



1
00:00:07,269 --> 00:00:03,990
we are now live with

2
00:00:10,530 --> 00:00:07,279
mick west this is brian keating

3
00:00:12,070 --> 00:00:10,540
into the impossible podcast we will

4
00:00:14,950 --> 00:00:12,080
[Music]

5
00:00:17,910 --> 00:00:14,960
any sufficiently advanced technology is

6
00:00:19,670 --> 00:00:17,920
indistinguishable from magic

7
00:00:22,470 --> 00:00:19,680
arthur c clark center for human

8
00:00:26,790 --> 00:00:22,480
imagination or my video

9
00:00:29,349 --> 00:00:26,800
and my motto is abc always be curious

10
00:00:31,109 --> 00:00:29,359
mick how are you today where are you

11
00:00:32,389 --> 00:00:31,119
joining us from

12
00:00:34,229 --> 00:00:32,399
doing great i'm joining you from

13
00:00:35,910 --> 00:00:34,239

sacramento and uh yeah i must say that

14

00:00:37,270 --> 00:00:35,920

arthur c clarke was one of my favorite

15

00:00:38,069 --> 00:00:37,280

science fiction authors when i was

16

00:00:39,830 --> 00:00:38,079

growing up

17

00:00:41,750 --> 00:00:39,840

and i also watched him on tv a lot he

18

00:00:44,869 --> 00:00:41,760

had a tv show in britain so

19

00:00:46,590 --> 00:00:44,879

i'm a big arthur c clark fan very good i

20

00:00:48,630 --> 00:00:46,600

am honored to be the

21

00:00:50,709 --> 00:00:48,640

co-director of the arthur c clarke

22

00:00:53,110 --> 00:00:50,719

center for human imagination and arthur

23

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

had many many sayings one of which i use

24

00:00:56,950 --> 00:00:55,199

as the title of this podcast which is

25

00:00:58,869 --> 00:00:56,960

the only way of discovering the limits

26

00:01:01,029 --> 00:00:58,879

of the possible is to venture

27

00:01:01,990 --> 00:01:01,039

a little way past them into the

28

00:01:04,149 --> 00:01:02,000

impossible

29

00:01:05,509 --> 00:01:04,159

and another one which will come up today

30

00:01:07,670 --> 00:01:05,519

undoubtedly is

31

00:01:09,190 --> 00:01:07,680

for every expert there's an equal and

32

00:01:10,950 --> 00:01:09,200

opposite expert

33

00:01:13,510 --> 00:01:10,960

and the third one which we open all of

34

00:01:16,630 --> 00:01:13,520

our regularly scheduled interviews with

35

00:01:17,910 --> 00:01:16,640

is that any sufficiently advanced

36

00:01:20,230 --> 00:01:17,920

technology

37

00:01:21,910 --> 00:01:20,240

is indistinguishable from magic and

38

00:01:23,830 --> 00:01:21,920

we're going to talk about some magical

39

00:01:26,230 --> 00:01:23,840

technology today perhaps

40

00:01:28,310 --> 00:01:26,240

that has been reported and i want to

41

00:01:31,109 --> 00:01:28,320

talk about some of the implications

42

00:01:31,670 --> 00:01:31,119

of this technology if it's true if it's

43

00:01:34,950 --> 00:01:31,680

if it's

44

00:01:36,469 --> 00:01:34,960

uh if it did actually exist and

45

00:01:38,469 --> 00:01:36,479

and some of the evidence that we have as

46

00:01:40,710 --> 00:01:38,479

a scientist i'm always of course

47

00:01:41,590 --> 00:01:40,720

interested not so much in belief but in

48

00:01:44,469 --> 00:01:41,600

evidence

49

00:01:44,950 --> 00:01:44,479

and i want to hearken back to that great

50

00:01:47,749 --> 00:01:44,960

uh

51
00:01:49,190 --> 00:01:47,759
hunter of evidence and that is carl

52
00:01:52,069 --> 00:01:49,200
sagan he was not a knight

53
00:01:54,789 --> 00:01:52,079
like like arthur c clarke was but he did

54
00:01:57,830 --> 00:01:54,799
say things such as extraordinary claims

55
00:01:59,910 --> 00:01:57,840
require extraordinary evidence now mick

56
00:02:00,550 --> 00:01:59,920
i'm a scientist i never reach into a bag

57
00:02:02,389 --> 00:02:00,560
that says

58
00:02:04,389 --> 00:02:02,399
uh you know here's the extraordinary

59
00:02:06,389 --> 00:02:04,399
evidence i don't know about you but

60
00:02:08,949 --> 00:02:06,399
first can we get a little quick

61
00:02:10,469 --> 00:02:08,959
recap for listeners in my podcast um can

62
00:02:11,029 --> 00:02:10,479
you give me a quick recap of how you

63
00:02:13,910 --> 00:02:11,039

came to

64

00:02:15,350 --> 00:02:13,920

study uh such phenomena that are

65

00:02:17,910 --> 00:02:15,360

unexplained first of all

66

00:02:19,670 --> 00:02:17,920

sure sure well i'm not a scientist i'm

67

00:02:20,229 --> 00:02:19,680

actually a former video game programmer

68

00:02:22,150 --> 00:02:20,239

which

69

00:02:23,589 --> 00:02:22,160

you might think doesn't suit me well for

70

00:02:25,430 --> 00:02:23,599

doing this type of thing

71

00:02:27,750 --> 00:02:25,440

but it's actually a lot of the the

72

00:02:29,430 --> 00:02:27,760

mathematics that i use in analyzing ufo

73

00:02:31,509 --> 00:02:29,440

videos are the exact same mathematics

74

00:02:32,949 --> 00:02:31,519

that i used uh programming video games

75

00:02:35,030 --> 00:02:32,959

because you have to do the same

76

00:02:36,949 --> 00:02:35,040

type of uh calculations to figure out

77

00:02:38,630 --> 00:02:36,959

where things are in 3d space and how you

78

00:02:40,710 --> 00:02:38,640

transform one to the other

79

00:02:42,070 --> 00:02:40,720

and the very simple physics that you do

80

00:02:44,470 --> 00:02:42,080

in video games

81

00:02:46,070 --> 00:02:44,480

is often all the physics you actually

82

00:02:46,869 --> 00:02:46,080

need to figure out certain things that

83

00:02:49,430 --> 00:02:46,879

are going on

84

00:02:51,030 --> 00:02:49,440

in ufo videos so i kind of got

85

00:02:53,830 --> 00:02:51,040

interested in uh

86

00:02:55,270 --> 00:02:53,840

ufos maybe about four years ago and

87

00:02:56,790 --> 00:02:55,280

before that i was doing a lot of

88

00:02:58,869 --> 00:02:56,800

investigation into

89

00:03:00,869 --> 00:02:58,879

various conspiracy theories one of which

90

00:03:02,390 --> 00:03:00,879

was the chemtrails conspiracy theory so

91

00:03:04,070 --> 00:03:02,400

i got really interested in

92

00:03:05,509 --> 00:03:04,080

you know tracking down where planes are

93

00:03:07,190 --> 00:03:05,519

in space and things like that and that

94

00:03:10,229 --> 00:03:07,200

just naturally translated

95

00:03:12,229 --> 00:03:10,239

into the uh the ufo realm and i

96

00:03:13,670 --> 00:03:12,239

started looking at these interesting ufo

97

00:03:15,750 --> 00:03:13,680

videos and trying to figure out what

98

00:03:18,149 --> 00:03:15,760

they were showing

99

00:03:19,030 --> 00:03:18,159

and recently there's been an upsurge in

100

00:03:20,710 --> 00:03:19,040

interest

101

00:03:22,070 --> 00:03:20,720

in all different venues i started to get

102

00:03:23,670 --> 00:03:22,080

interested in this

103

00:03:25,509 --> 00:03:23,680

courtesy of a very good friend of mine

104

00:03:27,830 --> 00:03:25,519

who's uh i call him

105

00:03:29,190 --> 00:03:27,840

you know the atomic clock eric weinstein

106

00:03:30,949 --> 00:03:29,200

because

107

00:03:32,390 --> 00:03:30,959

they say a broken clock is right twice a

108

00:03:33,910 --> 00:03:32,400

day but you know eric's been right about

109

00:03:35,670 --> 00:03:33,920

an awful lot of things and it's

110

00:03:37,350 --> 00:03:35,680

it's very hard to dismiss what he is

111

00:03:39,509 --> 00:03:37,360

interested in and so i

112

00:03:40,390 --> 00:03:39,519

i take him very seriously uh from all

113

00:03:42,949 --> 00:03:40,400

sorts of things like

114

00:03:44,630 --> 00:03:42,959

lab leaks of certain things that uh

115

00:03:47,830 --> 00:03:44,640

shall not be named currently

116

00:03:50,149 --> 00:03:47,840

uh to uh to other sorts of things that

117

00:03:51,910 --> 00:03:50,159

might be considered fringe or conspiracy

118

00:03:53,750 --> 00:03:51,920

uh he tends to be right more often than

119

00:03:55,270 --> 00:03:53,760

not and anything that interests him

120

00:03:57,190 --> 00:03:55,280

peaks his interest will certainly pique

121

00:03:59,589 --> 00:03:57,200

my interest and so um

122

00:04:00,789 --> 00:03:59,599

he's sort of more convinced than than

123

00:04:01,830 --> 00:04:00,799

i've seen him in a long time that

124

00:04:04,149 --> 00:04:01,840

there's something here

125

00:04:05,509 --> 00:04:04,159

that there's some uh something to pay

126

00:04:07,270 --> 00:04:05,519

attention to

127

00:04:08,949 --> 00:04:07,280

so that's good enough for me to at least

128

00:04:10,390 --> 00:04:08,959

pay attention to it now i'm a physicist

129

00:04:11,270 --> 00:04:10,400

i'm an experimental physicist he's a

130

00:04:12,470 --> 00:04:11,280

theoretical

131

00:04:13,509 --> 00:04:12,480

he's actually a mathematician by

132

00:04:15,030 --> 00:04:13,519

training but interested in the

133

00:04:16,949 --> 00:04:15,040

theoretical implications

134

00:04:18,789 --> 00:04:16,959

of such technology he's made statements

135

00:04:20,949 --> 00:04:18,799

on clubhouse and elsewhere that

136

00:04:21,990 --> 00:04:20,959

you know he's curious who knows about

137

00:04:25,990 --> 00:04:22,000

these phenomena

138

00:04:28,710 --> 00:04:26,000

had conversations with ryan graves on

139

00:04:30,629 --> 00:04:28,720

clubhouse and um and on and off

140

00:04:32,390 --> 00:04:30,639

who is one of the fighter pilots who's

141

00:04:33,830 --> 00:04:32,400

been interviewed by 60 minutes maybe

142

00:04:36,870 --> 00:04:33,840

he's watching maybe he's not

143

00:04:38,469 --> 00:04:36,880

uh he's a very generous individual um as

144

00:04:41,030 --> 00:04:38,479

well as alexanditrich

145

00:04:42,710 --> 00:04:41,040

who's shown a great deal of class and

146

00:04:44,469 --> 00:04:42,720

dignity and talking about this

147

00:04:46,230 --> 00:04:44,479

and i believe that these individuals who

148

00:04:47,749 --> 00:04:46,240

have provided eyewitness accounts

149

00:04:49,270 --> 00:04:47,759

are credible they're highly trained

150

00:04:50,070 --> 00:04:49,280

they're incredibly patriotic and

151
00:04:52,070 --> 00:04:50,080
motivated

152
00:04:53,749 --> 00:04:52,080
i don't think there are ill uh

153
00:04:55,189 --> 00:04:53,759
intentions here but there's certainly a

154
00:04:55,990 --> 00:04:55,199
lot of passion involved i don't want to

155
00:04:57,749 --> 00:04:56,000
talk about the

156
00:05:00,230 --> 00:04:57,759
why people are motivated to do things

157
00:05:02,469 --> 00:05:00,240
but um to what do you attribute uh this

158
00:05:04,870 --> 00:05:02,479
most recent upsurge is it this marco

159
00:05:05,990 --> 00:05:04,880
rubio you know instigated report this

160
00:05:08,230 --> 00:05:06,000
pentagon data dump

161
00:05:09,990 --> 00:05:08,240
what is contributing to it and what you

162
00:05:11,430 --> 00:05:10,000
know why now what's the nancy kerrigan

163
00:05:13,270 --> 00:05:11,440

you know kind of background on all this

164

00:05:15,189 --> 00:05:13,280

why why now why me

165

00:05:17,189 --> 00:05:15,199

well i think eric's take really is about

166

00:05:18,629 --> 00:05:17,199

uh whether smoke there's fire

167

00:05:20,150 --> 00:05:18,639

and that's really what he's looking at

168

00:05:21,430 --> 00:05:20,160

he's seeing that there's a lot of talk

169

00:05:23,029 --> 00:05:21,440

about it going on at

170

00:05:24,469 --> 00:05:23,039

relatively high levels you know we've

171

00:05:26,629 --> 00:05:24,479

recently had uh

172

00:05:28,390 --> 00:05:26,639

former president obama talk about it a

173

00:05:30,390 --> 00:05:28,400

couple of times in different situations

174

00:05:32,150 --> 00:05:30,400

and people are bringing it up

175

00:05:33,670 --> 00:05:32,160

uh i think what we're seeing is kind of

176

00:05:35,749 --> 00:05:33,680

a culmination of something that's been

177

00:05:37,510 --> 00:05:35,759

going on for a number of years

178

00:05:38,950 --> 00:05:37,520

and you can kind of trace it back to

179

00:05:39,909 --> 00:05:38,960

about four years ago with the

180

00:05:41,990 --> 00:05:39,919

publication

181

00:05:44,230 --> 00:05:42,000

of the new york times article uh titled

182

00:05:46,150 --> 00:05:44,240

uh glowing auras and black money

183

00:05:47,990 --> 00:05:46,160

which kind of revealed the existence of

184

00:05:48,950 --> 00:05:48,000

this uh this pentagon program called

185

00:05:51,990 --> 00:05:48,960

atip

186

00:05:55,670 --> 00:05:52,000

which was uh in in part uh

187

00:05:56,950 --> 00:05:55,680

supposedly studying uaps or ufos

188

00:05:58,629 --> 00:05:56,960

and it was also looking into various

189

00:06:00,230 --> 00:05:58,639

types of advanced technology like you

190

00:06:01,909 --> 00:06:00,240

know warp drives potentially

191

00:06:03,590 --> 00:06:01,919

hypothetical things and different types

192

00:06:05,110 --> 00:06:03,600

of energy sources and whatnot

193

00:06:07,270 --> 00:06:05,120

but you know this story came out and

194

00:06:07,909 --> 00:06:07,280

with that came a couple of videos that

195

00:06:09,110 --> 00:06:07,919

looked like

196

00:06:11,430 --> 00:06:09,120

uh initially there were really

197

00:06:13,189 --> 00:06:11,440

impressive videos of ufos

198

00:06:15,189 --> 00:06:13,199

and people started looking at these

199

00:06:16,629 --> 00:06:15,199

videos and it got on

200

00:06:18,790 --> 00:06:16,639

the media and that kind of started a

201
00:06:19,590 --> 00:06:18,800
feedback loop that's been going on i

202
00:06:21,830 --> 00:06:19,600
think

203
00:06:23,990 --> 00:06:21,840
for about the last four years really and

204
00:06:27,270 --> 00:06:24,000
what we're seeing now is in some ways

205
00:06:28,629 --> 00:06:27,280
a culmination of that that uh that kind

206
00:06:31,189 --> 00:06:28,639
of media tsunami of

207
00:06:33,110 --> 00:06:31,199
of interest fueling the public interest

208
00:06:34,790 --> 00:06:33,120
which fuels more interest and then

209
00:06:37,029 --> 00:06:34,800
politicians get interested in this as

210
00:06:37,749 --> 00:06:37,039
well and he just kind of has been on a

211
00:06:39,830 --> 00:06:37,759
roll

212
00:06:41,029 --> 00:06:39,840
ever since then but i don't you know

213
00:06:41,909 --> 00:06:41,039

saying that i don't think it's just

214

00:06:45,270 --> 00:06:41,919

simply

215

00:06:46,629 --> 00:06:45,280

uh an issue of the media promoting this

216

00:06:48,790 --> 00:06:46,639

and these people promoting this there's

217

00:06:50,710 --> 00:06:48,800

also very real issues that are going on

218

00:06:52,469 --> 00:06:50,720

that are kind of related to the whole uh

219

00:06:54,469 --> 00:06:52,479

phenomena you know we have a real issue

220

00:06:56,309 --> 00:06:54,479

with unidentified objects

221

00:06:57,589 --> 00:06:56,319

and you know if the navy can't identify

222

00:06:58,950 --> 00:06:57,599

something that's in their airspace

223

00:06:59,510 --> 00:06:58,960

that's a real issue so it's not like

224

00:07:02,550 --> 00:06:59,520

this

225

00:07:04,309 --> 00:07:02,560

there's nothing going on but i think we

226

00:07:05,909 --> 00:07:04,319

do perhaps have a bit of a

227

00:07:07,589 --> 00:07:05,919

conflation of two things we have all

228

00:07:09,510 --> 00:07:07,599

this media interest which is really

229

00:07:10,629 --> 00:07:09,520

driven by the idea that these might be

230

00:07:12,550 --> 00:07:10,639

aliens

231

00:07:14,070 --> 00:07:12,560

and then we have a bunch of uh real

232

00:07:15,350 --> 00:07:14,080

issues which have to do with like things

233

00:07:17,830 --> 00:07:15,360

like drones and

234

00:07:19,110 --> 00:07:17,840

unidentified airspace incursions but

235

00:07:21,189 --> 00:07:19,120

it's all kind of coming to the head and

236

00:07:23,589 --> 00:07:21,199

i'm kind of hopeful that this

237

00:07:25,510 --> 00:07:23,599

coming report might resolve a few

238

00:07:27,270 --> 00:07:25,520

questions

239

00:07:28,790 --> 00:07:27,280

and that was uh kind of slated at the

240

00:07:31,270 --> 00:07:28,800

end of the trump administration

241

00:07:33,430 --> 00:07:31,280

initiated by marco rubio and others

242

00:07:34,790 --> 00:07:33,440

talked about in a recent interview on 60

243

00:07:37,510 --> 00:07:34,800

minutes a couple weeks

244

00:07:37,830 --> 00:07:37,520

back and that had a six month fuse about

245

00:07:40,950 --> 00:07:37,840

to

246

00:07:43,589 --> 00:07:40,960

expire in june and

247

00:07:45,110 --> 00:07:43,599

that you know kind of set the wheels in

248

00:07:46,550 --> 00:07:45,120

motion at least in my mind that

249

00:07:48,390 --> 00:07:46,560

this was sort of interesting although

250

00:07:50,070 --> 00:07:48,400

i've been saying you know this might be

251

00:07:51,830 --> 00:07:50,080

kind of the last opportunity if it turns

252

00:07:53,270 --> 00:07:51,840

out to be nothing and and so

253

00:07:54,710 --> 00:07:53,280

in talking with eric on clubhouse and

254

00:07:56,869 --> 00:07:54,720

elsewhere i've been saying you know

255

00:07:59,189 --> 00:07:56,879

might this not be a case of you know

256

00:08:00,710 --> 00:07:59,199

buy the rumor sell the news if folks are

257

00:08:02,550 --> 00:08:00,720

going to get interested about it

258

00:08:04,469 --> 00:08:02,560

uh we might want to capitalize on

259

00:08:06,230 --> 00:08:04,479

attention uh for those that might have

260

00:08:09,189 --> 00:08:06,240

purposes other than the pure

261

00:08:10,790 --> 00:08:09,199

actual uh investigation of scientific

262

00:08:12,550 --> 00:08:10,800

phenomena

263

00:08:14,550 --> 00:08:12,560

yeah i think a lot of people are

264

00:08:15,990 --> 00:08:14,560

actually uh who are promoting this are

265

00:08:17,990 --> 00:08:16,000

actually already

266

00:08:19,510 --> 00:08:18,000

convinced and they're not really so much

267

00:08:20,790 --> 00:08:19,520

interested in the scientific

268

00:08:23,189 --> 00:08:20,800

investigation

269

00:08:24,790 --> 00:08:23,199

uh of are these amazing phenomena or are

270

00:08:26,550 --> 00:08:24,800

these natural phenomena they're actually

271

00:08:28,070 --> 00:08:26,560

convinced that these are

272

00:08:29,510 --> 00:08:28,080

in many cases they're convinced that

273

00:08:30,869 --> 00:08:29,520

they are aliens you know the way that

274

00:08:33,269 --> 00:08:30,879

they talk about it it's not

275

00:08:34,709 --> 00:08:33,279

human essentially and so you've got kind

276

00:08:35,829 --> 00:08:34,719

of a you know two things there you've

277

00:08:37,509 --> 00:08:35,839

got people

278

00:08:39,350 --> 00:08:37,519

trying to promote the idea that these

279

00:08:40,709 --> 00:08:39,360

are aliens and then you've got people

280

00:08:41,909 --> 00:08:40,719

trying to figure out what they actually

281

00:08:44,550 --> 00:08:41,919

are

282

00:08:45,190 --> 00:08:44,560

now in my field of astronomy we have a

283

00:08:47,590 --> 00:08:45,200

tradition

284

00:08:48,790 --> 00:08:47,600

actually called great debates these go

285

00:08:50,790 --> 00:08:48,800

back hundreds of years

286

00:08:52,470 --> 00:08:50,800

actually back to the time of copernicus

287

00:08:54,870 --> 00:08:52,480

galileo kepler etc

288

00:08:55,829 --> 00:08:54,880

continuing through 100 years ago exactly

289

00:08:57,190 --> 00:08:55,839

last year

290

00:08:58,870 --> 00:08:57,200

what was called the great debate the

291

00:09:00,790 --> 00:08:58,880

size of the universe the scope of the

292

00:09:01,670 --> 00:09:00,800

universe is the milky way the entirety

293

00:09:03,750 --> 00:09:01,680

of the universe

294

00:09:05,590 --> 00:09:03,760

was actually called the great debate

295

00:09:07,430 --> 00:09:05,600

even though it was just one of many

296

00:09:09,190 --> 00:09:07,440

and i actually feel that debate is

297

00:09:11,110 --> 00:09:09,200

almost pointless in science yeah it's

298

00:09:13,350 --> 00:09:11,120

very hard to convince somebody of

299

00:09:15,350 --> 00:09:13,360

of an opinion especially as upton

300

00:09:15,829 --> 00:09:15,360

sinclair said if his or her job depends

301
00:09:18,550 --> 00:09:15,839
on it's

302
00:09:19,430 --> 00:09:18,560
not believing a fact to be true uh but i

303
00:09:22,230 --> 00:09:19,440
do believe

304
00:09:24,310 --> 00:09:22,240
that uh that the perspective of two

305
00:09:26,630 --> 00:09:24,320
different opposing sides can be valuable

306
00:09:29,350 --> 00:09:26,640
at revealing truth and for that reason

307
00:09:31,350 --> 00:09:29,360
i've had on diametrically opposed forces

308
00:09:33,750 --> 00:09:31,360
on the into the impossible podcast

309
00:09:34,470 --> 00:09:33,760
i've had on michael saylor perhaps the

310
00:09:36,870 --> 00:09:34,480
world's most

311
00:09:37,829 --> 00:09:36,880
preeminent proponent of bitcoin and

312
00:09:39,990 --> 00:09:37,839
blockchain

313
00:09:41,509 --> 00:09:40,000

technology and i've had on his arch

314

00:09:44,470 --> 00:09:41,519

nemesis peter schiff

315

00:09:45,190 --> 00:09:44,480

uh as well as other proponents of gold

316

00:09:47,509 --> 00:09:45,200

versus

317

00:09:49,590 --> 00:09:47,519

blockchain not at the same time i didn't

318

00:09:52,710 --> 00:09:49,600

have them debate each other i've had on

319

00:09:55,190 --> 00:09:52,720

noam chomsky and his uh ideological

320

00:09:56,470 --> 00:09:55,200

alter ego ben shapiro i don't know

321

00:09:58,630 --> 00:09:56,480

people that have had on you know such

322

00:10:01,750 --> 00:09:58,640

diametrically opposed forces i've had on

323

00:10:02,230 --> 00:10:01,760

uh kamran vapha at harvard and i've had

324

00:10:04,870 --> 00:10:02,240

on

325

00:10:06,630 --> 00:10:04,880

uh and michio kaku the foremost

326

00:10:07,430 --> 00:10:06,640

proponents of string theory in the

327

00:10:09,670 --> 00:10:07,440

universe

328

00:10:12,150 --> 00:10:09,680

as i know it and i've had on as i said

329

00:10:14,630 --> 00:10:12,160

eric weinstein sabine hassenfelder

