

**SOMEWHERE
IN THE
SKIES**



**A COSMIC CONVERSATION
WITH AVI LOEB**

1
00:00:28,790 --> 00:00:19,240

[Music]

2
00:00:33,510 --> 00:00:31,669

this is somewhere in the skies with ryan

3
00:00:53,910 --> 00:00:33,520

spread

4
00:00:58,630 --> 00:00:56,549

hi guys ryan sprague here from somewhere

5
00:01:00,790 --> 00:00:58,640

in the skies and i really do have to

6
00:01:03,029 --> 00:01:00,800

change the theme the opening theme for

7
00:01:06,070 --> 00:01:03,039

the show to not just say with ryan

8
00:01:08,469 --> 00:01:06,080

sprague because i have my co-pilot with

9
00:01:10,469 --> 00:01:08,479

me today for this very special live

10
00:01:12,310 --> 00:01:10,479

stream interview we are doing with the

11
00:01:14,390 --> 00:01:12,320

one and only avi loeb returning to

12
00:01:17,190 --> 00:01:14,400

somewhere in the skies again so let's

13
00:01:19,270 --> 00:01:17,200

bring chrissy in first and uh catch up

14

00:01:20,149 --> 00:01:19,280

chrissy how you doing hey good how are

15

00:01:28,550 --> 00:01:20,159

you

16

00:01:31,670 --> 00:01:28,560

um a lot's going on some exciting stuff

17

00:01:33,990 --> 00:01:31,680

um a story that avi actually just

18

00:01:36,149 --> 00:01:34,000

released an article about a few days ago

19

00:01:38,950 --> 00:01:36,159

if not yesterday i believe that we're

20

00:01:41,990 --> 00:01:38,960

going to talk about another interstellar

21

00:01:44,550 --> 00:01:42,000

object um now a lot of people know avi's

22

00:01:47,190 --> 00:01:44,560

name because of umuah the interstellar

23

00:01:47,990 --> 00:01:47,200

object that came in and got out of here

24

00:01:50,310 --> 00:01:48,000

but

25

00:01:52,469 --> 00:01:50,320

we have an object that actually

26

00:01:53,830 --> 00:01:52,479

is on the earth in interstellar objects

27

00:01:54,630 --> 00:01:53,840

so we're going to talk to him all about

28

00:01:56,789 --> 00:01:54,640

that

29

00:01:58,230 --> 00:01:56,799

all about the galileo project and what's

30

00:02:00,149 --> 00:01:58,240

new with that

31

00:02:01,190 --> 00:02:00,159

all the fascinating stuff with hubble

32

00:02:04,550 --> 00:02:01,200

and um

33

00:02:05,990 --> 00:02:04,560

and james webb but uh yeah yeah i guess

34

00:02:06,950 --> 00:02:06,000

should we just bring them in wait a

35

00:02:09,350 --> 00:02:06,960

second

36

00:02:10,229 --> 00:02:09,360

yeah let's do it let's do it let's go

37

00:02:11,830 --> 00:02:10,239

awesome

38

00:02:13,830 --> 00:02:11,840

avi welcome back to somewhere in the

39

00:02:15,990 --> 00:02:13,840

skies thanks for having me it's a great

40

00:02:18,630 --> 00:02:16,000

pleasure good to see you thank you thank

41

00:02:20,710 --> 00:02:18,640

you i think the last time i had you on

42

00:02:23,030 --> 00:02:20,720

this show was right when your book came

43

00:02:25,430 --> 00:02:23,040

out and there have been some incredible

44

00:02:28,070 --> 00:02:25,440

developments since that including

45

00:02:30,630 --> 00:02:28,080

galileo which we will talk about but

46

00:02:33,430 --> 00:02:30,640

let's talk about the most recent

47

00:02:35,110 --> 00:02:33,440

breaking story um you wrote an article

48

00:02:36,630 --> 00:02:35,120

on medium recently

49

00:02:39,110 --> 00:02:36,640

like i mentioned earlier about an

50

00:02:42,229 --> 00:02:39,120

interstellar object that actually

51
00:02:45,509 --> 00:02:42,239
came to earth um so i would love if you

52
00:02:47,830 --> 00:02:45,519
don't mind um can you update us on this

53
00:02:49,350 --> 00:02:47,840
what it is where it happened and why

54
00:02:51,030 --> 00:02:49,360
it's so important with the work that

55
00:02:55,110 --> 00:02:51,040
you're doing right now

56
00:02:58,229 --> 00:02:55,120
right so this story starts in march 2019

57
00:02:59,990 --> 00:02:58,239
when i was asked for a radio interview

58
00:03:01,589 --> 00:03:00,000
in new york city about

59
00:03:03,670 --> 00:03:01,599
a meteor that

60
00:03:07,190 --> 00:03:03,680
was detected

61
00:03:08,869 --> 00:03:07,200
above the bering sea near kamchatka and

62
00:03:11,350 --> 00:03:08,879
i didn't know much about meteor so i

63
00:03:14,550 --> 00:03:11,360

went online and i realized there is a

64

00:03:18,309 --> 00:03:14,560

catalogue of data on meteors that the

65

00:03:21,750 --> 00:03:18,319

government released um and it was put

66

00:03:24,149 --> 00:03:21,760

online by the jet propulsion lab and uh

67

00:03:26,229 --> 00:03:24,159

i then reached out to my uh

68

00:03:28,550 --> 00:03:26,239

undergraduate student amir siraj and

69

00:03:30,949 --> 00:03:28,560

said that why don't we check

70

00:03:32,949 --> 00:03:30,959

whether the fastest moving meteors could

71

00:03:35,350 --> 00:03:32,959

have come from outside the solar system

72

00:03:37,589 --> 00:03:35,360

it's a very simple idea when we launch a

73

00:03:40,149 --> 00:03:37,599

rocket if the rocket moves fast enough

74

00:03:43,030 --> 00:03:40,159

it escapes the pool of the earth and if

75

00:03:46,390 --> 00:03:43,040

it moves even faster it escapes the pull

76
00:03:47,350 --> 00:03:46,400
of the sun so you can imagine objects

77
00:03:50,309 --> 00:03:47,360
that move

78
00:03:53,190 --> 00:03:50,319
faster than the escape speed from our

79
00:03:55,670 --> 00:03:53,200
neighborhood so that they must have

80
00:03:58,070 --> 00:03:55,680
arrived from outside the solar system

81
00:04:00,309 --> 00:03:58,080
and we we then

82
00:04:02,710 --> 00:04:00,319
amir looked at the fastest moving object

83
00:04:04,949 --> 00:04:02,720
in that catalog it turned out that it

84
00:04:07,110 --> 00:04:04,959
was a head-on collision with the earth

85
00:04:08,710 --> 00:04:07,120
so the fastest speed that it had

86
00:04:09,589 --> 00:04:08,720
relative to earth was just because it

87
00:04:10,550 --> 00:04:09,599
was

88
00:04:12,949 --> 00:04:10,560

uh

89

00:04:15,350 --> 00:04:12,959

moving in the opposite direction so it

90

00:04:18,390 --> 00:04:15,360

looked as if that object is probably

91

00:04:20,469 --> 00:04:18,400

bound to the sun but the second fastest

92

00:04:23,909 --> 00:04:20,479

ended up being unbound to the sun in

93

00:04:26,950 --> 00:04:23,919

fact if we uh extrapolate its trajectory

94

00:04:28,870 --> 00:04:26,960

back in time it had a speed of

95

00:04:30,790 --> 00:04:28,880

40 kilometers per second relative to the

96

00:04:32,710 --> 00:04:30,800

sun faster than the earth moves

97

00:04:34,710 --> 00:04:32,720

around the sun so

98

00:04:36,390 --> 00:04:34,720

when it was very far away from the sun

99

00:04:38,469 --> 00:04:36,400

it was already moving faster than the

100

00:04:39,430 --> 00:04:38,479

earth is close to the sun

101
00:04:41,670 --> 00:04:39,440
so

102
00:04:44,629 --> 00:04:41,680
