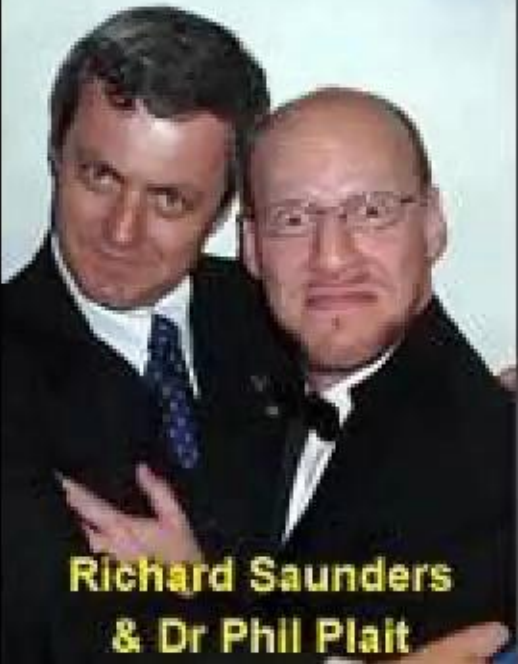


# The Skeptic Zone

Show 214 - 24 Nov 2012



**Richard Saunders  
& Dr Phil Plait**

1  
00:00:22,070 --> 00:00:09,089  
welcome to the skeptic zone the podcast

2  
00:00:28,890 --> 00:00:24,870  
hello and welcome to the skeptic zone

3  
00:00:32,609 --> 00:00:28,900  
episode number 214 for the 24th of

4  
00:00:35,970 --> 00:00:32,619  
November 2012 Richard Saunders here with

5  
00:00:39,229 --> 00:00:35,980  
you from a wonderfully beautifully sunny

6  
00:00:41,640 --> 00:00:39,239  
Sydney Australia summer is on the way

7  
00:00:44,280 --> 00:00:41,650  
might be time to go to the beach eyeing

8  
00:00:47,579 --> 00:00:44,290  
it might be time for a barbecue at least

9  
00:00:51,150 --> 00:00:47,589  
anyway on today's show a man who I have

10  
00:00:53,850 --> 00:00:51,160  
a barbecue with any time dr. Phil Plait

11  
00:00:57,119 --> 00:00:53,860  
the bad astronomer what a wonderful man

12  
00:01:00,119 --> 00:00:57,129  
Phil is what a great advocate for

13  
00:01:03,240 --> 00:01:00,129

science and reason Phil played the bad

14

00:01:04,890 --> 00:01:03,250

astronomer his website bad astronomy

15

00:01:08,789 --> 00:01:04,900

which I'm sure you're all familiar with

16

00:01:11,010 --> 00:01:08,799

has just moved location move to another

17

00:01:13,640 --> 00:01:11,020

server Phil plates here in a few moments

18

00:01:17,340 --> 00:01:13,650

to tell us all about that and other

19

00:01:20,310 --> 00:01:17,350

wonders of the universe and following

20

00:01:23,070 --> 00:01:20,320

that maynards back again I don't think

21

00:01:25,499 --> 00:01:23,080

he ever really went away Maynard catches

22

00:01:28,399 --> 00:01:25,509

up with Ross blocher from the oh no Ross

23

00:01:31,260 --> 00:01:28,409

and Carrie podcast and they have a very

24

00:01:36,359 --> 00:01:31,270

very deep and meaningful discussion

25

00:01:38,760 --> 00:01:36,369

about colonic irrigation yes they really

26  
00:01:41,160 --> 00:01:38,770  
get to the bottom of this one oh he had

27  
00:01:44,160 --> 00:01:41,170  
to say it that's coming up after our

28  
00:01:47,219 --> 00:01:44,170  
interview with her Phil Plait Maynard

29  
00:01:49,050 --> 00:01:47,229  
back at tam back in Las Vegas still

30  
00:01:51,870 --> 00:01:49,060  
giving the goods with the interviews

31  
00:01:55,739 --> 00:01:51,880  
it's just amazing but before all that a

32  
00:01:57,510 --> 00:01:55,749  
couple of messages wow it's finally here

33  
00:01:58,830 --> 00:01:57,520  
it's finally here in a couple of days

34  
00:02:00,630 --> 00:01:58,840  
I'll be boarding that flight with

35  
00:02:04,410 --> 00:02:00,640  
Maynard heading down to Melbourne to

36  
00:02:06,719 --> 00:02:04,420  
enjoy the skeptics convention and I hear

37  
00:02:09,240 --> 00:02:06,729  
there are now some one day tickets

38  
00:02:11,040 --> 00:02:09,250

available so if you just want to go for

39

00:02:13,320 --> 00:02:11,050

one day you want to see James Randi or

40

00:02:15,480 --> 00:02:13,330

rebecca watson on the one day or some

41

00:02:17,670 --> 00:02:15,490

other people on the other day however it

42

00:02:22,860 --> 00:02:17,680

works out you can get one day tickets

43

00:02:26,040 --> 00:02:22,870

check it out w WV skeptics wordpress com

44

00:02:27,900 --> 00:02:26,050

be really quick now as in right now as

45

00:02:29,790 --> 00:02:27,910

soon as you hear me say this run to your

46

00:02:32,040 --> 00:02:29,800

computer grab up those tickets snap up

47

00:02:33,840 --> 00:02:32,050

those dinner tickets as well it's all

48

00:02:36,240 --> 00:02:33,850

happening it's really exciting

49

00:02:38,370 --> 00:02:36,250

and I'm really excited to say that as I

50

00:02:40,830 --> 00:02:38,380

mentioned on last week's show there's a

51  
00:02:43,440 --> 00:02:40,840  
possibility that would be a sort of a an

52  
00:02:46,440 --> 00:02:43,450  
informal meet up before the convention

53  
00:02:49,080 --> 00:02:46,450  
well it's all happening yes maynard's no

54  
00:02:52,110 --> 00:02:49,090  
agenda skeptic zone dirty disbeliever

55  
00:02:54,750 --> 00:02:52,120  
malaise ha it's all happening on the

56  
00:02:56,520 --> 00:02:54,760  
night of the 28th of November that's

57  
00:03:00,570 --> 00:02:56,530  
Wednesday coming this coming wednesday

58  
00:03:03,900 --> 00:03:00,580  
at six thirty at the penny black the

59  
00:03:05,940 --> 00:03:03,910  
penny black which is at 420 sydney road

60  
00:03:09,510 --> 00:03:05,950  
brunswick and you can check out more

61  
00:03:11,700 --> 00:03:09,520  
details about that on facebook i'll put

62  
00:03:14,490 --> 00:03:11,710  
a link on the skeptics own page or you

63  
00:03:16,440 --> 00:03:14,500

can just google maynards no agenda

64

00:03:21,000 --> 00:03:16,450

skeptics own dirty disbeliever malaise

65

00:03:24,090 --> 00:03:21,010

or just turn up at the penny black 420

66

00:03:26,640 --> 00:03:24,100

sydney road in brunswick in melbourne

67

00:03:28,830 --> 00:03:26,650

and we'll get together fantastic can't

68

00:03:30,630 --> 00:03:28,840

wait to meet you turn up anybody can

69

00:03:32,700 --> 00:03:30,640

turn up may not it'll be running around

70

00:03:34,800 --> 00:03:32,710

with his microphone you can have a chat

71

00:03:36,240 --> 00:03:34,810

with me have a chat with Maynard and

72

00:03:38,310 --> 00:03:36,250

other great people who will be turning

73

00:03:40,170 --> 00:03:38,320

up including postie Lindley a good

74

00:03:41,790 --> 00:03:40,180

friend postal in lee and steve roberts

75

00:03:43,370 --> 00:03:41,800

from the australian skeptics and lots of

76

00:03:47,010 --> 00:03:43,380

other people i can't even imagine

77

00:03:48,840 --> 00:03:47,020

melbourne people i'll see you there now

78

00:03:52,380 --> 00:03:48,850

i was a little bit saddened during the

79

00:03:54,210 --> 00:03:52,390

past week to hear that larry hagman has

80

00:03:56,850 --> 00:03:54,220

died larry hagman from I Dream of

81

00:03:58,830 --> 00:03:56,860

Jeannie and a Dallas of course now the

82

00:04:01,140 --> 00:03:58,840

reason I was a little bit sad to hear

83

00:04:05,760 --> 00:04:01,150

this was our Maynard and I met Larry

84

00:04:07,830 --> 00:04:05,770

Hagman in 2011 just last year at the

85

00:04:09,690 --> 00:04:07,840

supernova science fiction convention in

86

00:04:13,050 --> 00:04:09,700

Sydney in fact there's an interview if

87

00:04:14,490 --> 00:04:13,060

you google may nod at supernova and look

88

00:04:16,470 --> 00:04:14,500

down the list you'll see a little

89

00:04:19,530 --> 00:04:16,480

picture of Maynard with Larry Hagman

90

00:04:22,620 --> 00:04:19,540

having an interview what a really nice

91

00:04:24,210 --> 00:04:22,630

guy and brief moment I met him and he

92

00:04:25,800 --> 00:04:24,220

didn't shake my hand because he had a

93

00:04:28,770 --> 00:04:25,810

sort of a thing about shaking hands so

94

00:04:31,200 --> 00:04:28,780

he sort of touched fist it was very nice

95

00:04:32,970 --> 00:04:31,210

sad to know Larry Hagman is no longer

96

00:04:36,240 --> 00:04:32,980

with us but you can check out maynards

97

00:04:38,430 --> 00:04:36,250

interview of larry hagman a little

98

00:04:40,680 --> 00:04:38,440

report I produced if you search for

99

00:04:42,659 --> 00:04:40,690

Maine our debt supernova and while

100

00:04:47,370 --> 00:04:42,669

you're on the internet looking at things

101  
00:04:48,870 --> 00:04:47,380  
on YouTube check out death valley grove

102  
00:04:51,720 --> 00:04:48,880  
now I know many of you have seen this

103  
00:04:54,530 --> 00:04:51,730  
before but I'm quite amazed to see how

104  
00:04:57,270 --> 00:04:54,540  
many hits it's been getting lately and

105  
00:04:59,760 --> 00:04:57,280  
it's also a little bit of source of

106  
00:05:01,890 --> 00:04:59,770  
revenue for Brian nanning sceptile

107  
00:05:03,690 --> 00:05:01,900  
podcast and the skeptic zone podcast

108  
00:05:05,910 --> 00:05:03,700  
we're sort of splitting the profits it's

109  
00:05:07,830 --> 00:05:05,920  
not a huge amount but every little scent

110  
00:05:10,170 --> 00:05:07,840  
count so if you want to check out Death

111  
00:05:11,700 --> 00:05:10,180  
Valley gravity google that have a look

112  
00:05:14,400 --> 00:05:11,710  
at the video pass it on to your friend's

113  
00:05:16,920 --> 00:05:14,410

blog it tweet it let's get more people

114

00:05:19,200 --> 00:05:16,930

looking it's only goes for about a

115

00:05:22,050 --> 00:05:19,210

minute it's great fun and a little bit

116

00:05:25,110 --> 00:05:22,060

of profit goes to help the skeptic zone

117

00:05:27,630 --> 00:05:25,120

and the Skip toyed podcast and of course

118

00:05:29,940 --> 00:05:27,640

my undying gratitude goes out to those

119

00:05:32,550 --> 00:05:29,950

people who subscribe to the skeptic zone

120

00:05:37,320 --> 00:05:32,560

less than a dollar a week and there's a

121

00:05:40,440 --> 00:05:37,330

link at ww skeptics own TV and some

122

00:05:42,330 --> 00:05:40,450

people even our chip in by buying US

123

00:05:43,680 --> 00:05:42,340

drinks well it's sort of giving us a

124

00:05:45,210 --> 00:05:43,690

little bit of a donation but on the

125

00:05:47,460 --> 00:05:45,220

website it's called buying us a drink

126

00:05:50,250 --> 00:05:47,470

and I really do thank those people it's

127

00:05:52,740 --> 00:05:50,260

those donations that make the skeptic

128

00:05:55,530 --> 00:05:52,750

zone possible well that's enough for me

129

00:05:59,790 --> 00:05:55,540

I'm going to run downstairs open the

130

00:06:02,610 --> 00:05:59,800

fridge and have another slice of the

131

00:06:06,060 --> 00:06:02,620

wonderful chocolate cake with pink icing

132

00:06:09,240 --> 00:06:06,070

my mother made for my niece's party just

133

00:06:12,660 --> 00:06:09,250

the other day mother's chocolate cake

134

00:06:14,220 --> 00:06:12,670

folks I tell you what mmm why I do that

135

00:06:33,020 --> 00:06:14,230

and stack on the calories I'll let you

136

00:06:39,150 --> 00:06:36,030

and joining me now from sunny the

137

00:06:42,150 --> 00:06:39,160

sun-drenched shores of beautiful Boulder

138

00:06:44,430 --> 00:06:42,160

Colorado is bad astronomer dr. Phil

139

00:06:48,330 --> 00:06:44,440

Plait hi Phil hey Richard I don't know

140

00:06:49,890 --> 00:06:48,340

what what atlas you're looking at we we

141

00:06:51,960 --> 00:06:49,900

kind of a but the mountains here we're

142

00:06:53,820 --> 00:06:51,970