330

00:10:16,630 --> 00:10:14,640

and and many other great opponents of

331

00:10:17,670 --> 00:10:16,640

string theory so i am not unaccustomed

332

00:10:20,230 --> 00:10:17,680

to this and i have

333

00:10:21,509 --> 00:10:20,240

had commitments from some of the pilots

334

00:10:23,269 --> 00:10:21,519

uh who have uh

335

00:10:24,389 --> 00:10:23,279

been involved in some of these tentative

336

00:10:25,350 --> 00:10:24,399

commitments i should say and i don't

337

00:10:26,949 --> 00:10:25,360

want to say which ones

338

00:10:29,030 --> 00:10:26,959

uh to come on the into the impossible

339

00:10:31,030 --> 00:10:29,040

podcast and i am grateful for that

340

00:10:32,550 --> 00:10:31,040

not only for their patriotism far beyond

341

00:10:34,710 --> 00:10:32,560

anything i would ever show

342

00:10:35,829 --> 00:10:34,720

but i do want to say that i think it's

343

00:10:38,150 --> 00:10:35,839

it's useful as

344

00:10:39,829 --> 00:10:38,160

i will ask them i want to ask you for

345

00:10:42,069 --> 00:10:39,839

your perspective on their

346

00:10:42,949 --> 00:10:42,079

um on their reports and for uh i'm going

347

00:10:45,269 --> 00:10:42,959

to ask them on

348

00:10:46,150 --> 00:10:45,279

their perspective on your report so some

349

00:10:48,389 --> 00:10:46,160

of the reports

350

00:10:49,829 --> 00:10:48,399

that have been made and on lex

351

00:10:50,870 --> 00:10:49,839

friedman's podcast who's a friend of

352

00:10:52,710 --> 00:10:50,880

mine and

353

00:10:54,310 --> 00:10:52,720

and has has been very vocal about these

354

00:10:56,870 --> 00:10:54,320

things um is it

355

00:10:57,750 --> 00:10:56,880

not possible that because you are not an

356

00:10:59,829 --> 00:10:57,760

expert

357

00:11:01,110 --> 00:10:59,839

in uh and that fleer systems and the

358

00:11:03,350 --> 00:11:01,120

paws that are installed on the

359

00:11:05,829 --> 00:11:03,360

on the on the super hornets that were

360

00:11:07,910 --> 00:11:05,839

involved in the 2004 nimitz encounter

361

00:11:09,350 --> 00:11:07,920

uh which was not far from where i am now

362

00:11:10,790 --> 00:11:09,360

in san diego

363

00:11:12,470 --> 00:11:10,800

uh you're not an expert you're not

364

00:11:13,590 --> 00:11:12,480
operating this shouldn't you be

365

00:11:15,110 --> 00:11:13,600
contacting

366

00:11:17,269 --> 00:11:15,120
engineers at raytheon to learn how to

367

00:11:18,630 --> 00:11:17,279
use this uh isn't it possible that

368

00:11:20,069 --> 00:11:18,640
you're falling into the confirmation

369

00:11:22,150 --> 00:11:20,079
bias fallacy that's

370

00:11:24,230 --> 00:11:22,160
really befuddled astronomer scientist

371

00:11:26,470 --> 00:11:24,240
ever since the time of galileo up

372

00:11:27,910 --> 00:11:26,480
through einstein and beyond

373

00:11:29,990 --> 00:11:27,920
sure and i would love to talk to

374

00:11:31,269 --> 00:11:30,000
raytheon and i i tried to contact them a

375

00:11:32,790 --> 00:11:31,279
couple of times and

376

00:11:34,310 --> 00:11:32,800

got nothing other people have tried to

377

00:11:36,389 --> 00:11:34,320

contact them on my behalf

378

00:11:37,430 --> 00:11:36,399

and they've said basically well we re

379

00:11:39,190 --> 00:11:37,440

refer you to the

380

00:11:40,550 --> 00:11:39,200

the users of the equipment for what's

381

00:11:42,870 --> 00:11:40,560

actually going on

382

00:11:45,190 --> 00:11:42,880

uh so you know i would really like to

383

00:11:47,350 --> 00:11:45,200

talk to experts i've had people who

384

00:11:49,110 --> 00:11:47,360

uh say they're experts in the the flea

385

00:11:50,069 --> 00:11:49,120

system which is not really the same

386

00:11:53,269 --> 00:11:50,079

thing exactly but

387

00:11:53,590 --> 00:11:53,279

the uh rebut me but you know essentially

388

00:11:55,030 --> 00:11:53,600

it's

389

00:11:56,230 --> 00:11:55,040

you know i kind of disagree with them

390

00:11:57,910 --> 00:11:56,240

because i think that they're not

391

00:12:00,150 --> 00:11:57,920

actually understanding my argument

392

00:12:01,110 --> 00:12:00,160

but it becomes very problematic because

393

00:12:03,030 --> 00:12:01,120

you know here's me

394

00:12:05,030 --> 00:12:03,040

you know a former video game programmer

395

00:12:07,030 --> 00:12:05,040

who is certainly not someone with much

396

00:12:08,829 --> 00:12:07,040

experience in in these systems

397

00:12:10,150 --> 00:12:08,839

and i'm putting forward theories and

398

00:12:12,870 --> 00:12:10,160

hypotheses and

399

00:12:13,990 --> 00:12:12,880

other people who ostensibly have more

400

00:12:16,470 --> 00:12:14,000

experience than me

401
00:12:18,150 --> 00:12:16,480
say that i'm wrong but i think usually

402
00:12:21,190 --> 00:12:18,160
what happens in these situations

403
00:12:22,629 --> 00:12:21,200
is that they're not actually

404
00:12:24,389 --> 00:12:22,639
addressing the arguments that i'm

405
00:12:25,829 --> 00:12:24,399
raising which sounds kind of very

406
00:12:27,910 --> 00:12:25,839
presumptuous on my part i

407
00:12:29,269 --> 00:12:27,920
understand how that how that sounds but

408
00:12:31,030 --> 00:12:29,279
if you look into what we're actually

409
00:12:33,350 --> 00:12:31,040
talking about there's one

410
00:12:34,710 --> 00:12:33,360
one issue in particular that i talk

411
00:12:36,069 --> 00:12:34,720
about quite a bit which is to do with

412
00:12:38,550 --> 00:12:36,079
one of the videos it's the

413
00:12:40,310 --> 00:12:38,560

the gimbal video which we can get into

414

00:12:40,949 --> 00:12:40,320

later but it's a very simple thing which

415

00:12:43,509 --> 00:12:40,959

is

416

00:12:45,269 --> 00:12:43,519

uh when the the scene rotates can can

417

00:12:48,230 --> 00:12:45,279

something that rotates the scene make

418

00:12:48,790 --> 00:12:48,240

a glare rotate uh and the people are

419

00:12:51,670 --> 00:12:48,800

told me that

420

00:12:52,790 --> 00:12:51,680

obviously it can't that can't happen

421

00:12:54,150 --> 00:12:52,800

because if you're rotating the entire

422

00:12:55,509 --> 00:12:54,160

scene everything is going to rotate

423

00:12:57,269 --> 00:12:55,519

which is true

424

00:12:58,629 --> 00:12:57,279

but unfortunately they were asked the

425

00:13:01,590 --> 00:12:58,639

wrong question

426

00:13:03,430 --> 00:13:01,600

so we get this this situation where it's

427

00:13:05,670 --> 00:13:03,440

not really jewelers experts here

428

00:13:07,430 --> 00:13:05,680

it's it's kind of people almost talking

429

00:13:08,870 --> 00:13:07,440

across purposes like i put forward a

430

00:13:10,230 --> 00:13:08,880

hypothesis and someone doesn't

431

00:13:11,910 --> 00:13:10,240

understand what it was but

432

00:13:13,670 --> 00:13:11,920

they're not actually talking to me so we

433

00:13:15,829 --> 00:13:13,680

can't we can't thrash it out so

434

00:13:16,710 --> 00:13:15,839

i would love to talk to raytheon i would

435

00:13:19,590 --> 00:13:16,720

love to talk to our

436

00:13:20,389 --> 00:13:19,600

actual engineers uh i have heard people

437

00:13:22,629 --> 00:13:20,399

who told me

438

00:13:23,509 --> 00:13:22,639

that i uh i was right in various things

439

00:13:26,150 --> 00:13:23,519

but they can't

440

00:13:27,590 --> 00:13:26,160

talk about it because it's uh it's a

441

00:13:29,190 --> 00:13:27,600

classified system

442

00:13:30,710 --> 00:13:29,200

you know the app flea system you know

443

00:13:33,110 --> 00:13:30,720

the video that we're looking at right

444

00:13:35,190 --> 00:13:33,120

now was taken with an atlea camera

445

00:13:37,590 --> 00:13:35,200

uh which is a very expensive military

446

00:13:40,710 --> 00:13:37,600

pod type glare effect is simply to

447

00:13:43,509 --> 00:13:40,720

take uh your your camera phone and just

448

00:13:46,230 --> 00:13:43,519

kind of touch the lens on the back so

449

00:13:47,590 --> 00:13:46,240

it's it it's actually it this is

450

00:13:48,150 --> 00:13:47,600

actually the best footage that we have

451
00:13:50,790 --> 00:13:48,160
available

452
00:13:52,389 --> 00:13:50,800
from that camera we can't actually find

453
00:13:54,069 --> 00:13:52,399
any other footage because it's a

454
00:13:55,509 --> 00:13:54,079
classified system and the military does

455
00:13:57,750 --> 00:13:55,519
not release that footage so

456
00:13:58,710 --> 00:13:57,760
we've got this this opaque wall of

457
00:14:01,030 --> 00:13:58,720
secrecy

458
00:14:02,550 --> 00:14:01,040
beyond which i can't reach we have some

459
00:14:03,829 --> 00:14:02,560
people who are a bit closer to that wall

460
00:14:05,110 --> 00:14:03,839
and they can kind of look over it and we

461
00:14:07,430 --> 00:14:05,120
have people on the other side

462
00:14:09,509 --> 00:14:07,440
who can't actually talk about it at all

463
00:14:11,030 --> 00:14:09,519

and so we've got this this big problem

464

00:14:13,189 --> 00:14:11,040

of communication how do i get

465

00:14:14,790 --> 00:14:13,199

how do i resolve you know whether i'm

466

00:14:16,710 --> 00:14:14,800

right or wrong if no one can actually

467

00:14:18,389 --> 00:14:16,720

talk about it

468

00:14:20,550 --> 00:14:18,399

yeah and i think you know there is this

469

00:14:21,990 --> 00:14:20,560

kind of deference to authority which by

470

00:14:23,350 --> 00:14:22,000

the way does not have a place in the

471

00:14:25,670 --> 00:14:23,360

scientific method

472

00:14:26,710 --> 00:14:25,680

einstein was wrong no less than seven

473

00:14:29,030 --> 00:14:26,720

times at least

474

00:14:30,870 --> 00:14:29,040

by my reckoning he was of course right

475

00:14:32,710 --> 00:14:30,880

many more times than that and

476

00:14:34,550 --> 00:14:32,720

i point out in my book that he deserved

477

00:14:36,069 --> 00:14:34,560

probably seven nobel prizes

478

00:14:37,829 --> 00:14:36,079

according to most physicists and why he

479

00:14:38,470 --> 00:14:37,839

didn't win that is a tale for another

480

00:14:40,710 --> 00:14:38,480

time

481

00:14:42,069 --> 00:14:40,720

uh but uh but similarly you know we

482

00:14:44,069 --> 00:14:42,079

could make the same argument

483

00:14:46,150 --> 00:14:44,079

for astronomers who as my friend sarah

484

00:14:47,430 --> 00:14:46,160

scholes has made in her book they are

485

00:14:49,430 --> 00:14:47,440

already here

486

00:14:51,269 --> 00:14:49,440

she was on my podcast last year about

487

00:14:51,670 --> 00:14:51,279

her book which focuses on tom de long

488

00:14:54,870 --> 00:14:51,680

and

489

00:14:56,790 --> 00:14:54,880

there

490

00:14:58,629 --> 00:14:56,800

you know astronomers are also experts at

491

00:15:00,310 --> 00:14:58,639

watching the skies and we have advanced

492

00:15:00,790 --> 00:15:00,320

technology that's not classified and in

493

00:15:02,550 --> 00:15:00,800

fact

494

00:15:03,829 --> 00:15:02,560

most of the technology that goes into

495

00:15:05,670 --> 00:15:03,839

military hardware

496

00:15:08,150 --> 00:15:05,680

has some pedigree some heritage that

497

00:15:09,750 --> 00:15:08,160

traces its way to astronomical signals

498

00:15:11,189 --> 00:15:09,760

for example the cosmic microwave

499

00:15:13,509 --> 00:15:11,199

background that i study

500

00:15:15,030 --> 00:15:13,519

uh was uh detected by accident

501
00:15:16,870 --> 00:15:15,040
serendipitously by two

502
00:15:18,389 --> 00:15:16,880
radio astronomers and it's a through

503
00:15:20,310 --> 00:15:18,399
line directly to

504
00:15:22,389 --> 00:15:20,320
the cell phone that we're using many of

505
00:15:24,790 --> 00:15:22,399
our listeners are watching right now on

506
00:15:26,069 --> 00:15:24,800
uh to uh the devices in our pockets to

507
00:15:27,829 --> 00:15:26,079
this very day

508
00:15:29,189 --> 00:15:27,839
and the technology that went into the

509
00:15:31,030 --> 00:15:29,199
first ccd cameras

510
00:15:32,790 --> 00:15:31,040
those are all for astronomical image

511
00:15:33,430 --> 00:15:32,800
sensing astronomers are watching the

512
00:15:35,509 --> 00:15:33,440
skies

513
00:15:36,710 --> 00:15:35,519

right now around the planet any clear

514

00:15:39,110 --> 00:15:36,720

night of the day

515

00:15:40,230 --> 00:15:39,120

and we use all wavelength bands and we

516

00:15:42,470 --> 00:15:40,240

don't uh have

517

00:15:43,829 --> 00:15:42,480

any less of an interest in fact carl

518

00:15:45,269 --> 00:15:43,839

sagan one of the most eminent

519

00:15:47,269 --> 00:15:45,279

astronomers of all time

520

00:15:48,710 --> 00:15:47,279

uh jill tarter seth shostak who will be

521

00:15:51,110 --> 00:15:48,720

on the into the impossible podcast

522

00:15:52,230 --> 00:15:51,120

live tomorrow thursday and you're

523

00:15:54,550 --> 00:15:52,240

welcome all of you

524

00:15:56,069 --> 00:15:54,560

listening out there to join in all these

525

00:15:58,150 --> 00:15:56,079

folks have been on my podcast

526

00:16:00,150 --> 00:15:58,160

we astronomers would like nothing better

527

00:16:02,150 --> 00:16:00,160

mick than if this were true if we could

528

00:16:04,870 --> 00:16:02,160

have access to advanced technology

529

00:16:06,470 --> 00:16:04,880

if we could have access to new knowledge

530

00:16:08,470 --> 00:16:06,480

and new laws of physics

531

00:16:10,389 --> 00:16:08,480

this i mean if you were suppressing this

532

00:16:11,990 --> 00:16:10,399

mick i would be more mad than any of the

533

00:16:12,790 --> 00:16:12,000

comments that that come in negatively

534

00:16:15,110 --> 00:16:12,800

against you

535

00:16:16,790 --> 00:16:15,120

so i think uh to to argue that you know

536

00:16:17,910 --> 00:16:16,800

astronomers are suppressing this i think

537

00:16:19,910 --> 00:16:17,920

that's that's sort of uh

538

00:16:21,350 --> 00:16:19,920

laughable point now the government

539

00:16:23,509 --> 00:16:21,360

conspiracy against it

540

00:16:24,870 --> 00:16:23,519

uh you have to give them something right

541

00:16:26,310 --> 00:16:24,880

if they're saying well the government's

542

00:16:27,749 --> 00:16:26,320

not going to give you the flir because

543

00:16:29,350 --> 00:16:27,759

it's advanced technology

544

00:16:31,509 --> 00:16:29,360

i think that's a little hollow this

545

00:16:32,870 --> 00:16:31,519

image was taken these images were taken

546

00:16:34,150 --> 00:16:32,880

in 2004

547

00:16:36,389 --> 00:16:34,160

that probably means that raytheon

548

00:16:37,749 --> 00:16:36,399

technology is over 30 years old right i

549

00:16:39,430 --> 00:16:37,759

mean the flir system

550

00:16:40,870 --> 00:16:39,440

itself was mounted on a pod it's not

551
00:16:43,670 --> 00:16:40,880
installed on the f6

552
00:16:45,030 --> 00:16:43,680
as i understand f18 this variant which

553
00:16:47,829 --> 00:16:45,040
is the super hornet

554
00:16:49,189 --> 00:16:47,839
as the upgrade first commis commissioned

555
00:16:51,030 --> 00:16:49,199
in the 1980s

556
00:16:52,790 --> 00:16:51,040
so this is not like some modern stealth

557
00:16:54,790 --> 00:16:52,800
fighter right this is a pod that's

558
00:16:56,069 --> 00:16:54,800
external to the original airframe am i

559
00:16:57,749 --> 00:16:56,079
right

560
00:16:59,189 --> 00:16:57,759
yeah it fits underneath you can take it

561
00:17:00,470 --> 00:16:59,199
on or off some some of the planes don't

562
00:17:02,790 --> 00:17:00,480
even have it on

563
00:17:04,630 --> 00:17:02,800

but yeah it's it's uh it's it's just a

564

00:17:05,990 --> 00:17:04,640

camera essentially and so when we're

565

00:17:06,309 --> 00:17:06,000

talking about you know what can it do or

566

00:17:09,510 --> 00:17:06,319

what

567

00:17:11,510 --> 00:17:09,520

many really

568

00:17:12,949 --> 00:17:11,520

secret technological things that are

569

00:17:14,710 --> 00:17:12,959

hidden and a lot of it was actually

570

00:17:15,189 --> 00:17:14,720

described in the patterns which i read

571

00:17:21,350 --> 00:17:15,199

in

572

00:17:23,669 --> 00:17:21,360

of the system and how it uses these

573

00:17:25,270 --> 00:17:23,679

gimbal mirrors internally to steer

574

00:17:26,789 --> 00:17:25,280

the line of sight and how it has this

575

00:17:27,750 --> 00:17:26,799

external gimbal and how they work

576

00:17:30,390 --> 00:17:27,760

together

577

00:17:32,230 --> 00:17:30,400

uh so it's it's not uh it's not like we

578

00:17:33,110 --> 00:17:32,240

know nothing at all about it

579

00:17:35,029 --> 00:17:33,120

but it would be good to have

580

00:17:36,230 --> 00:17:35,039

confirmation again part of the problem

581

00:17:37,669 --> 00:17:36,240

here is that

582

00:17:39,669 --> 00:17:37,679

the what i'm describing is quite

583

00:17:40,390 --> 00:17:39,679

complicated it was described by joe

584

00:17:42,950 --> 00:17:40,400

rogan as

585

00:17:44,470 --> 00:17:42,960

performing mental gymnastics which is a

586

00:17:46,789 --> 00:17:44,480

term that kind of caught on

587

00:17:48,230 --> 00:17:46,799

for describing the these theories but uh

588

00:17:50,310 --> 00:17:48,240

you know they are complicated

589

00:17:52,070 --> 00:17:50,320

and it is difficult to explain and so

590

00:17:54,310 --> 00:17:52,080

people then tend to

591

00:17:55,110 --> 00:17:54,320

uh pick their expert and they pick which

592

00:17:56,630 --> 00:17:55,120

person they want

593

00:17:58,230 --> 00:17:56,640

to to agree with and of course like

594

00:17:59,830 --> 00:17:58,240

gives a choice between me

595

00:18:01,350 --> 00:17:59,840

and someone who you know claims to be a

596

00:18:02,070 --> 00:18:01,360

flyer technician or someone who is a

597

00:18:03,590 --> 00:18:02,080

pilot

598

00:18:05,350 --> 00:18:03,600

who is disagreeing with me they're going

599

00:18:07,590 --> 00:18:05,360

to pick you know the pilot

600

00:18:09,190 --> 00:18:07,600

and then pick the the flare technician

601
00:18:10,870 --> 00:18:09,200
uh and it could be simply that they

602
00:18:11,830 --> 00:18:10,880
prefer that explanation but it's also

603
00:18:14,150 --> 00:18:11,840
because you know this

604
00:18:16,310 --> 00:18:14,160
this other person has a bit more

605
00:18:19,029 --> 00:18:16,320
perceived authority than than me

606
00:18:19,990 --> 00:18:19,039
so if we have explanations that are

607
00:18:22,630 --> 00:18:20,000
competing

608
00:18:23,830 --> 00:18:22,640
and we can't actually thrash them out in

609
00:18:25,190 --> 00:18:23,840
the public sphere

610
00:18:27,669 --> 00:18:25,200
then people are going to go with

611
00:18:29,750 --> 00:18:27,679
opinions rather than actual facts

612
00:18:31,990 --> 00:18:29,760
but you know if someone disagrees with

613
00:18:33,669 --> 00:18:32,000

me they shouldn't just say i disagree

614

00:18:35,430 --> 00:18:33,679

with you because i'm an expert

615

00:18:36,789 --> 00:18:35,440

they should say i disagree with you and

616

00:18:38,470 --> 00:18:36,799

here's why and here's the exact

617

00:18:40,710 --> 00:18:38,480

technical reason why and then we can

618

00:18:42,630 --> 00:18:40,720

discuss that and figure it out

619

00:18:45,029 --> 00:18:42,640

one of the most troubling aspects as far

620

00:18:47,029 --> 00:18:45,039

as experts in doubting the pilots to me

621

00:18:49,110 --> 00:18:47,039

as you know i fly tiny little systems

622

00:18:52,390 --> 00:18:49,120

right uh one of the things that

623

00:18:53,669 --> 00:18:52,400

um uh that that troubled me is a report

624

00:18:56,390 --> 00:18:53,679

that was on 60 minutes

625

00:18:57,830 --> 00:18:56,400

over time and the fact that 60 minutes

626

00:19:00,070 --> 00:18:57,840

didn't have any

627

00:19:01,590 --> 00:19:00,080

uh as arthur c clarke would say equal

628

00:19:03,270 --> 00:19:01,600

and opposite experts

629

00:19:04,710 --> 00:19:03,280

meaning someone like you or someone just

630

00:19:07,029 --> 00:19:04,720

to counter the narrative

631

00:19:07,909 --> 00:19:07,039

that it either is the conspiracy

632

00:19:10,470 --> 00:19:07,919

cover-up

633

00:19:11,350 --> 00:19:10,480

we have right to foia right to know or

634

00:19:14,150 --> 00:19:11,360

the two pilots

635

00:19:15,909 --> 00:19:14,160

uh three pilots or more perhaps or lou

636

00:19:18,070 --> 00:19:15,919

i'm i'm blanking on his last name

637

00:19:19,669 --> 00:19:18,080

and probably would mispronounce it i'd

638

00:19:21,350 --> 00:19:19,679

love to have him on the show as well

639

00:19:23,029 --> 00:19:21,360

uh he's certainly you know a hero to

640

00:19:24,789 --> 00:19:23,039

many people deservedly so

641

00:19:26,310 --> 00:19:24,799

uh but anyway there was nobody to point

642

00:19:28,470 --> 00:19:26,320

out you know that uh

643

00:19:29,909 --> 00:19:28,480

except in 60 minutes overtime and i can

644

00:19:31,430 --> 00:19:29,919

put a link to that in the chat

645

00:19:33,510 --> 00:19:31,440

you know that when they came back for

646

00:19:34,150 --> 00:19:33,520

for several days the pilots were kind of

647

00:19:36,310 --> 00:19:34,160

mocked

648

00:19:37,990 --> 00:19:36,320

they were teased you know and and i

649

00:19:39,990 --> 00:19:38,000

pointed out to my listeners and my

650

00:19:41,110 --> 00:19:40,000

channel uh last night i was chatting

651
00:19:43,669 --> 00:19:41,120
with them in in the

652
00:19:44,390 --> 00:19:43,679
comment section on my channel and i said

653
00:19:45,909 --> 00:19:44,400
you know

654
00:19:47,430 --> 00:19:45,919
you can make fun of me because i'm not a

655
00:19:48,950 --> 00:19:47,440
great pilot and i'm not gonna like

656
00:19:50,789 --> 00:19:48,960
criticize that or mick you know

657
00:19:52,630 --> 00:19:50,799
and i you can say like you have no ride

658
00:19:54,390 --> 00:19:52,640
keating or mick you have no right to

659
00:19:55,990 --> 00:19:54,400