it was clear that this one looks like an

103
00:04:46,230 --> 00:04:44,639
interstellar object and we wrote a

104
00:04:47,590 --> 00:04:46,240
scientific paper submitted it for

105
00:04:48,790 --> 00:04:47,600
publication

106
00:04:51,590 --> 00:04:48,800
and then

107
00:04:54,550 --> 00:04:51,600
the referee the reviewer of the paper

108
00:04:57,189 --> 00:04:54,560
said well the government released this

109
00:04:59,350 --> 00:04:57,199
data but there are no uncertainties in

110
00:05:01,990 --> 00:04:59,360
the data and to me it was obvious

111
00:05:05,029 --> 00:05:02,000
because the government uses satellites

112
00:05:07,510 --> 00:05:05,039
and ground-based sensors to

113
00:05:09,670 --> 00:05:07,520

monitor the sky you know as a matter of

114

00:05:12,310 --> 00:05:09,680

national security so

115

00:05:13,909 --> 00:05:12,320

the the uncertainties must be small

116

00:05:16,150 --> 00:05:13,919

because they need to know whether a

117

00:05:18,870 --> 00:05:16,160

ballistic missile will hit boston or new

118

00:05:20,950 --> 00:05:18,880

york city they can't afford having large

119

00:05:23,029 --> 00:05:20,960

uncertainties and they don't want to

120

00:05:25,430 --> 00:05:23,039

release the uncertainties because that

121

00:05:27,110 --> 00:05:25,440

would inform adversaries of the

122

00:05:29,909 --> 00:05:27,120

capabilities of

123

00:05:30,710 --> 00:05:29,919

the defense system that the us has um

124

00:05:32,390 --> 00:05:30,720

and

125

00:05:35,270 --> 00:05:32,400

so i we

126

00:05:37,670 --> 00:05:35,280

uh try to convince the referee uh the

127

00:05:39,110 --> 00:05:37,680

reviewer and without success and at the

128

00:05:41,189 --> 00:05:39,120

time i was

129

00:05:43,670 --> 00:05:41,199

the chair of the border

130

00:05:45,990 --> 00:05:43,680

sign the board on physics and astronomy

131

00:05:47,990 --> 00:05:46,000

of the national academies and

132

00:05:50,629 --> 00:05:48,000

a member of the board was from los

133

00:05:52,469 --> 00:05:50,639

alamos and at dinner i expressed my

134

00:05:55,189 --> 00:05:52,479

frustration that the paper was not

135

00:05:58,150 --> 00:05:55,199

accepted for publication and asked

136

00:06:00,550 --> 00:05:58,160

that person who had the access to people

137

00:06:02,390 --> 00:06:00,560

beyond the national security fence

138

00:06:04,469 --> 00:06:02,400

whether he can try and promote the

139

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

release declassification of the

140

00:06:08,469 --> 00:06:06,240

uncertainty in the measurements of this

141

00:06:09,430 --> 00:06:08,479

particular meteor nothing else

142

00:06:13,590 --> 00:06:09,440

and

143

00:06:14,550 --> 00:06:13,600

saying the uncertainties are less than

144

00:06:17,590 --> 00:06:14,560

10

145

00:06:19,749 --> 00:06:17,600

that was sufficient to imply that it is

146

00:06:22,309 --> 00:06:19,759

from of interstellar origin but again

147

00:06:23,670 --> 00:06:22,319

the reviewer said i cannot accept the

148

00:06:26,790 --> 00:06:23,680

paper for publication it must be

149

00:06:29,590 --> 00:06:26,800

declined because it's based on an email

150

00:06:31,990 --> 00:06:29,600

and how do i know that i can trust that

151

00:06:34,390 --> 00:06:32,000

person and then the editor of the

152

00:06:36,870 --> 00:06:34,400

journal tried to find a reviewer that

153

00:06:39,110 --> 00:06:36,880

has a clearance that can look at the

154

00:06:42,710 --> 00:06:39,120

data but without success so the paper

155

00:06:45,110 --> 00:06:42,720

was not published from 2019 and then at

156

00:06:48,070 --> 00:06:45,120

the same time you know within government

157

00:06:49,670 --> 00:06:48,080

there were people trying to allow the

158

00:06:51,830 --> 00:06:49,680

government to make a statement that

159

00:06:53,589 --> 00:06:51,840

confirms the fact that you know indeed

160

00:06:55,909 --> 00:06:53,599

the uncertainties are small enough for

161

00:06:59,510 --> 00:06:55,919

this to be interstellar for sure and it

162

00:07:02,790 --> 00:06:59,520

took three years and just last week this

163

00:07:04,870 --> 00:07:02,800

letter was released publicly it was a

164

00:07:08,309 --> 00:07:04,880

letter sent from

165

00:07:11,350 --> 00:07:08,319

the space command

166

00:07:14,950 --> 00:07:11,360

office of the department of defense uh

167

00:07:19,189 --> 00:07:14,960

to nasa the science division led by

168

00:07:21,749 --> 00:07:19,199

dr thomas zbrugen saying explicitly

169

00:07:24,390 --> 00:07:21,759

that the 99.999

170

00:07:26,230 --> 00:07:24,400

confidence this meteor is of

171

00:07:28,830 --> 00:07:26,240

interstellar origin came from outside

172

00:07:34,390 --> 00:07:28,840

the solar system now this meteor was

173

00:07:35,749 --> 00:07:34,400

discovered on january 8th 2014

174

00:07:38,870 --> 00:07:35,759

nearly

175

00:07:40,629 --> 00:07:38,880

four years before omuamua so

176

00:07:42,749 --> 00:07:40,639

in the history books it should be

177

00:07:45,589 --> 00:07:42,759

documented as the first

178

00:07:47,430 --> 00:07:45,599

interstellar object that was identified

179

00:07:49,430 --> 00:07:47,440

by humans not on

180

00:07:52,629 --> 00:07:49,440

because it's four years earlier

181

00:07:54,390 --> 00:07:52,639

and this meteor produced the fireball

182

00:07:56,230 --> 00:07:54,400

that's the way meteors are discovered

183

00:07:58,550 --> 00:07:56,240

that you know it's an object entering

184

00:07:59,830 --> 00:07:58,560

the atmosphere and burning up as a

185

00:08:01,749 --> 00:07:59,840

result of the friction with the

186

00:08:03,589 --> 00:08:01,759

atmosphere and

187

00:08:06,150 --> 00:08:03,599

the amount of energy released was about

188

00:08:08,309 --> 00:08:06,160

a percent of the hiroshima bomb

189

00:08:11,510 --> 00:08:08,319

uh so one can infer that this object was

190

00:08:12,950 --> 00:08:11,520

roughly the size of half a meter to a

191

00:08:15,670 --> 00:08:12,960

meter

192

00:08:18,390 --> 00:08:15,680

and then you know like half the height

193

00:08:20,629 --> 00:08:18,400

of a person kind of um it was a small

194

00:08:23,110 --> 00:08:20,639

object a hundred times smaller than a

195

00:08:25,110 --> 00:08:23,120

muammua now the reason that we can

196

00:08:28,550 --> 00:08:25,120

detect it is because it burns up in the

197

00:08:30,629 --> 00:08:28,560

atmosphere whereas to discover a moa we

198

00:08:33,829 --> 00:08:30,639

needed to rely on the reflection of

199

00:08:35,990 --> 00:08:33,839

sunlight and the telescopes can only

200

00:08:37,190 --> 00:08:36,000

detect an object the size of a football

201

00:08:38,230 --> 00:08:37,200

field that

202

00:08:39,909 --> 00:08:38,240

was

203

00:08:42,949 --> 00:08:39,919