right up against the Rockies that's true

143

00:06:55,920 --> 00:06:53,830

well maybe once upon a time it was the

144

00:06:57,330 --> 00:06:55,930

shoreline there somewhere how is Boulder

145

00:06:59,520 --> 00:06:57,340

these days I haven't been there for a

146

00:07:01,680 --> 00:06:59,530

few years it has been a while since

147

00:07:03,180 --> 00:07:01,690

you've been here and in fact uh this did

148

00:07:04,620 --> 00:07:03,190

used to be a shoreline it's why we have

149

00:07:08,310 --> 00:07:04,630

so much sandstone here this used to be

150

00:07:11,040 --> 00:07:08,320

underwater a long time ago um everything

151

00:07:13,050 --> 00:07:11,050

here is great in fact if it's anything

152

00:07:16,140 --> 00:07:13,060

it's too sunny we are not getting much

153

00:07:19,770 --> 00:07:16,150

rain and it's been very warm it's it's

154

00:07:21,150 --> 00:07:19,780

november and i know it's uh edgmont

155

00:07:22,830 --> 00:07:21,160

towards somewhere where you guys are

156

00:07:25,050 --> 00:07:22,840

standing on your heads yeah but up here

157

00:07:27,360 --> 00:07:25,060

in the real hemisphere it's uh it

158

00:07:28,680 --> 00:07:27,370

shouldn't be this warm and it means like

159

00:07:30,090 --> 00:07:28,690

room temperature outside and it should

160

00:07:32,760 --> 00:07:30,100

be really cold out right now so it's

161

00:07:35,250 --> 00:07:32,770

crazy I see but I know one thing for

162

00:07:38,190 --> 00:07:35,260

sure that in your neck of the woods you

163

00:07:39,540 --> 00:07:38,200

get the most incredible skylscapes if I

164

00:07:43,230 --> 00:07:39,550

may put it that way with the most

165

00:07:46,710 --> 00:07:43,240

amazing Thunder cloud cells coming

166

00:07:48,270 --> 00:07:46,720

through occasionally I wish yeah when

167

00:07:51,630 --> 00:07:48,280

you were here yeah it was amazing you

168

00:07:53,400 --> 00:07:51,640

know every every afternoon the air blown

169

00:07:55,770 --> 00:07:53,410

over the mountains with with moisture in

170

00:07:57,120 --> 00:07:55,780

it builds up and you get huge thunder

171

00:07:59,790 --> 00:07:57,130

clouds blowing through here and it's at

172

00:08:02,640 --> 00:07:59,800

sunset so you get fantastic rainbows and

173

00:08:04,590 --> 00:08:02,650

orange clouds and it's gorgeous but you

174

00:08:07,470 --> 00:08:04,600

know not that there's any global warming

175

00:08:09,240 --> 00:08:07,480

of course but yeah it's really messed up

176

00:08:10,500 --> 00:08:09,250

on our weather here this this mountains

177

00:08:13,200 --> 00:08:10,510

don't even have snow on them right now

178

00:08:14,910 --> 00:08:13,210

it's crazy really look yeah so people

179

00:08:16,110 --> 00:08:14,920

are sitting here denying global warming

180

00:08:19,050 --> 00:08:16,120

and I'm like you know I look out my

181

00:08:20,460 --> 00:08:19,060

window and I kind of see it the one of

182

00:08:23,520 --> 00:08:20,470

the things that struck me once when I

183

00:08:25,650 --> 00:08:23,530

flew into Denver and I walked outside

184

00:08:27,120 --> 00:08:25,660

the airport to go to your car in fact

185

00:08:30,570 --> 00:08:27,130

and I looked up in the sky and I thought

186

00:08:32,550 --> 00:08:30,580

wow look at that sky those clouds it's

187

00:08:34,830 --> 00:08:32,560

quite someone isn't it when we had those

188

00:08:36,610 --> 00:08:34,840

two mushroom clouds yep yeah and they

189

00:08:38,469 --> 00:08:36,620

look like nuclear bombs had gone off and

190

00:08:42,730 --> 00:08:38,479

ever yeah yeah that was awesome for a

191

00:08:45,070 --> 00:08:42,740

second now of course apart from staring

192

00:08:46,570 --> 00:08:45,080

at the clouds in Boulder Colorado you've

193

00:08:49,420 --> 00:08:46,580

been very busy lately and you've got

194

00:08:52,480 --> 00:08:49,430

some big news about a movie of done with

195

00:08:56,340 --> 00:08:52,490

the bad astronomy site yeah I've been

196

00:09:00,130 --> 00:08:56,350

crazy busy and it's a it's been fun I

197

00:09:03,190 --> 00:09:00,140

after four and a half years of writing

198

00:09:05,680 --> 00:09:03,200

for discover magazine I got an offer

199

00:09:08,019 --> 00:09:05,690

from slate magazine which is run by The

200

00:09:09,610 --> 00:09:08,029

Washington Post which is a newspaper

201  
00:09:11,230 --> 00:09:09,620  
that's been around forever I used to

202  
00:09:13,870 --> 00:09:11,240  
deliver the Washington Post when I was

203  
00:09:16,210 --> 00:09:13,880  
in high school and yeah and it's it's

204  
00:09:17,769 --> 00:09:16,220  
all online there's no print version or

205  
00:09:20,890 --> 00:09:17,779  
anything like that it is it is

206  
00:09:24,070 --> 00:09:20,900  
specifically an online entity they have

207  
00:09:26,920 --> 00:09:24,080  
a handful of blogs no science blog they

208  
00:09:28,210 --> 00:09:26,930  
cover science but not specifically you

209  
00:09:31,450 --> 00:09:28,220  
know when it's news they cover it

210  
00:09:33,490 --> 00:09:31,460  
there's a lot of news and economics

211  
00:09:35,829 --> 00:09:33,500  
politics that sort of thing but they

212  
00:09:37,900 --> 00:09:35,839  
wanted someone to write more dedicated

213  
00:09:40,090 --> 00:09:37,910

science and they contacted me and made

214

00:09:45,430 --> 00:09:40,100

me an offer I really couldn't refuse Wow

215

00:09:47,079 --> 00:09:45,440

so I accepted and it's been nine days as

216

00:09:50,490 --> 00:09:47,089

I look at my calendar it was on Monday

217

00:09:53,310 --> 00:09:50,500

November twelfth uh-huh and it's been um

218

00:09:55,630 --> 00:09:53,320

moving a blog is always a little bit

219

00:09:57,430 --> 00:09:55,640

well it's terrifying for one thing but

220

00:09:59,800 --> 00:09:57,440

it's also there are a lot of bumps in a

221

00:10:01,210 --> 00:09:59,810

road and we're smoothing them out it's

222

00:10:03,579 --> 00:10:01,220

the point now where it's much much

223

00:10:06,160 --> 00:10:03,589

easier than it was a week ago just a

224

00:10:12,190 --> 00:10:06,170

learning curve yeah that's right now I

225

00:10:14,470 --> 00:10:12,200

have 7100 posts and and we had to copy

226

00:10:15,760 --> 00:10:14,480

that database over from discover and so

227

00:10:18,519 --> 00:10:15,770

we're still in the middle of doing that

228

00:10:21,790 --> 00:10:18,529

it just it turns out it just simply

229

00:10:22,990 --> 00:10:21,800

takes a long time it's not just hey grab

230

00:10:26,260 --> 00:10:23,000

them and move them over and up they go

231

00:10:27,610 --> 00:10:26,270

as no it's it's actually yeah it's quite

232

00:10:29,620 --> 00:10:27,620

complicated so though hopefully those

233

00:10:31,660 --> 00:10:29,630

will be up soon and once that's up you

234

00:10:33,490 --> 00:10:31,670

know that's it will be off and running I

235

00:10:35,590 --> 00:10:33,500

guess you in the process you're

236

00:10:39,640 --> 00:10:35,600

revisiting a lot of blog posts you wrote

237

00:10:41,170 --> 00:10:39,650

years ago yeah it's funny I II I've

238

00:10:42,790 --> 00:10:41,180

written about everything when you've

239

00:10:44,410 --> 00:10:42,800

written seven thousand blog posts you

240

00:10:46,269 --> 00:10:44,420

know you pretty much covered every topic

241

00:10:47,290 --> 00:10:46,279

in astronomy and there's a

242

00:10:49,389 --> 00:10:47,300

handful I have and I've been thinking

243

00:10:52,569 --> 00:10:49,399

about covering those two and it's it's

244

00:10:54,460 --> 00:10:52,579

so easy especially when I was at

245

00:10:56,050 --> 00:10:54,470

discover it was just a matter of you

246

00:10:58,420 --> 00:10:56,060

know search for what I wrote about I

247

00:11:00,759 --> 00:10:58,430

don't know solar flares find the best

248

00:11:01,389 --> 00:11:00,769

one and link to it as an explanation is

249

00:11:03,759 --> 00:11:01,399

that way I don't have to explain

250

00:11:05,230 --> 00:11:03,769

everything over and over again now it's

251

00:11:07,660 --> 00:11:05,240

a little bit tougher but hopefully that

252

00:11:09,489 --> 00:11:07,670

will that like I said that will smooth

253

00:11:11,350 --> 00:11:09,499

out over the next couple of weeks but as

254

00:11:12,670 --> 00:11:11,360

it is you know I'm often running i'm

255

00:11:14,110 --> 00:11:12,680

writing I've already written a couple of

256

00:11:16,389 --> 00:11:14,120

political posts that have gotten a hate

257

00:11:17,949 --> 00:11:16,399

mail which is awesome and you know

258

00:11:20,069 --> 00:11:17,959

there's some vaccines stuff coming up

259

00:11:23,350 --> 00:11:20,079

some global warming stuff coming up so

260

00:11:26,319 --> 00:11:23,360

besides the usual astronomy and gorgeous

261

00:11:29,110 --> 00:11:26,329

pictures and space news and all that the

262

00:11:30,790 --> 00:11:29,120

did nothing will have changed my voice

263

00:11:32,530 --> 00:11:30,800

is still the same I'm still posting the

264

00:11:34,629 --> 00:11:32,540

same sort of thing I posted Doctor Who

265

00:11:36,160 --> 00:11:34,639

stuff the other day so I had a couple

266

00:11:38,290 --> 00:11:36,170

emails from people really worried I was

267

00:11:40,179 --> 00:11:38,300

going to be you know towing some sort of

268

00:11:42,460 --> 00:11:40,189

party line it's like no why would you

269

00:11:44,319 --> 00:11:42,470

even think that I wouldn't accept a job

270

00:11:46,540 --> 00:11:44,329

where they made me talk about different

271

00:11:48,489 --> 00:11:46,550

things or things I didn't want to do so

272

00:11:50,199 --> 00:11:48,499

I'm pretty happy now I think you've

273

00:11:52,240 --> 00:11:50,209

probably come in for sir como no

274

00:11:54,490 --> 00:11:52,250

criticism in the past because for an

275

00:11:58,090 --> 00:11:54,500

astronomy site which is primarily what

276

00:11:59,860 --> 00:11:58,100

it is which is really great you do dip

277

00:12:01,480 --> 00:11:59,870

your toe into skepticism which is

278

00:12:05,199 --> 00:12:01,490

natural enough of given your background

279

00:12:07,090 --> 00:12:05,209

and especially your promotion of the

280

00:12:09,249 --> 00:12:07,100

good cause which is vaccination and your

281

00:12:12,579 --> 00:12:09,259

fight against the anti-vaxxers has that

282

00:12:14,769 --> 00:12:12,589

caused you much much trouble over the

283

00:12:18,819 --> 00:12:14,779

years that people really can't get the

284

00:12:20,980 --> 00:12:18,829

fact that you're Pro vaccinations well