criticize this trained highly skilled

660
00:19:57,990 --> 00:19:56,000
pilot fravor dietrich

661
00:19:59,590 --> 00:19:58,000
these are heroes these are top guns

662
00:20:01,190 --> 00:19:59,600
literally um

663
00:20:02,870 --> 00:20:01,200

but these are other pilots now

664

00:20:04,710 --> 00:20:02,880

criticizing them teasing them

665

00:20:06,310 --> 00:20:04,720

um making fun of them like i would never

666

00:20:08,470 --> 00:20:06,320

t you never tease a pile about an

667

00:20:09,350 --> 00:20:08,480

accident about an incident this could

668

00:20:11,590 --> 00:20:09,360

have led to like

669

00:20:12,470 --> 00:20:11,600

tragic consequences right so i'm

670

00:20:14,390 --> 00:20:12,480

wondering

671

00:20:15,830 --> 00:20:14,400

i can't criticize them i can't you know

672

00:20:17,190 --> 00:20:15,840

because i'm not an expert but these are

673

00:20:18,549 --> 00:20:17,200

other fighter pilots right

674

00:20:19,909 --> 00:20:18,559

now people are saying well pilots would

675

00:20:21,669 --> 00:20:19,919

be pilots they'll tease each other but

676

00:20:23,590 --> 00:20:21,679

come on at some point

677

00:20:25,110 --> 00:20:23,600

you you have to start to say well like

678

00:20:26,549 --> 00:20:25,120

you know what point do we trust the

679

00:20:28,549 --> 00:20:26,559

eyewitness testimony

680

00:20:29,830 --> 00:20:28,559

and what point you know do we we have to

681

00:20:31,190 --> 00:20:29,840

rely on sensor data

682

00:20:32,710 --> 00:20:31,200

now there are questions in the chat room

683

00:20:33,990 --> 00:20:32,720

people are asking well what about the

684

00:20:36,390 --> 00:20:34,000

radar data is that

685

00:20:37,110 --> 00:20:36,400

not reliable that's not eyewitness data

686

00:20:39,669 --> 00:20:37,120

that's

687

00:20:41,350 --> 00:20:39,679

cold hard time series evidence mick what

688

00:20:43,590 --> 00:20:41,360

do you say about that

689

00:20:45,029 --> 00:20:43,600

uh the radar data is eyewitness data

690

00:20:45,909 --> 00:20:45,039

because we don't actually have access to

691

00:20:47,510 --> 00:20:45,919

it and we don't

692

00:20:48,950 --> 00:20:47,520

even know anybody who has access to it

693

00:20:50,950 --> 00:20:48,960

now we perhaps louis elizondo is

694

00:20:53,110 --> 00:20:50,960

claiming that he has seen something

695

00:20:54,870 --> 00:20:53,120

but if you uh if we talk about say the

696

00:20:55,750 --> 00:20:54,880

nimitz incident which is david framers

697

00:20:57,750 --> 00:20:55,760

incident

698

00:20:59,350 --> 00:20:57,760

we have recollections about what the

699

00:21:01,270 --> 00:20:59,360

radar looked like you know what

700

00:21:02,549 --> 00:21:01,280

showed up on the scope and what showed

701

00:21:04,230 --> 00:21:02,559

up when they did replays

702

00:21:06,310 --> 00:21:04,240

of it but we don't actually have the

703

00:21:07,830 --> 00:21:06,320

data so

704

00:21:10,470 --> 00:21:07,840

you know really is that is that

705

00:21:11,909 --> 00:21:10,480

recollection of a radar reading any

706

00:21:12,630 --> 00:21:11,919

different from an eyewitness seeing

707

00:21:14,710 --> 00:21:12,640

something

708

00:21:16,470 --> 00:21:14,720

in the sky you know it's additional

709

00:21:17,430 --> 00:21:16,480

information but it's just an additional

710

00:21:20,549 --> 00:21:17,440

eyewitness

711

00:21:22,630 --> 00:21:20,559

uh statement we don't actually have the

712

00:21:24,630 --> 00:21:22,640

corroborating data we you know if we

713

00:21:26,549 --> 00:21:24,640

have the if we have a video and we had

714

00:21:28,070 --> 00:21:26,559

like you know video of the radar screen

715

00:21:29,110 --> 00:21:28,080

showing the same thing at the same time

716

00:21:30,390 --> 00:21:29,120

that would be wonderful

717

00:21:32,149 --> 00:21:30,400

that would be really really good if it

718

00:21:33,430 --> 00:21:32,159

showed something amazing you know just

719

00:21:34,870 --> 00:21:33,440

showing you know dots in the distance

720

00:21:37,270 --> 00:21:34,880

that wouldn't be that amazing

721

00:21:39,029 --> 00:21:37,280

but you know we don't actually have the

722

00:21:39,909 --> 00:21:39,039

data but people talk about that all the

723

00:21:42,310 --> 00:21:39,919

time we have

724

00:21:43,190 --> 00:21:42,320

eyewitness accounts of seeing things in

725

00:21:45,830 --> 00:21:43,200

the sky

726
00:21:46,390 --> 00:21:45,840
we have eyewitness accounts of radar

727
00:21:48,549 --> 00:21:46,400
data

728
00:21:49,750 --> 00:21:48,559
and we have this this one kind of fuzzy

729
00:21:51,430 --> 00:21:49,760
video uh

730
00:21:53,110 --> 00:21:51,440
of something which doesn't actually

731
00:21:54,950 --> 00:21:53,120
doesn't actually happen at the same time

732
00:21:57,669 --> 00:21:54,960
as either the eyewitness account

733
00:21:58,070 --> 00:21:57,679
or uh the the eyewitness accounts of the

734
00:22:01,590 --> 00:21:58,080
radar

735
00:22:03,350 --> 00:22:01,600
data so um

736
00:22:04,950 --> 00:22:03,360
now the time series data is that not

737
00:22:06,710 --> 00:22:04,960
available to you know

738
00:22:09,909 --> 00:22:06,720

foia requests or something i mean i can

739

00:22:12,789 --> 00:22:09,919

imagine that you know after 17 years

740

00:22:13,350 --> 00:22:12,799

might not be uh super threatening uh but

741

00:22:15,350 --> 00:22:13,360

you know have

742

00:22:17,830 --> 00:22:15,360

is that something that you've pursued as

743

00:22:19,510 --> 00:22:17,840

well nick to try to gain access to

744

00:22:20,950 --> 00:22:19,520

i haven't but i know other people have

745

00:22:22,230 --> 00:22:20,960

people have been trying to get this this

746

00:22:25,350 --> 00:22:22,240

information out uh

747

00:22:25,990 --> 00:22:25,360

here for for years uh this information

748

00:22:28,149 --> 00:22:26,000

you know if it was

749

00:22:30,390 --> 00:22:28,159

there it's just it's just the type of

750

00:22:32,470 --> 00:22:30,400

thing that is um

751
00:22:34,070 --> 00:22:32,480
classified or not cleared for release by

752
00:22:35,750 --> 00:22:34,080
default and there's just no

753
00:22:37,510 --> 00:22:35,760
there's no reason for the military to

754
00:22:39,190 --> 00:22:37,520
release it i i don't know if that would

755
00:22:40,789 --> 00:22:39,200
even be uh foiable

756
00:22:42,710 --> 00:22:40,799
because it's something that's you know

757
00:22:44,149 --> 00:22:42,720
essentially an active operation even if

758
00:22:45,590 --> 00:22:44,159
it's a training operation

759
00:22:47,350 --> 00:22:45,600
i don't know if that would be something

760
00:22:48,630 --> 00:22:47,360
that they would release i guess they

761
00:22:52,230 --> 00:22:48,640
have released deck logs

762
00:22:55,270 --> 00:22:52,240
uh of some incidents but they also

763
00:22:57,430 --> 00:22:55,280

retract parts of those redact

764

00:22:58,950 --> 00:22:57,440

uh so yeah well it'll be great if we

765

00:23:00,710 --> 00:22:58,960

could have that and if anybody out there

766

00:23:02,549 --> 00:23:00,720

has got any idea how to get it then yeah

767

00:23:04,149 --> 00:23:02,559

let's get it but we do not have radar

768

00:23:06,310 --> 00:23:04,159

data now

769

00:23:09,270 --> 00:23:06,320

uh let's see this question my cyrillic

770

00:23:12,470 --> 00:23:09,280

is not that great but i think it's anton

771

00:23:14,630 --> 00:23:12,480

spasiba anton is asking a question why

772

00:23:14,950 --> 00:23:14,640

not make a collaborative research effort

773

00:23:17,669 --> 00:23:14,960

with

774

00:23:18,470 --> 00:23:17,679

between mick and some former tsa

775

00:23:19,830 --> 00:23:18,480

members

776

00:23:21,510 --> 00:23:19,840

have you thought about doing that

777

00:23:23,110 --> 00:23:21,520

reaching out to the intelligence

778

00:23:25,510 --> 00:23:23,120

community

779

00:23:26,950 --> 00:23:25,520

well tssa uh isn't the intelligence

780

00:23:27,909 --> 00:23:26,960

community though that's the the to the

781

00:23:31,190 --> 00:23:27,919

stars academy

782

00:23:33,270 --> 00:23:31,200

oh to the sorry i'm sorry yeah uh

783

00:23:39,909 --> 00:23:33,280

which i thought it was uh transportation

784

00:23:43,190 --> 00:23:41,669

yeah i'd be happy to collaborate with

785

00:23:44,390 --> 00:23:43,200

anybody if they've got like some ideas

786

00:23:45,750 --> 00:23:44,400

or information that they want to share

787

00:23:47,190 --> 00:23:45,760

or they want to work over

788

00:23:48,710 --> 00:23:47,200

but you know i've talked to someone that

789

00:23:50,070 --> 00:23:48,720

i've talked to lou elizondo i

790

00:23:52,870 --> 00:23:50,080

interviewed him

791

00:23:54,950 --> 00:23:52,880

i tried to get chris mellon you know to

792

00:23:56,789 --> 00:23:54,960

talk and i've emailed a few of the other

793

00:23:57,669 --> 00:23:56,799

people and i'd be happy to talk to any

794

00:23:59,669 --> 00:23:57,679

of them

795

00:24:01,909 --> 00:23:59,679

but i don't think they like me and i

796

00:24:04,149 --> 00:24:01,919

think part of that is because

797

00:24:06,390 --> 00:24:04,159

i'm a destroyer destroyer of dreams when

798

00:24:07,669 --> 00:24:06,400

it comes to ufo videos i i take these

799

00:24:09,830 --> 00:24:07,679

videos and i give a

800

00:24:11,190 --> 00:24:09,840

a mundane explanation of it and this

801
00:24:12,630 --> 00:24:11,200
isn't my intent

802
00:24:13,750 --> 00:24:12,640
i don't go in there thinking like oh

803
00:24:14,630 --> 00:24:13,760
well i'm going to destroy somebody's

804
00:24:16,470 --> 00:24:14,640
dreams today

805
00:24:18,789 --> 00:24:16,480
i go there and look at these videos and

806
00:24:19,990 --> 00:24:18,799
say what is this thing and try to figure

807
00:24:22,149 --> 00:24:20,000
out what it is

808
00:24:23,590 --> 00:24:22,159
and perhaps because i'm a bit more

809
00:24:25,990 --> 00:24:23,600
obsessive and have a little bit more

810
00:24:28,390 --> 00:24:26,000
time on my hands than other people have

811
00:24:29,750 --> 00:24:28,400
i often kind of arrive at an answer and

812
00:24:31,029 --> 00:24:29,760
often with the help of other people a

813
00:24:32,470 --> 00:24:31,039

lot of people contribute to these

814

00:24:34,230 --> 00:24:32,480

investigations

815

00:24:36,230 --> 00:24:34,240

and it turns out a lot of these videos

816

00:24:39,510 --> 00:24:36,240

have very mundane explanations

817

00:24:39,990 --> 00:24:39,520

when tsa uh people like elizondo and

818

00:24:41,669 --> 00:24:40,000

melon

819

00:24:43,750 --> 00:24:41,679

have been claiming in the past that they

820

00:24:45,430 --> 00:24:43,760

share extraordinary things

821

00:24:48,950 --> 00:24:45,440

which would be indicative of some kind

822

00:24:50,630 --> 00:24:48,960

of amazing technology or even aliens

823

00:24:52,390 --> 00:24:50,640

now getting back to the eyewitness

824

00:24:55,190 --> 00:24:52,400

accounts you know which i think

825

00:24:56,870 --> 00:24:55,200

uh i think it is believed that those are

826

00:24:58,230 --> 00:24:56,880

some of the more convincing

827

00:25:00,390 --> 00:24:58,240

accounts right because you're basically

828

00:25:01,990 --> 00:25:00,400

saying the radar data shouldn't

829

00:25:03,190 --> 00:25:02,000

should count as eyewitness data right

830

00:25:04,230 --> 00:25:03,200

you're saying the operators are

831

00:25:05,590 --> 00:25:04,240

testifying

832

00:25:07,750 --> 00:25:05,600

we don't have the raw data we don't have

833

00:25:11,029 --> 00:25:07,760

the time series data as you might

834

00:25:12,549 --> 00:25:11,039

expect correct yeah we don't we don't

835

00:25:14,070 --> 00:25:12,559

have data that we can actually analyze

836

00:25:15,669 --> 00:25:14,080

and do some kind of reconstruction we

837

00:25:16,950 --> 00:25:15,679

have people's recollections of it which

838

00:25:19,350 --> 00:25:16,960

is certainly more than

839

00:25:21,029 --> 00:25:19,360

just eyewitness uh you know eyeballs on

840

00:25:23,750 --> 00:25:21,039

the thing we we have

841

00:25:25,669 --> 00:25:23,760

uh actual people talking about the radar

842

00:25:28,149 --> 00:25:25,679

for example when fraver went out

843

00:25:30,549 --> 00:25:28,159

to see an object he was sent to a

844

00:25:32,789 --> 00:25:30,559

location because there was a radar

845

00:25:33,990 --> 00:25:32,799

return at that location and it was one

846

00:25:35,830 --> 00:25:34,000

of these

847

00:25:38,230 --> 00:25:35,840

in the nimitz encounter they had these

848

00:25:40,070 --> 00:25:38,240

groups of five radar returns which were

849

00:25:42,070 --> 00:25:40,080

slowly drifting down from the north to

850

00:25:43,110 --> 00:25:42,080

the south which they initially thought

851
00:25:44,710 --> 00:25:43,120
might be some kind of

852
00:25:46,630 --> 00:25:44,720
glitch in the system they reset the

853
00:25:47,110 --> 00:25:46,640
system and then it you know stayed and

854
00:25:54,230 --> 00:25:47,120
they

855
00:25:55,190 --> 00:25:54,240
know this is the story the recollection

856
00:25:57,350 --> 00:25:55,200
that people give

857
00:25:59,430 --> 00:25:57,360
and then fragra went to the location and

858
00:26:01,590 --> 00:25:59,440
then at approximately that location

859
00:26:03,350 --> 00:26:01,600
he saw something down by the water and

860
00:26:05,110 --> 00:26:03,360
that turned out to be the tic tac and

861
00:26:06,470 --> 00:26:05,120
alex dietrich was was there with him and

862
00:26:09,269 --> 00:26:06,480
she saw

863
00:26:11,269 --> 00:26:09,279

something along the same lines now the

864

00:26:11,990 --> 00:26:11,279

altitude and so forth i mean i'd love to

865

00:26:14,149 --> 00:26:12,000

have on

866

00:26:15,430 --> 00:26:14,159

those individuals and i'm hoping and

867

00:26:16,710 --> 00:26:15,440

working to get

868

00:26:18,390 --> 00:26:16,720

to to be with them but i'm trying to

869

00:26:18,870 --> 00:26:18,400

work out just the geometry of it you've

870

00:26:21,669 --> 00:26:18,880

done

871

00:26:22,390 --> 00:26:21,679

yeoman's work on uh you know reproducing

872

00:26:25,029 --> 00:26:22,400

the glare

873

00:26:25,909 --> 00:26:25,039

and lens flare and ghosting the bokeh

874

00:26:29,669 --> 00:26:25,919

we'll get into that

875

00:26:29,909 --> 00:26:29,679

in just a bit and uh but looking at it

876

00:26:33,590 --> 00:26:29,919

in

877

00:26:35,669 --> 00:26:33,600

perspective how how

878

00:26:37,029 --> 00:26:35,679

would one actually approach this

879

00:26:38,549 --> 00:26:37,039

literally you know flying a high

880

00:26:41,590 --> 00:26:38,559

performance jet

881

00:26:43,510 --> 00:26:41,600

low over the ocean uh tracking you know

882

00:26:46,070 --> 00:26:43,520

during a daytime encounter

883

00:26:46,870 --> 00:26:46,080

uh for an object which was reported the

884

00:26:50,149 --> 00:26:46,880

size of a

885

00:26:51,590 --> 00:26:50,159

of a of an f18 um

886

00:26:53,909 --> 00:26:51,600

you know with no scale nothing to

887

00:26:56,630 --> 00:26:53,919

compare to on a featureless ocean

888

00:26:57,830 --> 00:26:56,640

surface um you know where you're flying

889

00:27:00,870 --> 00:26:57,840

a supersonic

890

00:27:02,549 --> 00:27:00,880

jet uh capable of extremely high speeds

891

00:27:04,870 --> 00:27:02,559

at what's called high angle of attack so

892

00:27:06,789 --> 00:27:04,880

the only way to fly a very fast jet very

893

00:27:08,230 --> 00:27:06,799

slow as would be needed would be to make

894

00:27:10,710 --> 00:27:08,240

it dirty which is to

895

00:27:12,870 --> 00:27:10,720

have landing gear and flaps spoilers

896

00:27:14,549 --> 00:27:12,880

leading edge devices etcetera deployed

897

00:27:16,630 --> 00:27:14,559

and then fly it at high angle of attack

898

00:27:17,510 --> 00:27:16,640

or high alpha which puts the cockpit at

899

00:27:19,669 --> 00:27:17,520

a high

900

00:27:21,750 --> 00:27:19,679

um high pitch with respect to the ocean

901
00:27:23,190 --> 00:27:21,760
so that's not really compatible

902
00:27:24,950 --> 00:27:23,200
and i'm wondering you know people have

903
00:27:26,470 --> 00:27:24,960
actually simulated you know what would

904
00:27:27,990 --> 00:27:26,480
the encounter look like just from uh

905
00:27:29,430 --> 00:27:28,000
just from an aviation perspective what

906
00:27:31,350 --> 00:27:29,440
is the geometry

907
00:27:33,350 --> 00:27:31,360
involved you know what did it look like

908
00:27:34,710 --> 00:27:33,360
from the cockpit because it wasn't like

909
00:27:35,269 --> 00:27:34,720
you know it's imagine driving down the

910
00:27:36,549 --> 00:27:35,279
freeway

911
00:27:38,710 --> 00:27:36,559
and you're looking for something the

912
00:27:40,549 --> 00:27:38,720
size of a car or two cars

913
00:27:42,630 --> 00:27:40,559

and you're going the stall speed of an

914

00:27:44,389 --> 00:27:42,640

f-18 in that configuration

915

00:27:46,789 --> 00:27:44,399

which is its landing configuration still

916

00:27:47,990 --> 00:27:46,799

about 100 knots or so

917

00:27:49,430 --> 00:27:48,000

and so he'd have to be going faster than

918

00:27:50,710 --> 00:27:49,440

that or he would stall and he wouldn't

919

00:27:52,950 --> 00:27:50,720

be here god forbid

920

00:27:54,950 --> 00:27:52,960

um so you're going 200 maybe 200 knots

921

00:27:57,350 --> 00:27:54,960

uh 230 miles an hour

922

00:27:58,070 --> 00:27:57,360

uh to stay safe and then you're still at

923

00:27:59,830 --> 00:27:58,080

a pitch up

924

00:28:02,870 --> 00:27:59,840

angle if you're not deploying your all

925

00:28:04,870 --> 00:28:02,880

your drag devices so has anyone looked

926
00:28:05,909 --> 00:28:04,880
at what is the geometry involved

927
00:28:07,510 --> 00:28:05,919
and what would it look like in the

928
00:28:08,630 --> 00:28:07,520
cockpit the cockpit is not like a you

929
00:28:10,470 --> 00:28:08,640
know glass bubble

930
00:28:11,909 --> 00:28:10,480
he's got a lot of stuff in his face he's

931
00:28:14,230 --> 00:28:11,919
got a heads-up display

932
00:28:15,269 --> 00:28:14,240
has anyone looked at that well i think

933
00:28:17,750 --> 00:28:15,279
you know the copy cut of

934
00:28:18,389 --> 00:28:17,760
is the top half of it is kind of a glass

935
00:28:20,310 --> 00:28:18,399
bubble and

936
00:28:21,590 --> 00:28:20,320
the pilots actually sit relatively high

937
00:28:23,269 --> 00:28:21,600
because they do need to have very good

938
00:28:24,789 --> 00:28:23,279

visibility in the airspace around them

939

00:28:26,710 --> 00:28:24,799

so it's not like they can't see

940

00:28:28,389 --> 00:28:26,720

out of the side and the angle of attack

941

00:28:30,470 --> 00:28:28,399

perhaps isn't so much of an issue

942

00:28:31,430 --> 00:28:30,480

at the front because when fraber says he

943

00:28:33,590 --> 00:28:31,440

saw it at first

944

00:28:35,029 --> 00:28:33,600

he says he looked out of the side window

945

00:28:36,710 --> 00:28:35,039

and saw it

946

00:28:38,070 --> 00:28:36,720

so he would have had a reasonable view

947

00:28:41,590 --> 00:28:38,080

of the ocean and i think

948

00:28:43,350 --> 00:28:41,600

even if you're going at 200 to 300 knots

949

00:28:45,669 --> 00:28:43,360

we're looking down at the ocean of

950

00:28:47,269 --> 00:28:45,679

something that is serious 20 000 feet

951
00:28:49,669 --> 00:28:47,279
below and you know a few

952
00:28:51,269 --> 00:28:49,679
a few thousand feet to the side so say

953
00:28:52,230 --> 00:28:51,279
it's about you know four or five miles

954
00:28:54,389 --> 00:28:52,240
away visually

955
00:28:56,149 --> 00:28:54,399
so even if you're going fairly fast you

956
00:28:58,070 --> 00:28:56,159
know in your field of view the

957
00:28:59,909 --> 00:28:58,080
the rate of change of the of the angle

958
00:29:01,510 --> 00:28:59,919
of the the object isn't going to be that

959
00:29:03,590 --> 00:29:01,520
much so you would be able to

960
00:29:04,950 --> 00:29:03,600
to keep an eyeball on it if you could

961
00:29:06,310 --> 00:29:04,960
see it in the first place

962
00:29:08,389 --> 00:29:06,320
and they didn't actually see the object

963
00:29:09,990 --> 00:29:08,399

itself first the the tic tac

964

00:29:12,470 --> 00:29:10,000

object they saw what they described as

965

00:29:14,149 --> 00:29:12,480

being a excuse me a disturbance in the

966

00:29:15,590 --> 00:29:14,159

water so they looked down

967

00:29:17,029 --> 00:29:15,600

and they saw what looked like either

968

00:29:17,590 --> 00:29:17,039

waves breaking over something or some

969

00:29:20,389 --> 00:29:17,600

kind of

970

00:29:22,310 --> 00:29:20,399

boiling in the water uh type disturbance

971

00:29:24,149 --> 00:29:22,320

like a submarine surfacing or whale

972

00:29:25,510 --> 00:29:24,159

speeding or something like that

973

00:29:27,510 --> 00:29:25,520

and then they saw this this tic-tac

974

00:29:28,789 --> 00:29:27,520

object uh above

975

00:29:30,070 --> 00:29:28,799

this disturbance in the water so you

976

00:29:32,070 --> 00:29:30,080

could imagine that you know this this

977

00:29:34,389 --> 00:29:32,080

larger disturbance would catch their eye

978

00:29:35,269 --> 00:29:34,399

and then they saw this this smaller tic

979

00:29:37,269 --> 00:29:35,279

tac so i think

980

00:29:38,710 --> 00:29:37,279

uh you know it's it's you know plausible

981

00:29:40,149 --> 00:29:38,720

that they saw something and certainly

982

00:29:41,909 --> 00:29:40,159

seeing something in the water

983

00:29:43,430 --> 00:29:41,919

but then when it gets complicated is

984

00:29:45,350 --> 00:29:43,440

like you say they're

985

00:29:46,630 --> 00:29:45,360

looking at something where you have no

986

00:29:48,870 --> 00:29:46,640

context uh

987

00:29:50,470 --> 00:29:48,880

as to how big it is you know it's a tic