within the orbit of the earth around the

204

00:08:44,870 --> 00:08:42,959

sun as a result of reflecting sunlight

205

00:08:46,949 --> 00:08:44,880

but if you know existing telescopes

206

00:08:48,790 --> 00:08:46,959

cannot survey the sky for objects as

207

00:08:51,509 --> 00:08:48,800

small as a meter because they don't

208

00:08:53,829 --> 00:08:51,519

reflect enough sunlight uh you know

209

00:08:55,110 --> 00:08:53,839

unless they collide with the earth and

210

00:08:57,430 --> 00:08:55,120

burn up and then we can see the

211

00:08:59,670 --> 00:08:57,440

fireballs so so this discovery is

212

00:09:02,710 --> 00:08:59,680

important first because it's the first

213

00:09:03,670 --> 00:09:02,720

interstellar object four years predating

214

00:09:05,750 --> 00:09:03,680

uh

215

00:09:08,550 --> 00:09:05,760

but second because we are looking at a

216

00:09:11,030 --> 00:09:08,560

smaller object and frankly nasa never

217

00:09:13,350 --> 00:09:11,040

launched a spacecraft as big as a

218

00:09:15,269 --> 00:09:13,360

football field so we expect many more

219

00:09:17,190 --> 00:09:15,279

small objects and if you just do the

220

00:09:17,910 --> 00:09:17,200

calculation there should be a million of

221

00:09:19,509 --> 00:09:17,920

them

222

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

within the orbit of the earth around the

223

00:09:23,910 --> 00:09:21,600

sun and you can think of the earth as a

224

00:09:26,389 --> 00:09:23,920

fishing net that is

225

00:09:29,110 --> 00:09:26,399

you know collecting any object

226

00:09:30,870 --> 00:09:29,120

along its path and the size of the

227

00:09:33,670 --> 00:09:30,880

fishing net is small it's the size of

228

00:09:35,509 --> 00:09:33,680

the earth and that's why you know we see

229

00:09:38,070 --> 00:09:35,519

such events

230

00:09:39,269 --> 00:09:38,080

every few years

231

00:09:41,430 --> 00:09:39,279

but

232

00:09:43,269 --> 00:09:41,440

there are lots of these objects we can

233

00:09:44,790 --> 00:09:43,279

infer a million of them within the orbit

234

00:09:46,949 --> 00:09:44,800

of the earth around the sun and they're

235

00:09:49,030 --> 00:09:46,959

roughly the size

236

00:09:50,790 --> 00:09:49,040

of of a person and they came from

237

00:09:52,949 --> 00:09:50,800

outside the solar system and the

238

00:09:54,230 --> 00:09:52,959

question the fundamental question

239

00:10:10,710 --> 00:09:54,240

is

240

00:10:12,630 --> 00:10:10,720

land on it you know come as close as a

241

00:10:15,430 --> 00:10:12,640

thousand kilometers so we can take a

242

00:10:17,350 --> 00:10:15,440

photograph that resolves the object and

243

00:10:20,389 --> 00:10:17,360

tells us whether it has screws and bolts

244

00:10:22,949 --> 00:10:20,399

on it or maybe a label saying made on

245

00:10:24,870 --> 00:10:22,959

exoplanet y if we can land on it we can

246

00:10:26,069 --> 00:10:24,880

press some buttons maybe if it's

247

00:10:27,910 --> 00:10:26,079

artificial

248

00:10:30,150 --> 00:10:27,920

we can definitely say whether it's a

249

00:10:32,710 --> 00:10:30,160

nitrogen iceberg or a hydrogen iceberg

250

00:10:34,710 --> 00:10:32,720

or a dust bunny the way some of my

251

00:10:37,030 --> 00:10:34,720

colleagues argued for

252

00:10:38,630 --> 00:10:37,040

things that we've never seen before but

253

00:10:40,710 --> 00:10:38,640

it would be even more exciting if it's

254

00:10:43,430 --> 00:10:40,720

artificial and

255

00:10:45,190 --> 00:10:43,440

it's such a mission to come close to an

256

00:10:47,030 --> 00:10:45,200

object coming

257

00:10:48,870 --> 00:10:47,040

near earth but never

258

00:10:50,389 --> 00:10:48,880

colliding with the earth

259

00:10:52,790 --> 00:10:50,399

it would cost us

260

00:10:55,030 --> 00:10:52,800

at least a billion dollars we had

261

00:10:58,230 --> 00:10:55,040

such a mission to visit the asteroid

262

00:11:00,150 --> 00:10:58,240

bennu it was called the osiris-rex and

263

00:11:03,750 --> 00:11:00,160

it will actually bring a sample back to

264

00:11:06,230 --> 00:11:03,760

earth next year from that piece of rock

265

00:11:08,949 --> 00:11:06,240

but it's it costs a billion dollars

266

00:11:11,910 --> 00:11:08,959

however when you have a meteor the size

267

00:11:14,389 --> 00:11:11,920

of emitter and it burns up in the

268

00:11:15,190 --> 00:11:14,399

atmosphere you know some fragments from

269

00:11:18,389 --> 00:11:15,200

it

270

00:11:20,870 --> 00:11:18,399

land on the ground okay in this case

271

00:11:21,829 --> 00:11:20,880

uh it was off the coast of papua new

272

00:11:23,030 --> 00:11:21,839

guinea

273

00:11:25,030 --> 00:11:23,040

and then

274

00:11:27,350 --> 00:11:25,040

the the fragments should land in the

275

00:11:31,030 --> 00:11:27,360

ocean of the coast and

276
00:11:32,949 --> 00:11:31,040
the ocean is about 1.7 kilometers deep

277
00:11:35,269 --> 00:11:32,959
about a mile deep

278
00:11:37,990 --> 00:11:35,279
uh in that region and

279
00:11:40,710 --> 00:11:38,000
it's possible to design an expedition

280
00:11:44,230 --> 00:11:40,720
that will go to the ocean floor

281
00:11:45,269 --> 00:11:44,240
with a magnet and

282
00:11:48,870 --> 00:11:45,279
collect

283
00:11:52,230 --> 00:11:48,880
the debris from that meteor we know the

284
00:11:54,150 --> 00:11:52,240
region where the debris must have

285
00:11:55,110 --> 00:11:54,160
landed within

286
00:11:57,829 --> 00:11:55,120
um

287
00:12:00,870 --> 00:11:57,839
five miles or so within 10 kilometers

288
00:12:03,269 --> 00:12:00,880

and then it's relatively straightforward

289

00:12:04,790 --> 00:12:03,279

such a an expedition will not i mean it

290

00:12:08,710 --> 00:12:04,800

will cost maybe

291

00:12:10,949 --> 00:12:08,720

one part in 10 000 of a space mission

292

00:12:12,949 --> 00:12:10,959

okay and we can do it and then we can

293

00:12:14,949 --> 00:12:12,959

bring the debris to the two laboratories

294

00:12:16,310 --> 00:12:14,959

and examine it

295

00:12:18,870 --> 00:12:16,320

wow

296

00:12:21,030 --> 00:12:18,880

that's a great explanation yeah i know i

297

00:12:22,069 --> 00:12:21,040

mean again like it would cost billions

298

00:12:25,350 --> 00:12:22,079

to like

299

00:12:27,910 --> 00:12:25,360

land on an asteroid or um study it in

300

00:12:29,509 --> 00:12:27,920

space as it were but the fact that it's

301

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

you know not so much in our backyard but

302

00:12:34,550 --> 00:12:32,480

i guess in the pool of the backyard like

303

00:12:38,310 --> 00:12:34,560

we can now actually

304

00:12:40,150 --> 00:12:38,320

study it so i mean i guess to kind of um

305

00:12:42,230 --> 00:12:40,160

play off of that avi like so what do we