285

00:12:23,410 --> 00:12:20,990

for a sufficient definition of trouble I

286

00:12:24,819 --> 00:12:23,420

mean when you write about anything where

287

00:12:26,949 --> 00:12:24,829

there's a controversy you're going to

288

00:12:29,710 --> 00:12:26,959

get a lot of noise in the comments

289

00:12:31,269 --> 00:12:29,720

section for example as well as email and

290

00:12:33,100 --> 00:12:31,279

and on the social networks where people

291

00:12:34,449 --> 00:12:33,110

make funny ax and it doesn't matter what

292

00:12:37,419 --> 00:12:34,459

you say it doesn't matter if you're pro

293

00:12:40,329 --> 00:12:37,429

or anti vax a climate change denier or

294

00:12:41,740 --> 00:12:40,339

climate change acceptor I suppose would

295

00:12:43,629 --> 00:12:41,750

be the word you know take any issue

296

00:12:46,600 --> 00:12:43,639

where there are quote unquote two sides

297

00:12:48,489 --> 00:12:46,610

by a real side and a fantasy side if you

298

00:12:51,189 --> 00:12:48,499

wish and you're just gonna get hate mail

299

00:12:52,749 --> 00:12:51,199

no matter what you say uh so I decided

300

00:12:54,730 --> 00:12:52,759

long ago if I'm gonna get hate mail and

301  
00:12:57,179 --> 00:12:54,740  
if I'm gonna get people yelling at me

302  
00:12:59,870 --> 00:12:57,189  
I'm gonna do it for the right reasons so

303  
00:13:02,450 --> 00:12:59,880  
writing about vaccine

304  
00:13:06,560 --> 00:13:02,460  
patient's is is something I do because

305  
00:13:10,520 --> 00:13:06,570  
it's important and it saves lives so you

306  
00:13:11,960 --> 00:13:10,530  
know you can you can deny the benefits

307  
00:13:14,360 --> 00:13:11,970  
of vaccination all you want you can say

308  
00:13:15,890 --> 00:13:14,370  
they are related autism they have toxins

309  
00:13:18,530 --> 00:13:15,900  
in them all this ridiculous stuff that's

310  
00:13:20,450 --> 00:13:18,540  
just totally made up and wrong but

311  
00:13:22,010 --> 00:13:20,460  
you're wrong and I'm gonna call you on

312  
00:13:24,080 --> 00:13:22,020  
it and you can go in my comments and

313  
00:13:26,060 --> 00:13:24,090

yell at me but you know be prepared to

314

00:13:29,270 --> 00:13:26,070

have your head handed to you with facts

315

00:13:30,910 --> 00:13:29,280

when it's all done so it's not trouble

316

00:13:32,660 --> 00:13:30,920

it's not like anybody said you know

317

00:13:34,340 --> 00:13:32,670

we're not going to invite you to our

318

00:13:36,710 --> 00:13:34,350

party because you vaccinated your kid or

319

00:13:39,110 --> 00:13:36,720

anything like that and in fact the

320

00:13:41,960 --> 00:13:39,120

support you get from people who are

321

00:13:44,330 --> 00:13:41,970

fighting the good fight all by itself is

322

00:13:46,820 --> 00:13:44,340

worth the trouble but of course what's

323

00:13:50,480 --> 00:13:46,830

really worth the trouble is doing this

324

00:13:52,130 --> 00:13:50,490

on on its own merits getting people to

325

00:13:55,040 --> 00:13:52,140

talk to their doctors about vaccinations

326

00:13:56,840 --> 00:13:55,050

getting people to understand about the

327

00:13:58,160 --> 00:13:56,850

forces of anti reality and government

328

00:14:02,240 --> 00:13:58,170

and religion and all of these other

329

00:14:05,510 --> 00:14:02,250

places is critical and doing that is why

330

00:14:08,390 --> 00:14:05,520

I do it that's fantastic and I've just

331

00:14:10,040 --> 00:14:08,400

been looking at you and new well I guess

332

00:14:12,080 --> 00:14:10,050

you could say it's a new site it's and

333

00:14:14,930 --> 00:14:12,090

you look for your site and it is a new

334

00:14:18,220 --> 00:14:14,940

look indeed it's somewhat it's almost

335

00:14:22,580 --> 00:14:18,230

like it's been made aerodynamic Phil

336

00:14:25,870 --> 00:14:22,590

it's it's a different layout my if I had

337

00:14:28,790 --> 00:14:25,880

one complaint it would be that the

338

00:14:30,770 --> 00:14:28,800

content in the middle of the blog the

339

00:14:34,160 --> 00:14:30,780

content column is a little bit narrower

340

00:14:36,380 --> 00:14:34,170

but it's so is such a small percentage

341

00:14:37,910 --> 00:14:36,390

it hardly matters and it's easy enough

342

00:14:40,160 --> 00:14:37,920

to click a picture and make it big so

343

00:14:42,110 --> 00:14:40,170

that's you know that's not a big deal

344

00:14:45,470 --> 00:14:42,120

and if that's my only complaint come on

345

00:14:47,690 --> 00:14:45,480

so it's nice it's it's a little bit more

346

00:14:52,670 --> 00:14:47,700

minimalistic and easier to read and I

347

00:14:56,660 --> 00:14:52,680

think they're very supportive and it's

348

00:14:59,390 --> 00:14:56,670

just great to be in a new community

349

00:15:03,170 --> 00:14:59,400

sometimes you need to shake things up a

350

00:15:04,460 --> 00:15:03,180

little bit to knock yourself out of a

351

00:15:06,140 --> 00:15:04,470

rut I mean it's not that I was in a rut

352

00:15:07,490 --> 00:15:06,150

but it's just that well I'm just really

353

00:15:10,070 --> 00:15:07,500

talking myself into a corner here Oh

354

00:15:11,199 --> 00:15:10,080

everything was terrible and I sucked no

355

00:15:13,900 --> 00:15:11,209

it's not like that it's just every now

356

00:15:15,609 --> 00:15:13,910

again you need you need to shake

357

00:15:18,910 --> 00:15:15,619

yourself a little bit too to achieve

358

00:15:21,280 --> 00:15:18,920

more and to try different things that's

359

00:15:24,280 --> 00:15:21,290

what I've done here I think and we'll

360

00:15:26,230 --> 00:15:24,290

see how this goes and one of the things

361

00:15:28,359 --> 00:15:26,240

that impressed me I would always

362

00:15:29,319 --> 00:15:28,369

impresses me to visit bad astronomy of

363

00:15:31,869 --> 00:15:29,329

course there's always something

364

00:15:33,790 --> 00:15:31,879

interesting to see there but this video

365

00:15:35,619 --> 00:15:33,800

which is currently on your front page

366

00:15:37,749 --> 00:15:35,629

and I suspect will be there by the time

367

00:15:40,509 --> 00:15:37,759

this interview goes out is quite

368

00:15:44,290 --> 00:15:40,519

hypnotic it's quite hypnotic moon phases

369

00:15:47,040 --> 00:15:44,300

for 2013 every phase of the Moon of the

370

00:15:50,109 --> 00:15:47,050

Moon in one video that's something else

371

00:15:52,480 --> 00:15:50,119

in NASA Goddard Space Flight Center is a

372

00:15:55,359 --> 00:15:52,490

research center with NASA I used to work

373

00:15:57,759 --> 00:15:55,369

there actually they have a visualization

374

00:15:59,650 --> 00:15:57,769

studio where they put together images

375

00:16:02,530 --> 00:15:59,660

and videos and what they did and this is

376

00:16:03,939 --> 00:16:02,540

phenomenal they took imagery from two

377

00:16:06,400 --> 00:16:03,949

different missions the Clementine

378

00:16:09,400 --> 00:16:06,410

mission which was in the 1990s a joint

379

00:16:10,869 --> 00:16:09,410

NASA military mission and the lunar

380

00:16:12,280 --> 00:16:10,879

reconnaissance orbiter which is still

381

00:16:14,499 --> 00:16:12,290

orbiting the moon and taking phenomenal

382

00:16:16,960 --> 00:16:14,509

data and they took images from those two

383

00:16:18,549 --> 00:16:16,970

missions and combine them with altimeter

384

00:16:20,829 --> 00:16:18,559

data this this Lunar Reconnaissance

385

00:16:23,019 --> 00:16:20,839

Orbiter has a laser altimeter it it

386

00:16:25,059 --> 00:16:23,029

shoots down little pulses of laser light

387

00:16:27,669 --> 00:16:25,069

and times how long it takes them to go

388

00:16:30,160 --> 00:16:27,679

down and come back and that way it can

389

00:16:31,900 --> 00:16:30,170

basically measure the elevation of

390

00:16:33,879 --> 00:16:31,910

features below it mountains craters

391

00:16:36,699 --> 00:16:33,889

whatever and they put these two things

392

00:16:38,919 --> 00:16:36,709

together and using the elevation data

393

00:16:40,749 --> 00:16:38,929

they can create realistic shadows on the

394

00:16:42,340 --> 00:16:40,759

images so if there's a mountain in the

395

00:16:44,710 --> 00:16:42,350

image and they know where it is then a

396

00:16:47,139 --> 00:16:44,720

how tall it is they can add a shadow to

397

00:16:50,919 --> 00:16:47,149

it so knowing where the sun's position

398

00:16:53,710 --> 00:16:50,929

is you can accurately recreate what the

399

00:16:56,289 --> 00:16:53,720

landscape the moonscape is so what they

400

00:16:58,840 --> 00:16:56,299

did knowing the Earth Moon Sun geometry

401  
00:17:02,710 --> 00:16:58,850  
is they calculated it every hour 24

402  
00:17:04,360 --> 00:17:02,720  
hours a day for 365 days for 2013 and

403  
00:17:08,019 --> 00:17:04,370  
then calculated what the moon would look

404  
00:17:09,309 --> 00:17:08,029  
like its phase the shadows and and also

405  
00:17:12,250 --> 00:17:09,319  
because the moon's orbit is elliptical

406  
00:17:14,679 --> 00:17:12,260  
and tilted we actually see a little bit

407  
00:17:16,720 --> 00:17:14,689  
more than half and it's sort of we see a

408  
00:17:19,000 --> 00:17:16,730  
little bit past one side and the other

409  
00:17:22,090 --> 00:17:19,010  
side and it tips and nods and as you

410  
00:17:23,949 --> 00:17:22,100  
watch this video you can see that motion

411  
00:17:26,110 --> 00:17:23,959  
the moon is sort of coming towards you

412  
00:17:29,740 --> 00:17:26,120  
and moving away and tipping and and and

413  
00:17:31,360 --> 00:17:29,750

and panning it's really really cool so I

414

00:17:32,789 --> 00:17:31,370

added some music to it and explained a

415

00:17:36,730 --> 00:17:32,799

little bit about what you were seeing

416

00:17:38,590 --> 00:17:36,740

they did this last year 24 2012 and it's

417

00:17:41,220 --> 00:17:38,600

it's fascinating to watch it it's just

418

00:17:43,810 --> 00:17:41,230

like four and a half minutes of oh

419

00:17:46,570 --> 00:17:43,820

really there's just something about it

420

00:17:48,700 --> 00:17:46,580

and what I've done is I've I've hit the

421

00:17:50,350 --> 00:17:48,710

button on the YouTube there which makes

422

00:17:52,029 --> 00:17:50,360

it go fullscreen and you can see all the

423

00:17:53,649 --> 00:17:52,039

data and the fact I'll just do it again

424

00:17:55,330 --> 00:17:53,659

while we're speaking there we go now

425

00:17:58,149 --> 00:17:55,340

it's on my full screen and I can see the

426

00:18:00,879 --> 00:17:58,159

