

01:09:58,100 --> 01:09:55,200

scale but they were just basically cut

1749

01:10:00,050 --> 01:09:58,110

off my god but the it was actually

1750

01:10:02,480 --> 01:10:00,060

plywood plywood it might look like

1751

01:10:05,030 --> 01:10:02,490

cardboard and the explosion heavy wasn't

1752

01:10:07,340 --> 01:10:05,040

but we blew up I mean we blew up 7,500

1753

01:10:09,890 --> 01:10:07,350

pounds what's called it an pho it's

1754

01:10:14,170 --> 01:10:09,900

ammonium nitrate fuel oil mix and it's

1755

01:10:16,490 --> 01:10:14,180

it's it's a incredibly explosive a

1756

01:10:17,840 --> 01:10:16,500

chemical compound that was it's actually

1757

01:10:19,730 --> 01:10:17,850

some terrorists have used it with the

1758

01:10:22,640 --> 01:10:19,740

Oklahoma City bombing a few years back

1759

01:10:25,100 --> 01:10:22,650

yes yes they used that same mix it was

1760

01:10:27,770 --> 01:10:25,110

the equivalent of 3,000 pounds a ton and

1761

01:10:32,240 --> 01:10:27,780

a half you know a thousand what is that

1762

01:10:35,090 --> 01:10:32,250

1500 kilos of TNT and it was a huge

1763

01:10:36,710 --> 01:10:35,100

explosion Hugh you press the button them

1764

01:10:38,150 --> 01:10:36,720

I actually pulled the trigger on that I

1765

01:10:39,890 --> 01:10:38,160

didn't he was going to let me and I

1766

01:10:41,510 --> 01:10:39,900

asked it was a running joke up to that

1767

01:10:42,530 --> 01:10:41,520

point that I would ask the explosives

1768

01:10:44,780 --> 01:10:42,540

guy can I pull the trigger and they'd

1769

01:10:46,640 --> 01:10:44,790

say no it's too dangerous no but this

1770

01:10:50,810 --> 01:10:46,650

guy's like yeah sure what do I care all

1771

01:10:52,520 --> 01:10:50,820

right and it was it was amazing and did

1772

01:10:54,620 --> 01:10:52,530

a huge amount of devastation because the

1773

01:10:56,630 --> 01:10:54,630

freighter was very real it was it was it

1774

01:10:58,730 --> 01:10:56,640

was stunning was let me know it's a real

1775

01:11:00,350 --> 01:10:58,740

crater I mean if i knew-- up you know

1776

01:11:02,810 --> 01:11:00,360

you can see the shockwave on the

1777

01:11:04,670 --> 01:11:02,820

slow-motion reality that was astonishing

1778

01:11:07,100 --> 01:11:04,680

yeah it did a huge amount of damage you

1779

01:11:08,510 --> 01:11:07,110

know the debris field the way the crater

1780

01:11:10,310 --> 01:11:08,520

was shaped everything with just like an

1781

01:11:12,350 --> 01:11:10,320

asteroid impact was perfect and we're

1782

01:11:13,850 --> 01:11:12,360

really wedding out the appetite of the

1783

01:11:16,820 --> 01:11:13,860

listeners out there who haven't seen

1784

01:11:18,680 --> 01:11:16,830

your eye and lucky people in Canada I

1785

01:11:20,420 --> 01:11:18,690

hear that's going to be played in Canada

1786

01:11:22,010 --> 01:11:20,430

right it's it's a discovery channel show

1787

01:11:23,960 --> 01:11:22,020

the way we did it is it's a three part

1788

01:11:26,090 --> 01:11:23,970

you could call it a pilot we made a

1789

01:11:28,520 --> 01:11:26,100

three-part show the first ones about

1790

01:11:30,050 --> 01:11:28,530

asteroid impacts the next two I don't

1791

01:11:31,610 --> 01:11:30,060

you know I don't know if they if I'm

1792

01:11:32,900 --> 01:11:31,620

allowed to actually say in public what

1793

01:11:35,180 --> 01:11:32,910

they're about but I you know i'll let

1794

01:11:37,040 --> 01:11:35,190

you i'll let you see your zune i'm not

1795

01:11:38,990 --> 01:11:37,050

you'll see it soon enough it's based on

1796

01:11:42,260 --> 01:11:39,000

my book death from the skies so you can

1797

01:11:43,970 --> 01:11:42,270

you can kind of look even see it and the

1798

01:11:45,890 --> 01:11:43,980

it aired on discovery channel here in

1799

01:11:51,350 --> 01:11:45,900

the States a couple of weeks ago it's

1800

01:11:53,000 --> 01:11:51,360

going to air on our Tober Oh drat I

1801
01:11:55,790 --> 01:11:53,010
october twenty third now i can't

1802
01:11:57,290 --> 01:11:55,800
remember in october in canada yeah and i

1803
01:11:58,979 --> 01:11:57,300
just wrote about it but now i can't