306

00:12:43,910 --> 00:12:42,240

do next are are are there any

307

00:12:46,389 --> 00:12:43,920

expeditions set up is this something

308

00:12:48,550 --> 00:12:46,399

you're interested in pursuing what comes

309

00:12:51,110 --> 00:12:48,560

next for them i'm very interested and we

310

00:12:53,829 --> 00:12:51,120

are i'm discussing it

311

00:12:55,910 --> 00:12:53,839

with my student amir and with some

312

00:12:57,990 --> 00:12:55,920

experts that worked on such expeditions

313

00:13:01,110 --> 00:12:58,000

in the past and uh it's not very

314

00:13:03,350 --> 00:13:01,120

expensive and even you know if it costs

315

00:13:05,110 --> 00:13:03,360

some tens of thousands of dollars or a

316

00:13:06,389 --> 00:13:05,120

hundred thousand dollars

317

00:13:08,389 --> 00:13:06,399

i can

318

00:13:10,470 --> 00:13:08,399

fund it from the galileo project or get

319

00:13:12,230 --> 00:13:10,480

someone that will be excited enough to

320

00:13:14,150 --> 00:13:12,240

give us the funds that's not an issue at

321

00:13:17,030 --> 00:13:14,160

all it's not a billion dollars where you

322

00:13:18,710 --> 00:13:17,040

need we we need to appeal to nasa's

323

00:13:21,350 --> 00:13:18,720

interests

324

00:13:23,990 --> 00:13:21,360

and then the interesting point is

325

00:13:25,910 --> 00:13:24,000

there would be most likely uh fragments

326

00:13:27,110 --> 00:13:25,920

that are very small but

327

00:13:30,069 --> 00:13:27,120

suppose

328

00:13:33,190 --> 00:13:30,079

just imagine a piece of equipment okay

329

00:13:35,269 --> 00:13:33,200

that the component of it survived okay

330

00:13:36,470 --> 00:13:35,279

and then you can bring it to the lab and

331

00:13:38,790 --> 00:13:36,480

examine it

332

00:13:40,870 --> 00:13:38,800

you know that's that would be amazing uh

333

00:13:43,110 --> 00:13:40,880

in the worst case scenario you know we

334

00:13:45,750 --> 00:13:43,120

will find it's just a rock

335

00:13:47,990 --> 00:13:45,760

okay that came from interstellar space

336

00:13:51,269 --> 00:13:48,000

i say worst case just because it will

337

00:13:53,350 --> 00:13:51,279

not be as exciting uh but papua new

338

00:13:56,310 --> 00:13:53,360

guinea is a beautiful sight and spending

339

00:13:58,310 --> 00:13:56,320

a week there would be fascinating anyway

340

00:14:00,550 --> 00:13:58,320

yeah that's great yeah i know you're

341

00:14:03,670 --> 00:14:00,560

hitting up all these places people dream

342

00:14:05,990 --> 00:14:03,680

of going hawaii papua new guinea with

343

00:14:07,990 --> 00:14:06,000

this one i love it man hey you might as

344

00:14:10,710 --> 00:14:08,000

well take pleasure in your work that's

345

00:14:12,310 --> 00:14:10,720

what i say for sure um yeah well christy

346

00:14:14,710 --> 00:14:12,320

do you have any follow-ups on this

347

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

developing story before we move on yeah

348

00:14:18,150 --> 00:14:16,480

i'm just curious to see what people have

349

00:14:19,990 --> 00:14:18,160

said back to you what is your peers you

350

00:14:21,910 --> 00:14:20,000

know have they messaged you recently

351

00:14:23,670 --> 00:14:21,920

since this this conversation and this

352

00:14:25,590 --> 00:14:23,680

discovery and the article that just came

353

00:14:27,509 --> 00:14:25,600

out you know are they excited is there

354

00:14:28,710 --> 00:14:27,519

criticism you know what's the the

355

00:14:29,670 --> 00:14:28,720

thought right now in the science

356

00:14:31,509 --> 00:14:29,680

community

357

00:14:33,110 --> 00:14:31,519

yeah splits into two camps there are

358

00:14:35,350 --> 00:14:33,120

people that are very excited these are

359

00:14:37,670 --> 00:14:35,360

the curious people and you know i was

360

00:14:40,550 --> 00:14:37,680

asked yesterday i had an interview

361

00:14:43,590 --> 00:14:40,560

from chile and i was asked what needs to

362

00:14:44,470 --> 00:14:43,600

be changed in the academic community so

363

00:14:47,110 --> 00:14:44,480

that

364

00:14:49,110 --> 00:14:47,120

we will promote innovation more often

365

00:14:50,949 --> 00:14:49,120

and i said it's very simple we just need

366

00:14:52,470 --> 00:14:50,959

to behave like kids

367

00:14:54,389 --> 00:14:52,480

i mean it's not very difficult look at

368

00:14:56,389 --> 00:14:54,399

kids you know they explore the world

369

00:14:58,790 --> 00:14:56,399

with curiosity they just

370

00:15:01,189 --> 00:14:58,800

uh are open-minded and that's the way we

371

00:15:02,870 --> 00:15:01,199

should behave the the big problem is

372

00:15:04,870 --> 00:15:02,880

that a lot of people try to behave as

373

00:15:05,670 --> 00:15:04,880

the adults in the room and pretend they

374

00:15:07,910 --> 00:15:05,680

know

375

00:15:10,550 --> 00:15:07,920

answers to questions

376

00:15:13,189 --> 00:15:10,560

and based on their past knowledge but

377

00:15:15,590 --> 00:15:13,199

the thrill about life is you know

378

00:15:17,750 --> 00:15:15,600

finding new things let's not pretend we

379

00:15:20,470 --> 00:15:17,760

know the answers let's enjoy the process

380

00:15:21,910 --> 00:15:20,480

of learning new things and in this case

381

00:15:24,310 --> 00:15:21,920

you know it's the first interstellar

382

00:15:26,550 --> 00:15:24,320

meteor so let's be excited about it

383

00:15:29,189 --> 00:15:26,560

figure it out see what it is and it

384

00:15:31,990 --> 00:15:29,199

opens a new avenue of research where we

385

00:15:33,509 --> 00:15:32,000

will look for very fast-moving meteors

386

00:15:35,829 --> 00:15:33,519

and whenever it looks like it's

387

00:15:38,710 --> 00:15:35,839

interstellar based on the measurements

388

00:15:40,150 --> 00:15:38,720

we can go and examine what this object

389

00:15:42,470 --> 00:15:40,160
was made of and whether it was

390

00:15:43,829 --> 00:15:42,480
technological in origin i think that's

391

00:15:47,590 --> 00:15:43,839
very exciting because there are two

392

00:15:49,030 --> 00:15:47,600
types of uh objects you can imagine from

393

00:15:50,949 --> 00:15:49,040
an extraterrestrial technological

394

00:15:53,509 --> 00:15:50,959
civilization there could be objects that

395

00:15:56,629 --> 00:15:53,519
are just space trash you know the kind

396

00:15:59,110 --> 00:15:56,639
of object that new horizons or voyager

397

00:16:00,949 --> 00:15:59,120
would become in a billion years so there

398

00:16:03,189 --> 00:16:00,959
could be a lot of trash out there and if

399

00:16:04,870 --> 00:16:03,199
such an object impacts the earth it

400

00:16:07,670 --> 00:16:04,880
would just behave like a rock you know

401
00:16:09,990 --> 00:16:07,680
but land eventually some some fragments

402
00:16:11,990 --> 00:16:10,000