988

00:29:52,870 --> 00:29:50,480

tac i've got this this is like an iphone

989

00:29:53,590 --> 00:29:52,880

case i'm holding up here uh tic tac

990

00:29:55,590 --> 00:29:53,600

shaped

991

00:29:57,590 --> 00:29:55,600

and uh you know you know how big it is

992

00:29:59,269 --> 00:29:57,600

because you know how big my hand is

993

00:30:01,029 --> 00:29:59,279

but if this was just you know hovering

994

00:30:02,549 --> 00:30:01,039

in space and you know it was there was

995

00:30:04,470 --> 00:30:02,559

blue sky behind it and you didn't know

996

00:30:06,710 --> 00:30:04,480

how far away it was if this was like say

997

00:30:08,310 --> 00:30:06,720

you know back on my shelf over here it

998

00:30:10,149 --> 00:30:08,320

would actually be a lot bigger

999

00:30:11,830 --> 00:30:10,159

uh than than what you see here it would

1000

00:30:15,590 --> 00:30:11,840

be like you know four times as big

1001
00:30:18,789 --> 00:30:15,600
but because you know where it is uh you

1002
00:30:22,549 --> 00:30:20,870
didn't use my skype there uh because

1003
00:30:24,470 --> 00:30:22,559
because you know what the context is you

1004
00:30:27,669 --> 00:30:24,480
can figure out how big it is but if you

1005
00:30:30,470 --> 00:30:27,679
lack that context you cannot actually

1006
00:30:31,669 --> 00:30:30,480
you cannot actually find out uh uh how

1007
00:30:33,190 --> 00:30:31,679
how big it is and if you don't know how

1008
00:30:33,990 --> 00:30:33,200
big something is you don't know how far

1009
00:30:35,430 --> 00:30:34,000
away it is

1010
00:30:37,190 --> 00:30:35,440
and vice versa if you don't know how far

1011
00:30:39,909 --> 00:30:37,200
away it is you don't how big it is

1012
00:30:40,310 --> 00:30:39,919
now fravo says that he looked at this

1013
00:30:43,350 --> 00:30:40,320

thing

1014

00:30:45,350 --> 00:30:43,360

and he knew it was 40 feet long and he

1015

00:30:47,430 --> 00:30:45,360

was asked by lex friedman like how do

1016

00:30:51,110 --> 00:30:47,440

you know this and his answer was

1017

00:30:54,549 --> 00:30:51,120

um 15 years uh experience as a pilot

1018

00:30:55,830 --> 00:30:54,559

as a navy pilot top gun pilot right and

1019

00:30:58,630 --> 00:30:55,840

uh you know it's just kind of fair

1020

00:31:00,149 --> 00:30:58,640

enough but how actually do you know

1021

00:31:02,389 --> 00:31:00,159

how do you know is there some kind of

1022

00:31:04,549 --> 00:31:02,399

technique that you use is do you

1023

00:31:05,669 --> 00:31:04,559

reference something else or you just you

1024

00:31:08,389 --> 00:31:05,679

look at this thing

1025

00:31:10,389 --> 00:31:08,399

you have no idea what it is no idea what

1026

00:31:11,830 --> 00:31:10,399

uh how how big it is but you instantly

1027

00:31:13,669 --> 00:31:11,840

know how big it is by

1028

00:31:15,190 --> 00:31:13,679

by magic you somehow essentially you

1029

00:31:15,909 --> 00:31:15,200

know the freighter then goes on to talk

1030

00:31:17,590 --> 00:31:15,919

about

1031

00:31:18,950 --> 00:31:17,600

uh in the same interview with lex

1032

00:31:22,710 --> 00:31:18,960

friedman about how

1033

00:31:24,789 --> 00:31:22,720

you you can't actually trust your eyes

1034

00:31:25,909 --> 00:31:24,799

pretty much how often do you you know do

1035

00:31:28,070 --> 00:31:25,919

you trust your eyes

1036

00:31:29,110 --> 00:31:28,080

how often do you make mistakes and and

1037

00:31:30,630 --> 00:31:29,120

and uh

1038

00:31:32,630 --> 00:31:30,640

and fragrant was saying you know all the

1039

00:31:33,190 --> 00:31:32,640

time yeah he says you were actually

1040

00:31:35,029 --> 00:31:33,200

trained

1041

00:31:36,630 --> 00:31:35,039

not to trust our eyes because your eyes

1042

00:31:38,389 --> 00:31:36,640

fool you in aviation

1043

00:31:39,830 --> 00:31:38,399

he was talking about other stuff and

1044

00:31:41,430 --> 00:31:39,840

saying like you know we go down

1045

00:31:42,789 --> 00:31:41,440

when he went down because he didn't go

1046

00:31:43,830 --> 00:31:42,799

all the way down to the surface of the

1047

00:31:45,430 --> 00:31:43,840

ocean because you

1048

00:31:47,669 --> 00:31:45,440

always stop before you get too close to

1049

00:31:49,590 --> 00:31:47,679

the ocean because people lose spatial

1050

00:31:51,110 --> 00:31:49,600

awareness as to how high they are and

1051
00:31:52,230 --> 00:31:51,120
they fly into the ocean he said that

1052
00:31:53,909 --> 00:31:52,240
happens all the time

1053
00:31:55,590 --> 00:31:53,919
right so if he knows about all these

1054
00:31:56,870 --> 00:31:55,600
visual illusions that can happen how

1055
00:31:58,470 --> 00:31:56,880
does he know something like that didn't

1056
00:32:00,470 --> 00:31:58,480
actually happen to him

1057
00:32:01,750 --> 00:32:00,480
yeah although they have radar altimeters

1058
00:32:03,110 --> 00:32:01,760
in the f-18 and

1059
00:32:04,789 --> 00:32:03,120
there are many ways to do it but yes

1060
00:32:05,430 --> 00:32:04,799
you're right as a pilot the first lesson

1061
00:32:06,870 --> 00:32:05,440
you get is

1062
00:32:08,549 --> 00:32:06,880
trust your instruments that's why we

1063
00:32:10,310 --> 00:32:08,559

have exactly instruments that's where

1064

00:32:11,830 --> 00:32:10,320

you use the altimeter rather than

1065

00:32:13,190 --> 00:32:11,840

looking to see where the ocean is when

1066

00:32:13,990 --> 00:32:13,200

you're descending towards the ocean when

1067

00:32:16,789 --> 00:32:14,000

you try to land

1068

00:32:18,710 --> 00:32:16,799

at an airport yeah you you're using

1069

00:32:20,549 --> 00:32:18,720

you're generally using things uh

1070

00:32:21,830 --> 00:32:20,559

like like the the the landing aids that

1071

00:32:22,950 --> 00:32:21,840

are on the side of the airport on the

1072

00:32:25,029 --> 00:32:22,960

other hand you know i am

1073

00:32:26,710 --> 00:32:25,039

i am torn right you would like to have

1074

00:32:28,389 --> 00:32:26,720

there not be a stigma

1075

00:32:30,549 --> 00:32:28,399

you know if there are some in let's say

1076
00:32:32,549 --> 00:32:30,559
it's it's not you know exotic phenomenon

1077
00:32:32,950 --> 00:32:32,559
let's say it is you know chinese drones

1078
00:32:34,149 --> 00:32:32,960
or

1079
00:32:36,149 --> 00:32:34,159
you know let's say those you know

1080
00:32:37,909 --> 00:32:36,159
portuguese i don't know why we always

1081
00:32:39,669 --> 00:32:37,919
have to you know stigmatize that there's

1082
00:32:41,269 --> 00:32:39,679
you know these nefarious enemies trying

1083
00:32:42,789 --> 00:32:41,279
let's say it's those damn portuguese

1084
00:32:44,470 --> 00:32:42,799
people again they're trying to get back

1085
00:32:46,789 --> 00:32:44,480
you know the new world and they've got

1086
00:32:48,549 --> 00:32:46,799
sophisticated anti-aircraft

1087
00:32:50,310 --> 00:32:48,559
you know anyway uh and so they're

1088
00:32:51,990 --> 00:32:50,320

harassing it so you wouldn't want to

1089

00:32:54,310 --> 00:32:52,000

make it so that you know the next time

1090

00:32:55,990 --> 00:32:54,320

an f-35 pilot is out there that she's

1091

00:32:59,029 --> 00:32:56,000

not going to report it right so

1092

00:33:01,110 --> 00:32:59,039

you don't want to stigmatize it no yeah

1093

00:33:02,470 --> 00:33:01,120

i i'm all for that i'm all for reporting

1094

00:33:04,470 --> 00:33:02,480

these incidents because i think

1095

00:33:05,909 --> 00:33:04,480

uh the more that they can be reported

1096

00:33:07,509 --> 00:33:05,919

the more we can clear up what's actually

1097

00:33:08,710 --> 00:33:07,519

going on because i think there are very

1098

00:33:11,509 --> 00:33:08,720

real issues here

1099

00:33:12,310 --> 00:33:11,519

uh if fraver you know saw something and

1100

00:33:13,509 --> 00:33:12,320

it wasn't identified

1101
00:33:14,950 --> 00:33:13,519
that needs to be figured out they should

1102
00:33:16,149 --> 00:33:14,960
have followed it out they should have

1103
00:33:17,269 --> 00:33:16,159
tried to figure out what was going on

1104
00:33:19,350 --> 00:33:17,279
maybe they did

1105
00:33:21,509 --> 00:33:19,360
so uh you know either there was a

1106
00:33:22,870 --> 00:33:21,519
failure there in in doing that or they

1107
00:33:25,509 --> 00:33:22,880
already knew what it was

1108
00:33:26,710 --> 00:33:25,519
and i think it's probably the former

1109
00:33:27,750 --> 00:33:26,720
they probably just didn't take him

1110
00:33:29,590 --> 00:33:27,760
seriously

1111
00:33:31,110 --> 00:33:29,600
and they didn't follow up with with uh

1112
00:33:33,750 --> 00:33:31,120
with investigating it

1113
00:33:35,669 --> 00:33:33,760

so i think you know if pilots are seeing

1114

00:33:39,269 --> 00:33:35,679

things that are unidentified

1115

00:33:41,190 --> 00:33:39,279

that is an issue uh sometimes that is

1116

00:33:42,070 --> 00:33:41,200

going to be the pilots themselves making

1117

00:33:43,750 --> 00:33:42,080

mistakes

1118

00:33:45,190 --> 00:33:43,760

sometimes it might be issues with

1119

00:33:46,070 --> 00:33:45,200

equipment and sometimes it might

1120

00:33:48,070 --> 00:33:46,080

actually be

1121

00:33:49,669 --> 00:33:48,080

be real things and it could be just you

1122

00:33:50,789 --> 00:33:49,679

know different ways of looking at things

1123

00:33:51,509 --> 00:33:50,799

that we haven't really like thought

1124

00:33:53,990 --> 00:33:51,519

about

1125

00:33:55,830 --> 00:33:54,000

before like you know perhaps sometimes

1126
00:33:56,310 --> 00:33:55,840
we get certain atmospheric effects which

1127
00:33:58,149 --> 00:33:56,320
do

1128
00:33:59,830 --> 00:33:58,159
you know make make something appear like

1129
00:34:01,590 --> 00:33:59,840
a flying saucer off in the distance

1130
00:34:03,430 --> 00:34:01,600
so yeah we should definitely look into

1131
00:34:06,310 --> 00:34:03,440
these things

1132
00:34:07,830 --> 00:34:06,320
so just a reminder take a little pause

1133
00:34:09,829 --> 00:34:07,840
we're speaking with mick west

1134
00:34:11,190 --> 00:34:09,839
who's got a wonderful youtube channel

1135
00:34:14,790 --> 00:34:11,200
which you may find

1136
00:34:15,829 --> 00:34:14,800
uh wherever youtube's videos are sold

1137
00:34:18,550 --> 00:34:15,839
and bought

1138
00:34:20,869 --> 00:34:18,560

uh i am brian keating the proprietor of

1139

00:34:23,190 --> 00:34:20,879

the into the impossible podcast

1140

00:34:24,069 --> 00:34:23,200

and you can find me dr brian keating on

1141

00:34:26,470 --> 00:34:24,079

youtube and

1142

00:34:27,270 --> 00:34:26,480

on twitter and mickwest mcwest on

1143

00:34:29,349 --> 00:34:27,280

twitter

1144

00:34:30,310 --> 00:34:29,359

and on youtube as well tomorrow i'm

1145

00:34:33,589 --> 00:34:30,320

going to be interviewing

1146

00:34:35,430 --> 00:34:33,599

seth shostak of the seti institute

1147

00:34:37,030 --> 00:34:35,440

who along with jill tarter has been a

1148

00:34:38,629 --> 00:34:37,040

longtime guest and friend of the arthur

1149

00:34:40,069 --> 00:34:38,639

c clarke center for human imagination

1150

00:34:41,349 --> 00:34:40,079

which i co-direct

1151

00:34:43,990 --> 00:34:41,359

i am the chancellor's distinguished

1152

00:34:47,270 --> 00:34:44,000

professor of physics an astrophysicist

1153

00:34:49,430 --> 00:34:47,280

with also with 25 years of flying

1154

00:34:50,389 --> 00:34:49,440

small planes not far from the warning

1155

00:34:52,389 --> 00:34:50,399

area where

1156

00:34:54,629 --> 00:34:52,399

the tic tac encounter was spot although

1157

00:34:55,030 --> 00:34:54,639

it wasn't me and i can prove it because

1158

00:35:12,870 --> 00:34:55,040

i

1159

00:35:15,670 --> 00:35:12,880

these encounters represent

1160

00:35:16,950 --> 00:35:15,680

advanced technology either earthbound or

1161

00:35:18,790 --> 00:35:16,960

not earthbound

1162

00:35:19,990 --> 00:35:18,800

and i want to speculate if mick will

1163

00:35:21,349 --> 00:35:20,000

allow me and

1164

00:35:23,030 --> 00:35:21,359

kind of think about what would be the

1165

00:35:25,190 --> 00:35:23,040

implications that these uh

1166

00:35:26,390 --> 00:35:25,200

are actually representative of

1167

00:35:29,750 --> 00:35:26,400

technology

1168

00:35:29,990 --> 00:35:29,760

not of our current uh generation or of

1169

00:35:32,230 --> 00:35:30,000

our

1170

00:35:33,109 --> 00:35:32,240

current um current technological

1171

00:35:34,870 --> 00:35:33,119

capabilities

1172

00:35:37,190 --> 00:35:34,880

before i go there though i do want to

1173

00:35:38,310 --> 00:35:37,200

ask a question that is being asked in

1174

00:35:40,069 --> 00:35:38,320

the chat room

1175

00:35:41,510 --> 00:35:40,079

uh because there are so many questions

1176

00:35:42,310 --> 00:35:41,520

coming in i want to thank you all for

1177

00:35:45,910 --> 00:35:42,320

putting up

1178

00:35:48,710 --> 00:35:45,920

uh your questions in the chat room and

1179

00:35:50,230 --> 00:35:48,720

um i will thank you yeah i'm sorry i'm a

1180

00:35:52,310 --> 00:35:50,240

little bit too loud here

1181

00:35:55,109 --> 00:35:52,320

uh so array gray is asking what do you

1182

00:35:58,390 --> 00:35:55,119

think of the most foundational ufo

1183

00:36:01,750 --> 00:35:58,400

cases aerial school siding phoenix

1184

00:36:02,310 --> 00:36:01,760

lab west hall uh school sighting forest

1185

00:36:04,630 --> 00:36:02,320

rend hall

1186

00:36:06,310 --> 00:36:04,640

sighting rent rental shim siding how

1187

00:36:08,310 --> 00:36:06,320

much weight do you give to any of these

1188

00:36:11,829 --> 00:36:08,320

sightings

1189

00:36:12,069 --> 00:36:11,839

well you know a lot of these things are

1190

00:36:20,710 --> 00:36:12,079

i

1191

00:36:22,630 --> 00:36:20,720

and the uh the reynoldshum forest

1192

00:36:24,790 --> 00:36:22,640

citing like i think has some maybe very

1193

00:36:26,790 --> 00:36:24,800

limited imagery but again it was mostly

1194

00:36:28,390 --> 00:36:26,800

eyewitness accounts and

1195

00:36:31,349 --> 00:36:28,400

a lot of these these sightings are very

1196

00:36:34,150 --> 00:36:31,359

very old and i personally

1197

00:36:36,230 --> 00:36:34,160

you know while you know i don't don't

1198

00:36:38,630 --> 00:36:36,240

want to just dismiss them out of hand

1199

00:36:41,109 --> 00:36:38,640

i i'm not particularly interested in

1200

00:36:43,430 --> 00:36:41,119

these old sightings because the evidence

1201
00:36:44,710 --> 00:36:43,440
that's available for analysis isn't very

1202
00:36:47,510 --> 00:36:44,720
good

1203
00:36:48,069 --> 00:36:47,520
the aerial school one for example the

1204
00:36:51,430 --> 00:36:48,079
evidence

1205
00:36:53,190 --> 00:36:51,440
consists of a bunch of children telling

1206
00:36:56,230 --> 00:36:53,200
the story of what they

1207
00:36:58,630 --> 00:36:56,240
thought they saw and some pictures

1208
00:37:00,069 --> 00:36:58,640
that the the children drew and there's

1209
00:37:00,790 --> 00:37:00,079
no there's no physical evidence there's

1210
00:37:07,190 --> 00:37:00,800
no

1211
00:37:08,870 --> 00:37:07,200
that was a very difficult one to get any

1212
00:37:10,790 --> 00:37:08,880
any handle on and you'd have to talk to

1213
00:37:11,750 --> 00:37:10,800

like child psychiatrists and memory

1214

00:37:13,510 --> 00:37:11,760

experts

1215

00:37:14,870 --> 00:37:13,520

as to you know the validity of their

1216

00:37:16,069 --> 00:37:14,880

eyewitness accounts but you know

1217

00:37:17,190 --> 00:37:16,079

personally i don't

1218

00:37:19,430 --> 00:37:17,200

i don't think it's particularly

1219

00:37:21,510 --> 00:37:19,440

compelling uh and

1220

00:37:23,430 --> 00:37:21,520

i i just you know i'm not actually

1221

00:37:24,630 --> 00:37:23,440

really that much of a ufo guy when it

1222

00:37:26,310 --> 00:37:24,640

comes down to it

1223

00:37:28,390 --> 00:37:26,320

uh i only really got into it four years

1224

00:37:30,310 --> 00:37:28,400

ago i i'm not deeply seeked in the

1225

00:37:31,510 --> 00:37:30,320

the history of ufos uh although i've

1226
00:37:32,950 --> 00:37:31,520
been reading a lot recently because it's

1227
00:37:35,829 --> 00:37:32,960
so fascinating

1228
00:37:36,630 --> 00:37:35,839
but uh what i'm really into is studying

1229
00:37:38,870 --> 00:37:36,640
videos

1230
00:37:40,230 --> 00:37:38,880
and so that naturally means that i i

1231
00:37:41,589 --> 00:37:40,240
look at the newer cases because the

1232
00:37:44,790 --> 00:37:41,599
newer cases are the ones that have

1233
00:37:49,349 --> 00:37:47,910
so uh when we think about um i'm just

1234
00:37:51,990 --> 00:37:49,359
let me get rid of my middle

1235
00:37:53,829 --> 00:37:52,000
ins i just got teleported an extra copy

1236
00:37:56,550 --> 00:37:53,839
of me just emerged here

1237
00:37:57,190 --> 00:37:56,560
um so some other questions are coming in

1238
00:38:01,990 --> 00:37:57,200

about

1239

00:38:04,390 --> 00:38:02,000

pyramid which i thought you did a

1240

00:38:06,550 --> 00:38:04,400

masterful kind of analysis with

1241

00:38:07,670 --> 00:38:06,560

actually making use of free astronomical

1242

00:38:10,150 --> 00:38:07,680

toolkits like

1243

00:38:11,430 --> 00:38:10,160

stellarium and loading positions the

1244

00:38:12,710 --> 00:38:11,440

only thing i thought was missing was

1245

00:38:14,230 --> 00:38:12,720

just the analysis of

1246

00:38:16,310 --> 00:38:14,240

an arrival what's called an arrival

1247

00:38:19,589 --> 00:38:16,320

corridor where aircraft arrive

1248

00:38:21,670 --> 00:38:19,599

on predefined set flight paths and the

1249

00:38:23,349 --> 00:38:21,680

fact that many of these aircraft

1250

00:38:24,710 --> 00:38:23,359

that fly in what's called controlled

1251

00:38:27,030 --> 00:38:24,720

airspace which the tic-tac

1252

00:38:28,710 --> 00:38:27,040

encounter by the way was not within if

1253

00:38:30,390 --> 00:38:28,720

it was conducted at the surface

1254

00:38:32,069 --> 00:38:30,400

is in what's called a so-called warning

1255

00:38:33,430 --> 00:38:32,079

area which anybody who has a pilot's

1256

00:38:36,710 --> 00:38:33,440

license can operate in

1257

00:38:39,430 --> 00:38:36,720

they do so at great risk um and that

1258

00:38:41,270 --> 00:38:39,440

uh that risk is is to you know potential

1259

00:38:43,670 --> 00:38:41,280

life and limb that you may be

1260

00:38:44,550 --> 00:38:43,680

intercepted you may be shot you may be

1261

00:38:47,030 --> 00:38:44,560

intercepted not

1262

00:38:49,430 --> 00:38:47,040

illegally but you may be intercepted as

1263

00:38:52,310 --> 00:38:49,440

a sort of a cat playing with a mouse

1264

00:38:54,470 --> 00:38:52,320

and that would be uh that would be for

1265

00:38:55,990 --> 00:38:54,480

practice for these naval aviators

1266

00:38:57,670 --> 00:38:56,000

but you're legally allowed to operate in

1267

00:38:59,670 --> 00:38:57,680

this warning area

1268

00:39:00,790 --> 00:38:59,680

and but you may be shot with a missile

1269

00:39:02,230 --> 00:39:00,800

by accident

1270

00:39:04,630 --> 00:39:02,240

because they can't guarantee your safety

1271

00:39:07,510 --> 00:39:04,640

but above 18 000 feet if this object

1272

00:39:08,310 --> 00:39:07,520

really did ascend to 60 000 feet uh for

1273

00:39:09,829 --> 00:39:08,320

example but

1274

00:39:11,910 --> 00:39:09,839

other things like the boca if you want

1275

00:39:13,430 --> 00:39:11,920

to explain that i'll put the video up

1276

00:39:15,910 --> 00:39:13,440

i'm having trouble muting my

1277

00:39:17,270 --> 00:39:15,920

uh your video but i'll put that up on

1278

00:39:18,950 --> 00:39:17,280

screen the bokeh and

1279

00:39:20,630 --> 00:39:18,960

i'll just play it without sound on my

1280

00:39:21,510 --> 00:39:20,640

side uh you want to talk about that or

1281

00:39:23,349 --> 00:39:21,520

do would you rather talk about the

1282

00:39:25,589 --> 00:39:23,359

gimbal which which one is sort of more

1283

00:39:26,950 --> 00:39:25,599

uh the bokeh's you know the book is

1284

00:39:28,790 --> 00:39:26,960

interesting because it's new but yeah

1285

00:39:30,950 --> 00:39:28,800

real quick i i actually used to uh

1286

00:39:32,950 --> 00:39:30,960

fly in that area myself i didn't really

1287

00:39:34,710 --> 00:39:32,960

fly over the ocean very much i'd go out

1288

00:39:38,069 --> 00:39:34,720

and look at the dolphins occasionally

1289

00:39:39,670 --> 00:39:38,079

but uh yeah around uh 2003 2004

1290

00:39:40,950 --> 00:39:39,680

yeah coincidentally the exact same time

1291

00:39:42,950 --> 00:39:40,960

of the nimitz encounter i was taking

1292

00:39:44,950 --> 00:39:42,960

flying lessons out of santa monica

1293

00:39:46,790 --> 00:39:44,960

so i'm kind of familiar with the layout

1294

00:39:48,069 --> 00:39:46,800

of the airspace there and you know you

1295

00:39:49,670 --> 00:39:48,079

fly out of santa monica you've got the

1296

00:39:51,510 --> 00:39:49,680

class b beneath you so you never really

1297

00:39:54,310 --> 00:39:51,520

get down to the warning area

1298

00:39:55,670 --> 00:39:54,320

but yeah it's very busy airspace which

1299

00:39:56,630 --> 00:39:55,680

is one of the things about it because

1300

00:39:59,750 --> 00:39:56,640

obviously you've got

1301

00:40:01,670 --> 00:39:59,760

not only lax but you have uh you have

1302

00:40:03,190 --> 00:40:01,680

long beach uh john wayne airport and

1303

00:40:04,790 --> 00:40:03,200

then you have san diego and then a few

1304

00:40:07,270 --> 00:40:04,800

other airports as well you sometimes

1305

00:40:09,030 --> 00:40:07,280

get people flying from hawaii to denver

1306

00:40:09,990 --> 00:40:09,040

flying overhead as well and then you get

1307

00:40:12,230 --> 00:40:10,000

people flying overhead

1308

00:40:13,829 --> 00:40:12,240