time and the phase and the diameter of

427

00:18:03,430 --> 00:18:00,889

the distance position it goes on and on

428

00:18:04,720 --> 00:18:03,440

and of course you then you can go scroll

429

00:18:06,310 --> 00:18:04,730

straight to your birthday and see

430

00:18:09,820 --> 00:18:06,320

exactly how the moon will look on that

431

00:18:12,580 --> 00:18:09,830

day right and there's a link to the NASA

432

00:18:14,200 --> 00:18:12,590

website where this is all hosted you can

433

00:18:16,000 --> 00:18:14,210

download a much higher resolution

434

00:18:17,919 --> 00:18:16,010

version if you want and also there's a

435

00:18:20,799 --> 00:18:17,929

picture at the top of that web page of

436

00:18:22,779 --> 00:18:20,809

the phase of the moon that will be

437

00:18:25,450 --> 00:18:22,789

updated in real time starting January

438

00:18:27,639 --> 00:18:25,460

first right now it's got a waxing

439

00:18:29,019 --> 00:18:27,649

gibbous moon I believe I'd have to look

440

00:18:33,070 --> 00:18:29,029

at it again it might be waning but it's

441

00:18:35,560 --> 00:18:33,080

a give us moon and it's um uh for

442

00:18:37,539 --> 00:18:35,570

january first at midnight UTC for

443

00:18:39,159 --> 00:18:37,549

greenwich time but it will be updated

444

00:18:40,419 --> 00:18:39,169

every hour so when you go to the page it

445

00:18:42,070 --> 00:18:40,429

will show you the current phase of the

446

00:18:44,049 --> 00:18:42,080

moon which is pretty cool and in

447

00:18:46,870 --> 00:18:44,059

stunning detail i'm just looking at that

448

00:18:49,690 --> 00:18:46,880

picture right now well of course let's

449

00:18:51,159 --> 00:18:49,700

talk about space and stars and things

450

00:18:54,279 --> 00:18:51,169

for a moment and one of the reasons that

451  
00:18:55,990 --> 00:18:54,289  
I've certainly first became aware of you

452  
00:18:58,899 --> 00:18:56,000  
when you wrote your book bad astronomy

453  
00:19:00,070 --> 00:18:58,909  
and I think it's interesting how these

454  
00:19:02,950 --> 00:19:00,080  
things come around and come around

455  
00:19:04,480 --> 00:19:02,960  
because right now we're heading headlong

456  
00:19:07,840 --> 00:19:04,490  
into the end of the world of course in

457  
00:19:09,669 --> 00:19:07,850  
december this year december 2012 but one

458  
00:19:11,409 --> 00:19:09,679  
thing i must say that surprises me feel

459  
00:19:14,169 --> 00:19:11,419  
i thought by now there would be a lot

460  
00:19:16,149 --> 00:19:14,179  
more hoopla about it but you know what

461  
00:19:18,310 --> 00:19:16,159  
you you really don't hear much about the

462  
00:19:20,289 --> 00:19:18,320  
end of the world all mysterious planets

463  
00:19:21,700 --> 00:19:20,299

heading our way although i did meet a

464

00:19:23,379 --> 00:19:21,710

man the other day who said there was a

465

00:19:25,389 --> 00:19:23,389

mysterious planet heading our way are

466

00:19:28,139 --> 00:19:25,399

there any mysterious planets new ones

467

00:19:31,810 --> 00:19:28,149

feel that we should be looking out for

468

00:19:33,909 --> 00:19:31,820

well let me freeze this carefully there

469

00:19:36,520 --> 00:19:33,919

are made-up nonsense ones that don't

470

00:19:36,910 --> 00:19:36,530

exist and then there are real planets

471

00:19:38,530 --> 00:19:36,920

orbiting

472

00:19:42,210 --> 00:19:38,540

they're stars that we're seeing which is

473

00:19:44,710 --> 00:19:42,220

awesome so you know as far as the

474

00:19:47,890 --> 00:19:44,720

quote/unquote Mayan apocalypse on

475

00:19:49,660 --> 00:19:47,900

December 21st that's all nonsense it

476

00:19:52,420 --> 00:19:49,670

you're right it's kind of funny I'm not

477

00:19:54,400 --> 00:19:52,430

seeing it as much as I thought I would

478

00:19:56,320 --> 00:19:54,410

right now I'm not getting the emails

479

00:19:59,140 --> 00:19:56,330

every day I'm not seeing it all over the

480

00:20:01,930 --> 00:19:59,150

web when I am seeing it people are

481

00:20:04,300 --> 00:20:01,940

making fun of it it's it's a line in a

482

00:20:07,570 --> 00:20:04,310

TV show or somebody's using it as in an

483

00:20:10,870 --> 00:20:07,580

ad and that's about it I was expecting

484

00:20:12,640 --> 00:20:10,880

it to be much more popular which is

485

00:20:14,620 --> 00:20:12,650

great you know oh it's nice to see that

486

00:20:16,120 --> 00:20:14,630

this is not getting the traction I

487

00:20:18,520 --> 00:20:16,130

thought I wish I weren't getting any I

488

00:20:19,930 --> 00:20:18,530

dunno some astronomers who are getting

489

00:20:22,210 --> 00:20:19,940

emails all the time from people who were

490

00:20:24,850 --> 00:20:22,220

scared usually kids yeah I get those two

491

00:20:26,410 --> 00:20:24,860

just not as often as I thought so it is

492

00:20:28,720 --> 00:20:26,420

kind of nice that that that's not

493

00:20:30,670 --> 00:20:28,730

happening and one of the things you know

494

00:20:32,440 --> 00:20:30,680

this is all based on the fact you know

495

00:20:34,150 --> 00:20:32,450

what let me back up a little bit what is

496

00:20:36,310 --> 00:20:34,160

all based on it's not a fact it's based

497

00:20:39,640 --> 00:20:36,320

on a gross misinterpretation of Mayan

498

00:20:42,280 --> 00:20:39,650

calendar it's the idea that the Mayan

499

00:20:44,740 --> 00:20:42,290

calendar end on December 21st 2012 and

500

00:20:46,360 --> 00:20:44,750

that's nonsense just like we do they

501  
00:20:48,310 --> 00:20:46,370  
have cycles to their calendar they had

502  
00:20:52,150 --> 00:20:48,320  
something like a week something like a

503  
00:20:54,280 --> 00:20:52,160  
year 360 days and they had bigger units

504  
00:20:57,160 --> 00:20:54,290  
and one of them is about 400 years and

505  
00:20:59,320 --> 00:20:57,170  
that one does apparently end on december

506  
00:21:00,490 --> 00:20:59,330  
twenty first of this year but what's

507  
00:21:02,320 --> 00:21:00,500  
going to happen is the same thing that

508  
00:21:04,900 --> 00:21:02,330  
happens every time a cycle ends you know

509  
00:21:07,150 --> 00:21:04,910  
it goes back to zero the next cycle tix

510  
00:21:09,490 --> 00:21:07,160  
up by one and you start over again so

511  
00:21:11,590 --> 00:21:09,500  
there's nothing about the calendar the

512  
00:21:13,570 --> 00:21:11,600  
Mayans themselves had no mythology's

513  
00:21:16,600 --> 00:21:13,580

about the end of the world this was just

514

00:21:19,680 --> 00:21:16,610

totally made up from scratch but a lot

515

00:21:22,540 --> 00:21:19,690

of people have been sort of pushing

516

00:21:24,400 --> 00:21:22,550

astronomical events as some sort of

517

00:21:26,860 --> 00:21:24,410

doomsday thing that the Mayans could

518

00:21:29,830 --> 00:21:26,870

have predicted like an asteroid impact

519

00:21:31,360 --> 00:21:29,840

solar flares a gigantic planet on its

520

00:21:34,030 --> 00:21:31,370

way to the earth and the thing is you

521

00:21:35,560 --> 00:21:34,040

know Mayans didn't have telescopes so

522

00:21:37,810 --> 00:21:35,570

they couldn't have known about it if

523

00:21:40,900 --> 00:21:37,820

this stuff anyway and the fact of the

524

00:21:42,640 --> 00:21:40,910

matter is you know there any planet that

525

00:21:45,250 --> 00:21:42,650

would be headed towards the Earth that

526  
00:21:47,010 --> 00:21:45,260  
would be here in time to do anything to

527  
00:21:49,300 --> 00:21:47,020  
us by december twenty first would be

528  
00:21:52,030 --> 00:21:49,310  
brighter than the full moon in the sky

529  
00:21:55,030 --> 00:21:52,040  
right now Jupiter is hundreds of

530  
00:21:56,920 --> 00:21:55,040  
millions of miles away and it's one of

531  
00:21:58,330 --> 00:21:56,930  
the brightest objects in the sky so if

532  
00:21:59,950 --> 00:21:58,340  
there were something two million miles

533  
00:22:01,600 --> 00:21:59,960  
away it would be intensely bright and

534  
00:22:04,480 --> 00:22:01,610  
there's nothing there so that's all just

535  
00:22:07,330 --> 00:22:04,490  
nonsense yeah I think I think we would

536  
00:22:09,550 --> 00:22:07,340  
have noticed it by now but I'm glad too

537  
00:22:12,250 --> 00:22:09,560  
that this hasn't caused the big stir

538  
00:22:14,350 --> 00:22:12,260

that maybe it's we can thank someone

539

00:22:16,450 --> 00:22:14,360

like Harold Camping who was it last year

540

00:22:18,070 --> 00:22:16,460

or the year before was making a lot

541

00:22:20,140 --> 00:22:18,080

who'll are about the the end of the

542

00:22:21,880 --> 00:22:20,150

world which didn't come and maybe it's

543

00:22:23,770 --> 00:22:21,890

like the the boy who cried wolf maybe

544

00:22:27,460 --> 00:22:23,780

finally people are just sick of hearing

545

00:22:30,070 --> 00:22:27,470

about the end of the world maybe that

546

00:22:32,830 --> 00:22:30,080

would be nice I guess um I wouldn't put

547

00:22:35,770 --> 00:22:32,840

too much faith in that idea though this

548

00:22:37,750 --> 00:22:35,780

is not the first end of the world and I

549

00:22:39,480 --> 00:22:37,760

don't think it's going to be the last we

550

00:22:43,630 --> 00:22:39,490

see this over and over again in fact in

551  
00:22:47,200 --> 00:22:43,640  
2003 there was this idea that that got

552  
00:22:49,690 --> 00:22:47,210  
widespread coverage for biz give reasons

553  
00:22:51,310 --> 00:22:49,700  
the bizarre I have no idea but there was

554  
00:22:53,860 --> 00:22:51,320  
a giant planet on its way to earth

555  
00:22:56,590 --> 00:22:53,870  
Nibiru and this was actually back in

556  
00:22:59,290 --> 00:22:56,600  
2003 the third time something like this

557  
00:23:01,270 --> 00:22:59,300  
had come up and it was shown not to

558  
00:23:04,270 --> 00:23:01,280  
happen of course we're still here and it

559  
00:23:06,660 --> 00:23:04,280  
got cycled for 2012 so you know who

560  
00:23:09,400 --> 00:23:06,670  
knows what's going to happen in

561  
00:23:11,740 --> 00:23:09,410  
2014-2020 I don't know somebody will

562  
00:23:13,030 --> 00:23:11,750  
come up with something you know there's

563  
00:23:14,500 --> 00:23:13,040

a comet that's going to pass by the

564

00:23:15,730 --> 00:23:14,510

earth next year people are already

565

00:23:17,230 --> 00:23:15,740

saying that that's going to hit us and

566

00:23:19,090 --> 00:23:17,240

it's not it's not even to come within 10

567

00:23:21,640 --> 00:23:19,100

million kilometers of the earth so it's

568

00:23:23,350 --> 00:23:21,650