from it will land on earth and then we

403
00:16:14,230 --> 00:16:12,000
can examine them

404
00:16:15,990 --> 00:16:14,240
and of course there is a second

405
00:16:17,430 --> 00:16:16,000
class of technological object

406
00:16:19,749 --> 00:16:17,440
technological equipment that is

407
00:16:21,910 --> 00:16:19,759
operational and that will not behave

408
00:16:23,990 --> 00:16:21,920
like a rock that may actually behave

409
00:16:26,069 --> 00:16:24,000
more like these unidentified aerial

410
00:16:28,550 --> 00:16:26,079
phenomena that the government is talking

411
00:16:30,870 --> 00:16:28,560
about so you know those require a

412
00:16:33,030 --> 00:16:30,880
completely different set of

413
00:16:34,710 --> 00:16:33,040

observations and and that's part of the

414

00:16:36,949 --> 00:16:34,720

galileo project that's what we're trying

415

00:16:39,430 --> 00:16:36,959

to do build telescope systems that would

416

00:16:41,670 --> 00:16:39,440

look at objects that

417

00:16:43,990 --> 00:16:41,680

whose nature is unclear and the

418

00:16:45,990 --> 00:16:44,000

government is uncertain about and

419

00:16:47,509 --> 00:16:46,000

frankly what i really wish

420

00:16:48,790 --> 00:16:47,519

what i really hope

421

00:16:50,629 --> 00:16:48,800

are two things

422

00:16:53,110 --> 00:16:50,639

for those objects that behave like

423

00:16:55,749 --> 00:16:53,120

meteors that you know land on the ground

424

00:16:57,590 --> 00:16:55,759

i want to find this piece of equipment

425

00:16:59,590 --> 00:16:57,600

and see if there are any buttons that i

426

00:17:01,430 --> 00:16:59,600

can press on it that that would be

427

00:17:03,509 --> 00:17:01,440

amazing you know that would give me the

428

00:17:06,150 --> 00:17:03,519

thrill of my life

429

00:17:07,829 --> 00:17:06,160

for for the others

430

00:17:10,949 --> 00:17:07,839

you know um

431

00:17:13,909 --> 00:17:10,959

i i would like to remove this term of

432

00:17:16,789 --> 00:17:13,919

unidentified aerial phenomena or

433

00:17:19,189 --> 00:17:16,799

unidentified flying objects i would like

434

00:17:21,750 --> 00:17:19,199

to remove these these terms from our

435

00:17:23,750 --> 00:17:21,760

lexicon not to use them anymore again

436

00:17:25,429 --> 00:17:23,760

because we will identify what they are

437

00:17:27,510 --> 00:17:25,439

okay so

438

00:17:29,510 --> 00:17:27,520

we don't need to use these words if we

439

00:17:31,510 --> 00:17:29,520

have good enough data you know if we can

440

00:17:35,270 --> 00:17:31,520

resolve an object and figure out whether

441

00:17:37,510 --> 00:17:35,280

it's a bird a drone

442

00:17:39,990 --> 00:17:37,520

a meteor or you know maybe something

443

00:17:41,909 --> 00:17:40,000

from outside of this earth you know once

444

00:17:44,310 --> 00:17:41,919

we figure out what it is because we have

445

00:17:47,830 --> 00:17:44,320

a high resolution image or because

446

00:17:50,789 --> 00:17:47,840

you know we see how it behaves um then

447

00:17:53,750 --> 00:17:50,799

we will not need the term unidentified

448

00:17:56,470 --> 00:17:53,760

it will be identified so

449

00:17:57,830 --> 00:17:56,480

these are my great hopes that within a

450

00:17:59,669 --> 00:17:57,840

few years

451
00:18:00,789 --> 00:17:59,679
you know either i would be able to press

452
00:18:01,909 --> 00:18:00,799
a button

453
00:18:04,549 --> 00:18:01,919
or

454
00:18:06,870 --> 00:18:04,559
remove the term unidentified from the

455
00:18:08,390 --> 00:18:06,880
lexicon of those objects

456
00:18:10,870 --> 00:18:08,400
that's wonderful

457
00:18:13,510 --> 00:18:10,880
yeah i well i love both options i just

458
00:18:15,430 --> 00:18:13,520
hope that button isn't a trojan horse of

459
00:18:17,669 --> 00:18:15,440
some kind but

460
00:18:19,669 --> 00:18:17,679
that's that's my biggest kind of scary

461
00:18:22,470 --> 00:18:19,679
i've watched too much twilight zone i

462
00:18:23,990 --> 00:18:22,480
know um well avi i i guess kind of

463
00:18:26,789 --> 00:18:24,000

playing off of that and i do want to

464

00:18:28,310 --> 00:18:26,799

read this message really quick from mark

465

00:18:30,390 --> 00:18:28,320

thank you for the super chat mark he

466

00:18:32,870 --> 00:18:30,400

said i first discovered your show when

467

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

you interviewed dr loeb on muammua over

468

00:18:37,430 --> 00:18:35,120

a year ago this was before the interest

469

00:18:39,669 --> 00:18:37,440

my interest in ufos dr loeb is an

470

00:18:42,070 --> 00:18:39,679

inspiration you and chrissy are great um

471

00:18:44,310 --> 00:18:42,080

avi i couldn't agree more when i had you

472

00:18:46,549 --> 00:18:44,320

on the show um

473

00:18:49,110 --> 00:18:46,559

it just it was amazing seeing so many

474

00:18:51,669 --> 00:18:49,120

young people get interested and not just

475

00:18:53,830 --> 00:18:51,679

people interested in ufos i'm talking

476

00:18:56,070 --> 00:18:53,840

you know aspiring astronomers

477

00:18:57,110 --> 00:18:56,080

astrophysicists reaching out to me and

478

00:18:59,190 --> 00:18:57,120

then you go

479

00:19:01,270 --> 00:18:59,200

to the galileo project website and you

480

00:19:03,990 --> 00:19:01,280

look at all the researchers that are

481

00:19:06,789 --> 00:19:04,000

involved with with what you have founded

482

00:19:09,590 --> 00:19:06,799

and it's so refreshing to see

483

00:19:11,750 --> 00:19:09,600

young people students even getting

484

00:19:14,549 --> 00:19:11,760

involved in this whereas

485

00:19:17,750 --> 00:19:14,559

gosh five years ago none of them would

486

00:19:20,070 --> 00:19:17,760

touch this in fear of what you know the

487

00:19:22,710 --> 00:19:20,080

the mainstream scientific community

488

00:19:24,070 --> 00:19:22,720

would think and it's amazing the strides

489

00:19:25,590 --> 00:19:24,080

that have been made in the past few

490

00:19:27,669 --> 00:19:25,600

years so um

491

00:19:30,549 --> 00:19:27,679

thank you to mark and thank you to you

492

00:19:33,270 --> 00:19:30,559

thank you um yeah i mean last friday i

493

00:19:35,909 --> 00:19:33,280

took part in a discussion at the bitcoin

494

00:19:37,990 --> 00:19:35,919

2022 on in miami florida and you can

495

00:19:39,669 --> 00:19:38,000

find the video online

496

00:19:42,789 --> 00:19:39,679

and the one thing i said to the audience

497

00:19:44,710 --> 00:19:42,799

there were 100 000 viewers of that

498

00:19:46,310 --> 00:19:44,720

discussion and you know i really

499

00:19:48,230 --> 00:19:46,320

appreciated the fact that

500

00:19:51,029 --> 00:19:48,240

they're mostly young people because

501
00:19:53,590 --> 00:19:51,039
young people do not carry a baggage

502
00:19:55,430 --> 00:19:53,600