from from the north to san diego very

1309

00:40:15,190 --> 00:40:13,839

very busy airspace so there's lots of

1310

00:40:17,990 --> 00:40:15,200

things to see

1311

00:40:19,349 --> 00:40:18,000

uh in the sky yeah and you know that

1312

00:40:22,230 --> 00:40:19,359

kind of brings us to the

1313

00:40:24,230 --> 00:40:22,240

the bokeh video the triangle video okay

1314

00:40:26,309 --> 00:40:24,240

is this green night vision

1315

00:40:27,589 --> 00:40:26,319

which one uh should i play here i'm

1316

00:40:29,349 --> 00:40:27,599

gonna put the

1317

00:40:31,430 --> 00:40:29,359

i have the bokeh on let me see here i'm

1318

00:40:33,190 --> 00:40:31,440

gonna do screenshots uh

1319

00:40:34,630 --> 00:40:33,200

yeah yeah that one's this one's this

1320

00:40:36,390 --> 00:40:34,640

one's good this so this is what you're

1321

00:40:38,790 --> 00:40:36,400

seeing there is me actually taking the

1322

00:40:41,349 --> 00:40:38,800

video and trying to track where it was

1323

00:40:42,790 --> 00:40:41,359

in the the star field and if you go to

1324

00:40:43,349 --> 00:40:42,800

the start of that video this i think

1325

00:40:45,589 --> 00:40:43,359

it's just me

1326

00:40:46,790 --> 00:40:45,599

yeah it's just the full full trace like

1327

00:40:47,990 --> 00:40:46,800

right at the start of that video you

1328

00:40:50,230 --> 00:40:48,000

actually see

1329

00:40:51,990 --> 00:40:50,240

a bunch of stars and the planet jupiter

1330

00:40:54,069 --> 00:40:52,000

and somebody else noticed this before

1331

00:40:55,829 --> 00:40:54,079

i did and they pointed out that this was

1332

00:40:56,550 --> 00:40:55,839

you know this actual constellation and

1333

00:40:58,230 --> 00:40:56,560

that the

1334

00:41:01,270 --> 00:40:58,240

that uh jupiter was there on that

1335

00:41:03,510 --> 00:41:01,280

particular day you know june 15th 2019

1336

00:41:05,109 --> 00:41:03,520

and so we knew exactly where the camera

1337

00:41:06,870 --> 00:41:05,119

was looking and then we were able to

1338

00:41:09,109 --> 00:41:06,880

trace the camera through the sky

1339

00:41:11,030 --> 00:41:09,119

and see where it ended up and where it

1340

00:41:14,309 --> 00:41:11,040

ended up there was two other stars

1341

00:41:16,550 --> 00:41:14,319

uh right at the end of the of the uh the

1342

00:41:17,670 --> 00:41:16,560

the video and you see the flashing

1343

00:41:19,589 --> 00:41:17,680

triangle

1344

00:41:21,190 --> 00:41:19,599

passed by these two other stars and

1345

00:41:24,069 --> 00:41:21,200

these two other stars

1346

00:41:24,790 --> 00:41:24,079

also take on the shape of triangles and

1347

00:41:26,230 --> 00:41:24,800

this was kind of

1348

00:41:28,309 --> 00:41:26,240

originally presented when the video came

1349

00:41:30,630 --> 00:41:28,319

out of these are two other crafts that

1350

00:41:32,550 --> 00:41:30,640

are not flashing and just hovering there

1351
00:41:33,910 --> 00:41:32,560
but you can see by doing this trace

1352
00:41:35,030 --> 00:41:33,920
through it that there are actually these

1353
00:41:35,990 --> 00:41:35,040
these two stars

1354
00:41:37,670 --> 00:41:36,000
i don't think they're actually labeled

1355
00:41:39,589 --> 00:41:37,680
in this version of the video but you

1356
00:41:41,430 --> 00:41:39,599
know you can actually you'll see it pass

1357
00:41:44,230 --> 00:41:41,440
by one of them in a second

1358
00:41:45,190 --> 00:41:44,240
uh and yeah we know exactly what what

1359
00:41:47,589 --> 00:41:45,200
the stars are

1360
00:41:48,870 --> 00:41:47,599
we know uh what we're looking at we know

1361
00:41:50,230 --> 00:41:48,880
what angle we're looking at because we

1362
00:41:52,870 --> 00:41:50,240
know what time of day it is

1363
00:41:53,510 --> 00:41:52,880

roughly uh so we can get a good idea of

1364

00:41:55,910 --> 00:41:53,520

uh

1365

00:41:56,710 --> 00:41:55,920

you know what we're actually looking at

1366

00:41:58,470 --> 00:41:56,720

in terms of

1367

00:42:01,190 --> 00:41:58,480

uh altitude and angular speed and

1368

00:42:03,190 --> 00:42:01,200

whatnot but you know stepping back a bit

1369

00:42:04,950 --> 00:42:03,200

besides knowing where it is in the sky

1370

00:42:07,510 --> 00:42:04,960

and the fact that the triangle

1371

00:42:09,430 --> 00:42:07,520

shape of the the object is kind of an

1372

00:42:11,510 --> 00:42:09,440

optical artifact which is obvious from

1373

00:42:12,550 --> 00:42:11,520

the stars being made into triangles by

1374

00:42:14,550 --> 00:42:12,560

the camera

1375

00:42:16,710 --> 00:42:14,560

uh we also see that it's flashing and

1376

00:42:19,910 --> 00:42:16,720

it's flashing in a very similar way

1377

00:42:22,790 --> 00:42:19,920

to uh the flashing of

1378

00:42:23,589 --> 00:42:22,800

a commercial plane like a boeing 737

1379

00:42:25,829 --> 00:42:23,599

there's

1380

00:42:27,270 --> 00:42:25,839

they don't have strict ways that they

1381

00:42:28,630 --> 00:42:27,280

have to flash they just have limits

1382

00:42:30,630 --> 00:42:28,640

between which you have plus between

1383

00:42:31,829 --> 00:42:30,640

something like 30 and 70 times per

1384

00:42:32,870 --> 00:42:31,839

second or something like that they have

1385

00:42:34,309 --> 00:42:32,880

a limit

1386

00:42:36,069 --> 00:42:34,319

and different manufacturers have

1387

00:42:38,550 --> 00:42:36,079

different types of lights there's led

1388

00:42:41,030 --> 00:42:38,560

lights and there's the xenon lights

1389

00:42:43,270 --> 00:42:41,040

but yeah basically the bottom line is uh

1390

00:42:45,990 --> 00:42:43,280

the flashing pattern looks like a plane

1391

00:42:46,550 --> 00:42:46,000

the triangular shape of this object

1392

00:42:48,550 --> 00:42:46,560

comes

1393

00:42:49,990 --> 00:42:48,560

uh from an artifact of the camera it has

1394

00:42:52,150 --> 00:42:50,000

a triangular

1395

00:42:54,230 --> 00:42:52,160

aperture like the the aperture of uh of

1396

00:42:56,550 --> 00:42:54,240

the lens is triangular

1397

00:42:57,349 --> 00:42:56,560

uh you know some some lenses have more

1398

00:42:59,990 --> 00:42:57,359

circular

1399

00:43:00,470 --> 00:43:00,000

apertures like which this octagonal one

1400

00:43:02,230 --> 00:43:00,480

here

1401
00:43:03,589 --> 00:43:02,240
this one's a triangular one so when you

1402
00:43:05,030 --> 00:43:03,599
take pictures of small lights that are

1403
00:43:08,230 --> 00:43:05,040
out of focus they will appear

1404
00:43:09,190 --> 00:43:08,240
as triangles uh and that's that's what

1405
00:43:11,109 --> 00:43:09,200
we're seeing here

1406
00:43:12,790 --> 00:43:11,119
so all these things kind of line up and

1407
00:43:15,349 --> 00:43:12,800
then we know

1408
00:43:16,870 --> 00:43:15,359
the rough location of the plane uh the

1409
00:43:19,030 --> 00:43:16,880
of the boat that where where the video

1410
00:43:21,349 --> 00:43:19,040
is taken is the uss russell and we have

1411
00:43:24,630 --> 00:43:21,359
the deck logs from those two days

1412
00:43:27,030 --> 00:43:24,640
and we have the location

1413
00:43:28,790 --> 00:43:27,040

in latitude and longitude of that so you

1414

00:43:30,150 --> 00:43:28,800

can stick it on a map and we can go back

1415

00:43:32,790 --> 00:43:30,160

into the

1416

00:43:35,030 --> 00:43:32,800

the the flight to flight trapping acts

1417

00:43:37,270 --> 00:43:35,040

like plane finder planefinder.net

1418

00:43:38,790 --> 00:43:37,280

you can replay back to that day and you

1419

00:43:40,630 --> 00:43:38,800

can see exactly which planes were flying

1420

00:43:42,309 --> 00:43:40,640

overhead and a whole bunch of planes

1421

00:43:44,470 --> 00:43:42,319

on that particular day it varies based

1422

00:43:46,470 --> 00:43:44,480

on the wind and other factors

1423

00:43:48,069 --> 00:43:46,480

but on that day there were a whole bunch

1424

00:43:49,750 --> 00:43:48,079

of planes basically flying directly

1425

00:43:51,349 --> 00:43:49,760

overhead that area

1426

00:43:53,510 --> 00:43:51,359

so everything lines up you've got a

1427

00:43:55,510 --> 00:43:53,520

triangular shaped flashing light

1428

00:43:57,109 --> 00:43:55,520

are moving it's moving a plane speed we

1429

00:44:00,309 --> 00:43:57,119

can do that we can do the whole

1430

00:44:02,230 --> 00:44:00,319

uh translate the angular velocity to

1431

00:44:03,829 --> 00:44:02,240

to linear velocity and it works out to

1432

00:44:06,630 --> 00:44:03,839

be right if it's at the

1433

00:44:07,910 --> 00:44:06,640

same altitude as the planes uh we know

1434

00:44:08,630 --> 00:44:07,920

there were planes in that region at the

1435

00:44:11,190 --> 00:44:08,640

time

1436

00:44:12,870 --> 00:44:11,200

and we know that this is simply a a

1437

00:44:14,790 --> 00:44:12,880

small light that has been turned into a

1438

00:44:17,030 --> 00:44:14,800

triangular shape which is what

1439

00:44:17,829 --> 00:44:17,040

a plane would look like and beyond

1440

00:44:20,069 --> 00:44:17,839

that

1441

00:44:22,390 --> 00:44:20,079

we have a whole bunch of people who have

1442

00:44:23,910 --> 00:44:22,400

this type of of night vision camera with

1443

00:44:25,430 --> 00:44:23,920

a triangular aperture

1444

00:44:26,950 --> 00:44:25,440

this is just a lens not a night vision

1445

00:44:28,230 --> 00:44:26,960

camera but they have these night vision

1446

00:44:29,349 --> 00:44:28,240

cameras with triangular apertures

1447

00:44:31,349 --> 00:44:29,359

they've gone out

1448

00:44:33,270 --> 00:44:31,359

they've taken pictures of the night sky

1449

00:44:34,790 --> 00:44:33,280

with stars and planes and it looks

1450

00:44:38,069 --> 00:44:34,800

exactly the same

1451
00:44:39,589 --> 00:44:38,079
as this video so i i really don't feel

1452
00:44:42,309 --> 00:44:39,599
like there's very much room

1453
00:44:43,270 --> 00:44:42,319
for alternative explanations here and

1454
00:44:46,630 --> 00:44:43,280
yet

1455
00:44:48,630 --> 00:44:46,640
people won't let it go so

1456
00:44:50,069 --> 00:44:48,640
i want to switch topics to your book

1457
00:44:51,430 --> 00:44:50,079
escaping the rabbit hole

1458
00:44:53,430 --> 00:44:51,440
we want to talk about that for a little

1459
00:44:54,630 --> 00:44:53,440
bit what is that about what impelled you

1460
00:44:57,829 --> 00:44:54,640
to write it

1461
00:44:59,510 --> 00:44:57,839
uh what is the guide to helping friends

1462
00:45:00,950 --> 00:44:59,520
family and loved ones why do you want

1463
00:45:02,710 --> 00:45:00,960

them to escape

1464

00:45:04,710 --> 00:45:02,720

doesn't it sort of uh you know kind of

1465

00:45:07,910 --> 00:45:04,720

depend on what they believe

1466

00:45:10,550 --> 00:45:07,920

and uh sure why why why uh why

1467

00:45:11,990 --> 00:45:10,560

why did you write this book well uh it's

1468

00:45:13,670 --> 00:45:12,000

really about helping people who have

1469

00:45:16,630 --> 00:45:13,680

been trapped in some kind of

1470

00:45:17,430 --> 00:45:16,640

um conspiracy theory rabbit hole they've

1471

00:45:20,710 --> 00:45:17,440

come to believe

1472

00:45:22,710 --> 00:45:20,720

things which are not true like

1473

00:45:24,230 --> 00:45:22,720

say an extreme example someone believes

1474

00:45:26,069 --> 00:45:24,240

that the earth is flat

1475

00:45:28,150 --> 00:45:26,079

and they're going around saying that the

1476
00:45:29,670 --> 00:45:28,160
earth is flat everyone makes fun of them

1477
00:45:31,510 --> 00:45:29,680
because of this they become socially

1478
00:45:33,190 --> 00:45:31,520
isolated because the people think that

1479
00:45:34,710 --> 00:45:33,200
they are idiots they they try to

1480
00:45:36,230 --> 00:45:34,720
persuade other people that the earth is

1481
00:45:37,510 --> 00:45:36,240
flat they don't trust anything that

1482
00:45:38,870 --> 00:45:37,520
science says so they

1483
00:45:40,950 --> 00:45:38,880
start distrusting every single thing

1484
00:45:43,589 --> 00:45:40,960
that's that's out there in science

1485
00:45:44,870 --> 00:45:43,599
and so uh i think it's a worthwhile

1486
00:45:46,870 --> 00:45:44,880
thing trying to

1487
00:45:48,230 --> 00:45:46,880
help them get out of that belief now

1488
00:45:50,550 --> 00:45:48,240

that's an extreme belief

1489

00:45:52,150 --> 00:45:50,560

there are lots of other uh conspiracy

1490

00:45:53,510 --> 00:45:52,160

theory beliefs that are out there that

1491

00:45:55,829 --> 00:45:53,520

are less extreme but

1492

00:45:57,510 --> 00:45:55,839

for example some people believe that the

1493

00:45:59,829 --> 00:45:57,520

world trade center was

1494

00:46:01,430 --> 00:45:59,839

destroyed by the us government using

1495

00:46:03,030 --> 00:46:01,440

pre-planted explosives

1496

00:46:04,470 --> 00:46:03,040

you know this is something that people

1497

00:46:06,230 --> 00:46:04,480

actually believe so it's conspiracy

1498

00:46:08,309 --> 00:46:06,240

theory that people believe

1499

00:46:09,910 --> 00:46:08,319

and if you start believing that again

1500

00:46:12,710 --> 00:46:09,920

you start uh

1501
00:46:13,990 --> 00:46:12,720
having all these very anti-social forms

1502
00:46:16,390 --> 00:46:14,000
of the better word

1503
00:46:18,390 --> 00:46:16,400
but if if if you start you know having

1504
00:46:20,230 --> 00:46:18,400
this deep-seated distrust of the

1505
00:46:22,950 --> 00:46:20,240
government you can kind of go south in a

1506
00:46:24,870 --> 00:46:22,960
in a very in a very short space of time

1507
00:46:27,510 --> 00:46:24,880
if you think back to a long time ago

1508
00:46:30,710 --> 00:46:27,520
there was the oklahoma city bombing

1509
00:46:32,870 --> 00:46:30,720
which i think was in the 1990s uh maybe

1510
00:46:34,630 --> 00:46:32,880
the early 2000s the 1990s yeah but that

1511
00:46:36,550 --> 00:46:34,640
that was to my timothy mcveigh

1512
00:46:38,150 --> 00:46:36,560
and he was a believer in conspiracy

1513
00:46:40,069 --> 00:46:38,160

theories he thought

1514

00:46:41,670 --> 00:46:40,079

that the u.s government was in league

1515

00:46:43,109 --> 00:46:41,680

with the united nations and was going to

1516

00:46:46,470 --> 00:46:43,119

enslave everybody

1517

00:46:47,990 --> 00:46:46,480

and he was sending a message to to the

1518

00:46:49,270 --> 00:46:48,000

powers that be that you know he wasn't

1519

00:46:51,109 --> 00:46:49,280

going to take it

1520

00:46:53,430 --> 00:46:51,119

so these conspiracy theories have

1521

00:46:55,030 --> 00:46:53,440

consequences both for the individual and

1522

00:46:57,349 --> 00:46:55,040

for society as a whole

1523

00:46:58,870 --> 00:46:57,359

and so something i've i've actually been

1524

00:47:01,109 --> 00:46:58,880

interested in in general

1525

00:47:02,710 --> 00:47:01,119

is just how do you talk to people who

1526
00:47:04,069 --> 00:47:02,720
believe in conspiracy theories and you

1527
00:47:05,349 --> 00:47:04,079
know kind of what i've learned over the

1528
00:47:08,470 --> 00:47:05,359
years is that

1529
00:47:11,030 --> 00:47:08,480
the key thing to do is first of all

1530
00:47:12,470 --> 00:47:11,040
keep talking you maintain an effective

1531
00:47:16,309 --> 00:47:12,480
communication

1532
00:47:17,589 --> 00:47:16,319
with people and uh don't

1533
00:47:19,510 --> 00:47:17,599
don't get into a position where you're

1534
00:47:19,990 --> 00:47:19,520
arguing with them straight away because

1535
00:47:21,750 --> 00:47:20,000
until

1536
00:47:23,030 --> 00:47:21,760
you you reach some kind of mutual

1537
00:47:23,589 --> 00:47:23,040
understanding you're not going to get

1538
00:47:24,870 --> 00:47:23,599

anywhere

1539

00:47:26,790 --> 00:47:24,880

so the first thing you've got to do is

1540

00:47:28,470 --> 00:47:26,800

like keep talking second thing you've

1541

00:47:30,390 --> 00:47:28,480

got to do is try to figure out figure

1542

00:47:33,349 --> 00:47:30,400

them out try to understand them

1543

00:47:34,150 --> 00:47:33,359

and or and on the flip side try to

1544

00:47:36,309 --> 00:47:34,160

explain to

1545

00:47:37,910 --> 00:47:36,319

them where you are coming from but

1546

00:47:38,870 --> 00:47:37,920

always do it in this context of keeping

1547

00:47:40,309 --> 00:47:38,880

the conversation

1548

00:47:41,750 --> 00:47:40,319

going and then when you kind of

1549

00:47:42,069 --> 00:47:41,760

establish that and you've got some kind

1550

00:47:43,750 --> 00:47:42,079

of

1551
00:47:45,349 --> 00:47:43,760
common ground you can then move on to

1552
00:47:46,309 --> 00:47:45,359
kind of the the second step of the

1553
00:47:48,309 --> 00:47:46,319
process

1554
00:47:50,470 --> 00:47:48,319
which is supplying them with useful

1555
00:47:52,549 --> 00:47:50,480
information which is you know if they

1556
00:47:53,589 --> 00:47:52,559
they say something which is wrong you

1557
00:47:55,270 --> 00:47:53,599
can at this point know you've

1558
00:47:56,549 --> 00:47:55,280
established effective communication you

1559
00:47:59,670 --> 00:47:56,559
can respectfully

1560
00:48:00,950 --> 00:47:59,680
introduce other opinions and facts and

1561
00:48:02,309 --> 00:48:00,960
then talk about them you know they're

1562
00:48:04,069 --> 00:48:02,319
not necessarily going to agree with it

1563
00:48:05,430 --> 00:48:04,079

but you can talk about it

1564

00:48:07,750 --> 00:48:05,440

and then the third step here in my

1565

00:48:09,750 --> 00:48:07,760

three-step program is to give it time

1566

00:48:11,670 --> 00:48:09,760

because these things take a lot more

1567

00:48:13,109 --> 00:48:11,680

time than you would initially think you

1568

00:48:14,549 --> 00:48:13,119

think you could just go in there

1569

00:48:16,230 --> 00:48:14,559

explain to someone why they're wrong and

1570

00:48:17,589 --> 00:48:16,240

they'll be like oh yeah but no

1571

00:48:18,630 --> 00:48:17,599

it doesn't work like that you explain to

1572

00:48:20,230 --> 00:48:18,640

them why they're wrong and they say

1573

00:48:22,230 --> 00:48:20,240

you're a government chill

1574

00:48:23,349 --> 00:48:22,240

and they stopped talking to you so it's

1575

00:48:26,470 --> 00:48:23,359

a kick gloves

1576

00:48:27,910 --> 00:48:26,480

process that takes a lot of time uh when

1577

00:48:28,870 --> 00:48:27,920

i remind folks we're talking with mick

1578

00:48:31,910 --> 00:48:28,880

west who's got his

1579

00:48:33,270 --> 00:48:31,920

own podcast he's got his own book and

1580

00:48:35,589 --> 00:48:33,280

he's got his own youtube channel

1581

00:48:37,270 --> 00:48:35,599

a competitor to mine but i do hope that

1582

00:48:38,950 --> 00:48:37,280

you will tune in to both subscribe to

1583

00:48:39,510 --> 00:48:38,960

both even though it's a zero-sum game

1584

00:48:40,950 --> 00:48:39,520

mech

1585

00:48:43,109 --> 00:48:40,960

hopefully we'll find some fertile

1586

00:48:44,549 --> 00:48:43,119

cross-pollination i want to ask a

1587

00:48:45,349 --> 00:48:44,559

question that is being asked by a

1588

00:48:47,109 --> 00:48:45,359

listener

1589

00:48:48,549 --> 00:48:47,119

um who has a name that i was going gonna

1590

00:48:50,710 --> 00:48:48,559

choose for my first born

1591

00:48:51,910 --> 00:48:50,720

son his name is boiled pizza which is

1592

00:48:53,829 --> 00:48:51,920

making me hungry

1593

00:48:55,109 --> 00:48:53,839

uh to be honest but he asked a good

1594

00:48:55,510 --> 00:48:55,119

question which i'll rephrase a little

1595

00:48:57,750 --> 00:48:55,520

bit

1596

00:48:59,990 --> 00:48:57,760

uh mick i wanna ask you which uh debate

1597

00:49:00,630 --> 00:49:00,000

opponent on the other side of the ufo

1598

00:49:03,510 --> 00:49:00,640

aisle

1599

00:49:05,270 --> 00:49:03,520

would you most fear or do you most uh

1600

00:49:05,670 --> 00:49:05,280

feel is most kind of intimidating to

1601

00:49:11,589 --> 00:49:05,680

your

1602

00:49:13,430 --> 00:49:11,599

well i don't know i i i talked recently

1603

00:49:13,750 --> 00:49:13,440

with oh gosh i remember forget his name

1604

00:49:16,950 --> 00:49:13,760

now

1605

00:49:18,549 --> 00:49:16,960

um but the guy from the the scu i almost

1606

00:49:20,309 --> 00:49:18,559

apologized to him but uh

1607

00:49:22,470 --> 00:49:20,319

uh robert i think something but you know

1608

00:49:24,309 --> 00:49:22,480

he was a guy who had been kind of

1609

00:49:26,309 --> 00:49:24,319

asking me for a long time to have a

1610

00:49:27,430 --> 00:49:26,319

debate with him because you know he felt

1611

00:49:29,750 --> 00:49:27,440

like he could

1612

00:49:31,589 --> 00:49:29,760

uh obliterate me and we had you know a

1613

00:49:33,109 --> 00:49:31,599

reasonable chat and we we threshed out a

1614

00:49:34,470 --> 00:49:33,119

few things and we had some disagreements

1615

00:49:37,589 --> 00:49:34,480

and some agreements

1616

00:49:38,790 --> 00:49:37,599

i don't like to debate people i like to

1617

00:49:41,510 --> 00:49:38,800

have discussions with them

1618

00:49:42,630 --> 00:49:41,520

yeah i think there's no point trying to

1619

00:49:44,710 --> 00:49:42,640

you know try

1620

00:49:46,549 --> 00:49:44,720

try to be like who has the best argument

1621

00:49:47,910 --> 00:49:46,559

here we're not lawyers in a courtroom

1622

00:49:49,190 --> 00:49:47,920

trying to present a case

1623

00:49:51,670 --> 00:49:49,200

trying to get someone off you know

1624

00:49:53,510 --> 00:49:51,680

lawyers have to

1625

00:49:54,790 --> 00:49:53,520

just look at one side i don't want to

1626

00:49:57,030 --> 00:49:54,800

look at just one side i want to figure

1627

00:49:58,630 --> 00:49:57,040

out what's going on i'm not a lawyer i'm

1628

00:49:59,750 --> 00:49:58,640

an investigator i'm someone who's trying

1629

00:50:02,069 --> 00:49:59,760

to figure out

1630

00:50:04,390 --> 00:50:02,079

what actually happened in these cases