1804
01:12:01,290 --> 01:11:58,989
remember the day but people in canada

1805
01:12:03,870 --> 01:12:01,300
run to the discovery website right

1806
01:12:06,120 --> 01:12:03,880
discovery canada and and it's going to

1807
01:12:08,069 --> 01:12:06,130
show on discovery asia in november and

1808
01:12:10,950 --> 01:12:08,079
actually do you get discovery age you

1809
01:12:13,319 --> 01:12:10,960
know i am strand listeners may know i

1810
01:12:15,959 --> 01:12:13,329
don't i don't get the well got a channel

1811
01:12:19,500 --> 01:12:15,969
yes male listen is it i will listen is

1812
01:12:21,689 --> 01:12:19,510
in australia i've seen the show and i'm

1813
01:12:22,979 --> 01:12:21,699

gonna see it again I'm going to get as

1814

01:12:25,859 --> 01:12:22,989

many people as I can to see it's

1815

01:12:27,479 --> 01:12:25,869

fabulous I thank you i know it seriously

1816

01:12:29,250 --> 01:12:27,489

it's not because i'm sitting in your

1817

01:12:30,629 --> 01:12:29,260

house drinking your coffee playing with

1818

01:12:32,399 --> 01:12:30,639

your dogs drinking right y'all get

1819

01:12:35,100 --> 01:12:32,409

another sip here safe stay away from my

1820

01:12:37,470 --> 01:12:35,110

own interview it's um rachel i watch it

1821

01:12:39,629 --> 01:12:37,480

with the brian and Lisa Dunning and we

1822

01:12:41,520 --> 01:12:39,639

were just enthralled and we were

1823

01:12:44,580 --> 01:12:41,530

laughing when Sydney was getting creamed

1824

01:12:47,189 --> 01:12:44,590

and we're admiring that the effects and

1825

01:12:48,839 --> 01:12:47,199

the science behind it and then there's

1826

01:12:50,640 --> 01:12:48,849

some selling us in this cereal is this

1827

01:12:52,529 --> 01:12:50,650

some silliness at one stage Rachel and I

1828

01:12:54,330 --> 01:12:52,539

got up to the TV we froze a picture

1829

01:12:57,959 --> 01:12:54,340

viewer we're both like praying save this

1830

01:13:02,220 --> 01:12:57,969

for later but listen is in Australia um

1831

01:13:05,009 --> 01:13:02,230

look if it's not coming up right email

1832

01:13:07,350 --> 01:13:05,019

the discovery channel sure because it is

1833

01:13:09,779 --> 01:13:07,360

discovery Australia is there a separate

1834

01:13:11,339 --> 01:13:09,789

honestly we probably do we probably do

1835

01:13:12,989 --> 01:13:11,349

but but listeners in Australia who get

1836

01:13:15,450 --> 01:13:12,999

that would certainly know about it it's

1837

01:13:18,120 --> 01:13:15,460

called bad universe and right in

1838

01:13:20,160 --> 01:13:18,130

demanding demand to be nice sweet be

1839

01:13:22,830 --> 01:13:20,170

nice and that does work because what

1840

01:13:25,290 --> 01:13:22,840

happened was when it aired here in the

1841

01:13:27,149 --> 01:13:25,300

States I was live-tweeting it the east

1842

01:13:30,299 --> 01:13:27,159

coast feed which was on at a certain

1843

01:13:31,770 --> 01:13:30,309

time and I was sitting there watching it

1844

01:13:35,040 --> 01:13:31,780

and tweeting about it I was getting so

1845

01:13:37,680 --> 01:13:35,050

many people in Canada saying when do we

1846

01:13:40,620 --> 01:13:37,690

get to see it and I didn't know so I

1847

01:13:42,419 --> 01:13:40,630

asked my the PR person that discovery

1848

01:13:43,620 --> 01:13:42,429

channel and said Wednesday are in Canada

1849

01:13:47,189 --> 01:13:43,630

she said well look they're their own

1850

01:13:48,959 --> 01:13:47,199

separate channel you know we're we don't

1851

01:13:50,759 --> 01:13:48,969

we don't dictate to them when they get

1852

01:13:53,819 --> 01:13:50,769

to what water when they show stuff so

1853

01:13:55,439 --> 01:13:53,829

ask them so I basically tweeted to

1854

01:13:58,649 --> 01:13:55,449

Discovery Channel canada and said what's

1855

01:14:01,529 --> 01:13:58,659

going on and a bunch of people sent nice

1856

01:14:03,720 --> 01:14:01,539

tweets you know at mentioning using the

1857

01:14:05,310 --> 01:14:03,730

at you know at Discovery Canada and sure

1858

01:14:09,870 --> 01:14:05,320

enough discovery Canada picked it up

1859

01:14:12,040 --> 01:14:09,880

because they got enough outcry that's