of past knowledge they are not really

503
00:19:57,270 --> 00:19:55,440
obsessed with themselves

504
00:19:59,590 --> 00:19:57,280
you know the way the adults in the room

505
00:20:02,549 --> 00:19:59,600
often are you know that's the biggest

506
00:20:05,830 --> 00:20:02,559
problem we have that people at a certain

507
00:20:08,950 --> 00:20:05,840
age start focusing on themselves and

508
00:20:11,029 --> 00:20:08,960
promoting their image and that implies

509
00:20:13,350 --> 00:20:11,039
that they should pretend

510
00:20:15,270 --> 00:20:13,360
that their past knowledge can explain

511
00:20:17,990 --> 00:20:15,280
anything they see and they're not open

512
00:20:20,470 --> 00:20:18,000
to discovering new things because then

513
00:20:23,990 --> 00:20:20,480

they would lose their title as experts

514

00:20:26,710 --> 00:20:24,000

an expert is a person who pretends to be

515

00:20:28,310 --> 00:20:26,720

able to explain anything based on packed

516

00:20:30,950 --> 00:20:28,320

knowledge right that's where the

517

00:20:33,110 --> 00:20:30,960

reputation of an expert comes from so

518

00:20:36,549 --> 00:20:33,120

when i left the room

519

00:20:38,549 --> 00:20:36,559

after a lecture about

520

00:20:42,230 --> 00:20:38,559

a an expert a colleague of mine that

521

00:20:45,909 --> 00:20:42,240

works on on rocks for decades said that

522

00:20:48,390 --> 00:20:45,919

omo is so weird i wish it never existed

523

00:20:50,390 --> 00:20:48,400

okay and why does he wish that it never

524

00:20:52,710 --> 00:20:50,400

existed because that threatens his

525

00:20:55,110 --> 00:20:52,720

expertise he prefers to argue this

526

00:20:56,149 --> 00:20:55,120

object can be explained based on my past

527

00:20:58,630 --> 00:20:56,159

knowledge

528

00:21:00,950 --> 00:20:58,640

and that is the exactly the opposite to

529

00:21:04,310 --> 00:21:00,960

the way a scientist should think which

530

00:21:06,549 --> 00:21:04,320

is if nature shows me an anomaly that's

531

00:21:08,149 --> 00:21:06,559

nature's way of educating me that i'm

532

00:21:10,310 --> 00:21:08,159

missing something i should be

533

00:21:13,510 --> 00:21:10,320

open-minded now of course it may well be

534

00:21:14,230 --> 00:21:13,520

that umuah is a nitrogen iceberg okay

535

00:21:16,950 --> 00:21:14,240

but

536

00:21:18,630 --> 00:21:16,960

to find out we should not argue that it

537

00:21:20,549 --> 00:21:18,640

must be a nitrogen aspect we should

538

00:21:23,190 --> 00:21:20,559

collect evidence and you know when

539

00:21:25,510 --> 00:21:23,200

people say extraordinary claims require

540

00:21:28,230 --> 00:21:25,520

extraordinary evidence my reply and

541

00:21:29,270 --> 00:21:28,240

that's based on what carl sagan said i

542

00:21:31,190 --> 00:21:29,280

say

543

00:21:33,990 --> 00:21:31,200

uh extraordinary evidence requires

544

00:21:36,070 --> 00:21:34,000

extraordinary funding um and and by the

545

00:21:37,990 --> 00:21:36,080

way we invested billions of dollars

546

00:21:39,270 --> 00:21:38,000

trying to find out what the dark matter

547

00:21:41,669 --> 00:21:39,280

is what most of the matter in the

548

00:21:43,990 --> 00:21:41,679

universe is we still don't know you know

549

00:21:45,430 --> 00:21:44,000

we we were exploring the universe for a

550

00:21:48,470 --> 00:21:45,440

century now

551
00:21:50,070 --> 00:21:48,480
and since 1933 we know that most of the

552
00:21:51,990 --> 00:21:50,080
matter in the universe is not the

553
00:21:53,990 --> 00:21:52,000
material that we are made of it's

554
00:21:55,830 --> 00:21:54,000
something else we don't know what it is

555
00:21:58,310 --> 00:21:55,840
and we invested billions of dollars

556
00:22:00,549 --> 00:21:58,320
trying to find out through experiments

557
00:22:03,430 --> 00:22:00,559
and we went in directions that were very

558
00:22:05,350 --> 00:22:03,440
popular mainstream and we didn't find

559
00:22:06,870 --> 00:22:05,360
anything so if we search for

560
00:22:08,630 --> 00:22:06,880
technological equipment of other

561
00:22:10,789 --> 00:22:08,640
civilizations you know something that we

562
00:22:13,190 --> 00:22:10,799
sent into space and we say there are so

563
00:22:15,190 --> 00:22:13,200

many other planets just like the earth

564

00:22:17,190 --> 00:22:15,200

why don't we just see if anyone else

565

00:22:19,590 --> 00:22:17,200

sent equipment to space you know that

566

00:22:21,830 --> 00:22:19,600

sounds to me like not very speculative

567

00:22:24,230 --> 00:22:21,840

and if we do that for 40 years and

568

00:22:26,630 --> 00:22:24,240

invest billions of dollars and not find

569

00:22:29,510 --> 00:22:26,640

anything then we would be exactly at the

570

00:22:31,510 --> 00:22:29,520

same point as dark matter searches are

571

00:22:33,830 --> 00:22:31,520

right now and they are part of the

572

00:22:35,350 --> 00:22:33,840

mainstream so i ask myself how is it

573

00:22:37,830 --> 00:22:35,360

possible that the mainstream of

574

00:22:39,909 --> 00:22:37,840

astronomy is pushing back

575

00:22:41,909 --> 00:22:39,919

on the search and that was the reason

576

00:22:43,590 --> 00:22:41,919

that i established the galileo project i

577

00:22:46,390 --> 00:22:43,600

hope it will make a difference

578

00:22:48,310 --> 00:22:46,400

yeah it's the first time ever too like a

579

00:22:50,230 --> 00:22:48,320

wonderful group of affiliates on the

580

00:22:52,310 --> 00:22:50,240

board and researchers

581

00:22:55,669 --> 00:22:52,320

i recently watched your yip lecture that

582

00:22:57,110 --> 00:22:55,679

you did and it was fabulous avi and i i

583

00:22:58,549 --> 00:22:57,120

found you know some new stuff that you

584

00:23:00,230 --> 00:22:58,559

were talking about and i was like i'm

585

00:23:03,430 --> 00:23:00,240

really excited to talk to you about this

586

00:23:05,510 --> 00:23:03,440

with ryan um you mentioned cern

587

00:23:07,350 --> 00:23:05,520

in that lecture and being able to use

588

00:23:09,830 --> 00:23:07,360

cern with the galileo project can you

589

00:23:11,830 --> 00:23:09,840

talk a little bit about that and and

590

00:23:14,549 --> 00:23:11,840

and how cern would play a part in it

591

00:23:16,630 --> 00:23:14,559

because that's very very exciting well i

592

00:23:19,190 --> 00:23:16,640

mentioned sun to illustrate the fact

593

00:23:21,510 --> 00:23:19,200

that we invested 10 billion dollars in

594

00:23:22,549 --> 00:23:21,520

the large hadron collider and

595

00:23:25,110 --> 00:23:22,559

that was

596

00:23:27,669 --> 00:23:25,120

uh partly to find the higgs boson which

597

00:23:29,110 --> 00:23:27,679

was found and but that's old news in

598

00:23:30,630 --> 00:23:29,120

terms of physics it's just a

599

00:23:32,870 --> 00:23:30,640