it's it's you know head banging against

569

00:23:25,870 --> 00:23:23,360

the wall constantly for people like me

570

00:23:28,810 --> 00:23:25,880

trying to debunk this stuff it is it is

571

00:23:31,870 --> 00:23:28,820

but I'm again it's interesting that

572

00:23:33,220 --> 00:23:31,880

people like you are keeping score so to

573

00:23:35,140 --> 00:23:33,230

speak because that's yeah that's about

574

00:23:38,080 --> 00:23:35,150

the time I first got to know you was in

575

00:23:40,030 --> 00:23:38,090

about two thousand three when all this

576

00:23:42,130 --> 00:23:40,040

was going on and of course with the book

577

00:23:44,350 --> 00:23:42,140

bad astronomy and subsequently you wrote

578

00:23:46,180 --> 00:23:44,360

that great book of course death from the

579

00:23:49,360 --> 00:23:46,190

skies which really does talk about the

580

00:23:53,140 --> 00:23:49,370

end of the world yeah thanks for the

581

00:23:54,790 --> 00:23:53,150

plug um it's yeah I got so tired of

582

00:23:56,800 --> 00:23:54,800

doomsday scenarios and people making

583

00:23:58,330 --> 00:23:56,810

stuff up I decided to write about the

584

00:24:00,850 --> 00:23:58,340

real ways astronomical events could

585

00:24:02,830 --> 00:24:00,860

destroy the earth and the whole point of

586

00:24:05,350 --> 00:24:02,840

the book is that

587

00:24:08,170 --> 00:24:05,360

to most likely ones which would be an

588

00:24:09,790 --> 00:24:08,180

asteroid impact or a huge solar storm

589

00:24:11,800 --> 00:24:09,800

which by the way the latter cannot

590

00:24:14,410 --> 00:24:11,810

destroy the earth but it can damage our

591

00:24:17,470 --> 00:24:14,420

technology wipe out satellites and cause

592

00:24:20,290 --> 00:24:17,480

blackouts both of those are our if not

593

00:24:24,700 --> 00:24:20,300

preventable at least they are something

594

00:24:28,450 --> 00:24:24,710

we can mitigate by launching rockets to

595

00:24:30,190 --> 00:24:28,460

push asteroids out of the way or protect

596

00:24:32,170 --> 00:24:30,200

our satellites in our power grid from

597

00:24:34,330 --> 00:24:32,180

big solar flare so that they don't they

598

00:24:36,940 --> 00:24:34,340

don't hurt us everything else is just so

599

00:24:38,830 --> 00:24:36,950

low statistics a black hole passing by

600

00:24:40,660 --> 00:24:38,840

the earth or a nearby supernova there's

601  
00:24:41,950 --> 00:24:40,670  
basically zero chance of them happening

602  
00:24:43,780 --> 00:24:41,960  
so it's kind of fun to talk about them

603  
00:24:45,070 --> 00:24:43,790  
the point being that you know

604  
00:24:47,320 --> 00:24:45,080  
realistically speaking they're not

605  
00:24:49,420 --> 00:24:47,330  
anything we have to worry about yes yes

606  
00:24:52,600 --> 00:24:49,430  
I I agree and it's a good way I've found

607  
00:24:53,830 --> 00:24:52,610  
to when I'm talking to students and they

608  
00:24:56,230 --> 00:24:53,840  
say do you think the world is going to

609  
00:24:58,420 --> 00:24:56,240  
end in this year earlier in the year

610  
00:24:59,890 --> 00:24:58,430  
they were asking me this and I said well

611  
00:25:01,930 --> 00:24:59,900  
no and then I asked them how do you

612  
00:25:04,870 --> 00:25:01,940  
think that could possibly happen and of

613  
00:25:06,490 --> 00:25:04,880

course and fair enough they're still you

614

00:25:08,290 --> 00:25:06,500

know finding their feet they hadn't got

615

00:25:10,090 --> 00:25:08,300

that far as to actually think how the

616

00:25:11,800 --> 00:25:10,100

world could possibly end but it's a nice

617

00:25:15,850 --> 00:25:11,810

catch phrases and it the world's going

618

00:25:18,730 --> 00:25:15,860

to end right and it turns out it's hard

619

00:25:19,990 --> 00:25:18,740

to do you know if you if you were to

620

00:25:23,080 --> 00:25:20,000

talk about wiping out life on Earth

621

00:25:24,610 --> 00:25:23,090

that's that's not easy but it can be

622

00:25:25,930 --> 00:25:24,620

done with a large enough you know

623

00:25:28,360 --> 00:25:25,940

asteroid impact or something like that

624

00:25:30,100 --> 00:25:28,370

but actually destroying a planet is

625

00:25:33,280 --> 00:25:30,110

really hard it turns out the earth has a

626  
00:25:34,750 --> 00:25:33,290  
lot of gravity and even taking the moon

627  
00:25:36,670 --> 00:25:34,760  
and smacking it into the earth that

628  
00:25:39,820 --> 00:25:36,680  
would wipe out all life but the planet

629  
00:25:41,470 --> 00:25:39,830  
itself would survive so even the phrase

630  
00:25:43,960 --> 00:25:41,480  
end of the world are destroying the

631  
00:25:46,860 --> 00:25:43,970  
earth or whatever is a little vague

632  
00:25:49,570 --> 00:25:46,870  
booth and I and even then it's like well

633  
00:25:51,160 --> 00:25:49,580  
maybe maybe it wipes out humans which

634  
00:25:54,130 --> 00:25:51,170  
would suck I don't want that to happen

635  
00:25:57,250 --> 00:25:54,140  
but even even destroying life on this

636  
00:25:58,510 --> 00:25:57,260  
planet would be really hard to do so in

637  
00:26:00,160 --> 00:25:58,520  
a sense at least that's kind of

638  
00:26:01,870 --> 00:26:00,170

uplifting you know yeah all the animals

639

00:26:04,180 --> 00:26:01,880

are dead but you know something on 30

640

00:26:06,370 --> 00:26:04,190

million years you'd never know yeah them

641

00:26:08,380 --> 00:26:06,380

all again there will be another odd

642

00:26:10,150 --> 00:26:08,390

group of creatures evolved probably in

643

00:26:13,090 --> 00:26:10,160

the in the time that this planet

644

00:26:14,890 --> 00:26:13,100

certainly has to to go to carry on now

645

00:26:16,659 --> 00:26:14,900

before we wrap it up Phil let's let's

646

00:26:19,539 --> 00:26:16,669

turn our gaze away from the steer

647

00:26:21,820 --> 00:26:19,549

planets and back to real ones I'm sure

648

00:26:23,799 --> 00:26:21,830

you've been excited as I have and I'm

649

00:26:26,499 --> 00:26:23,809

sure our listeners have to of all the

650

00:26:30,549 --> 00:26:26,509

wonderful information images coming back

651  
00:26:33,779 --> 00:26:30,559  
from curiosity oh yeah it's been

652  
00:26:38,200 --> 00:26:33,789  
fantastic that's uh that's been a

653  
00:26:40,899 --> 00:26:38,210  
culmination of oh my gosh close to 35

654  
00:26:43,320 --> 00:26:40,909  
years of sending probes to Mars and it's

655  
00:26:46,840 --> 00:26:43,330  
it's the largest and most sophisticated

656  
00:26:49,359 --> 00:26:46,850  
probe ever to land on Mars and and

657  
00:26:52,659 --> 00:26:49,369  
certainly of the rover's it's the most

658  
00:26:53,739 --> 00:26:52,669  
functional and it's it just incredibly

659  
00:26:58,029 --> 00:26:53,749  
capable it takes high-resolution

660  
00:26:59,649 --> 00:26:58,039  
pictures it has a chemistry set on it so

661  
00:27:02,019 --> 00:26:59,659  
to speak so that it can actually sample

662  
00:27:04,330 --> 00:27:02,029  
the soil and see what's in it it's got

663  
00:27:06,099 --> 00:27:04,340

that that really way cool laser that it

664

00:27:08,109 --> 00:27:06,109

can zap rocks with and yeah it makes

665

00:27:09,970 --> 00:27:08,119

them mum sorry yeah that you're

666

00:27:12,220 --> 00:27:09,980

absolutely right that I love watching

667

00:27:13,629 --> 00:27:12,230

the images coming back from this is

668

00:27:16,299 --> 00:27:13,639

where we've just shut the laser that's

669

00:27:17,950 --> 00:27:16,309

fantastic it's a very powerful laser it

670

00:27:20,080 --> 00:27:17,960

only shoots for a tiny tiny fraction of

671

00:27:23,409 --> 00:27:20,090

a second but it vaporizes The Rock The

672

00:27:25,479 --> 00:27:23,419

Rock glows and the the specific colors

673

00:27:27,580 --> 00:27:25,489

you break that that glow up into its

674

00:27:29,440 --> 00:27:27,590

colors like a rainbow except much more

675

00:27:31,869 --> 00:27:29,450

detail and you can actually determine

676

00:27:33,669 --> 00:27:31,879

what elements are in it so silicon

677

00:27:36,129 --> 00:27:33,679

oxygen carbon all of those things can be

678

00:27:39,099 --> 00:27:36,139

seen in the rocks they can sample them

679

00:27:41,259 --> 00:27:39,109

that way so it's an amazing thing that

680

00:27:44,200 --> 00:27:41,269

it's doing and it's it's landed in this

681

00:27:47,409 --> 00:27:44,210

gigantic crater gale crater which is

682

00:27:48,909 --> 00:27:47,419

close to 100 kilometres across and

683

00:27:50,769 --> 00:27:48,919

that's cool because when the asteroid

684

00:27:53,409 --> 00:27:50,779

impact hit their billions of years ago

685

00:27:55,539 --> 00:27:53,419

it basically exposed all these layers of

686

00:27:57,580 --> 00:27:55,549

Martian history so it doesn't have to

687

00:27:59,549 --> 00:27:57,590

dig very far it can just roll over this

688

00:28:02,169 --> 00:27:59,559

landscape it's kind of like walking down

689

00:28:04,509 --> 00:28:02,179

into a canyon it's then all the work is

690

00:28:06,399 --> 00:28:04,519

done for you so it's learning a huge

691

00:28:08,080 --> 00:28:06,409

amount about Mars and that of course the

692

00:28:09,639 --> 00:28:08,090

pictures have been fantastic the

693

00:28:11,440 --> 00:28:09,649

pictures are fantastic there's one on

694

00:28:14,979 --> 00:28:11,450

your website now which I'm looking at is

695

00:28:19,690 --> 00:28:14,989

leaving a little alien in there yeah as

696

00:28:21,249 --> 00:28:19,700

we're recording this yesterday a media

697

00:28:22,659 --> 00:28:21,259

organization interviewed one of the

698

00:28:24,879 --> 00:28:22,669

scientists the project scientist

699

00:28:26,739 --> 00:28:24,889

actually for curiosity and he said they

700

00:28:30,190 --> 00:28:26,749

found something that's really exciting

701  
00:28:31,480 --> 00:28:30,200  
and of course everybody's speculating

702  
00:28:33,640 --> 00:28:31,490  
what it is people are saying its life

703  
00:28:35,890 --> 00:28:33,650  
it's organics it's this it's that it's

704  
00:28:38,680 --> 00:28:35,900  
like we don't know what it is and he

705  
00:28:40,120 --> 00:28:38,690  
won't even say so I'm guessing it's

706  
00:28:41,860 --> 00:28:40,130  
something scientifically very

707  
00:28:43,570 --> 00:28:41,870  
interesting yeah they need to wait to

708  
00:28:46,330 --> 00:28:43,580  
confirm it and then they'll announce it

709  
00:28:48,820 --> 00:28:46,340  
I don't think it's aliens it could it

710  
00:28:51,430 --> 00:28:48,830  
will even know if it's biology they