1860

01:14:13,720 --> 01:14:12,050

we're not the right word to you is

1861

01:14:15,399 --> 01:14:13,730

you know it's like that by man but by

1862

01:14:17,169 --> 01:14:15,409

public demand right they got hundreds of

1863

01:14:18,310 --> 01:14:17,179

tweets and emails from people saying we

1864

01:14:20,169 --> 01:14:18,320

wanted to see this and so they're

1865

01:14:21,819 --> 01:14:20,179

running it so tweet is sort of came to

1866

01:14:24,250 --> 01:14:21,829

the rescue a little bit it's it's the

1867

01:14:26,319 --> 01:14:24,260

new paradigm of you know user demanding

1868

01:14:28,330 --> 01:14:26,329

content and so if you tweet to a channel

1869

01:14:29,890 --> 01:14:28,340

and say I want to see this especially if

1870

01:14:31,600 --> 01:14:29,900

its discovery channel because they're

1871

01:14:33,790 --> 01:14:31,610

all under the same umbrella of discovery

1872

01:14:36,069 --> 01:14:33,800

communications network they can talk to

1873

01:14:38,589 --> 01:14:36,079

each other you know you maybe you can't

1874

01:14:40,419 --> 01:14:38,599

get Firefly a second season but but

1875

01:14:44,200 --> 01:14:40,429

maybe you can get you know this show and

1876

01:14:45,609 --> 01:14:44,210

if it's popular enough maybe the

1877

01:14:47,109 --> 01:14:45,619

discovery channel will pick it up as a

1878

01:14:49,089 --> 01:14:47,119

full-fledged series i have not heard

1879

01:14:50,560 --> 01:14:49,099

from the network yet i'm hoping they

1880

01:14:52,629 --> 01:14:50,570

will of course i want to turn you send

1881

01:14:54,609 --> 01:14:52,639

the whole show ya where we can analyze

1882

01:14:56,890 --> 01:14:54,619

science of all sorts of things it was

1883

01:14:59,319 --> 01:14:56,900

really i'd love to sit down every week

1884

01:15:01,330 --> 01:14:59,329

and watch bad universe they look thanks

1885

01:15:02,979 --> 01:15:01,340

right after Mythbusters yeah and yeah

1886

01:15:04,299 --> 01:15:02,989

did you know there's a similarity to

1887

01:15:05,530 --> 01:15:04,309

Mythbusters but we're trying to make it

1888

01:15:07,959 --> 01:15:05,540

different the first episode has a lot of

1889

01:15:10,120 --> 01:15:07,969

explosions yeah we don't have quite so

1890

01:15:13,209 --> 01:15:10,130

many in the next episodes but I know I'd

1891

01:15:14,649 --> 01:15:13,219

love to make it was a lot of work oh but

1892

01:15:16,419 --> 01:15:14,659

it is a lot of fun and it's something I

1893

01:15:18,819 --> 01:15:16,429

wanted to do my whole life especially

1894

01:15:20,379 --> 01:15:18,829

over the past 10 or 12 years and its

1895

01:15:23,049 --> 01:15:20,389

really really nice to be able to go out

1896

01:15:25,149 --> 01:15:23,059

and have the backing of an actual

1897

01:15:26,709 --> 01:15:25,159

network in a production company saying

1898

01:15:30,879 --> 01:15:26,719

you know what do you want to make a show

1899

01:15:32,319 --> 01:15:30,889

about like oh well wow yeah and at one

1900

01:15:34,600 --> 01:15:32,329

point actually there was there was an

1901

01:15:37,810 --> 01:15:34,610

executive who said you know what other

1902

01:15:39,189 --> 01:15:37,820

what other ideas she was totally honest

1903

01:15:40,750 --> 01:15:39,199

about this she just didn't know she said

1904

01:15:42,189 --> 01:15:40,760

is that we know what else could you talk

1905

01:15:44,500 --> 01:15:42,199

about if this were to get picked up as a

1906

01:15:46,450 --> 01:15:44,510

series and I was like are you kidding

1907

01:15:48,220 --> 01:15:46,460

and I was like bam bam bam mmm Hannah

1908

01:15:49,720 --> 01:15:48,230

it's listing all these things and she

1909

01:15:51,430 --> 01:15:49,730

was kind of shell-shocked her eyes got

1910

01:15:52,569 --> 01:15:51,440

wide she's like oh well and I could see

1911

01:15:54,640 --> 01:15:52,579

her exchanging glances with this other

1912

01:15:56,109 --> 01:15:54,650

guy like oh I see maybe there are other

1913

01:16:00,100 --> 01:15:56,119

topics we could do in a show like this

1914

01:16:01,180 --> 01:16:00,110

yeah I think so so we'll see i have no

1915

01:16:02,919 --> 01:16:01,190