confirmation of something that for

600

00:23:35,669 --> 00:23:32,880

decades was believed to exist

601
00:23:36,950 --> 00:23:35,679
uh but in terms of uh opening new

602
00:23:39,350 --> 00:23:36,960
frontiers

603
00:23:41,510 --> 00:23:39,360
sun was hoping to

604
00:23:43,430 --> 00:23:41,520
find the lightest supersymmetric

605
00:23:45,510 --> 00:23:43,440
particle which was the favorite

606
00:23:48,549 --> 00:23:45,520
candidate for the dark matter

607
00:23:51,990 --> 00:23:48,559
and nothing was found as of yet

608
00:23:54,070 --> 00:23:52,000
and the you know we know that

609
00:23:56,710 --> 00:23:54,080
our understanding of physics is

610
00:23:58,549 --> 00:23:56,720
incomplete we know that because we don't

611
00:24:01,430 --> 00:23:58,559
know what the dark matter is

612
00:24:04,070 --> 00:24:01,440
and then in order to find out we have to

613
00:24:06,549 --> 00:24:04,080

to invest money and so far we haven't

614

00:24:08,870 --> 00:24:06,559

found the dark matter is so so you can't

615

00:24:11,029 --> 00:24:08,880

ask for extraordinary evidence without

616

00:24:13,510 --> 00:24:11,039

investing the funds to collect that

617

00:24:15,909 --> 00:24:13,520

evidence and otherwise it's a circular

618

00:24:17,909 --> 00:24:15,919

argument and that's the way that the

619

00:24:19,909 --> 00:24:17,919

subject of searching for technological

620

00:24:22,470 --> 00:24:19,919

equipment from other civilizations is

621

00:24:24,230 --> 00:24:22,480

being dealt with people say we don't

622

00:24:26,710 --> 00:24:24,240

have the evidence therefore forget about

623

00:24:28,070 --> 00:24:26,720

it everything in the sky must be natural

624

00:24:28,870 --> 00:24:28,080

must be rocks

625

00:24:30,950 --> 00:24:28,880

and

626
00:24:33,430 --> 00:24:30,960
you know that that would be the approach

627
00:24:35,029 --> 00:24:33,440
of a cave dweller finding a cell phone

628
00:24:37,909 --> 00:24:35,039
saying it's a rock of a type that we've

629
00:24:39,510 --> 00:24:37,919
never seen before if you have to imagine

630
00:24:41,909 --> 00:24:39,520
rocks with a type that we've never seen

631
00:24:44,470 --> 00:24:41,919
before like a nitrogen iceberg hydrogen

632
00:24:47,510 --> 00:24:44,480
iceberg dust bunny to explain the

633
00:24:49,029 --> 00:24:47,520
anomalies of i say

634
00:24:51,190 --> 00:24:49,039
you should allow for the possibility

635
00:24:53,029 --> 00:24:51,200
that it's artificial because

636
00:24:54,789 --> 00:24:53,039
because it's something of a type that

637
00:24:57,110 --> 00:24:54,799
we've never seen before so how can you

638
00:24:59,029 --> 00:24:57,120

be sure that it's natural unless you

639

00:25:01,269 --> 00:24:59,039

collect more evidence and you know the

640

00:25:02,230 --> 00:25:01,279

biggest mistake we can make is

641

00:25:04,870 --> 00:25:02,240

um

642

00:25:06,630 --> 00:25:04,880

be complacent basically say oh there are

643

00:25:07,669 --> 00:25:06,640

these anomalies but don't worry about

644

00:25:10,630 --> 00:25:07,679

them

645

00:25:12,950 --> 00:25:10,640

let's move on and continue to interpret

646

00:25:15,190 --> 00:25:12,960

anything we see in the sky as rocks you

647

00:25:17,830 --> 00:25:15,200

know of some type that we've never seen

648

00:25:19,350 --> 00:25:17,840

be that would be the wrong approach and

649

00:25:21,269 --> 00:25:19,360

you know one thing we knew about the

650

00:25:24,230 --> 00:25:21,279

muammua is that

651
00:25:26,230 --> 00:25:24,240
it's probably flat at the 90 confidence

652
00:25:29,269 --> 00:25:26,240
based on the reflection of sunlight as

653
00:25:30,950 --> 00:25:29,279
it was tumbling the other thing we

654
00:25:33,269 --> 00:25:30,960
know that it was pushed by some

655
00:25:36,070 --> 00:25:33,279
mysterious force which i explained to be

656
00:25:38,070 --> 00:25:36,080
the result of reflection of sunlight so

657
00:25:40,390 --> 00:25:38,080
if you imagine a thin

658
00:25:42,310 --> 00:25:40,400
flat object you know what could be that

659
00:25:44,950 --> 00:25:42,320
then one possibility is that it was a

660
00:25:47,269 --> 00:25:44,960
leaflet you know a letter a love letter

661
00:25:49,830 --> 00:25:47,279
in our mailbox from another civilization

662
00:25:50,870 --> 00:25:49,840
advising us of what to do and

663
00:25:53,269 --> 00:25:50,880

um

664

00:25:54,310 --> 00:25:53,279

it would be really tragic if

665

00:25:55,110 --> 00:25:54,320

um

666

00:25:57,269 --> 00:25:55,120

we

667

00:25:58,710 --> 00:25:57,279

do not read any letter that comes in our

668

00:26:01,110 --> 00:25:58,720

mailbox

669

00:26:04,870 --> 00:26:01,120

because we have an expiration date

670

00:26:07,430 --> 00:26:04,880

that's when uh wars or climate change or

671

00:26:11,269 --> 00:26:07,440

whatever we do damage this

672

00:26:13,590 --> 00:26:11,279

uh environment that we live in will um

673

00:26:15,909 --> 00:26:13,600

bring an end to our

674

00:26:17,110 --> 00:26:15,919

technological civilization and you know

675

00:26:18,070 --> 00:26:17,120

we better

676

00:26:19,350 --> 00:26:18,080

uh

677

00:26:21,350 --> 00:26:19,360

first of all

678

00:26:23,669 --> 00:26:21,360

figure out if there is a smarter kid on

679

00:26:26,070 --> 00:26:23,679

the block and and second learn from that

680

00:26:28,230 --> 00:26:26,080

kid uh because that could

681

00:26:29,750 --> 00:26:28,240

uh bring us to our salvation in some

682

00:26:32,549 --> 00:26:29,760

sense

683

00:26:35,029 --> 00:26:32,559

amen wonderful yeah yeah

684

00:26:35,750 --> 00:26:35,039

shakespearean at its finest i know i

685

00:26:37,269 --> 00:26:35,760

know

686

00:26:40,230 --> 00:26:37,279

um well

687

00:26:41,750 --> 00:26:40,240

i i heard uh through chrissy and um

688

00:26:44,070 --> 00:26:41,760

through the lecture that you gave avi as

689

00:26:46,230 --> 00:26:44,080

well um that you actually

690

00:26:48,230 --> 00:26:46,240

uh were working with the james webb

691

00:26:51,190 --> 00:26:48,240

telescope is that correct you got to use

692

00:26:54,070 --> 00:26:51,200

that um now we saw the stunning images

693

00:26:57,350 --> 00:26:54,080

or image that uh recently came through

694

00:26:59,830 --> 00:26:57,360

on that so i'd love to know um what what

695

00:27:01,510 --> 00:26:59,840

access were you given and um what did

696

00:27:02,950 --> 00:27:01,520

you do with your time with the james

697

00:27:05,110 --> 00:27:02,960

webb telescope

698

00:27:07,430 --> 00:27:05,120

well um so the

699

00:27:11,110 --> 00:27:07,440

the story starts in the

700

00:27:12,549 --> 00:27:11,120

mid the 1990s i was on the first

701
00:27:17,190 --> 00:27:12,559
advisory

702
00:27:18,549 --> 00:27:17,200
designed the the web telescope and at

703