711  
00:28:53,500 --> 00:28:51,440  
could have found evidence of you know

712  
00:28:54,730 --> 00:28:53,510  
warm water standing in this place two

713  
00:28:57,010 --> 00:28:54,740

billion years ago it could be some

714

00:28:58,360 --> 00:28:57,020

interesting geology it there's we don't

715

00:29:01,870 --> 00:28:58,370

even know what field of science he's

716

00:29:03,010 --> 00:29:01,880

talking about so speculating on what

717

00:29:06,070 --> 00:29:03,020

they found which is of course what

718

00:29:09,070 --> 00:29:06,080

everybody's doing I think is just a

719

00:29:11,890 --> 00:29:09,080

little bit premature oh well it's but

720

00:29:13,930 --> 00:29:11,900

it's a lot of fun to wonder oh yeah I

721

00:29:15,970 --> 00:29:13,940

mean I'm wondering too but I you know

722

00:29:18,220 --> 00:29:15,980

I'm not gonna go out and write a big

723

00:29:20,620 --> 00:29:18,230

newspaper article or whatever online

724

00:29:22,270 --> 00:29:20,630

saying you know we think it's organics

725

00:29:23,290 --> 00:29:22,280

and it's like you don't know crap you

726

00:29:26,110 --> 00:29:23,300

don't know what you're talking I mean

727

00:29:27,390 --> 00:29:26,120

you could be anything come on so we've

728

00:29:29,740 --> 00:29:27,400

been through this before NASA's

729

00:29:32,110 --> 00:29:29,750

sometimes will make a will have an

730

00:29:33,490 --> 00:29:32,120

announcement in a few days and they'll

731

00:29:35,500 --> 00:29:33,500

put out a press release to journalists

732

00:29:37,390 --> 00:29:35,510

saying we're going to announce something

733

00:29:39,820 --> 00:29:37,400

that has impact on the field of

734

00:29:41,980 --> 00:29:39,830

astrobiology and then everybody thinks

735

00:29:43,420 --> 00:29:41,990

aliens it's like really yet you really

736

00:29:46,570 --> 00:29:43,430

think that's how NASA would announce

737

00:29:49,930 --> 00:29:46,580

this so it's speculations gonna run no

738

00:29:51,310 --> 00:29:49,940

matter what you do hopefully when this

739

00:29:52,510 --> 00:29:51,320

comes out it will still be pretty

740

00:29:54,100 --> 00:29:52,520

interesting I think it will be

741

00:29:57,640 --> 00:29:54,110

everything curiosities finding on Mars

742

00:29:59,530 --> 00:29:57,650

it's interesting it's on Mars yes that's

743

00:30:02,140 --> 00:29:59,540

absolutely right it's hard to go wrong

744

00:30:04,540 --> 00:30:02,150

when you're getting back these wonderful

745

00:30:06,760 --> 00:30:04,550

photographs they are absolutely stunning

746

00:30:10,660 --> 00:30:06,770

that the high detail of them and that

747

00:30:12,550 --> 00:30:10,670

video that was produced of the curiosity

748

00:30:15,430 --> 00:30:12,560

landing on Mars is something I use in my

749

00:30:16,900 --> 00:30:15,440

talks it's just just breathtaking I've

750

00:30:19,540 --> 00:30:16,910

used that as well the seven minutes of

751

00:30:23,110 --> 00:30:19,550

Terror talk well yeah and there's the

752

00:30:25,900 --> 00:30:23,120

actual um images that the curiosity was

753

00:30:28,300 --> 00:30:25,910

taking as it was making it's right down

754

00:30:29,470 --> 00:30:28,310

on the parachute right it had cameras

755

00:30:31,420 --> 00:30:29,480

pointing down you can see the heat

756

00:30:33,130 --> 00:30:31,430

shield yep flying away and the

757

00:30:35,020 --> 00:30:33,140

parachutes and then as it lands and that

758

00:30:37,750 --> 00:30:35,030

had been remixed a bunch of times people

759

00:30:40,030 --> 00:30:37,760

kept making better and better videos

760

00:30:41,950 --> 00:30:40,040

doing interpolation between frames to

761

00:30:43,139 --> 00:30:41,960

make it smoother with the high def

762

00:30:44,999 --> 00:30:43,149

pictures and so the

763

00:30:47,369 --> 00:30:45,009

videos that that are out there now or if

764

00:30:48,779 --> 00:30:47,379

you haven't seen them folks down you can

765

00:30:51,659 --> 00:30:48,789

find them easily they're all there on my

766

00:30:54,389 --> 00:30:51,669

blog and they're stunning really

767

00:30:55,979 --> 00:30:54,399

something to look at it is because when

768

00:30:57,659 --> 00:30:55,989

I've been showing these especially the

769

00:31:00,450 --> 00:30:57,669

students I can tell them point blank

770

00:31:03,329 --> 00:31:00,460

this is not a Hollywood special-effects

771

00:31:05,759 --> 00:31:03,339

this isn't done in in computers it's not

772

00:31:08,729 --> 00:31:05,769

CGI although its computer assisted one

773

00:31:10,769 --> 00:31:08,739

could say it's an actual movie of a real

774

00:31:13,079 --> 00:31:10,779

spaceship landing on another planet and

775

00:31:14,549 --> 00:31:13,089

even every time I see it my heart skips

776

00:31:17,489 --> 00:31:14,559

a beat i think it's just it's just

777

00:31:20,729 --> 00:31:17,499

astounding yeah and I you know how

778

00:31:23,759 --> 00:31:20,739

spoiled we are now I a Voyager going

779

00:31:25,889 --> 00:31:23,769

past the outer giant planets and you

780

00:31:28,259 --> 00:31:25,899

have to wait and wait and wait for that

781

00:31:30,329 --> 00:31:28,269

data to come back you know line by line

782

00:31:31,889 --> 00:31:30,339

it was writing stuff and we didn't have

783

00:31:34,440 --> 00:31:31,899

the internet it was just being covered

784

00:31:37,320 --> 00:31:34,450

by the news if they covered it and even

785

00:31:39,209 --> 00:31:37,330

then typically it was the magazines that

786

00:31:40,440 --> 00:31:39,219

could print the color pictures where

787

00:31:42,629 --> 00:31:40,450

you'd have to exceed be waiting two

788

00:31:44,430 --> 00:31:42,639

months in a Voyager had past Neptune or

789

00:31:46,829 --> 00:31:44,440

something like that and then it was a

790

00:31:48,659 --> 00:31:46,839

long time later before we even saw the

791

00:31:50,700 --> 00:31:48,669

images now we're getting what's

792

00:31:53,519 --> 00:31:50,710

essentially video from other planets in

793

00:31:56,579 --> 00:31:53,529

color in high definition you know if not

794

00:31:58,049 --> 00:31:56,589

within days if not even even more

795

00:32:01,499 --> 00:31:58,059

quickly than that it's astonishing

796

00:32:04,619 --> 00:32:01,509

wasn't it an episode of cosmos with Carl

797

00:32:06,180 --> 00:32:04,629

Sagan where he was probably at NASA

798

00:32:07,769 --> 00:32:06,190

somewhere by a machine that was

799

00:32:09,779 --> 00:32:07,779

producing an image and he was saying

800

00:32:11,190 --> 00:32:09,789

this is coming through right now as

801

00:32:14,579 --> 00:32:11,200

we're filming and I think it was from

802

00:32:15,930 --> 00:32:14,589

from one of the voyagers the timing for

803

00:32:18,629 --> 00:32:15,940

that would have been about right yeah

804

00:32:20,519 --> 00:32:18,639

late 70s early 80s when cosmos was done

805

00:32:23,579 --> 00:32:20,529

late 70s I think so yeah that'd be about

806

00:32:26,519 --> 00:32:23,589

right to see the first close-up images

807

00:32:28,560 --> 00:32:26,529

of a world never before known this

808

00:32:31,289 --> 00:32:28,570

moment is one of the greatest joys in

809

00:32:32,789 --> 00:32:31,299

the life of a planetary scientist in the

810

00:32:35,310 --> 00:32:32,799

early morning hours of july nine

811

00:32:36,989 --> 00:32:35,320

nineteen seventy nine on the real-time

812

00:32:39,239 --> 00:32:36,999

television monitors at the Jet

813

00:32:42,330 --> 00:32:39,249

Propulsion Laboratory we began to learn

814

00:32:45,220 --> 00:32:42,340

about a world called europa

815

00:32:49,640 --> 00:32:45,230

finally the end product of this

816

00:32:51,680 --> 00:32:49,650

remarkable set of links and relays

817

00:32:56,090 --> 00:32:51,690

is a hard copy which comes out of this

818

00:32:58,490 --> 00:32:56,100

machine showing in this case the wonders

819

00:33:02,230 --> 00:32:58,500

of Europa which were recorded for the

820

00:33:05,810 --> 00:33:02,240

first time in human history today is

821

00:33:08,210 --> 00:33:05,820

absolutely astonishing that's exciting

822

00:33:10,940 --> 00:33:08,220

stuff now before we wrap it up Phil if

823

00:33:12,350 --> 00:33:10,950

people can't wait to visit your new site

824

00:33:15,440 --> 00:33:12,360

and I hope they have done already but if

825

00:33:17,470 --> 00:33:15,450

they haven't is the URL still the same

826

00:33:19,670 --> 00:33:17,480

or should they book make a new bookmark

827

00:33:24,200 --> 00:33:19,680

well you should make a new bookmark uh

828

00:33:27,770 --> 00:33:24,210

it's just slate com s la te like the

829

00:33:29,240 --> 00:33:27,780

blue black sedimentary rock it is

830

00:33:31,580 --> 00:33:29,250

sedimentary isn't it's not metamorphic

831

00:33:35,660 --> 00:33:31,590

oh my gosh I'm not a Jew I don't know

832

00:33:39,680 --> 00:33:35,670

okay just go to slate com and you'll see

833

00:33:41,870 --> 00:33:39,690

the link for blogs mine's there the old

834

00:33:44,930 --> 00:33:41,880

website bad astronomy com is still up

835

00:33:46,970 --> 00:33:44,940

and that's where i am and i'm on twitter

836

00:33:49,300 --> 00:33:46,980

at bad astronomer and google+ and

837

00:33:52,400 --> 00:33:49,310

facebook and all the usual haunts that

838

00:33:54,710 --> 00:33:52,410

socially media savvy people waste their

839

00:34:00,500 --> 00:33:54,720

time on that's right so there it is

840

00:34:02,450 --> 00:34:00,510

folks go to ww 8s lati com follow the

841

00:34:04,130 --> 00:34:02,460

links to bad astronomy I think you'll

842

00:34:06,950 --> 00:34:04,140

agree with me it looks slick it looks

843

00:34:09,409 --> 00:34:06,960

fast it's more like a newspaper sort of

844

00:34:10,880 --> 00:34:09,419

look but all the information that you

845

00:34:12,889 --> 00:34:10,890

know and love from bad astronomy and

846

00:34:14,750 --> 00:34:12,899

Phil Plait is all still there feel

847

00:34:17,750 --> 00:34:14,760

wonderful to talk with you again I'm

848

00:34:20,480 --> 00:34:17,760

going to try and rally myself in 2013 to

849

00:34:23,030 --> 00:34:20,490

visit Boulder and just walk up at the

850

00:34:25,909 --> 00:34:23,040

sky and in one wonderment and amazement

851  
00:34:27,380 --> 00:34:25,919  
and maybe see a comment or two but under

852  
00:34:29,630 --> 00:34:27,390  
then it's wonderful to catch up with you

853  
00:34:42,440 --> 00:34:29,640  
and thanks very much for being on the

854  
00:34:48,450 --> 00:34:45,299  
the skeptic magazine the journal from