idea what they're gonna do it's a

1916

01:16:05,500 --> 01:16:02,929

television they could they maybe would

1917

01:16:07,030 --> 01:16:05,510

want to replace me with some you know 16

1918

01:16:08,979 --> 01:16:07,040

year old girl for all I know but we'll

1919

01:16:10,660 --> 01:16:08,989

see what happens when I'm a bolt head

1920

01:16:11,859 --> 01:16:10,670

will it be yeah I know just I mean just

1921

01:16:13,839 --> 01:16:11,869

but you know I mean they just make these

1922

01:16:16,030 --> 01:16:13,849

these random decisions and yeah and so

1923

01:16:18,100 --> 01:16:16,040

there are other there are other hosts

1924

01:16:20,200 --> 01:16:18,110

out there there are who are doing shows

1925

01:16:22,209 --> 01:16:20,210

similar this there's Neil Tyson and me

1926

01:16:23,500 --> 01:16:22,219

shukaku and you don't come to think of

1927

01:16:25,170 --> 01:16:23,510

it I was think about this the other day

1928

01:16:27,600 --> 01:16:25,180

there are shows like this out there

1929

01:16:30,270 --> 01:16:27,610

not with my take on it but it's all men

1930

01:16:33,240 --> 01:16:30,280

now Neil Tyson african-american Misha

1931

01:16:35,670 --> 01:16:33,250

kako is Asian I'm your standard balding

1932

01:16:38,100 --> 01:16:35,680

white guy with beard but there I haven't

1933

01:16:40,140 --> 01:16:38,110

seen any hosted just by women or

1934

01:16:42,030 --> 01:16:40,150

anything like that which is which is

1935

01:16:44,400 --> 01:16:42,040

interesting to me I don't know what to

1936

01:16:47,100 --> 01:16:44,410

make of that I think I know a guy could

1937

01:16:48,420 --> 01:16:47,110

do one ano Pamela obviously oh my gosh

1938

01:16:50,580 --> 01:16:48,430

I'll have to do something with her of

1939

01:16:51,510 --> 01:16:50,590

course but yeah I love Pamela but it's

1940

01:16:53,340 --> 01:16:51,520

interesting i don't know if that's on

1941

01:16:54,990 --> 01:16:53,350

the network side of some science side of

1942

01:16:56,430 --> 01:16:55,000

its on the consumer side or what these

1943

01:16:58,770 --> 01:16:56,440

are complicated issues but it just it

1944

01:17:00,030 --> 01:16:58,780

occurred to me the other day that it's

1945

01:17:01,800 --> 01:17:00,040

interesting to watch television and

1946

01:17:03,740 --> 01:17:01,810

suddenly realize what you're being what

1947

01:17:06,240 --> 01:17:03,750

you what you're seeing and not knowing

1948

01:17:08,400 --> 01:17:06,250

what we don't why why did they choose

1949

01:17:10,710 --> 01:17:08,410

this person no I'm an astronomer and

1950

01:17:11,850 --> 01:17:10,720

I've done this kind of stuff but okay

1951

01:17:13,530 --> 01:17:11,860

you know but it's interesting

1952

01:17:14,940 --> 01:17:13,540

interesting i don't know let's let's

1953

01:17:18,390 --> 01:17:14,950

wrap up the interview with a few

1954

01:17:20,460 --> 01:17:18,400

thoughts about something that was

1955

01:17:22,050 --> 01:17:20,470

certainly an introduction to me about

1956

01:17:24,120 --> 01:17:22,060

who you were and what you were doing

1957

01:17:25,740 --> 01:17:24,130

your first book and one of the major

1958

01:17:29,730 --> 01:17:25,750

concerns you had in the skeptical field

1959

01:17:32,460 --> 01:17:29,740

was themed moon hoax what's the current

1960

01:17:34,860 --> 01:17:32,470

state well we it's sort of like yo yo

1961

01:17:38,040 --> 01:17:34,870

crazy you know i mean the five six seven

1962

01:17:39,930 --> 01:17:38,050

years ago it was all the Fox thing I

1963

01:17:41,640 --> 01:17:39,940

never walked to the dog that's you know

1964

01:17:44,130 --> 01:17:41,650

never around the world I'm afraid of

1965

01:17:46,350 --> 01:17:44,140

yoyo tricks it comes in goods but I

1966

01:17:48,180 --> 01:17:46,360

haven't heard any moon hoax is popping

1967

01:17:50,550 --> 01:17:48,190

up lately it's almost like it's its

1968

01:17:52,890 --> 01:17:50,560

beginning you get nostalgic for the days

1969

01:17:54,240 --> 01:17:52,900

when people's Oh carrying on about this

1970

01:17:55,620 --> 01:17:54,250

but it's still out there I'm back in the

1971

01:17:57,750 --> 01:17:55,630

day when it was so easy to debunk