1631

00:50:05,670 --> 00:50:04,400

and so if anybody wants to talk to me

1632

00:50:07,190 --> 00:50:05,680

that's fine i mean if you wouldn't they

1633

00:50:08,790 --> 00:50:07,200

want to argue with me that's fine too

1634

00:50:10,549 --> 00:50:08,800

like i don't i don't mind that

1635

00:50:12,230 --> 00:50:10,559

you know if they want to try to point

1636

00:50:13,910 --> 00:50:12,240

out where i'm wrong that's great

1637

00:50:15,910 --> 00:50:13,920

because if people are pointing out where

1638

00:50:16,950 --> 00:50:15,920

i'm wrong we can have a discussion about

1639

00:50:18,390 --> 00:50:16,960

that and we can say

1640

00:50:20,950 --> 00:50:18,400

you know am i actually wrong you know

1641

00:50:21,270 --> 00:50:20,960

maybe maybe not so maybe i am and if i

1642

00:50:24,950 --> 00:50:21,280

am

1643

00:50:27,589 --> 00:50:24,960

i'll revise my position and move on

1644

00:50:29,430 --> 00:50:27,599

very good uh so we have a couple more

1645

00:50:31,910 --> 00:50:29,440

questions from the audience

1646

00:50:32,470 --> 00:50:31,920

and i will also conclude with some

1647

00:50:35,670 --> 00:50:32,480

questions

1648

00:50:37,270 --> 00:50:35,680

of my own so cooperating with the

1649

00:50:38,790 --> 00:50:37,280

uh to the stars academy which you

1650

00:50:40,390 --> 00:50:38,800

corrected me about of course

1651
00:50:41,990 --> 00:50:40,400
uh is not out of the question you would

1652
00:50:44,230 --> 00:50:42,000
love to have them

1653
00:50:45,990 --> 00:50:44,240
uh uh collaborate with you but so far

1654
00:50:47,589 --> 00:50:46,000
they have not uh accepted what do you

1655
00:50:49,510 --> 00:50:47,599
make of harry reid and

1656
00:50:51,510 --> 00:50:49,520
and uh you know getting involved in this

1657
00:50:53,349 --> 00:50:51,520
uh kind of make strange bedfellows with

1658
00:50:56,069 --> 00:50:53,359
marco rubio is that uh

1659
00:50:56,950 --> 00:50:56,079
did that pique your interest yeah well i

1660
00:50:59,750 --> 00:50:56,960
mean harry reid

1661
00:51:00,150 --> 00:50:59,760
has been a uh ufo enthusiast for a long

1662
00:51:03,829 --> 00:51:00,160
time

1663
00:51:05,750 --> 00:51:03,839

he got into ufos back in 1996 when he

1664

00:51:07,430 --> 00:51:05,760

i think first went to ufo convention

1665

00:51:07,990 --> 00:51:07,440

with her with his friend george knapp

1666

00:51:11,109 --> 00:51:08,000

who's a

1667

00:51:13,270 --> 00:51:11,119

a local las vegas journalist and he

1668

00:51:14,309 --> 00:51:13,280

he has a friend uh rob bigelow was the

1669

00:51:16,069 --> 00:51:14,319

guy behind

1670

00:51:17,430 --> 00:51:16,079

the a-tip program he got the original

1671

00:51:19,910 --> 00:51:17,440

latip

1672

00:51:22,790 --> 00:51:19,920

contract so you know he's he's been a

1673

00:51:24,870 --> 00:51:22,800

ufo enthusiast for a long time

1674

00:51:26,150 --> 00:51:24,880

uh i don't know about strange bedfellows

1675

00:51:27,910 --> 00:51:26,160

with with rubio it's

1676

00:51:29,750 --> 00:51:27,920

it's kind of in a way a kind of an

1677

00:51:33,109 --> 00:51:29,760

apolitical issue

1678

00:51:35,430 --> 00:51:33,119

um so you know if republicans want to

1679

00:51:37,109 --> 00:51:35,440

get interested in it then i don't think

1680

00:51:38,549 --> 00:51:37,119

they're going to be particularly you

1681

00:51:39,750 --> 00:51:38,559

know upset that they're working with

1682

00:51:41,910 --> 00:51:39,760

democrats on it

1683

00:51:43,670 --> 00:51:41,920

uh you have rubio and you have mark

1684

00:51:45,030 --> 00:51:43,680

warner who is the actual chief of the

1685

00:51:47,910 --> 00:51:45,040

intelligence committee

1686

00:51:48,790 --> 00:51:47,920

now that rubio was when trump was

1687

00:51:50,470 --> 00:51:48,800

president

1688

00:51:52,230 --> 00:51:50,480

and you know they're they're basically

1689

00:51:53,990 --> 00:51:52,240

saying the same thing that there are

1690

00:51:55,349 --> 00:51:54,000

things that the military can't always

1691

00:51:57,109 --> 00:51:55,359

identify and uh

1692

00:51:58,710 --> 00:51:57,119

that we should look into this because

1693

00:52:00,790 --> 00:51:58,720

like i said earlier

1694

00:52:02,630 --> 00:52:00,800

it's an issue so yeah i don't really see

1695

00:52:06,309 --> 00:52:02,640

any kind of political

1696

00:52:09,430 --> 00:52:07,349

and what do you say to those that

1697

00:52:09,910 --> 00:52:09,440

criticize you because you're a video

1698

00:52:13,270 --> 00:52:09,920

game

1699

00:52:13,829 --> 00:52:13,280

designer i mean uh for example i heard

1700

00:52:16,870 --> 00:52:13,839

fravor

1701
00:52:18,710 --> 00:52:16,880
comment on you uh well you know the the

1702
00:52:20,390 --> 00:52:18,720
tic tac analysis that you did

1703
00:52:21,910 --> 00:52:20,400
you know the plane is is you have the

1704
00:52:23,589 --> 00:52:21,920
gimbal but the plane is not

1705
00:52:25,750 --> 00:52:23,599
it's not banking it's just sort of

1706
00:52:26,069 --> 00:52:25,760
pivoting and aircraft don't really do

1707
00:52:33,270 --> 00:52:26,079
that

1708
00:52:34,630 --> 00:52:33,280
well uh video game programming is

1709
00:52:36,549 --> 00:52:34,640
actually fairly complicated

1710
00:52:38,230 --> 00:52:36,559
there's a lot of a lot of stuff going on

1711
00:52:39,990 --> 00:52:38,240
in there uh so the the and the

1712
00:52:41,670 --> 00:52:40,000
mathematics that we're talking about in

1713
00:52:43,910 --> 00:52:41,680

terms of things like gimbal rotation

1714

00:52:46,230 --> 00:52:43,920

and uh the axes of rotation and

1715

00:52:47,829 --> 00:52:46,240

three-dimensional transforms uh

1716

00:52:49,750 --> 00:52:47,839

are just the exact same types of things

1717

00:52:51,349 --> 00:52:49,760

that i do in video game programming so i

1718

00:52:52,870 --> 00:52:51,359

may not know the nuts and bolts

1719

00:52:54,549 --> 00:52:52,880

of you know what button to press in the

1720

00:52:56,630 --> 00:52:54,559

cockpit but i understand

1721

00:52:57,829 --> 00:52:56,640

what happens when a mirror rotates or i

1722

00:52:59,270 --> 00:52:57,839

understand what happens when

1723

00:53:01,510 --> 00:52:59,280

when a camera rotates and i understand

1724

00:53:03,510 --> 00:53:01,520

what gimbal lock is

1725

00:53:05,430 --> 00:53:03,520

and i can read i can read the pattern so

1726

00:53:07,750 --> 00:53:05,440

i can see what's going on inside

1727

00:53:09,190 --> 00:53:07,760

inside these cameras now fraver is great

1728

00:53:11,349 --> 00:53:09,200

at um

1729

00:53:13,589 --> 00:53:11,359

operating the equipment that doesn't

1730

00:53:13,990 --> 00:53:13,599

mean he necessarily knows every nuance

1731

00:53:16,790 --> 00:53:14,000

of what

1732

00:53:19,270 --> 00:53:16,800

might happen uh to it in various unusual

1733

00:53:20,950 --> 00:53:19,280

situations like with with the gimbal

1734

00:53:22,630 --> 00:53:20,960

i don't think he really had a good

1735

00:53:24,069 --> 00:53:22,640

rebuttal of uh the

1736

00:53:26,470 --> 00:53:24,079

fact that there is this gimbal role in

1737

00:53:28,549 --> 00:53:26,480

fact he explicitly said that there

1738

00:53:30,390 --> 00:53:28,559

wasn't a gimbal roll transition when you

1739

00:53:33,109 --> 00:53:30,400

go past zero degrees

1740

00:53:34,470 --> 00:53:33,119

and yet in underwater's video which he's

1741

00:53:35,990 --> 00:53:34,480

very familiar with

1742

00:53:38,069 --> 00:53:36,000

you can actually see the gimbal roll

1743

00:53:39,750 --> 00:53:38,079

happen you see the entire sky rotate

1744

00:53:42,150 --> 00:53:39,760

much more dramatically in fact than in

1745

00:53:43,670 --> 00:53:42,160

the gimbal video so

1746

00:53:45,430 --> 00:53:43,680

he's missing something that's right

1747

00:53:47,430 --> 00:53:45,440

there in front of his face

1748

00:53:49,510 --> 00:53:47,440

and i think if i was to be able to sit

1749

00:53:53,030 --> 00:53:49,520

down with him and respectfully

1750

00:53:54,390 --> 00:53:53,040

go through it with him i'm sure he could

1751
00:53:57,670 --> 00:53:54,400
show me things but i think i could

1752
00:53:59,270 --> 00:53:57,680
probably show him a few things as well

1753
00:54:00,790 --> 00:53:59,280
yeah i mean from a physics perspective

1754
00:54:02,470 --> 00:54:00,800
which is the way i hope to engage you

1755
00:54:04,630 --> 00:54:02,480
know i can't engage

1756
00:54:06,309 --> 00:54:04,640
other than the tools that i have which

1757
00:54:07,670 --> 00:54:06,319
are you know from the perspective of an

1758
00:54:10,230 --> 00:54:07,680
astrophysicist is

1759
00:54:11,270 --> 00:54:10,240
very learned in general relativity

1760
00:54:13,589 --> 00:54:11,280
quantum mechanics

1761
00:54:14,549 --> 00:54:13,599
uh thermodynamics et cetera you know

1762
00:54:17,270 --> 00:54:14,559
these objects

1763
00:54:17,589 --> 00:54:17,280

are you know potentially traversing you

1764

00:54:21,510 --> 00:54:17,599

know

1765

00:54:22,950 --> 00:54:21,520

interstellar phenomena

1766

00:54:25,270 --> 00:54:22,960

they would have to traverse vast

1767

00:54:28,790 --> 00:54:25,280

distances be controlled remotely

1768

00:54:30,630 --> 00:54:28,800

uh be autonomous because you know

1769

00:54:32,069 --> 00:54:30,640

they'd have to have some purpose in mind

1770

00:54:32,950 --> 00:54:32,079

and then they're operating in a very

1771

00:54:34,150 --> 00:54:32,960

narrow

1772

00:54:36,789 --> 00:54:34,160

you know region of the earth's

1773

00:54:38,150 --> 00:54:36,799

mesosphere um in very short durations

1774

00:54:41,430 --> 00:54:38,160

but then they happen to be

1775

00:54:44,710 --> 00:54:41,440

in a very very narrow region of

1776

00:54:46,789 --> 00:54:44,720

one country's warning areas um

1777

00:54:48,150 --> 00:54:46,799

you know that's defined by a obscure

1778

00:54:50,950 --> 00:54:48,160

administration

1779

00:54:52,710 --> 00:54:50,960

agency of the federal government um and

1780

00:54:53,990 --> 00:54:52,720

and they seem to show up preferentially

1781

00:54:56,549 --> 00:54:54,000

in one country

1782

00:54:58,870 --> 00:54:56,559

um and they don't show up you know when

1783

00:55:00,390 --> 00:54:58,880

venus is below the horizon as often

1784

00:55:01,910 --> 00:55:00,400

they don't show up outside of certain

1785

00:55:03,430 --> 00:55:01,920

flight paths um

1786

00:55:05,349 --> 00:55:03,440

and what do you make of also this kind

1787

00:55:07,510 --> 00:55:05,359

of uh resurgence of

1788

00:55:09,030 --> 00:55:07,520

of interest of course you know david

1789

00:55:11,750 --> 00:55:09,040

kaiser is professor of science

1790

00:55:12,390 --> 00:55:11,760

technology as well as physics at mit uh

1791

00:55:15,510 --> 00:55:12,400

wrote a book

1792

00:55:17,270 --> 00:55:15,520

recently quantum legacies about the how

1793

00:55:19,030 --> 00:55:17,280

the atom and splitting the atom and the

1794

00:55:21,349 --> 00:55:19,040

quantum revolution

1795

00:55:23,510 --> 00:55:21,359

led to many similar related phenomena

1796

00:55:24,230 --> 00:55:23,520

both the threat of nuclear holocaust but

1797

00:55:26,789 --> 00:55:24,240

also

1798

00:55:27,910 --> 00:55:26,799

the resurgence or the surge of interest

1799

00:55:31,670 --> 00:55:27,920

in radar

1800

00:55:34,630 --> 00:55:31,680

in ufos etc and now we kind of see a new

1801
00:55:35,910 --> 00:55:34,640
uh twin paradox coming about where we

1802
00:55:39,030 --> 00:55:35,920
have a resurgence

1803
00:55:41,829 --> 00:55:39,040
or a surge in interest in interplanetary

1804
00:55:42,630 --> 00:55:41,839
uh uh travel a courtesy of spacex

1805
00:55:44,549 --> 00:55:42,640
perhaps

1806
00:55:46,309 --> 00:55:44,559
we have exploration going back to the

1807
00:55:47,190 --> 00:55:46,319
moon not the space age space race

1808
00:55:49,750 --> 00:55:47,200
originally

1809
00:55:51,190 --> 00:55:49,760
we have uh hopes for fusion reactors on

1810
00:55:53,670 --> 00:55:51,200
earth we have hopes for

1811
00:55:55,510 --> 00:55:53,680
artificial intelligence machine learning

1812
00:55:58,390 --> 00:55:55,520
it's sort of like paralleling

1813
00:56:00,069 --> 00:55:58,400

the post-war dayton but cold war instead

1814

00:56:00,710 --> 00:56:00,079

of russia we may have china as we've

1815

00:56:02,390 --> 00:56:00,720

said

1816

00:56:04,549 --> 00:56:02,400

um do you make of it that you know kind

1817

00:56:07,190 --> 00:56:04,559

of this arises in amelia

1818

00:56:08,549 --> 00:56:07,200

of vast technological kind of um what

1819

00:56:10,710 --> 00:56:08,559

they call future shock

1820

00:56:12,309 --> 00:56:10,720

is that to be expected in in such a

1821

00:56:14,950 --> 00:56:12,319

milieu

1822

00:56:16,309 --> 00:56:14,960

i think so uh but i'm not sure that's

1823

00:56:16,870 --> 00:56:16,319

what's happening here i'm not sure

1824

00:56:19,349 --> 00:56:16,880

what's

1825

00:56:20,870 --> 00:56:19,359

with the current ufo flap it's actually

1826

00:56:25,349 --> 00:56:20,880

really any difference to

1827

00:56:27,910 --> 00:56:25,359

the the ufo flaps of the 1940s and 1950s

1828

00:56:28,789 --> 00:56:27,920

now back in the the 40s and 50s we we

1829

00:56:31,829 --> 00:56:28,799

had a very

1830

00:56:34,630 --> 00:56:31,839

um kind of interesting technological

1831

00:56:36,789 --> 00:56:34,640

uh backdrop which was the the threat of

1832

00:56:38,309 --> 00:56:36,799

nuclear weapons and the the promise of

1833

00:56:40,630 --> 00:56:38,319

nuclear power

1834

00:56:41,349 --> 00:56:40,640

uh so we we had this kind of new

1835

00:56:42,870 --> 00:56:41,359

technology

1836

00:56:45,109 --> 00:56:42,880

and a lot of people theorized at the

1837

00:56:47,670 --> 00:56:45,119

time that uh flying saucers were

1838

00:56:49,109 --> 00:56:47,680

actually russian nuclear-powered planes

1839

00:56:50,950 --> 00:56:49,119

and that somehow that the russians had

1840

00:56:52,870 --> 00:56:50,960

done this technological leap which is

1841

00:56:54,549 --> 00:56:52,880

something people theorize now that

1842

00:56:57,190 --> 00:56:54,559

what we're seeing is an adversary who

1843

00:56:59,030 --> 00:56:57,200

has developed some kind of warp drive

1844

00:57:00,470 --> 00:56:59,040

so it's very it seems very very similar

1845

00:57:01,990 --> 00:57:00,480

but i don't think there's this kind of

1846

00:57:04,230 --> 00:57:02,000

similar backdrop

1847

00:57:05,349 --> 00:57:04,240

uh in in terms of an advancing

1848

00:57:07,829 --> 00:57:05,359

technology

1849

00:57:09,510 --> 00:57:07,839

i mean sure there's the the space uh

1850

00:57:12,309 --> 00:57:09,520

spacex aspect of it but

1851
00:57:14,390 --> 00:57:12,319
and that's contributed but i think more

1852
00:57:16,309 --> 00:57:14,400
spacex has contributed because of the

1853
00:57:18,630 --> 00:57:16,319
the spacex satellites and the

1854
00:57:21,349 --> 00:57:18,640
the constellation trains of satellites

1855
00:57:23,750 --> 00:57:21,359
are still being mistaken for ufos

1856
00:57:24,549 --> 00:57:23,760
my feeling isn't really the there's this

1857
00:57:28,710 --> 00:57:24,559
big

1858
00:57:29,990 --> 00:57:28,720
represented by a shift in in perceptions

1859
00:57:31,829 --> 00:57:30,000
of ufos

1860
00:57:34,150 --> 00:57:31,839
i think what we're seeing now is really

1861
00:57:37,589 --> 00:57:34,160
essentially uh

1862
00:57:39,430 --> 00:57:37,599
the result of a fairly good pr program

1863
00:57:41,750 --> 00:57:39,440

by the the groups of people who are

1864

00:57:42,630 --> 00:57:41,760

interested in in ufo disclosure i mean

1865

00:57:45,109 --> 00:57:42,640

going back to

1866

00:57:45,829 --> 00:57:45,119

harry reid and rob biglow and you know

1867

00:57:47,670 --> 00:57:45,839

tom de long

1868

00:57:49,670 --> 00:57:47,680

and and luella zonda and people like

1869

00:57:53,109 --> 00:57:49,680

that they're doing a good job

1870

00:57:56,069 --> 00:57:53,119

of getting it out there in the media

1871

00:57:58,230 --> 00:57:56,079

uh tim wilson is saying uh the names of

1872

00:57:59,670 --> 00:57:58,240

the videos go fast gimbal

1873

00:58:01,589 --> 00:57:59,680

are clear indications that the

1874

00:58:02,390 --> 00:58:01,599

department of defense realize what they

1875

00:58:06,950 --> 00:58:02,400

are

1876

00:58:09,430 --> 00:58:06,960

make of that

1877

00:58:10,230 --> 00:58:09,440

uh it could be that the the names of the

1878

00:58:11,990 --> 00:58:10,240

videos

1879

00:58:13,510 --> 00:58:12,000

represent what's actually in them in

1880

00:58:15,589 --> 00:58:13,520

terms of uh

1881

00:58:17,589 --> 00:58:15,599

the analysis of them like the go fast

1882

00:58:19,349 --> 00:58:17,599

video you can think of that both ways

1883

00:58:21,910 --> 00:58:19,359

because go fast

1884

00:58:22,950 --> 00:58:21,920

looks like it's going fast so if they

1885

00:58:23,990 --> 00:58:22,960

were really trolling people they would

1886

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

call it go slow

1887

00:58:27,670 --> 00:58:25,440

because it's actually going slow and

1888

00:58:29,589 --> 00:58:27,680

that would be the real explanation

1889

00:58:31,109 --> 00:58:29,599

the gimbal video i think is is perhaps

1890

00:58:32,549 --> 00:58:31,119

the more telling file name

1891

00:58:34,950 --> 00:58:32,559

and these are actually the file names

1892

00:58:37,990 --> 00:58:34,960

that were released by the dod

1893

00:58:39,349 --> 00:58:38,000

uh and because the the rotation of the

1894

00:58:42,470 --> 00:58:39,359

gimbal craft

1895

00:58:44,309 --> 00:58:42,480

uh appears to be a gimbal lock

1896

00:58:46,789 --> 00:58:44,319

and a gimbal lock artifact the camera

1897

00:58:48,870 --> 00:58:46,799

traverses zero degrees it has to rotate

1898

00:58:50,789 --> 00:58:48,880

as it at some time while it passes zero

1899

00:58:52,870 --> 00:58:50,799

degrees and that causes

1900

00:58:53,990 --> 00:58:52,880

uh the horizon to rotate relative to

1901
00:58:55,510 --> 00:58:54,000
that the camera

1902
00:58:57,349 --> 00:58:55,520
which means that the glares are now at

1903
00:58:59,430 --> 00:58:57,359
an angle relative to the horizon

1904
00:59:01,349 --> 00:58:59,440
and then the d rotation mechanism has to

1905
00:59:03,109 --> 00:59:01,359
rotate the horizon back which means that

1906
00:59:05,109 --> 00:59:03,119
the glare is now rotated

1907
00:59:06,309 --> 00:59:05,119
in the scene relative to where it was

1908
00:59:09,589 --> 00:59:06,319
before so

1909
00:59:11,270 --> 00:59:09,599
yeah that it could well be that this

1910
00:59:13,510 --> 00:59:11,280
this file name gimbal

1911
00:59:17,430 --> 00:59:13,520
represents the actual explanation of

1912
00:59:22,069 --> 00:59:19,190
uh so we have a question from philip

1913
00:59:23,349 --> 00:59:22,079

shane who is a good friend and host of

1914

00:59:26,150 --> 00:59:23,359

the what the if

1915

00:59:26,549 --> 00:59:26,160

uh podcast and let me see if i can call

1916

00:59:30,230 --> 00:59:26,559

up

1917

00:59:32,309 --> 00:59:30,240

his um his this question so philip is

1918

00:59:34,549 --> 00:59:32,319

asking would noah be a proper

1919

00:59:35,829 --> 00:59:34,559

national oceanographic and atmospheric

1920

00:59:37,430 --> 00:59:35,839

administration

1921

00:59:40,150 --> 00:59:37,440

would they be a proper agency to

1922

00:59:42,789 --> 00:59:40,160

investigate um uaps

1923

00:59:43,510 --> 00:59:42,799

and i think that uaps he's saying should

1924

00:59:47,750 --> 00:59:43,520

be called

1925

00:59:49,510 --> 00:59:47,760

unidentified atmospheric phenomena

1926

00:59:50,870 --> 00:59:49,520

well that's certainly a possibility and

1927

00:59:52,309 --> 00:59:50,880

you know a lot of the times when people

1928

00:59:53,670 --> 00:59:52,319

point to things in the sky they are

1929

00:59:55,030 --> 00:59:53,680

actually pointing at atmospheric

1930

00:59:56,870 --> 00:59:55,040

phenomena they're pointing at things

1931

01:00:00,150 --> 00:59:56,880

like clouds or things like

1932

01:00:02,470 --> 01:00:00,160

uh inversion layers causing some kind of

1933

01:00:03,510 --> 01:00:02,480

mirage like a like a fatima or ghana

1934

01:00:06,230 --> 01:00:03,520

type mirage or

1935

01:00:07,270 --> 01:00:06,240

superior mirage where something that's

1936

01:00:09,750 --> 01:00:07,280

on the horizon

1937

01:00:10,630 --> 01:00:09,760

appears like it's floating way up above

1938

01:00:13,670 --> 01:00:10,640

it

1939

01:00:14,069 --> 01:00:13,680

so i don't think obviously that every

1940

01:00:15,910 --> 01:00:14,079

single

1941

01:00:17,510 --> 01:00:15,920

ufo is some kind of atmospheric

1942

01:00:19,829 --> 01:00:17,520

phenomena but

1943

01:00:21,510 --> 01:00:19,839

uh certainly people who are experts in

1944

01:00:23,109 --> 01:00:21,520

that that type of thing that noah could

1945

01:00:25,190 --> 01:00:23,119

be involved in the discussion and

1946

01:00:26,470 --> 01:00:25,200

nasa has a lot of atmospheric scientists

1947

01:00:29,910 --> 01:00:26,480

as well so

1948

01:00:33,109 --> 01:00:29,920

yeah i think uh a europa a uap

1949

01:00:35,109 --> 01:00:33,119

task force of any any any quality

1950

01:00:37,349 --> 01:00:35,119

would have an atmospheric scientist on

1951

01:00:40,150 --> 01:00:37,359

board

1952

01:00:41,589 --> 01:00:40,160

and the last uh sort of question that um

1953

01:00:41,990 --> 01:00:41,599

someone's asking if you would like a tic

1954

01:00:44,630 --> 01:00:42,000

tac

1955

01:00:45,349 --> 01:00:44,640

i think that's not called for i think

1956

01:00:47,270 --> 01:00:45,359

that's weight

1957

01:00:49,829 --> 01:00:47,280

out of order nobody wants a tic tac

1958

01:00:53,030 --> 01:00:49,839