855  
00:34:50,669 --> 00:34:48,460  
Australian skeptics subscribe online to

856  
00:34:55,980 --> 00:34:50,679  
the world's second oldest skeptical

857  
00:34:58,739 --> 00:34:55,990  
magazine visit w WC apx com au and click

858  
00:35:02,539 --> 00:34:58,749  
the publication's League you can also

859  
00:35:06,029 --> 00:35:02,549  
find their over 30 years of back issues

860  
00:35:19,849 --> 00:35:06,039  
free to download the skeptic magazine

861  
00:35:26,660 --> 00:35:19,859  
from Australian skeptics here's may not

862  
00:35:31,560 --> 00:35:28,920  
we know there's a lot of podcasts out

863  
00:35:33,960 --> 00:35:31,570

there and when I listen to things in my

864

00:35:35,580 --> 00:35:33,970

ear very closely with earbuds I want to

865

00:35:36,960 --> 00:35:35,590

hear about people's bowels and we're

866

00:35:38,610 --> 00:35:36,970

about to talk to a man right now who's

867

00:35:41,100 --> 00:35:38,620

been doing look who work lately who we

868

00:35:43,800 --> 00:35:41,110

got here oh boy this is ross Blocher of

869

00:35:45,420 --> 00:35:43,810

oh no Ross and Carrie and boy do we

870

00:35:46,710 --> 00:35:45,430

deliver on the bowel movements that

871

00:35:47,940 --> 00:35:46,720

that's what you're interested in yeah

872

00:35:49,530 --> 00:35:47,950

well I'll be you've been going to places

873

00:35:51,390 --> 00:35:49,540

that we wouldn't normally go to but I

874

00:35:53,640 --> 00:35:51,400

actually have had a colonic irrigation

875

00:35:55,740 --> 00:35:53,650

twice oh hey all right we're part of the

876

00:35:57,270 --> 00:35:55,750

the same club then only once here Wow

877

00:35:58,770 --> 00:35:57,280

okay yeah well because I went back again

878

00:36:00,510 --> 00:35:58,780

because the first time it didn't do

879

00:36:01,740 --> 00:36:00,520

anything surprise and they were all

880

00:36:04,110 --> 00:36:01,750

maybe you have to have a couple of times

881

00:36:05,340 --> 00:36:04,120

before you realize what might happen it

882

00:36:06,660 --> 00:36:05,350

might just be a bit of a springing this

883

00:36:08,010 --> 00:36:06,670

step that will improve or something I

884

00:36:09,570 --> 00:36:08,020

thought that's good fake well I was

885

00:36:10,920 --> 00:36:09,580

gonna say if that's your yardstick you

886

00:36:12,810 --> 00:36:10,930

know it doing something you might be

887

00:36:14,580 --> 00:36:12,820

going for the rest of your life I mean

888

00:36:18,480 --> 00:36:14,590

certainly it's doing something they're

889

00:36:20,460 --> 00:36:18,490

putting water into your colon yeah I the

890

00:36:22,230 --> 00:36:20,470

fancy when I was lying down and it was a

891

00:36:24,600 --> 00:36:22,240

lovely room it was a very medical kind

892

00:36:26,190 --> 00:36:24,610

of grade sort of looking nicely centered

893

00:36:28,470 --> 00:36:26,200

all that sort of stuff what did you have

894

00:36:30,390 --> 00:36:28,480

like be like a shovel at a pint of water

895

00:36:32,430 --> 00:36:30,400

was almost well you know they have this

896

00:36:34,380 --> 00:36:32,440

plastic bed and it was kind of this

897

00:36:36,030 --> 00:36:34,390

curved shape and so there's padding for

898

00:36:37,890 --> 00:36:36,040

your head and there's kind of almost

899

00:36:40,530 --> 00:36:37,900

like plastic stirrups for your feet and

900

00:36:42,330 --> 00:36:40,540

this goalie that runs under your butt to

901  
00:36:44,490 --> 00:36:42,340  
collect everything can i say but unless

902  
00:36:45,720 --> 00:36:44,500  
y'all yeah yeah and so could you see

903  
00:36:47,220 --> 00:36:45,730  
what was coming at you oh absolutely

904  
00:36:49,260 --> 00:36:47,230  
yeah they're in mind couldn't i was

905  
00:36:50,490 --> 00:36:49,270  
lying down you see I couldn't see it but

906  
00:36:52,860 --> 00:36:50,500  
did they give you like a clear plastic

907  
00:36:54,570 --> 00:36:52,870  
tube so you could no no at no stage did

908  
00:36:56,130 --> 00:36:54,580  
I see what was going on whatsoever oh

909  
00:36:57,600 --> 00:36:56,140  
they want they were gave me a full

910  
00:36:58,950 --> 00:36:57,610  
viewing gallery they really wanted to

911  
00:37:00,510 --> 00:36:58,960  
make sure I could see everything coming

912  
00:37:02,400 --> 00:37:00,520  
out of me so so yeah I'm lying down

913  
00:37:04,200 --> 00:37:02,410

horizontally and this tube is running

914

00:37:06,810 --> 00:37:04,210

parallel to me essentially and I can

915

00:37:10,980 --> 00:37:06,820

watch it and that would have to be

916

00:37:12,600 --> 00:37:10,990

disturbing okay indeed I mean I'm under

917

00:37:15,330 --> 00:37:12,610

no illusions about what's inside of me

918

00:37:16,980 --> 00:37:15,340

so I don't that I I suppose I'm a

919

00:37:18,840 --> 00:37:16,990

realist enough not to be grossed out by

920

00:37:21,840 --> 00:37:18,850

but the best part was they had this

921

00:37:22,980 --> 00:37:21,850

poster right in front of me that said

922

00:37:26,160 --> 00:37:22,990

all these little inspirational phrases

923

00:37:27,990 --> 00:37:26,170

like be happy try new things you know

924

00:37:30,120 --> 00:37:28,000

experiment poop their floor and that

925

00:37:32,640 --> 00:37:30,130

kind of thing right inspirational

926

00:37:35,070 --> 00:37:32,650

phrases I make every moment count what's

927

00:37:36,690 --> 00:37:35,080

the last one and I thought oh okay I

928

00:37:38,550 --> 00:37:36,700

guess that's what I'm doing yeah you got

929

00:37:39,030 --> 00:37:38,560

you so on my here if that's the case why

930

00:37:40,650 --> 00:37:39,040

am i doing

931

00:37:42,690 --> 00:37:40,660

is with him one every moment scouting

932

00:37:45,570 --> 00:37:42,700

why am i lying here pooping right so I

933

00:37:48,060 --> 00:37:45,580

got to insert the tube myself really yes

934

00:37:50,010 --> 00:37:48,070

see that I did that for me at 10 they

935

00:37:52,170 --> 00:37:50,020

did offer if I you know was having a

936

00:37:54,600 --> 00:37:52,180

difficult time the the woman helping us

937

00:37:56,850 --> 00:37:54,610

did check under the you know I had this

938

00:37:57,990 --> 00:37:56,860

discreet white town so she checked under

939

00:38:00,960 --> 00:37:58,000

to make sure it was inserted properly

940

00:38:02,280 --> 00:38:00,970

yes apparently it was and yeah and then

941

00:38:04,020 --> 00:38:02,290

the water started and there were three

942

00:38:06,900 --> 00:38:04,030

pressure levels there's the low medium

943

00:38:08,940 --> 00:38:06,910

and high so I you know I started as also

944

00:38:11,370 --> 00:38:08,950

the Alec Baldwin level as well but that

945

00:38:14,070 --> 00:38:11,380

Sonny was at the him right indeed yeah

946

00:38:15,930 --> 00:38:14,080

that was prohibited and covered in red

947

00:38:17,490 --> 00:38:15,940

tape but until what would I promising

948

00:38:18,780 --> 00:38:17,500

what was their big what did I promise

949

00:38:20,640 --> 00:38:18,790

you I was a big claim that you would

950

00:38:23,160 --> 00:38:20,650

definitely get out of this sure well

951  
00:38:25,410 --> 00:38:23,170  
there's the weight loss aspect of it and

952  
00:38:27,090 --> 00:38:25,420  
then there's detoxification and that's

953  
00:38:28,290 --> 00:38:27,100  
really the extraordinary claim that

954  
00:38:30,870 --> 00:38:28,300  
we're going for it then it then again

955  
00:38:35,520 --> 00:38:30,880  
that as a weight loss method I would say

956  
00:38:37,140 --> 00:38:35,530  
is also spurious because certainly you

957  
00:38:39,480 --> 00:38:37,150  
know when you flush a a bunch of stuff

958  
00:38:42,330 --> 00:38:39,490  
out of your innards you're losing weight

959  
00:38:43,890 --> 00:38:42,340  
because that's wait that's material but

960  
00:38:45,720 --> 00:38:43,900  
other than that I don't see it as a

961  
00:38:47,520 --> 00:38:45,730  
dietary plan and I don't think medical

962  
00:38:49,140 --> 00:38:47,530  
science would back that up but but the

963  
00:38:51,690 --> 00:38:49,150

main claim there was that it detoxifies

964

00:38:53,370 --> 00:38:51,700

that somehow it's removing something

965

00:38:55,470 --> 00:38:53,380

that the body is not removing on its own

966

00:38:57,540 --> 00:38:55,480

and that the substance is dangerous to

967

00:39:00,060 --> 00:38:57,550

you and that is the part that there's no

968

00:39:01,800 --> 00:39:00,070

empirical claims to demonstrate you know

969

00:39:03,660 --> 00:39:01,810

and we even asked we have this woman

970

00:39:05,490 --> 00:39:03,670

helping us we said so what are these

971

00:39:08,280 --> 00:39:05,500

toxins and the first she said well you

972

00:39:09,570 --> 00:39:08,290

know if you smoke or you drink you know

973

00:39:11,520 --> 00:39:09,580

those are the sort of bad things to

974

00:39:14,400 --> 00:39:11,530

build up I said oh well I don't I don't

975

00:39:17,340 --> 00:39:14,410

smoke I rarely drink said you know a lot

976

00:39:19,230 --> 00:39:17,350

of eat eating meat as I don't eat too

977

00:39:21,210 --> 00:39:19,240

much meat and said well you know there's

978

00:39:22,470 --> 00:39:21,220

other toxins we said well what are those

979

00:39:24,750 --> 00:39:22,480

what are they made out of what did they

980

00:39:26,670 --> 00:39:24,760

look like and she kind of paused a

981

00:39:28,230 --> 00:39:26,680

little awkwardly for a second said you

982

00:39:30,030 --> 00:39:28,240

know I know there's an answer to this

983

00:39:31,530 --> 00:39:30,040

but I can't really remember I'll have to

984

00:39:34,110 --> 00:39:31,540

look that up for you have you ever

985

00:39:35,250 --> 00:39:34,120

secretly recorded audio with some of

986

00:39:36,540 --> 00:39:35,260

these encounters you've had I guess you

987

00:39:39,690 --> 00:39:36,550

probably could but I guess it's maybe

988

00:39:43,800 --> 00:39:39,700

unethical and illegal official answer no

989

00:39:45,510 --> 00:39:43,810

wink we we have at times recorded audio

990

00:39:47,190 --> 00:39:45,520

for our own reference purposes which

991

00:39:49,230 --> 00:39:47,200

could be tempted because some of the

992

00:39:50,460 --> 00:39:49,240

stuff is people are going to go no they

993

00:39:54,690 --> 00:39:50,470

didn't really say that

994

00:39:57,089 --> 00:39:54,700

right a yes certainly there are laws in

995

00:39:59,370 --> 00:39:57,099

in each state really it's on a per state

996

00:40:01,020 --> 00:39:59,380

basis about what you can do in the u.s.