1972

01:17:59,610 --> 01:17:57,760

something is so ridiculously you know

1973

01:18:00,870 --> 01:17:59,620

there's like oh you're making this claim

1974

01:18:02,910 --> 01:18:00,880

well you know turn around because

1975

01:18:05,070 --> 01:18:02,920

there's an enormous tsunami of evidence

1976

01:18:07,950 --> 01:18:05,080

about to the pets around you that you're

1977

01:18:13,350 --> 01:18:07,960

wrong nope i yearn for the face on Mars

1978

01:18:16,230 --> 01:18:13,360

days and all maybe the days um yeah the

1979

01:18:19,620 --> 01:18:16,240

moon hoax had its heyday it had been

1980

01:18:23,250 --> 01:18:19,630

around in small terms ever since Apollo

1981

01:18:24,720 --> 01:18:23,260

and yeah yeah bill casing the guy who is

1982

01:18:26,400 --> 01:18:24,730

basically the father of the moon host

1983

01:18:27,960 --> 01:18:26,410

was actually involved in the Apollo

1984

01:18:29,790 --> 01:18:27,970

program and he said he had all these

1985

01:18:31,380 --> 01:18:29,800

Bologna things he used to say I have a

1986

01:18:33,960 --> 01:18:31,390

top secret clearance well yeah you were

1987

01:18:35,610 --> 01:18:33,970

file clerk basically you had to have top

1988

01:18:37,620 --> 01:18:35,620

secret clearance by law to be able to

1989

01:18:38,310 --> 01:18:37,630

take a file somebody hands you and put

1990

01:18:40,590 --> 01:18:38,320

it into a lock

1991

01:18:42,450 --> 01:18:40,600

cabinet it doesn't mean you have any

1992

01:18:44,550 --> 01:18:42,460

real inside information on what's going

1993

01:18:46,020 --> 01:18:44,560

on but he made all these outrageous

1994

01:18:48,840 --> 01:18:46,030

claims about the moon landings being

1995

01:18:52,230 --> 01:18:48,850

fake that were ridiculous it got a

1996

01:18:54,480 --> 01:18:52,240

little bit of media attention there's a

1997

01:18:55,890 --> 01:18:54,490

James Bond movie where you see there's a

1998

01:18:58,740 --> 01:18:55,900

chase scene where he's running through a

1999

01:19:01,170 --> 01:18:58,750

set where they're filming a moon landing

2000

01:19:03,030 --> 01:19:01,180

being faked the diamonds are forever i

2001

01:19:04,200 --> 01:19:03,040

think so i think that's right up

2002

01:19:06,930 --> 01:19:04,210

something must been a while suggesting

2003

01:19:08,340 --> 01:19:06,940

it um there's there been a movies here

2004

01:19:10,860 --> 01:19:08,350

and there where they've mentioned it I

2005

01:19:13,830 --> 01:19:10,870

know that movie dan Aykroyd mentions it

2006

01:19:14,790 --> 01:19:13,840

in sneakers I think where he says all

2007

01:19:17,130 --> 01:19:14,800

you know they were they faked the moon

2008

01:19:18,690 --> 01:19:17,140

landing and then there's caprica 11

2009

01:19:19,950 --> 01:19:18,700

that's the movie they take to Mars lane

2010

01:19:24,720 --> 01:19:19,960

which is actually pretty good positive

2011

01:19:30,060 --> 01:19:24,730

is a good movie um but uh it wasn't

2012

01:19:32,450 --> 01:19:30,070

until 2001 when fox and and and again

2013

01:19:34,980 --> 01:19:32,460

Thank You Australia for Rupert Murdoch

2014

01:19:37,230 --> 01:19:34,990

when Fox aired a show called conspiracy

2015

01:19:38,880 --> 01:19:37,240

theory did we land on the moon and then

2016

01:19:39,870 --> 01:19:38,890

this thing exploded and it isn't right

2017

01:19:42,480 --> 01:19:39,880

at the time when the internet was

2018

01:19:47,100 --> 01:19:42,490

getting really popular in the year 2000

2019

01:19:49,830 --> 01:19:47,110

2001 and so it spread like Ebola but

2020

01:19:51,720 --> 01:19:49,840

like Ebola burned itself out relatively

2021

01:19:53,820 --> 01:19:51,730

I think so you know were a few people

2022

01:19:55,860 --> 01:19:53,830

out there who were promoting a really

2023

01:20:00,510 --> 01:19:55,870

hard bart sibrel who made his ridiculous

2024

01:20:03,030 --> 01:20:00,520

videos I mean when your most famous act

2025

01:20:07,200 --> 01:20:03,040

is getting punched in the head by Buzz

2026

01:20:09,200 --> 01:20:07,210

Aldrin in September 2002 you know maybe

2027

01:20:12,270 --> 01:20:09,210

you should rethink your career choices