right now this podcast is sponsored by

1959

01:00:55,270 --> 01:00:53,040

by bubbalicious of course um i wanna

1960

01:00:56,470 --> 01:00:55,280

i am a big fan of tic tacs actually i

1961

01:00:58,630 --> 01:00:56,480

have my empty box

1962

01:00:59,750 --> 01:00:58,640

that i just finished earlier the gum of

1963

01:01:01,510 --> 01:00:59,760

choice you need a

1964

01:01:03,349 --> 01:01:01,520

need a new supply so thank you for those

1965

01:01:06,390 --> 01:01:03,359

super chats i'll make sure

1966

01:01:08,470 --> 01:01:06,400

mick gets a tick an attack i'm sorry i

1967

01:01:09,990 --> 01:01:08,480

said tick tock later that earlier that

1968

01:01:10,950 --> 01:01:10,000

must have been i was talking too much

1969

01:01:12,470 --> 01:01:10,960

about chinese

1970

01:01:14,230 --> 01:01:12,480

that's why i'm being so nice and saying

1971

01:01:14,870 --> 01:01:14,240

the portuguese are responsible for all

1972

01:01:17,190 --> 01:01:14,880

this

1973

01:01:18,710 --> 01:01:17,200

um so i also want to talk just the last

1974

01:01:19,190 --> 01:01:18,720

points about kind of the scientific

1975

01:01:21,270 --> 01:01:19,200

method

1976

01:01:23,829 --> 01:01:21,280

scientific results i think there is sort

1977

01:01:24,150 --> 01:01:23,839

of a wish fulfillment in some sense that

1978

01:01:26,870 --> 01:01:24,160

um

1979

01:01:29,109 --> 01:01:26,880

as i said earlier no astronomer worth

1980

01:01:31,030 --> 01:01:29,119

his or her salt would turn down

1981

01:01:32,470 --> 01:01:31,040

you know the opportunity to study these

1982

01:01:34,390 --> 01:01:32,480

phenomena uh first of all be

1983

01:01:35,030 --> 01:01:34,400

instantaneous tenure i have a colleague

1984

01:01:37,030 --> 01:01:35,040

here

1985

01:01:39,109 --> 01:01:37,040

professor shelly wright she studies

1986

01:01:39,670 --> 01:01:39,119

optical seti she's looking for burst of

1987

01:01:41,270 --> 01:01:39,680

light

1988

01:01:42,789 --> 01:01:41,280

not far from where you are at the lick

1989

01:01:45,589 --> 01:01:42,799

observatory

1990

01:01:46,950 --> 01:01:45,599

looking for blast of light from alien

1991

01:01:49,109 --> 01:01:46,960

civilizations

1992

01:01:50,069 --> 01:01:49,119

this is legitimate scientific study uh

1993

01:01:52,230 --> 01:01:50,079

it has been

1994

01:01:53,670 --> 01:01:52,240

studied for 60 years plus and tomorrow

1995

01:01:54,630 --> 01:01:53,680

when seth shellstack comes on the

1996

01:01:56,150 --> 01:01:54,640

podcast

1997

01:01:58,549 --> 01:01:56,160

i'm going to ask him uh when this was

1998

01:01:59,349 --> 01:01:58,559

conceived in the 1960s frank drake and

1999

01:02:03,910 --> 01:01:59,359

others

2000

01:02:05,670 --> 01:02:03,920

thought it would be maybe a quick search

2001

01:02:07,430 --> 01:02:05,680

and and it was kind of spare time on

2002

01:02:09,190 --> 01:02:07,440

telescopes radio telescopes

2003

01:02:11,430 --> 01:02:09,200

it's now lasted you know in the seventh

2004

01:02:13,430 --> 01:02:11,440

decade when do you stop searching

2005

01:02:14,870 --> 01:02:13,440

um because there is a phenomena look

2006

01:02:17,190 --> 01:02:14,880

elsewhere you know if you look

2007

01:02:17,910 --> 01:02:17,200

long enough you will start to see three

2008

01:02:20,710 --> 01:02:17,920

sigma

2009

01:02:21,750 --> 01:02:20,720

standard deviation type effects but you

2010

01:02:23,990 --> 01:02:21,760

know is that

2011

01:02:25,829 --> 01:02:24,000

justifiable is that self-justifiable is

2012

01:02:27,589 --> 01:02:25,839

there a sunk cost hypothesis

2013

01:02:29,510 --> 01:02:27,599

i know this isn't your field but you

2014

01:02:30,309 --> 01:02:29,520

know when do you stop looking or when do

2015

01:02:31,670 --> 01:02:30,319

you double down

2016

01:02:33,270 --> 01:02:31,680

what do you think about the search for

2017

01:02:34,470 --> 01:02:33,280

extraterrestrial intelligence totally

2018

01:02:35,750 --> 01:02:34,480

distinct from what you and i have been

2019

01:02:37,750 --> 01:02:35,760

talking about

2020

01:02:39,349 --> 01:02:37,760

yeah well i think uh that there's

2021

01:02:41,510 --> 01:02:39,359

there's two two

2022

01:02:42,950 --> 01:02:41,520

searches really there's the search out

2023

01:02:44,549 --> 01:02:42,960

there and then there's the search here

2024

01:02:47,029 --> 01:02:44,559

and you know the ufo stuff is obviously

2025

01:02:49,190 --> 01:02:47,039

the search here but the external search

2026

01:02:50,549 --> 01:02:49,200

i think is something that you know where

2027

01:02:52,470 --> 01:02:50,559

i would never stop looking

2028

01:02:53,829 --> 01:02:52,480

for that i don't i don't think you're

2029

01:02:56,630 --> 01:02:53,839

ever going to exhaust

2030

01:02:57,589 --> 01:02:56,640

the the data sets that are out there or

2031

01:02:59,109 --> 01:02:57,599

you're not going to

2032

01:03:00,870 --> 01:02:59,119

exhaust different ways of looking for

2033

01:03:03,109 --> 01:03:00,880

things like different ways of looking

2034

01:03:05,270 --> 01:03:03,119

for signatures in exoplanet uh

2035

01:03:08,470 --> 01:03:05,280

atmospheres and uh

2036

01:03:10,390 --> 01:03:08,480

deep variants in in

2037

01:03:11,670 --> 01:03:10,400

solar radiation from from other stars

2038

01:03:12,710 --> 01:03:11,680

for things like dyson spheres and

2039

01:03:15,190 --> 01:03:12,720

whatnot

2040

01:03:16,710 --> 01:03:15,200

various dyson structures so there's

2041

01:03:19,349 --> 01:03:16,720

always going to be things to look for

2042

01:03:20,870 --> 01:03:19,359

uh i think yeah sure like you might get

2043

01:03:22,710 --> 01:03:20,880

some kind of false positive

2044

01:03:24,630 --> 01:03:22,720

eventually but that doesn't mean that

2045

01:03:26,069 --> 01:03:24,640

you you don't stop looking it just means

2046

01:03:27,270 --> 01:03:26,079

that's just another data point

2047

01:03:28,549 --> 01:03:27,280

because it's not going to prove its

2048

01:03:30,150 --> 01:03:28,559

people because you know people will do

2049

01:03:31,670 --> 01:03:30,160

that do the math and you know figure out

2050

01:03:34,390 --> 01:03:31,680

that that doesn't actually

2051
01:03:35,029 --> 01:03:34,400
uh prove that something exists out there

2052
01:03:36,630 --> 01:03:35,039
and you you

2053
01:03:38,150 --> 01:03:36,640
follow up with the experiment you'd look

2054
01:03:39,670 --> 01:03:38,160
in the same bit of the sky and you know

2055
01:03:42,789 --> 01:03:39,680
see what else is out there

2056
01:03:43,750 --> 01:03:42,799
so i i i'm a big science fiction fan

2057
01:03:45,910 --> 01:03:43,760
like i said big

2058
01:03:47,190 --> 01:03:45,920
arthur c clarke uh fan my one of my

2059
01:03:48,549 --> 01:03:47,200
favorite books when i was younger was

2060
01:03:52,150 --> 01:03:48,559
rendezvous with rama

2061
01:03:52,630 --> 01:03:52,160
and i just love the idea of uh of aliens

2062
01:03:55,510 --> 01:03:52,640
and

2063
01:03:57,029 --> 01:03:55,520

i think we should keep looking so i want

2064

01:03:59,109 --> 01:03:57,039

to build on a question by

2065

01:04:00,870 --> 01:03:59,119

tim as well um but i want to ask you

2066

01:04:03,029 --> 01:04:00,880

know your game designer

2067

01:04:04,150 --> 01:04:03,039

uh let's fast forward you know 20

2068

01:04:06,390 --> 01:04:04,160

millennia

2069

01:04:07,829 --> 01:04:06,400

let's let's apply moore's law you know

2070

01:04:09,430 --> 01:04:07,839

what do video games look like

2071

01:04:11,190 --> 01:04:09,440

what does uh what does you know

2072

01:04:12,549 --> 01:04:11,200

computational technology look like what

2073

01:04:14,870 --> 01:04:12,559

does ar look like

2074

01:04:16,870 --> 01:04:14,880

um what if there are you know advances

2075

01:04:18,390 --> 01:04:16,880

uh keeping a pace first of all is it

2076

01:04:19,829 --> 01:04:18,400

possible can we keep progressing

2077

01:04:22,630 --> 01:04:19,839

according to moore's law

2078

01:04:23,029 --> 01:04:22,640

just thinking about video games yeah

2079

01:04:25,029 --> 01:04:23,039

well

2080

01:04:26,870 --> 01:04:25,039

uh you think about i mean video games

2081

01:04:28,710 --> 01:04:26,880

are essentially simulations of reality

2082

01:04:31,349 --> 01:04:28,720

and you know what we're talking about

2083

01:04:33,349 --> 01:04:31,359

here is is getting more and more

2084

01:04:34,870 --> 01:04:33,359

high fidelity simulations that more

2085

01:04:37,910 --> 01:04:34,880

closely uh

2086

01:04:39,829 --> 01:04:37,920

resemble the real world and uh

2087

01:04:41,589 --> 01:04:39,839

yeah moore's law does does have certain

2088

01:04:43,430 --> 01:04:41,599

physical limits you you can't keep

2089

01:04:43,829 --> 01:04:43,440

making transistors smaller and smaller

2090

01:04:47,190 --> 01:04:43,839

because

2091

01:04:47,910 --> 01:04:47,200

you know atoms uh are not divisible in

2092

01:04:51,349 --> 01:04:47,920

terms of

2093

01:04:52,829 --> 01:04:51,359

you know silicon but uh you can have

2094

01:04:55,990 --> 01:04:52,839

massively parallel

2095

01:04:58,710 --> 01:04:56,000

computation and you can

2096

01:05:00,309 --> 01:04:58,720

extend that out almost indefinitely and

2097

01:05:03,270 --> 01:05:00,319

all it requires is space

2098

01:05:04,870 --> 01:05:03,280

material and energy so we could build

2099

01:05:06,789 --> 01:05:04,880

theoretically in the future very very

2100

01:05:08,150 --> 01:05:06,799

large computers that could use

2101
01:05:09,670 --> 01:05:08,160
like like i was mentioned the dyson

2102
01:05:11,430 --> 01:05:09,680
sphere which is a sphere that

2103
01:05:12,150 --> 01:05:11,440
encompasses a star to use all of the

2104
01:05:14,390 --> 01:05:12,160
energy

2105
01:05:15,990 --> 01:05:14,400
that the star is putting out you could

2106
01:05:17,829 --> 01:05:16,000
make a um

2107
01:05:19,910 --> 01:05:17,839
a supercomputer which was the size of a

2108
01:05:21,750 --> 01:05:19,920
dyson sphere which would be

2109
01:05:24,069 --> 01:05:21,760
incredibly incredibly large and you

2110
01:05:25,670 --> 01:05:24,079
could do a very impressive video game

2111
01:05:27,029 --> 01:05:25,680
with a computer that size

2112
01:05:28,150 --> 01:05:27,039
i don't know who would be playing it but

2113
01:05:30,069 --> 01:05:28,160

essentially what you're talking about

2114

01:05:32,950 --> 01:05:30,079

there is a simulation

2115

01:05:34,069 --> 01:05:32,960

that is indistinguishable from reality

2116

01:05:35,670 --> 01:05:34,079

you know you know of course that leads

2117

01:05:35,990 --> 01:05:35,680

you to the simulation hypothesis are we

2118

01:05:40,230 --> 01:05:36,000

living

2119

01:05:42,630 --> 01:05:40,240

in a simulation now uh but yeah i think

2120

01:05:44,549 --> 01:05:42,640

yeah perhaps like you know going along

2121

01:05:46,390 --> 01:05:44,559

those lines you think could aliens

2122

01:05:47,589 --> 01:05:46,400

have developed some kind of

2123

01:05:51,190 --> 01:05:47,599

supercomputer like that

2124

01:05:52,789 --> 01:05:51,200

and if they have like probably it that

2125

01:05:53,910 --> 01:05:52,799

supercomputer is going to be vastly more

2126
01:05:56,390 --> 01:05:53,920
intelligent

2127
01:05:58,150 --> 01:05:56,400
than those aliens themselves were if you

2128
01:05:59,910 --> 01:05:58,160
get enough computing power

2129
01:06:02,630 --> 01:05:59,920
and you structure the thing right you're

2130
01:06:04,390 --> 01:06:02,640
going to get hyper intelligence which is

2131
01:06:07,990 --> 01:06:04,400
vastly more powerful than

2132
01:06:09,270 --> 01:06:08,000
uh than humans and which makes the case

2133
01:06:11,109 --> 01:06:09,280
that i think

2134
01:06:12,390 --> 01:06:11,119
if aliens do arrive they will probably

2135
01:06:14,390 --> 01:06:12,400
arrive in the form of

2136
01:06:17,349 --> 01:06:14,400
super intelligent robots rather than

2137
01:06:20,150 --> 01:06:17,359
aliens themselves

2138
01:06:20,630 --> 01:06:20,160

and thinking about uh you know kind of

2139

01:06:25,589 --> 01:06:20,640

the

2140

01:06:28,789 --> 01:06:25,599

think it's more likely than not

2141

01:06:32,069 --> 01:06:28,799

that the net result of this

2142

01:06:35,510 --> 01:06:32,079

uh release purportedly coming very soon

2143

01:06:37,829 --> 01:06:35,520

perhaps in a next day or two uh would be

2144

01:06:39,589 --> 01:06:37,839

would be almost amounting to just a

2145

01:06:41,349 --> 01:06:39,599

confirmation of what's been

2146

01:06:43,430 --> 01:06:41,359

already talked about in other words that

2147

01:06:44,950 --> 01:06:43,440

the pentagon could essentially just

2148

01:06:47,029 --> 01:06:44,960

release what's already been released

2149

01:06:48,630 --> 01:06:47,039

maybe wrap it up with some you know

2150

01:06:51,349 --> 01:06:48,640

government stamp with some

2151
01:06:52,309 --> 01:06:51,359
redacted tape put over some some some

2152
01:06:55,430 --> 01:06:52,319
splotches and

2153
01:06:56,069 --> 01:06:55,440
satisfy the rubio commission and so

2154
01:06:57,750 --> 01:06:56,079
forth

2155
01:06:59,270 --> 01:06:57,760
or do you think you know they basically

2156
01:07:00,390 --> 01:06:59,280
have to release something as eric

2157
01:07:02,710 --> 01:07:00,400
weinstein has said

2158
01:07:03,910 --> 01:07:02,720
you know how do we how do we you know

2159
01:07:06,470 --> 01:07:03,920
kind of uh

2160
01:07:07,430 --> 01:07:06,480
troll the the state and say oh we've got

2161
01:07:09,270 --> 01:07:07,440
all this information we're going to

2162
01:07:10,390 --> 01:07:09,280
release it but then simultaneously

2163
01:07:13,109 --> 01:07:10,400

release almost nothing

2164

01:07:14,710 --> 01:07:13,119

i mean isn't that basically uh beyond

2165

01:07:17,349 --> 01:07:14,720

the pale of what a government could do

2166

01:07:18,789 --> 01:07:17,359

to its citizens well they haven't said

2167

01:07:20,710 --> 01:07:18,799

that they've got all this information

2168

01:07:21,910 --> 01:07:20,720

uh louis elizondo has said he's got all

2169

01:07:23,670 --> 01:07:21,920

the information but he's not in the

2170

01:07:26,470 --> 01:07:23,680

pentagon anymore he's uh he

2171

01:07:27,670 --> 01:07:26,480

you know he left it several years ago

2172

01:07:28,789 --> 01:07:27,680

various other people have said things

2173

01:07:31,109 --> 01:07:28,799

but the actual pentagon

2174

01:07:32,789 --> 01:07:31,119

hasn't really said that they've got lots

2175

01:07:34,230 --> 01:07:32,799

of information they're going to release

2176
01:07:35,910 --> 01:07:34,240
they said they're going to cooperate

2177
01:07:37,829 --> 01:07:35,920
with the inquiry uh

2178
01:07:39,270 --> 01:07:37,839
and they they're going to do what was

2179
01:07:40,150 --> 01:07:39,280
mandated by congress so you've got to

2180
01:07:42,390 --> 01:07:40,160
look at what

2181
01:07:43,990 --> 01:07:42,400
what does the bill actually ask and

2182
01:07:48,069 --> 01:07:44,000
essentially it's asking for

2183
01:07:51,029 --> 01:07:48,079
details of investigations into into uaps

2184
01:07:51,910 --> 01:07:51,039
uh which you know they but they don't

2185
01:07:53,270 --> 01:07:51,920
have to give you

2186
01:07:55,270 --> 01:07:53,280
stuff that is classified they could have

2187
01:07:56,150 --> 01:07:55,280
a classified annex which is a data

2188
01:07:59,349 --> 01:07:56,160

repository

2189

01:08:01,430 --> 01:07:59,359
of all the classified stuff so i don't

2190

01:08:03,670 --> 01:08:01,440
think that they are

2191

01:08:05,430 --> 01:08:03,680
obligated in any way to give some kind

2192

01:08:07,190 --> 01:08:05,440
of huge data dump if that's what eric

2193

01:08:09,510 --> 01:08:07,200
weinstein was saying

2194

01:08:10,630 --> 01:08:09,520
i think what we're likely to get is is

2195

01:08:13,829 --> 01:08:10,640
basically a

2196

01:08:14,630 --> 01:08:13,839
an overview of the situation i hope it

2197

01:08:17,669 --> 01:08:14,640
is one

2198

01:08:18,309 --> 01:08:17,679
that puts things in correct context and

2199

01:08:21,349 --> 01:08:18,319
doesn't

2200

01:08:22,870 --> 01:08:21,359
engage in speculation uh i think it will

2201
01:08:24,630 --> 01:08:22,880
probably talk about the real issues that

2202
01:08:25,669 --> 01:08:24,640
we have within identified objects like

2203
01:08:28,789 --> 01:08:25,679
you know drones and

2204
01:08:31,749 --> 01:08:28,799
airspace airspace incursions and pilots

2205
01:08:32,390 --> 01:08:31,759
uh not being able to identify things and

2206
01:08:35,510 --> 01:08:32,400
um

2207
01:08:38,149 --> 01:08:35,520
i i do not anticipate

2208
01:08:39,829 --> 01:08:38,159
that things will change very much

2209
01:08:40,309 --> 01:08:39,839
because i think what will happen is that

2210
01:08:43,110 --> 01:08:40,319
the

2211
01:08:44,630 --> 01:08:43,120
ufo fans are going to get angry that not

2212
01:08:46,309 --> 01:08:44,640
enough was released

2213
01:08:47,749 --> 01:08:46,319

and i will probably be a bit

2214

01:08:49,510 --> 01:08:47,759

disappointed that they

2215

01:08:53,110 --> 01:08:49,520

didn't actually clear things up a bit

2216

01:08:54,870 --> 01:08:53,120

more and we'll just go on from there

2217

01:08:56,470 --> 01:08:54,880

yeah so you know i've had on as i said

2218

01:08:59,430 --> 01:08:56,480

uh many different uh

2219

01:08:59,829 --> 01:08:59,440

perspectives from perspectives differing

2220

01:09:01,669 --> 01:08:59,839

on

2221

01:09:02,950 --> 01:09:01,679

the properties of bitcoin from michael

2222

01:09:05,110 --> 01:09:02,960

saylor to gold

2223

01:09:07,189 --> 01:09:05,120

on peter schiff from proponents of

2224

01:09:10,309 --> 01:09:07,199

string theory like michio kaku

2225

01:09:11,829 --> 01:09:10,319

to opponents of string theory like avi

2226

01:09:13,669 --> 01:09:11,839

loeb who also has

2227

01:09:15,189 --> 01:09:13,679

conjectures about alien techno

2228

01:09:16,309 --> 01:09:15,199

signatures and maybe we could talk about

2229

01:09:18,870 --> 01:09:16,319

that for a second

2230

01:09:20,149 --> 01:09:18,880

um ufos are the ultimate form of techno

2231

01:09:22,390 --> 01:09:20,159

signatures right so

2232

01:09:23,669 --> 01:09:22,400

it surprises me that that the foremost

2233

01:09:25,990 --> 01:09:23,679

proponents of

2234

01:09:26,950 --> 01:09:26,000

techno signatures like avi and like

2235

01:09:28,709 --> 01:09:26,960

michio kaku

2236

01:09:30,070 --> 01:09:28,719

who have thought about aliens in great

2237

01:09:31,030 --> 01:09:30,080

detail and discussed that with me on my

2238

01:09:32,630 --> 01:09:31,040

podcast

2239

01:09:34,149 --> 01:09:32,640

and i could put links and cards and so

2240

01:09:35,669 --> 01:09:34,159

forth later on um

2241

01:09:37,669 --> 01:09:35,679

but uh but you know they don't seem to

2242

01:09:38,709 --> 01:09:37,679

be advocating that these data really are

2243

01:09:41,749 --> 01:09:38,719

substantive

2244

01:09:43,990 --> 01:09:41,759

for the existence of of alien

2245

01:09:45,110 --> 01:09:44,000

presence or technology what do you make

2246

01:09:46,950 --> 01:09:45,120

of that should that be

2247

01:09:48,630 --> 01:09:46,960

dismissed or could that just be a case

2248

01:09:51,189 --> 01:09:48,640

of well they're not pilots so

2249

01:09:52,309 --> 01:09:51,199

we shouldn't trust them well now i mean

2250

01:09:54,070 --> 01:09:52,319

you've got to look at the evidence the

2251

01:09:54,950 --> 01:09:54,080

evidence really isn't indicative of

2252

01:09:57,750 --> 01:09:54,960

aliens

2253

01:09:57,990 --> 01:09:57,760

uh people are seeing things that you

2254

01:09:59,430 --> 01:09:58,000

know

2255

01:10:01,270 --> 01:09:59,440

they can't explain but that doesn't mean

2256

01:10:02,870 --> 01:10:01,280

that they're aliens you know there's a

2257

01:10:05,270 --> 01:10:02,880

multiple multitude of possible

2258

01:10:08,470 --> 01:10:05,280

explanations running all the way from

2259

01:10:10,790 --> 01:10:08,480

uh people misperceiving things

2260

01:10:14,470 --> 01:10:10,800

uh to various types of natural phenomena

2261

01:10:16,070 --> 01:10:14,480

or things like foreign drones or even

2262

01:10:17,750 --> 01:10:16,080

drones from like the kid down the road

2263

01:10:19,590 --> 01:10:17,760

that's flying up over your house

2264

01:10:21,830 --> 01:10:19,600

there's all kinds of explanations that

2265

01:10:24,310 --> 01:10:21,840

are generally a better fit

2266

01:10:25,669 --> 01:10:24,320

than the idea of aliens the aliens is a

2267

01:10:28,950 --> 01:10:25,679

an extraordinary

2268

01:10:30,550 --> 01:10:28,960

explanation for any particular uh given

2269

01:10:31,750 --> 01:10:30,560

case if you take like even the nimitz

2270

01:10:33,430 --> 01:10:31,760

encounter

2271

01:10:35,990 --> 01:10:33,440

which is presented as being one of the

2272

01:10:38,149 --> 01:10:36,000

best evidence of aliens out there but

2273

01:10:40,070 --> 01:10:38,159

the idea that there's no simpler

2274

01:10:41,669 --> 01:10:40,080

explanation than aliens

2275

01:10:43,590 --> 01:10:41,679

it's just it's quite ludicrous really

2276

01:10:43,990 --> 01:10:43,600

there's there's lots of explanations

2277

01:10:45,590 --> 01:10:44,000

yeah

2278

01:10:47,669 --> 01:10:45,600

even though they're perhaps you know a

2279

01:10:50,470 --> 01:10:47,679

bit unlikely some of them

2280

01:10:51,270 --> 01:10:50,480

yeah is alien visitors actually a more

2281

01:10:52,550 --> 01:10:51,280

likely thing

2282

01:10:53,750 --> 01:10:52,560

than these these other explanations

2283

01:10:55,030 --> 01:10:53,760

right i had this debate you know i'm

2284

01:10:56,630 --> 01:10:55,040

being a little bit too provocative

2285

01:10:58,149 --> 01:10:56,640

perhaps but you know there's a