997

00:40:03,810 --> 00:40:01,030

in terms of recording your conversation

998

00:40:05,190 --> 00:40:03,820

we do take photos you know we'll get

999

00:40:06,480 --> 00:40:05,200

that kind of reference just to prove as

1000

00:40:08,760 --> 00:40:06,490

you say you know that we were actually

1001  
00:40:10,290 --> 00:40:08,770  
there and doing what we say look when i

1002  
00:40:12,480 --> 00:40:10,300  
went to have my colonic irrigation it

1003  
00:40:13,920 --> 00:40:12,490  
was bibin folklore going around and even

1004  
00:40:15,720 --> 00:40:13,930  
the people didn't claim this themselves

1005  
00:40:17,849 --> 00:40:15,730  
that were doing it in that all the

1006  
00:40:19,620 --> 00:40:17,859  
recreational drugs you've had he is a

1007  
00:40:21,540 --> 00:40:19,630  
sort of in your colon there somewhere

1008  
00:40:23,420 --> 00:40:21,550  
and if you flush them all out you get

1009  
00:40:26,400 --> 00:40:23,430  
this effect of it coming on again

1010  
00:40:27,599 --> 00:40:26,410  
interesting never happened okay never

1011  
00:40:29,190 --> 00:40:27,609  
happen and I can't imagine how would

1012  
00:40:30,750 --> 00:40:29,200  
because if you had all them in your

1013  
00:40:32,609 --> 00:40:30,760

column that means all the medicine you

1014

00:40:34,080 --> 00:40:32,619

taken all over these years would also be

1015

00:40:35,370 --> 00:40:34,090

there so you get another hit of

1016

00:40:37,650 --> 00:40:35,380

antibiotics or what I you know what you

1017

00:40:41,070 --> 00:40:37,660

know indeed right yeah that there would

1018

00:40:43,260 --> 00:40:41,080

be a lot of you know conclusions to draw

1019

00:40:45,270 --> 00:40:43,270

from that but yeah I don't see any of

1020

00:40:46,230 --> 00:40:45,280

them playing out if that that's

1021

00:40:47,700 --> 00:40:46,240

interesting she hadn't mentioned

1022

00:40:49,170 --> 00:40:47,710

anything like that I guess they couldn't

1023

00:40:50,460 --> 00:40:49,180

officially say hey you got a drug the

1024

00:40:52,410 --> 00:40:50,470

high from all the stuff you used to have

1025

00:40:54,390 --> 00:40:52,420

again even that would be bit much even

1026  
00:40:55,980 --> 00:40:54,400  
for people who make spurious claims no

1027  
00:40:58,410 --> 00:40:55,990  
instead they warned that i may have the

1028  
00:41:00,960 --> 00:40:58,420  
urge to vomit which I you know I did

1029  
00:41:03,480 --> 00:41:00,970  
almost feel there Wow and in after a

1030  
00:41:05,430 --> 00:41:03,490  
while I did go up to the medium strength

1031  
00:41:07,200 --> 00:41:05,440  
of the water but I think that was about

1032  
00:41:10,079 --> 00:41:07,210  
as much as I could handle and this came

1033  
00:41:12,150 --> 00:41:10,089  
with a massage as well so yes this young

1034  
00:41:13,890 --> 00:41:12,160  
lady offered to give me a massage and

1035  
00:41:16,290 --> 00:41:13,900  
I'm wearing only a towel on my lower

1036  
00:41:17,940 --> 00:41:16,300  
half and so she's massaging my belly and

1037  
00:41:19,770 --> 00:41:17,950  
she's going to lathered up her hands

1038  
00:41:21,540 --> 00:41:19,780

with something and it was good you know

1039

00:41:22,710 --> 00:41:21,550

seven and to be right up there would one

1040

00:41:25,770 --> 00:41:22,720

of the strangest things you've ever done

1041

00:41:27,390 --> 00:41:25,780

Ross wouldn't it Hey yes and but you've

1042

00:41:29,220 --> 00:41:27,400

done it here so you know I know oh yeah

1043

00:41:32,339 --> 00:41:29,230

it is really odd it's not something i'd

1044

00:41:34,890 --> 00:41:32,349

recommend I mean no no well you know the

1045

00:41:37,020 --> 00:41:34,900

whole motto of our podcast is we show up

1046

00:41:38,640 --> 00:41:37,030

see you don't have to so where do you go

1047

00:41:40,710 --> 00:41:38,650

to from here but you like you've done

1048

00:41:43,020 --> 00:41:40,720

the Mormon thing you've done the colonic

1049

00:41:45,359 --> 00:41:43,030

irrigation the the weird diet stuff

1050

00:41:48,120 --> 00:41:45,369

what's next oh well there's no shortage

1051  
00:41:51,599 --> 00:41:48,130  
certainly of religions that go door to

1052  
00:41:54,810 --> 00:41:51,609  
door or you know dangerous cold sore

1053  
00:41:56,280 --> 00:41:54,820  
secret societies alternative medicine

1054  
00:41:58,230 --> 00:41:56,290  
practices there's a lot of stuff out

1055  
00:42:00,720 --> 00:41:58,240  
there for us to do so we certainly have

1056  
00:42:02,490 --> 00:42:00,730  
no shortage we've actually plotted out a

1057  
00:42:03,930 --> 00:42:02,500  
list of things that we'd like to do and

1058  
00:42:06,300 --> 00:42:03,940  
that could carry us on for

1059  
00:42:07,770 --> 00:42:06,310  
six years plus what do you think is the

1060  
00:42:09,600 --> 00:42:07,780  
biggest challenge to the skeptic

1061  
00:42:11,790 --> 00:42:09,610  
movement I always think part of the

1062  
00:42:13,110 --> 00:42:11,800  
challenge is explaining what it is to

1063  
00:42:14,790 --> 00:42:13,120

people half the time because a lot of

1064

00:42:17,250 --> 00:42:14,800

people skeptic it doesn't really mean a

1065

00:42:19,050 --> 00:42:17,260

lot to most people well I mean I think

1066

00:42:20,730 --> 00:42:19,060

the biggest challenge is just to impart

1067

00:42:21,810 --> 00:42:20,740

these ways of thinking to everybody else

1068

00:42:23,700 --> 00:42:21,820

that's really what we're trying to do

1069

00:42:26,760 --> 00:42:23,710

give them tools to critically evaluate

1070

00:42:29,370 --> 00:42:26,770

and just kind of save themselves from a

1071

00:42:33,600 --> 00:42:29,380

lot of inconvenience and wasted money

1072

00:42:36,120 --> 00:42:33,610

and imperiled health I mean skeptical

1073

00:42:38,220 --> 00:42:36,130

thinking is you know just takes away a

1074

00:42:40,710 --> 00:42:38,230

lot of bad and overly simplistic

1075

00:42:42,900 --> 00:42:40,720

solutions to life and leaves you with

1076  
00:42:45,360 --> 00:42:42,910  
you know life which is difficult enough

1077  
00:42:46,500 --> 00:42:45,370  
on its own and so hopefully you know

1078  
00:42:47,460 --> 00:42:46,510  
that's just spreading the message I

1079  
00:42:49,320 --> 00:42:47,470  
think that's the most difficult thing

1080  
00:42:51,090 --> 00:42:49,330  
and we've got to find ways to do it

1081  
00:42:53,190 --> 00:42:51,100  
however we can see you're challenging

1082  
00:42:56,580 --> 00:42:53,200  
people to think and that often isn't

1083  
00:42:58,170 --> 00:42:56,590  
much fun really I beg to differ i think

1084  
00:43:00,240 --> 00:42:58,180  
it's funny from the bank oh but it is

1085  
00:43:01,530 --> 00:43:00,250  
much easier if someone says he's the

1086  
00:43:03,150 --> 00:43:01,540  
thing that's going to do it all for you

1087  
00:43:05,730 --> 00:43:03,160  
like what you do is get the bowel

1088  
00:43:07,530 --> 00:43:05,740

cleansing done no more dieting no more

1089

00:43:09,810 --> 00:43:07,540

exercise just go get your poo washed out

1090

00:43:11,400 --> 00:43:09,820

yeah there's certainly an appeal to easy

1091

00:43:12,780 --> 00:43:11,410

answers and I think that's why a lot of

1092

00:43:14,160 --> 00:43:12,790

people go for a lot of these things oh I

1093

00:43:15,720 --> 00:43:14,170

want to lose weight but I want to do it

1094

00:43:18,630 --> 00:43:15,730

quickly I don't want to have to you know

1095

00:43:21,390 --> 00:43:18,640

eat healthy and workout constantly and

1096

00:43:23,040 --> 00:43:21,400

you know I want to feel loved and feel

1097

00:43:24,600 --> 00:43:23,050

like I purpose in life but jeez I don't

1098

00:43:25,920 --> 00:43:24,610

want to have to like find it on my own I

1099

00:43:27,660 --> 00:43:25,930

want someone to just kind of hand it to

1100

00:43:30,090 --> 00:43:27,670

me I'm actually wearing my Spanx today

1101  
00:43:31,800 --> 00:43:30,100  
these eggs wonderful Spanx things that

1102  
00:43:33,750 --> 00:43:31,810  
give you the Shatner gap they pull you

1103  
00:43:36,840 --> 00:43:33,760  
in there and I think it's a nice bit of

1104  
00:43:39,150 --> 00:43:36,850  
whoo okay so you do the same kind of

1105  
00:43:40,680 --> 00:43:39,160  
investigations we do clearly I'm wearing

1106  
00:43:42,420 --> 00:43:40,690  
it there for no apparent reason now

1107  
00:43:43,920 --> 00:43:42,430  
where can we find your podcast and you

1108  
00:43:46,470 --> 00:43:43,930  
have a bit of a forum where you go back

1109  
00:43:49,020 --> 00:43:46,480  
and forth with people well the the

1110  
00:43:52,320 --> 00:43:49,030  
website is oh no podcast com that's

1111  
00:43:54,630 --> 00:43:52,330  
ohnoo podcast calm and then we have a

1112  
00:43:57,720 --> 00:43:54,640  
facebook presence at facebook.com slash

1113  
00:43:59,010 --> 00:43:57,730

on rack Oh in RAC and that is where

1114

00:44:00,750 --> 00:43:59,020

we're really involved we do a lot of

1115

00:44:02,910 --> 00:44:00,760

back and forth and so we encourage

1116

00:44:04,800 --> 00:44:02,920

people to come there like us see extra

1117

00:44:06,780 --> 00:44:04,810

comments videos pictures and who are the

1118

00:44:08,190 --> 00:44:06,790

most feisty people you've taken on sofa

1119

00:44:09,720 --> 00:44:08,200

who are the people that came coming back

1120

00:44:12,090 --> 00:44:09,730

on facebook and going you guys

1121

00:44:13,380 --> 00:44:12,100

misrepresented us you ninny in you

1122

00:44:15,570 --> 00:44:13,390

that's the noise they make us at typing

1123

00:44:17,520 --> 00:44:15,580

eenie meenie yeah I don't know if we've

1124

00:44:19,530 --> 00:44:17,530

so much had that as we've had

1125

00:44:21,840 --> 00:44:19,540

well certainly i'd say the Raelians

1126  
00:44:23,580 --> 00:44:21,850  
would be the feistiest that was a UFO

1127  
00:44:25,080 --> 00:44:23,590  
cult that we joined look they have a

1128  
00:44:27,270 --> 00:44:25,090  
great float in the sydney gay and

1129  
00:44:29,310 --> 00:44:27,280  
lesbian mardi gras every year fantastic

1130  
00:44:30,960 --> 00:44:29,320  
float great looking Bunch yeah and they

1131  
00:44:33,390 --> 00:44:30,970  
break great looking Bunch to take care

1132  
00:44:35,940 --> 00:44:33,400  
of themselves very friendly when you

1133  
00:44:39,150 --> 00:44:35,950  
meet them and they advance a lot of

1134  
00:44:42,450 --> 00:44:39,160  
great social issues and so we applaud a

1135  
00:44:45,330 --> 00:44:42,460  
lot of that but it's based on this you

1136  
00:44:47,370 --> 00:44:45,340  
know quite a fantastical explanation of

1137  
00:44:49,800 --> 00:44:47,380  
how life was seated on the planet by

1138  
00:44:52,590 --> 00:44:49,810

aliens from another planet and so after

1139

00:44:54,000 --> 00:44:52,600

we recorded our podcasts two of them on

1140

00:44:56,730 --> 00:44:54,010

that subject they sent us a cease and

1141

00:44:58,500 --> 00:44:56,740

desist notice upset that we'd mentioned

1142

00:45:01,650 --> 00:44:58,510

a few things that they didn't want

1143

00:45:04,170 --> 00:45:01,660

talked about so so I would then classify

1144

00:45:05,640 --> 00:45:04,180

them as the feistiest mmm okay well I'm

1145

00:45:08,490 --> 00:45:05,650

sure you got a few battles ahead of you

1146

00:45:10,890 --> 00:45:08,500

yet Oh indeed oh you know we'll take

1147

00:45:12,780 --> 00:45:10,900

them as they come but we're not worried

1148

00:45:13,920 --> 00:45:12,790

we're having a good time now you're

1149

00:45:17,130 --> 00:45:13,930

gonna bring you a show down to Australia

1150

00:45:18,480 --> 00:45:17,140

sometime Oh hold love to absolutely i'm

1151

00:45:35,300 --> 00:45:18,490

sure there's all kinds of were down

1152

00:45:41,190 --> 00:45:38,850

good eye I'm Steve you can call me Steve

1153

00:45:42,900 --> 00:45:41,200

I don't know how things are down under

1154

00:45:44,730 --> 00:45:42,910

but here in North America science is

1155

00:45:46,590 --> 00:45:44,740

falling off the radar if you're a

1156

00:45:48,150 --> 00:45:46,600

skeptic and I assume you are if you're

1157

00:45:50,370 --> 00:45:48,160

listening to this podcast you're

1158

00:45:52,020 --> 00:45:50,380

probably a saddened as I am to see logic

1159

00:45:54,150 --> 00:45:52,030

and reason swept aside by mindless

1160

00:45:56,130 --> 00:45:54,160

drivel I'm going to step up and try to

1161

00:45:58,200 --> 00:45:56,140

change that I've decided to become the

1162

00:46:00,060 --> 00:45:58,210

next bill nye or Carl Sagan and I've

1163

00:46:01,860 --> 00:46:00,070

started an IndieGoGo campaign to fund a

1164

00:46:04,200 --> 00:46:01,870

series of youtube videos called science

1165

00:46:06,930 --> 00:46:04,210

isn't scary you can check out our site

1166

00:46:08,820 --> 00:46:06,940

at science isn't scary webs com you look

1167

00:46:11,160 --> 00:46:08,830

for us on facebook twitter and indiegogo

1168

00:46:14,120 --> 00:46:11,170

com or you can contact us directly at

1169

00:46:16,440 --> 00:46:14,130

science is not scary onward at gmail com

1170

00:46:33,579 --> 00:46:16,450

chip in or just spread the word and help

1171

00:46:38,240 --> 00:46:35,960

thank you for listening to the skeptic

1172

00:46:42,200 --> 00:46:38,250

zone well that's it that's it let me see

1173

00:46:45,170 --> 00:46:42,210

ah trousers what papers are going to

1174

00:46:47,150 --> 00:46:45,180

need those what's this ipad case and

1175

00:46:50,240 --> 00:46:47,160

spare glasses it's all getting together

1176

00:46:52,849 --> 00:46:50,250

or tripod better better take that one

1177

00:46:54,380 --> 00:46:52,859

I'm all i'm getting ready I mean all my

1178

00:46:56,359 --> 00:46:54,390

little ducks in a line so to speak

1179

00:46:58,099 --> 00:46:56,369

packing my bags getting ready to fly

1180

00:47:02,990 --> 00:46:58,109

down to Melbourne for the Australian

1181

00:47:04,640 --> 00:47:03,000

skeptics National Convention now I'm not

1182

00:47:06,680 --> 00:47:04,650

sure what that means for the skeptic

1183

00:47:09,530 --> 00:47:06,690

zone i'm going to endeavor to have the

1184

00:47:11,450 --> 00:47:09,540

show out on time or at least within a

1185

00:47:13,520 --> 00:47:11,460

window of time down there in melbourne

1186

00:47:16,040 --> 00:47:13,530

during the convention always a bit of a

1187

00:47:18,680 --> 00:47:16,050

challenge why not I line for that but if

1188

00:47:21,470 --> 00:47:18,690

the skeptic zone is a day late next week

1189

00:47:23,059 --> 00:47:21,480

you probably understand I'll be quite

1190

00:47:26,059 --> 00:47:23,069

busy at the convention which is a good

1191

00:47:27,559 --> 00:47:26,069

thing which is a very good thing if you

1192

00:47:30,559 --> 00:47:27,569

come to the convention please come up

1193

00:47:32,240 --> 00:47:30,569

and say hi to me hi to Maynard and other

1194

00:47:34,640 --> 00:47:32,250

members of the skeptic zone who will be

1195

00:47:36,950 --> 00:47:34,650

there r answer give dr. Rachel Joe Ben

1196

00:47:39,559 --> 00:47:36,960

amoud they'll all be there come up and

1197

00:47:41,839 --> 00:47:39,569

say hi that would be really great angle

1198

00:47:44,420 --> 00:47:41,849

then and my first report and maynards

1199

00:47:46,460 --> 00:47:44,430

report from the Australian skeptics

1200

00:47:48,380 --> 00:47:46,470

national convention with James Randi and

1201

00:47:50,270 --> 00:47:48,390

lots of other people this is Richard

1202

00:47:56,210 --> 00:47:50,280

Saunders signing off from Sydney

1203

00:47:57,970 --> 00:47:56,220

Australia you've been listening to the

1204

00:48:02,770 --> 00:47:57,980

skeptic zone

1205

00:48:05,800 --> 00:48:02,780

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