2028

01:20:14,100 --> 01:20:12,280

um but you know and I knew it would

2029

01:20:16,010 --> 01:20:14,110

eventually I put up a website about it

2030

01:20:19,170 --> 01:20:16,020

my friend Jay Windley who was an

2031

01:20:21,000 --> 01:20:19,180

aerospace engineer he put up a very

2032

01:20:24,300 --> 01:20:21,010

detailed analysis of all these claims

2033

01:20:27,180 --> 01:20:24,310

and you know once it's on the web people

2034

01:20:28,500 --> 01:20:27,190

could find it and it just started dying

2035

01:20:29,790 --> 01:20:28,510

off and there are still a couple of

2036

01:20:31,680 --> 01:20:29,800

diehard guys there's this guy in

2037

01:20:34,200 --> 01:20:31,690

Australia who makes YouTube videos he

2038

01:20:36,410 --> 01:20:34,210

was at a mate oh I remember him yes he

2039

01:20:39,480 --> 01:20:36,420

accosted me and he accosted Adam Savage

2040

01:20:42,360 --> 01:20:39,490

Adam smacked him down pretty good in

2041

01:20:44,730 --> 01:20:42,370

public and I he actually wanted to

2042

01:20:47,610 --> 01:20:44,740

interview me but I I agreed at first but

2043

01:20:50,550 --> 01:20:47,620

then changed my mind because he he was

2044

01:20:51,810 --> 01:20:50,560

completely impervious to evidence hmm he

2045

01:20:52,979 --> 01:20:51,820

would ask me questions and when

2046

01:20:54,899 --> 01:20:52,989

answer them he would either change the

2047

01:20:57,780 --> 01:20:54,909

subject or bring up something to have

2048

01:21:00,359 --> 01:20:57,790

nothing to do with what was going on and

2049

01:21:01,740 --> 01:21:00,369

and it was you know it was clearly and

2050

01:21:03,689 --> 01:21:01,750

I've seen his videos it's clear to me

2051
01:21:05,310 --> 01:21:03,699
that that evidence is not something he's

2052
01:21:07,260 --> 01:21:05,320
interested in unless it supports what

2053
01:21:10,520 --> 01:21:07,270
he's claiming yeah if he can find he's

2054
01:21:12,629 --> 01:21:10,530
an anomaly hunter he looks through

2055
01:21:13,740 --> 01:21:12,639
10,000 pieces of evidence which shall we

2056
01:21:15,660 --> 01:21:13,750
go to the moon and if there's one thing

2057
01:21:17,970 --> 01:21:15,670
that looks a little fishy he talks about

2058
01:21:19,379 --> 01:21:17,980
that and it's like well maybe you just

2059
01:21:20,910 --> 01:21:19,389
don't understand what's going on and you

2060
01:21:23,040 --> 01:21:20,920
should look at these other thousands of

2061
01:21:25,050 --> 01:21:23,050
things that show that we did go to move

2062
01:21:26,939 --> 01:21:25,060
that's not how he operates and so I was

2063
01:21:29,160 --> 01:21:26,949

like I don't I don't I don't trust him I

2064

01:21:30,240 --> 01:21:29,170

figure he's going to edit me and you

2065

01:21:31,470 --> 01:21:30,250

know make me look like I don't know what

2066

01:21:33,270 --> 01:21:31,480

I'm talking about so i just said nap

2067

01:21:35,520 --> 01:21:33,280

screw it these days you don't have to

2068

01:21:38,100 --> 01:21:35,530

give these people air time do you no no

2069

01:21:39,540 --> 01:21:38,110

yoga the day is gone then in the media

2070

01:21:41,399 --> 01:21:39,550

loves to do that they like to bring in

2071

01:21:44,100 --> 01:21:41,409

quiet throw in somebody con it's like

2072

01:21:46,490 --> 01:21:44,110

but why do that you know we know I could

2073

01:21:48,839 --> 01:21:46,500

claim that they're there pink unicorns

2074

01:21:51,330 --> 01:21:48,849

floating in the sky and why should you

2075

01:21:54,450 --> 01:21:51,340

bring in an expert in aerial phenomena

2076

01:21:56,640 --> 01:21:54,460

saying no to argue against this it's

2077

01:21:58,410 --> 01:21:56,650

ridiculous you're giving credence to the

2078

01:22:00,149 --> 01:21:58,420

precious what to me do you do but that

2079

01:22:03,240 --> 01:22:00,159

is what the media do ya to them it's

2080

01:22:05,700 --> 01:22:03,250

been totally understandable and I at the

2081

01:22:07,560 --> 01:22:05,710

example I typically uses abortion it's a

2082

01:22:10,109 --> 01:22:07,570

very hot topic it brings up a lot of

2083

01:22:12,060 --> 01:22:10,119

emotions I can argue persuasively on

2084