2286

01:11:00,390 --> 01:10:58,159

there's a notion in philosophy called

2287

01:11:01,990 --> 01:11:00,400

abduction and i joke about alien

2288

01:11:03,270 --> 01:11:02,000

abduction so abduction is the

2289

01:11:05,430 --> 01:11:03,280

philosophical

2290

01:11:06,709 --> 01:11:05,440

reasoning tool of inference to the best

2291

01:11:07,590 --> 01:11:06,719

explanation and we use this as a

2292

01:11:08,709 --> 01:11:07,600

scientist

2293

01:11:10,709 --> 01:11:08,719

people in the chat room have been

2294

01:11:11,990 --> 01:11:10,719

pointing out that william of ahm

2295

01:11:13,669 --> 01:11:12,000

you know i'm probably saying that too

2296

01:11:14,390 --> 01:11:13,679

much hebrew with the hat i shouldn't be

2297

01:11:16,149 --> 01:11:14,400

doing that

2298

01:11:17,669 --> 01:11:16,159

but uh william of occam you know said

2299

01:11:18,790 --> 01:11:17,679

that the simplest explanation is

2300

01:11:20,950 --> 01:11:18,800

probably the best

2301

01:11:23,189 --> 01:11:20,960

so my friend david brin who is a phd

2302

01:11:25,270 --> 01:11:23,199

astrophysicist at uc san diego

2303

01:11:27,669 --> 01:11:25,280

renowned science fiction writer as well

2304

01:11:29,270 --> 01:11:27,679

sends you his regards uh he's not in the

2305

01:11:30,790 --> 01:11:29,280

chat room as far as i can tell

2306

01:11:33,030 --> 01:11:30,800

but he says you know tell mick he's

2307

01:11:35,110 --> 01:11:33,040

doing great uh uh work but he's saying

2308

01:11:36,630 --> 01:11:35,120

also something very important mick he

2309

01:11:38,470 --> 01:11:36,640

says mick um

2310

01:11:40,709 --> 01:11:38,480

just remember you don't have to account

2311

01:11:42,070 --> 01:11:40,719

for everything you as a debunker

2312

01:11:43,910 --> 01:11:42,080

you know it's sort of said about like

2313

01:11:46,229 --> 01:11:43,920

people that work on you know in

2314

01:11:47,189 --> 01:11:46,239

defense you they they have to be right

2315

01:11:49,110 --> 01:11:47,199

every time

2316

01:11:50,149 --> 01:11:49,120

uh but you don't have to be right every

2317

01:11:51,430 --> 01:11:50,159

time in other words you don't have to

2318

01:11:53,430 --> 01:11:51,440

account for everything

2319

01:11:55,270 --> 01:11:53,440

even david brin says even if there are

2320

01:11:57,030 --> 01:11:55,280

some actually physical blob effects in

2321

01:11:59,189 --> 01:11:57,040

the atmosphere that emit light

2322

01:12:00,709 --> 01:11:59,199

and swerve and veer in non-newtonian

2323

01:12:03,189 --> 01:12:00,719

waves there can be

2324

01:12:04,950 --> 01:12:03,199

alternative explanations within the laws

2325

01:12:07,110 --> 01:12:04,960

of physics as we know it

2326

01:12:08,550 --> 01:12:07,120

the purported behavior could be a uh

2327

01:12:11,030 --> 01:12:08,560

quote unquote the same as

2328

01:12:12,550 --> 01:12:11,040

a cat laser effect okay he's being

2329

01:12:14,229 --> 01:12:12,560

shorthand but in other words there could

2330

01:12:16,390 --> 01:12:14,239

be effects like if you say

2331

01:12:18,070 --> 01:12:16,400

if you take a cat laser and you sh and

2332

01:12:18,870 --> 01:12:18,080

you shine it towards proxima centauri

2333

01:12:20,149 --> 01:12:18,880

over there

2334

01:12:22,470 --> 01:12:20,159

and then you turn it around the opposite

2335

01:12:24,229 --> 01:12:22,480

direction and shine it towards the virgo

2336

01:12:25,750 --> 01:12:24,239

constellation over there they'll

2337

01:12:26,149 --> 01:12:25,760

actually receive these two bursts of

2338

01:12:27,910 --> 01:12:26,159

light

2339

01:12:29,669 --> 01:12:27,920

instantaneously you know each one will

2340

01:12:30,229 --> 01:12:29,679

receive it and then somehow they could

2341

01:12:31,910 --> 01:12:30,239

reason

2342

01:12:33,750 --> 01:12:31,920

oh well they saw at the same time there

2343

01:12:35,110 --> 01:12:33,760

must be faster than light travel no we

2344

01:12:36,709 --> 01:12:35,120

just used a cat laser

2345

01:12:38,149 --> 01:12:36,719

and there's no there's no need to

2346

01:12:41,189 --> 01:12:38,159

distinguish or to provide

2347

01:12:42,070 --> 01:12:41,199

extra extra einsteinian space-time

2348

01:12:43,350 --> 01:12:42,080

violations

2349

01:12:45,669 --> 01:12:43,360

so in other words he's saying there's a

2350

01:12:47,669 --> 01:12:45,679

million ways he says to cause a physical

2351
01:12:48,630 --> 01:12:47,679
blob in the atmosphere to emit light and

2352
01:12:50,390 --> 01:12:48,640
this is a very

2353
01:12:53,510 --> 01:12:50,400
you know he's a phd theoretical

2354
01:12:55,350 --> 01:12:53,520
astrophysicist caltech and ucsd trained

2355
01:12:56,630 --> 01:12:55,360
to emit light and swerve and veer in

2356
01:12:58,790 --> 01:12:56,640
non-newtonian ways

2357
01:13:00,070 --> 01:12:58,800
he could do it david brin could do it

2358
01:13:00,870 --> 01:13:00,080
with a half a million dollars worth of

2359
01:13:02,550 --> 01:13:00,880
equipment which

2360
01:13:04,149 --> 01:13:02,560
suggests that the fellows responsible

2361
01:13:06,070 --> 01:13:04,159
are um quote

2362
01:13:07,350 --> 01:13:06,080
human so he's basically making this

2363
01:13:09,110 --> 01:13:07,360

alien abduction

2364

01:13:10,630 --> 01:13:09,120

you know abduction meaning reasoning to

2365

01:13:12,070 --> 01:13:10,640

the simplest possible hypothesis which

2366

01:13:12,870 --> 01:13:12,080

is what i want my audience is so

2367

01:13:14,470 --> 01:13:12,880

brilliant

2368

01:13:16,070 --> 01:13:14,480

and i claim you know i've had nine nobel

2369

01:13:17,910 --> 01:13:16,080

prize winners on this audience

2370

01:13:19,270 --> 01:13:17,920

uh is the best and brightest and i'm

2371

01:13:20,550 --> 01:13:19,280

gonna you know beg your doll i'm sure

2372

01:13:22,310 --> 01:13:20,560

your audience is just as bright

2373

01:13:24,070 --> 01:13:22,320

but i've had nine nobel prize winners on

2374

01:13:26,790 --> 01:13:24,080

this uh uh on the show

2375

01:13:28,790 --> 01:13:26,800

more are coming and uh and we like to go

2376

01:13:30,070 --> 01:13:28,800

extremely deep and and the point is we

2377

01:13:32,470 --> 01:13:30,080

take things from a scientific

2378

01:13:34,070 --> 01:13:32,480

perspective again nothing would get

2379

01:13:36,070 --> 01:13:34,080

i already have tenure you know which is

2380

01:13:38,550 --> 01:13:36,080

why i can have people on the show

2381

01:13:39,990 --> 01:13:38,560

uh you know that i've had on uh and be

2382

01:13:43,030 --> 01:13:40,000

controversial perhaps

2383

01:13:45,189 --> 01:13:43,040

uh but uh but the point is the uh

2384

01:13:47,030 --> 01:13:45,199

the the process that i like to engage in

2385

01:13:48,870 --> 01:13:47,040

is to stimulate curiosity it's kind of a

2386

01:13:52,229 --> 01:13:48,880

drug that's very powerful and very

2387

01:13:54,790 --> 01:13:52,239

addictive to me personally but also i i

2388

01:13:56,229 --> 01:13:54,800

i would like nothing more than to me to

2389

01:13:58,149 --> 01:13:56,239

shortcut and hack

2390

01:13:59,669 --> 01:13:58,159

the scientific method and know things

2391

01:14:01,110 --> 01:13:59,679

about the future right and when you

2392

01:14:04,550 --> 01:14:01,120

wouldn't we all like to know

2393

01:14:06,229 --> 01:14:04,560

the physics of the future we would and

2394

01:14:07,750 --> 01:14:06,239

if aliens arrived you know theoretically

2395

01:14:09,669 --> 01:14:07,760

they could give it to us and that is one

2396

01:14:10,470 --> 01:14:09,679

of the great attractions of this the et

2397

01:14:11,910 --> 01:14:10,480

hypothesis

2398

01:14:14,630 --> 01:14:11,920

and as you know ties into science

2399

01:14:17,590 --> 01:14:14,640

fiction and popular portrayals

2400

01:14:18,390 --> 01:14:17,600

of aliens as they are the the bearers of

2401

01:14:21,590 --> 01:14:18,400

gifts

2402

01:14:23,350 --> 01:14:21,600

they are going to

2403

01:14:24,630 --> 01:14:23,360

basically ascend humanity to the next

2404

01:14:26,149 --> 01:14:24,640

level and that's why people are so

2405

01:14:28,790 --> 01:14:26,159

interested in that but

2406

01:14:30,630 --> 01:14:28,800

you know i think that creates the

2407

01:14:31,350 --> 01:14:30,640

willingness to overlook a lot of things

2408

01:14:33,350 --> 01:14:31,360

and

2409

01:14:34,950 --> 01:14:33,360

the willingness to go towards one

2410

01:14:36,950 --> 01:14:34,960

particular explanation

2411

01:14:39,350 --> 01:14:36,960

when there are other explanations which

2412

01:14:40,870 --> 01:14:39,360

are perhaps less palatable

2413

01:14:42,550 --> 01:14:40,880

and in some ways a little bit more

2414

01:14:44,630 --> 01:14:42,560

complicated because you could actually

2415

01:14:46,070 --> 01:14:44,640

you know think about uh them rather than

2416

01:14:49,350 --> 01:14:46,080

just being the simple

2417

01:14:50,709 --> 01:14:49,360

aliens uh that that actually make a lot

2418

01:14:52,550 --> 01:14:50,719

more sense and would have made more

2419

01:14:56,070 --> 01:14:52,560

sense to to william a bockham

2420

01:14:58,550 --> 01:14:56,080

and i actually i don't i use a

2421

01:14:59,830 --> 01:14:58,560

a reasoning technique for figuring

2422

01:15:03,110 --> 01:14:59,840

things out which i call

2423

01:15:05,270 --> 01:15:03,120

or comic ranking uh which is

2424

01:15:06,229 --> 01:15:05,280

taking all positive all possible

2425

01:15:07,669 --> 01:15:06,239

hypotheses

2426
01:15:09,270 --> 01:15:07,679
everything that has been suggested and

2427
01:15:11,830 --> 01:15:09,280
everything i can think of

2428
01:15:12,790 --> 01:15:11,840
and putting them into a list and then

2429
01:15:15,750 --> 01:15:12,800
ranking them

2430
01:15:17,830 --> 01:15:15,760
by which seems the most likely basically

2431
01:15:18,149 --> 01:15:17,840
it's a huge heuristic you know you you

2432
01:15:21,350 --> 01:15:18,159
see

2433
01:15:23,990 --> 01:15:21,360
based on the evidence

2434
01:15:25,510 --> 01:15:24,000
uh if this was to go up the list a bit

2435
01:15:27,350 --> 01:15:25,520
what would need to happen for this to go

2436
01:15:28,709 --> 01:15:27,360
up to the list so i have these lists of

2437
01:15:30,790 --> 01:15:28,719
things and so used to

2438
01:15:32,870 --> 01:15:30,800

start at the top like uh with optical

2439

01:15:36,950 --> 01:15:32,880

illusions or balloons or

2440

01:15:39,990 --> 01:15:36,960

another plane or atmospheric effects or

2441

01:15:42,149 --> 01:15:40,000

cgi or the guy made a mistake it was all

2442

01:15:44,470 --> 01:15:42,159

a dream or he was lying and

2443

01:15:46,229 --> 01:15:44,480

aliens did it or it's a glitch in the

2444

01:15:46,709 --> 01:15:46,239

matrix it's part of the simulation so

2445

01:15:48,390 --> 01:15:46,719

you have

2446

01:15:50,070 --> 01:15:48,400

all the hypotheses and you try to figure

2447

01:15:51,990 --> 01:15:50,080

out which one of them

2448

01:15:53,750 --> 01:15:52,000

is at the top but you don't just focus

2449

01:15:55,110 --> 01:15:53,760

on that one you keep thinking about the

2450

01:15:56,709 --> 01:15:55,120

other things on the list as well because

2451
01:15:57,350 --> 01:15:56,719
quite often you have one two or three

2452
01:15:59,350 --> 01:15:57,360
things

2453
01:16:00,470 --> 01:15:59,360
near the top and one of them isn't a

2454
01:16:03,750 --> 01:16:00,480
clear winner

2455
01:16:07,189 --> 01:16:03,760
and i think that's a mistake

2456
01:16:09,430 --> 01:16:07,199
is to just go with one hypothesis

2457
01:16:10,229 --> 01:16:09,440
so i'd encourage people to try this out

2458
01:16:14,070 --> 01:16:10,239
make a list

2459
01:16:15,669 --> 01:16:14,080
them a rough ranking you can give them a

2460
01:16:16,630 --> 01:16:15,679
percentage as to how likely you think it

2461
01:16:18,550 --> 01:16:16,640
is to correct and just

2462
01:16:20,149 --> 01:16:18,560
sort them into order and then as new

2463
01:16:21,510 --> 01:16:20,159

information arises

2464

01:16:23,110 --> 01:16:21,520

you take them and you change the order

2465

01:16:24,790 --> 01:16:23,120

and new ones might bubble to the top and

2466

01:16:25,110 --> 01:16:24,800

things might fall to the bottom but you

2467

01:16:27,110 --> 01:16:25,120

know

2468

01:16:29,270 --> 01:16:27,120

you always keep things open as

2469

01:16:30,790 --> 01:16:29,280

possibilities

2470

01:16:32,229 --> 01:16:30,800

so we're going to wrap up in the next

2471

01:16:33,430 --> 01:16:32,239

few minutes we'll take on one or two

2472

01:16:37,030 --> 01:16:33,440

more questions

2473

01:16:37,669 --> 01:16:37,040

we have one uh here that is a question

2474

01:16:39,510 --> 01:16:37,679

about

2475

01:16:40,870 --> 01:16:39,520

whether or not there have been any kind

2476

01:16:43,590 --> 01:16:40,880
of multi-sensor

2477

01:16:45,189 --> 01:16:43,600
uap with a radar signature been verified

2478

01:16:47,590 --> 01:16:45,199
to go into the ocean

2479

01:16:48,229 --> 01:16:47,600
or has that only been claimed via navy

2480

01:16:50,070 --> 01:16:48,239
witnesses

2481

01:16:51,669 --> 01:16:50,080
in other words has there been multiple

2482

01:16:55,350 --> 01:16:51,679
sonar plus radar

2483

01:16:57,750 --> 01:16:55,360
confirmation or has that only been via

2484

01:16:59,189 --> 01:16:57,760
the eyewitness data this is something

2485

01:16:59,910 --> 01:16:59,199
that you know people have claimed a few

2486

01:17:01,590 --> 01:16:59,920
times that

2487

01:17:03,350 --> 01:17:01,600
there's this one yeah there's these five

2488

01:17:06,310 --> 01:17:03,360

observables of ufos that

2489

01:17:08,149 --> 01:17:06,320

uh people say are our signatures of of

2490

01:17:08,950 --> 01:17:08,159

ufos being something other than human

2491

01:17:10,950 --> 01:17:08,960

technology and

2492

01:17:12,630 --> 01:17:10,960

and one of them is transmedium travel

2493

01:17:14,470 --> 01:17:12,640

which is something that flies in

2494

01:17:16,229 --> 01:17:14,480

more or less equal speed through the air

2495

01:17:17,110 --> 01:17:16,239

and through the water and possibly space

2496

01:17:19,510 --> 01:17:17,120

too

2497

01:17:20,790 --> 01:17:19,520

uh and people have claimed that this has

2498

01:17:22,310 --> 01:17:20,800

happened that people have claimed that

2499

01:17:23,669 --> 01:17:22,320

there's radar data and then there's

2500

01:17:25,669 --> 01:17:23,679

sonar data but

2501

01:17:27,189 --> 01:17:25,679

there's this there's no real good

2502

01:17:28,470 --> 01:17:27,199

examples of this if you ask people to

2503

01:17:30,950 --> 01:17:28,480

point them out there's not

2504

01:17:31,830 --> 01:17:30,960

actually anything where you have any

2505

01:17:33,910 --> 01:17:31,840

kind of

2506

01:17:35,189 --> 01:17:33,920

continuous chain of evidence from the

2507

01:17:38,390 --> 01:17:35,199

from the radar to

2508

01:17:41,910 --> 01:17:38,400

to the sonar uh there was a recent case

2509

01:17:44,229 --> 01:17:41,920

where a video was released of

2510

01:17:45,590 --> 01:17:44,239

a sphere descending towards the horizon

2511

01:17:47,350 --> 01:17:45,600

and then a

2512

01:17:49,590 --> 01:17:47,360

video of a radar screen was released

2513

01:17:52,229 --> 01:17:49,600

which shows some targets on the radar

2514

01:17:53,669 --> 01:17:52,239

appearing to disappear uh off off the

2515

01:17:54,550 --> 01:17:53,679

screen which they did disappear off the

2516

01:17:56,470 --> 01:17:54,560

screen like they just

2517

01:17:58,310 --> 01:17:56,480

blinked out of existence and people kind

2518

01:17:59,669 --> 01:17:58,320

of said that is uh

2519

01:18:01,030 --> 01:17:59,679

evidence that something was going

2520

01:18:01,669 --> 01:18:01,040

underwater but it could equally have

2521

01:18:04,390 --> 01:18:01,679

been

2522

01:18:05,830 --> 01:18:04,400

uh the object simply going out of the

2523

01:18:07,669 --> 01:18:05,840

radar scan volume because it was a

2524

01:18:08,870 --> 01:18:07,679

surface scanning radar not actually

2525

01:18:11,030 --> 01:18:08,880

something designed to

2526

01:18:11,990 --> 01:18:11,040

uh scan things up in the sky so you know

2527

01:18:15,350 --> 01:18:12,000

shorthand sir

2528

01:18:20,229 --> 01:18:18,470

great um so this has been so much fun

2529

01:18:22,790 --> 01:18:20,239

uh people are asking you know will you

2530

01:18:24,229 --> 01:18:22,800

debate uh commander fravor

2531

01:18:26,229 --> 01:18:24,239

i'm gonna try to make that i'm gonna

2532

01:18:27,590 --> 01:18:26,239

make that happen if i can

2533

01:18:29,430 --> 01:18:27,600

first i'm going to try to have a

2534

01:18:32,310 --> 01:18:29,440

conversation not a debate

2535

01:18:34,310 --> 01:18:32,320

i agree with my past guests lord martin

2536

01:18:36,229 --> 01:18:34,320

reese the astronomer royal

2537

01:18:37,750 --> 01:18:36,239

most debate is pointless but we should

2538

01:18:39,910 --> 01:18:37,760

debate with love

2539

01:18:41,430 --> 01:18:39,920

we should use occam's razor every now

2540

01:18:44,310 --> 01:18:41,440

and then to get a close shave

2541

01:18:45,830 --> 01:18:44,320

uh but we should do so with comity and

2542

01:18:47,910 --> 01:18:45,840

sometimes a little comedy

2543

01:18:50,149 --> 01:18:47,920

uh throw in a little bit of levity

2544

01:18:52,709 --> 01:18:50,159

shouldn't always be so super serious

2545

01:18:54,470 --> 01:18:52,719

um and uh and i really have enjoyed this

2546

01:18:56,950 --> 01:18:54,480

i want to ask people again

2547

01:18:57,510 --> 01:18:56,960

uh please do subscribe to mick west's

2548

01:19:00,550 --> 01:18:57,520

channel

2549

01:19:02,149 --> 01:19:00,560

and follow him he is doing yeoman's work

2550

01:19:03,830 --> 01:19:02,159

i don't think you're getting uh

2551

01:19:05,990 --> 01:19:03,840

compensated you know we

2552

01:19:08,149 --> 01:19:06,000

youtubers don't make that much money for

2553

01:19:08,870 --> 01:19:08,159

uh views and likes and subscribes but

2554

01:19:10,870 --> 01:19:08,880

please do

2555

01:19:12,709 --> 01:19:10,880

like comment and subscribe because it

2556

01:19:14,790 --> 01:19:12,719

does tell the algorithm there

2557

01:19:15,990 --> 01:19:14,800

are algorithms of advanced artificial

2558

01:19:17,750 --> 01:19:16,000

intelligence that do

2559

01:19:20,070 --> 01:19:17,760

kind of control our lives at least as

2560

01:19:22,470 --> 01:19:20,080

youtubers so help us out if you can

2561

01:19:23,830 --> 01:19:22,480

um so mick uh please uh please i wish

2562

01:19:26,470 --> 01:19:23,840

you great success i hope you'll come

2563

01:19:28,550 --> 01:19:26,480

back tomorrow i do have on seth shostak

2564

01:19:31,189 --> 01:19:28,560

uh whose book confessions of an alien

2565

01:19:33,110 --> 01:19:31,199

hunter is a wonderful book uh from an

2566

01:19:34,790 --> 01:19:33,120

astronomer who himself has searched for

2567

01:19:35,990 --> 01:19:34,800

aliens who would love nothing better

2568

01:19:38,470 --> 01:19:36,000

than aliens to be real

2569

01:19:39,510 --> 01:19:38,480

i'm going to get him to ca to comment on

2570

01:19:40,790 --> 01:19:39,520

some of the work that you've done and

2571

01:19:43,830 --> 01:19:40,800

some of the work that

2572

01:19:45,750 --> 01:19:43,840

we are involved with um in in

2573

01:19:47,430 --> 01:19:45,760

microwave and radio astronomy and also

2574

01:19:49,430 --> 01:19:47,440

physics of the future

2575

01:19:50,950 --> 01:19:49,440

and uh and then later i do hope to have

2576

01:19:52,950 --> 01:19:50,960

on some of these wonderful

2577

01:19:54,070 --> 01:19:52,960

very heroic patriotic pilots i've been

2578

01:19:56,709 --> 01:19:54,080

in contact with

2579

01:19:57,350 --> 01:19:56,719

two of them and and hopefully i i will

2580

01:19:59,750 --> 01:19:57,360

be able to get

2581

01:20:01,430 --> 01:19:59,760

at least one or maybe two of the pilots

2582

01:20:03,590 --> 01:20:01,440

who are up close and personal

2583

01:20:05,350 --> 01:20:03,600

on various occasions i do think that

2584

01:20:07,590 --> 01:20:05,360

they have been a lovely

2585

01:20:09,350 --> 01:20:07,600

you know they've done incredible work um

2586

01:20:11,590 --> 01:20:09,360

and and i think they should be

2587

01:20:12,950 --> 01:20:11,600

uh they should be part of all the all

2588

01:20:14,229 --> 01:20:12,960

the conversation and

2589

01:20:15,830 --> 01:20:14,239

i don't think they have anything to gain

2590

01:20:17,350 --> 01:20:15,840

either in fact i think that they they

2591

01:20:19,350 --> 01:20:17,360

probably suffered a lot too for

2592

01:20:21,110 --> 01:20:19,360

everything that they've done and they

2593

01:20:23,830 --> 01:20:21,120

should not because i think that they

2594

01:20:25,189 --> 01:20:23,840

are heroes as i know you do too mick so

2595

01:20:26,310 --> 01:20:25,199

i want to thank you mick um

2596

01:20:28,229 --> 01:20:26,320

for everything you do i want to

2597

01:20:30,070 --> 01:20:28,239

recommend your book again and your

2598

01:20:32,470 --> 01:20:30,080

youtube channel so please everybody

2599

01:20:33,990 --> 01:20:32,480

stay tuned for more episodes of into the

2600

01:20:34,709 --> 01:20:34,000

impossible tomorrow with dr brian

2601
01:20:37,510 --> 01:20:34,719
keating

2602
01:20:38,790 --> 01:20:37,520
and for now signing off and i encourage

2603
01:20:41,430 --> 01:20:38,800
you all to keep

2604
01:20:42,629 --> 01:20:41,440
watching the skies and watching the two

2605
01:20:44,310 --> 01:20:42,639
youtube channels

2606
01:20:49,510 --> 01:20:44,320
good night everybody thank you so much

2607
01:21:00,709 --> 01:20:52,229
any sufficient advanced technology is

2608
01:21:03,590 --> 01:21:00,719
indistinguishable from magic