01:22:14,790 --> 01:22:12,070

both sides pro and con should we have a

2085

01:22:18,419 --> 01:22:14,800

horse in should we should we not and the

2086

01:22:20,419 --> 01:22:18,429

point is people of good moral stance can

2087

01:22:24,060 --> 01:22:20,429

come down in either side of this issue

2088

01:22:25,620 --> 01:22:24,070

it's a so to have a balanced you want to

2089

01:22:26,879 --> 01:22:25,630

have this open discussion but when

2090

01:22:28,410 --> 01:22:26,889

you're talking about something that is

2091

01:22:30,629 --> 01:22:28,420

clearly real and something that clearly

2092

01:22:33,030 --> 01:22:30,639

isn't there is no fair and balanced to

2093

01:22:36,569 --> 01:22:33,040

be that what's ours my dog going outside

2094

01:22:38,100 --> 01:22:36,579

that's okay for you you Ozzy some must

2095

01:22:39,899 --> 01:22:38,110

be another like we're all or there's a

2096

01:22:42,270 --> 01:22:39,909

there's another one hoax person ah

2097

01:22:47,220 --> 01:22:42,280

listen listening in a cumbia squirrel

2098

01:22:48,750 --> 01:22:47,230

hang on all cores on top for those of

2099

01:22:51,000 --> 01:22:48,760

you who follow my blog that was canis

2100

01:22:52,709 --> 01:22:51,010

minor the black and white dog i had i

2101

01:22:55,290 --> 01:22:52,719

put pictures of her up on the block

2102

01:22:57,660 --> 01:22:55,300

sometimes but you know it's just this

2103

01:22:58,770 --> 01:22:57,670

idea of you have to have both sides of

2104

01:23:01,229 --> 01:22:58,780

an issue and everything like that it's

2105

01:23:03,480 --> 01:23:01,239

baloney that's just not true if you want

2106

01:23:06,510 --> 01:23:03,490

to be fair then

2107

01:23:08,340 --> 01:23:06,520

then the newscast should be here's why

2108

01:23:10,560 --> 01:23:08,350

the moonlight is real you know it's a

2109

01:23:13,140 --> 01:23:10,570

matter of historical fact being fair is

2110

01:23:15,840 --> 01:23:13,150

showing their real not having some some

2111

01:23:18,360 --> 01:23:15,850

crackpot or somebody who's sincere but

2112

01:23:21,000 --> 01:23:18,370

wrong yeah but that sells that sells the

2113

01:23:23,520 --> 01:23:21,010

the paper or Zen Australia puts bums on

2114

01:23:26,130 --> 01:23:23,530

seats yeah you know the LHC is going to

2115

01:23:27,450 --> 01:23:26,140

create a black hole there's an asteroid

2116

01:23:29,910 --> 01:23:27,460

that's going to kill us because of

2117

01:23:32,310 --> 01:23:29,920

electromagnetic effects by on paper and

2118

01:23:33,900 --> 01:23:32,320

find out why exactly and it's all

2119

01:23:36,030 --> 01:23:33,910

baloney and it's see well it's our job

2120

01:23:37,560 --> 01:23:36,040

to make sure that you know freedom of

2121

01:23:38,940 --> 01:23:37,570

the press they can do that but it's up

2122

01:23:41,580 --> 01:23:38,950

to us to make sure that they don't get

2123

01:23:43,080 --> 01:23:41,590

away with it our Phil what a what a

2124

01:23:44,520 --> 01:23:43,090

wonderful pleasure it's been to catch up

2125

01:23:46,800 --> 01:23:44,530

with you again we don't see each other

2126
01:23:48,120 --> 01:23:46,810
very often not as often as we should no

2127
01:23:49,440 --> 01:23:48,130
I'm great Ashley Richards been staying

2128
01:23:52,500 --> 01:23:49,450
here the past couple of days you have no

2129
01:23:54,510 --> 01:23:52,510
disclosure here we are and we went for a

2130
01:23:55,830 --> 01:23:54,520
while min Allah al puta follows would

2131
01:23:58,230 --> 01:23:55,840
know that we went for a hike because we

2132
01:23:59,940 --> 01:23:58,240
were posting photographs of man that was

2133
01:24:01,860 --> 01:23:59,950
great and we spent a day yesterday

2134
01:24:03,540 --> 01:24:01,870
goofing off around boulder which was fun

2135
01:24:05,430 --> 01:24:03,550
just walking around down boulders an

2136
01:24:07,380 --> 01:24:05,440
awesome time it is it's it's similar to

2137
01:24:09,210 --> 01:24:07,390
Sydney in some ways it's not as

2138
01:24:11,730 --> 01:24:09,220

cosmopolitan it's much smaller tennis

2139

01:24:13,230 --> 01:24:11,740

laid back though but yeah a lot of smart

2140

01:24:15,990 --> 01:24:13,240

folks here so really this is a great

2141

01:24:20,610 --> 01:24:16,000

place to live so Phil Plait the the bad

2142

01:24:23,580 --> 01:24:20,620

astronomer and TV star oh if you'll play

2143

01:24:27,090 --> 01:24:23,590

a scene of us before you go I'll get you

2144

01:24:28,560 --> 01:24:27,100

to oh I've got a sign oh well I should

2145

01:24:30,900 --> 01:24:28,570

use you know look you're gonna hand me a

2146

01:24:32,640 --> 01:24:30,910

pen it should at least be a names randi

2147

01:24:35,580 --> 01:24:32,650

educational ish because you could sign

2148

01:24:38,100 --> 01:24:35,590

that to the skeptic zone to ebay winner

2149

01:24:40,320 --> 01:24:38,110

to me buddy winner and will option that

2150

01:24:42,390 --> 01:24:40,330

off actually CJ is assigned by Phil

2151

01:24:49,080 --> 01:24:42,400

Plait while being interviewed on the

2152

01:24:51,060 --> 01:24:49,090

skeptic zone for the skeptic zone and

2153

01:24:53,010 --> 01:24:51,070

I'll just sign it yeah my Australian

2154

01:24:55,890 --> 01:24:53,020

accent but we had this discussion or

2155

01:24:57,840 --> 01:24:55,900

troubling my Australian accent is just

2156

01:25:02,400 --> 01:24:57,850

as bad as your American accent yeah

2157

01:25:05,130 --> 01:25:02,410

whatever you talk like an American Phil

2158

01:25:07,740 --> 01:25:05,140

Plait and give you my pin back thank you

2159

01:25:08,970 --> 01:25:07,750

thanks very much thanks Richard and and

2160

01:25:10,560 --> 01:25:08,980

don't forget to listen to the skeptic

2161

01:25:12,090 --> 01:25:10,570

zone because this is a good podcast I

2162

01:25:15,150 --> 01:25:12,100

like this don't forget to watch bad

2163

01:25:15,580 --> 01:25:15,160

universe the skeptic zone I can't reckon

2164

01:25:34,260 --> 01:25:15,590

ever

2165

01:25:38,980 --> 01:25:36,370

well thank you for listening to the

2166

01:25:42,300 --> 01:25:38,990

skeptic zone our special reports from

2167

01:25:44,590 --> 01:25:42,310

dragoncon now we're still here and

2168

01:25:48,340 --> 01:25:44,600

believe it or not Phil's wife is still

2169

01:25:50,350 --> 01:25:48,350

stuck over there on the logs but coming

2170

01:25:52,180 --> 01:25:50,360

up on next week's episode of the skeptic

2171

01:25:54,340 --> 01:25:52,190

zone it's the big one Phil it's our

2172

01:25:56,530 --> 01:25:54,350

100th episode in our two-year

2173

01:25:58,210 --> 01:25:56,540

anniversary well that's just based n if

2174

01:26:01,630 --> 01:25:58,220

you were base 12 you have 44 more to go

2175

01:26:04,420 --> 01:26:01,640

yeah there's always one and we have a

2176

01:26:05,920 --> 01:26:04,430

live we did the skeptic zone live at

2177

01:26:08,650 --> 01:26:05,930

dragoncon our special guests will be

2178

01:26:10,150 --> 01:26:08,660

Brian Dunning and Brian brushwood it was

2179

01:26:13,660 --> 01:26:10,160

a fantastic time for those people who

2180

01:26:16,540 --> 01:26:13,670

were there hello what is it sorry I see

2181

01:26:17,800 --> 01:26:16,550

a fish but just about two meters away

2182

01:26:19,750 --> 01:26:17,810

from a seam swimming right there right

2183

01:26:21,280 --> 01:26:19,760

in front of us right with it I did

2184

01:26:22,900 --> 01:26:21,290

wasn't sure there were any fish in this

2185

01:26:29,230 --> 01:26:22,910

uh this lake but there yeah yeah there

2186

01:26:31,600 --> 01:26:29,240

do ya do Oh God oh yeah but i'm popeye

2187

01:26:33,190 --> 01:26:31,610

no more so until next week show this is

2188

01:26:36,540 --> 01:26:33,200

Richard Saunders and Phil Plait signing

2189

01:26:39,850 --> 01:26:36,550

off from what does it black black leg oh

2190

01:26:42,160 --> 01:26:39,860

this isn't likely oh this is Mills Lake

2191

01:26:45,430 --> 01:26:42,170

signing off oh well from from another

2192

01:26:51,540 --> 01:26:45,440

Lake entirely in in Colorado where I'm

2193

01:26:57,540 --> 01:26:53,550

you've been listening to the skeptic

2194

01:27:01,350 --> 01:26:57,550

zone visit our website at wwc a petting

2195

01:27:04,010 --> 01:27:01,360

zoo TV for comments contacts and extra

2196

01:27:09,340 --> 01:27:04,020

video reports