00:27:20,389 --> 00:27:18,559
the time it was called the next

704
00:27:22,950 --> 00:27:20,399
generation space telescope and the

705
00:27:25,269 --> 00:27:22,960
reason i was there is because

706
00:27:28,070 --> 00:27:25,279
at the time i was mainly working on the

707
00:27:29,909 --> 00:27:28,080
first stars in the universe so you can

708
00:27:33,269 --> 00:27:29,919
think of it as the scientific version of

709
00:27:35,669 --> 00:27:33,279
the story of genesis let there be light

710
00:27:38,389 --> 00:27:35,679
and we want to figure out when the first

711
00:27:40,630 --> 00:27:38,399
stars formed because they established

712
00:27:42,950 --> 00:27:40,640
our cosmic roots

713
00:27:45,669 --> 00:27:42,960

we would never exist

714

00:27:47,750 --> 00:27:45,679

unless carbon and oxygen were produced

715

00:27:49,669 --> 00:27:47,760

by stars they were never produced by the

716

00:27:51,830 --> 00:27:49,679

big bang and

717

00:27:53,830 --> 00:27:51,840

mostly you know out of the big bang came

718

00:27:56,710 --> 00:27:53,840

hydrogen and helium so

719

00:27:59,990 --> 00:27:56,720

for life as we know it to exist you need

720

00:28:02,310 --> 00:28:00,000

carbon and oxygen and heavy elements and

721

00:28:04,950 --> 00:28:02,320

that was produced in the interiors of

722

00:28:07,110 --> 00:28:04,960

stars and the process started with the

723

00:28:08,710 --> 00:28:07,120

first stars about 100 million years

724

00:28:10,389 --> 00:28:08,720

after the big bang

725

00:28:12,789 --> 00:28:10,399

when the universe was

726
00:28:13,590 --> 00:28:12,799
less than a percent of its current age

727
00:28:15,750 --> 00:28:13,600
so

728
00:28:18,070 --> 00:28:15,760
we want to see those first stars because

729
00:28:18,789 --> 00:28:18,080
that's our roots that's our cosmic roots

730
00:28:20,710 --> 00:28:18,799
and

731
00:28:22,789 --> 00:28:20,720
the james webb space telescope was

732
00:28:24,789 --> 00:28:22,799
designed to

733
00:28:26,230 --> 00:28:24,799
give us the deepest images of the

734
00:28:28,389 --> 00:28:26,240
universe so that we can see the first

735
00:28:30,549 --> 00:28:28,399
galaxies the first stars and

736
00:28:32,950 --> 00:28:30,559
it was designed to observe in the

737
00:28:35,110 --> 00:28:32,960
infrared because the

738
00:28:37,110 --> 00:28:35,120

wavelength of light emitted by those

739

00:28:39,750 --> 00:28:37,120

stars is stretched by the cosmic

740

00:28:42,789 --> 00:28:39,760

expansion starting from the visible

741

00:28:44,710 --> 00:28:42,799

light or ultraviolet light

742

00:28:45,590 --> 00:28:44,720

and being stretched into the infrared

743

00:28:48,310 --> 00:28:45,600

because

744

00:28:49,510 --> 00:28:48,320

red is longer wavelengths and

745

00:28:52,470 --> 00:28:49,520

so um

746

00:28:54,070 --> 00:28:52,480

that was the original intent and then

747

00:28:56,310 --> 00:28:54,080

of course by now we know that there are

748

00:28:58,870 --> 00:28:56,320

planets around other stars so there are

749

00:29:01,750 --> 00:28:58,880

other goals for the for the

750

00:29:04,389 --> 00:29:01,760

james webb space telescope

751

00:29:07,110 --> 00:29:04,399

such as imaging the birth

752

00:29:09,190 --> 00:29:07,120

uh places of planets you know like that

753

00:29:10,870 --> 00:29:09,200

would be exciting but the lesson we

754

00:29:11,669 --> 00:29:10,880

learned from the hubble space telescope

755

00:29:12,630 --> 00:29:11,679

is

756

00:29:13,430 --> 00:29:12,640

often

757

00:29:36,470 --> 00:29:13,440

a

758

00:29:39,909 --> 00:29:36,480

we discussed

759

00:29:43,430 --> 00:29:39,919

so the meteor represented the nearest

760

00:29:45,430 --> 00:29:43,440

object that was discovered from outside

761

00:29:48,149 --> 00:29:45,440

the solar system it came you know so

762

00:29:51,750 --> 00:29:48,159

close that it collided with the earth

763

00:29:54,389 --> 00:29:51,760

but i was also involved a day later in a

764

00:29:56,630 --> 00:29:54,399

press release about the farthest objects

765

00:29:59,510 --> 00:29:56,640

that we ever detected

766

00:30:01,669 --> 00:29:59,520

which existed that's a galaxy from 300

767

00:30:03,029 --> 00:30:01,679

million years after the big bang

768

00:30:05,669 --> 00:30:03,039

and

769

00:30:08,230 --> 00:30:05,679

perhaps that galaxy has a very massive

770

00:30:09,990 --> 00:30:08,240

black hole at its center because we see

771

00:30:11,110 --> 00:30:10,000

a lot of light coming out we don't know

772

00:30:13,029 --> 00:30:11,120

if it came

773

00:30:15,909 --> 00:30:13,039

from a black hole or from very massive

774

00:30:19,269 --> 00:30:15,919

stars in that galaxy but that was very

775

00:30:21,590 --> 00:30:19,279

exciting so in the same week i was part

776

00:30:22,789 --> 00:30:21,600

of discovering the

777

00:30:25,590 --> 00:30:22,799

closest

778

00:30:26,950 --> 00:30:25,600

and the farthest objects from outside

779

00:30:27,830 --> 00:30:26,960

the solar system

780

00:30:29,510 --> 00:30:27,840

and

781

00:30:30,870 --> 00:30:29,520

of course with the james webb space

782

00:30:33,990 --> 00:30:30,880

telescope

783

00:30:35,909 --> 00:30:34,000

we can learn much more about those early

784

00:30:37,430 --> 00:30:35,919

galaxies like the one that we reported

785

00:30:38,149 --> 00:30:37,440

about a week ago

786

00:30:39,750 --> 00:30:38,159

and

787

00:30:41,830 --> 00:30:39,760

the other thing we can learn is about

788

00:30:42,870 --> 00:30:41,840

objects like homoamua

789

00:30:45,029 --> 00:30:42,880

because

790

00:30:47,510 --> 00:30:45,039

the web telescope is one and a half

791

00:30:48,549 --> 00:30:47,520

million kilometers or about a million

792

00:30:50,950 --> 00:30:48,559

miles

793

00:30:52,710 --> 00:30:50,960

away from earth so when you observe an

794

00:30:54,149 --> 00:30:52,720

object like

795

00:30:55,990 --> 00:30:54,159

passing within the orbit of the earth

796

00:30:58,149 --> 00:30:56,000

around the sun

797

00:31:00,789 --> 00:30:58,159

you can see it from two

798

00:31:03,029 --> 00:31:00,799

different directions uh if you observe

799

00:31:04,389 --> 00:31:03,039

it from earth and from

800

00:31:07,110 --> 00:31:04,399

the web telescope

801
00:31:08,870 --> 00:31:07,120
and that allows you to

802
00:31:11,269 --> 00:31:08,880
figure out the trajectory in three

803
00:31:12,710 --> 00:31:11,279
dimensions uh it's called parallax in

804
00:31:15,350 --> 00:31:12,720
astronomy when you observe something

805
00:31:18,789 --> 00:31:15,360
from two different vantage points and

806
00:31:21,269 --> 00:31:18,799
then um and so that would allow us uh to

807
00:31:25,669 --> 00:31:21,279
observe the next

808
00:31:28,230 --> 00:31:25,679
uh from two directions and pin down the

809
00:31:30,710 --> 00:31:28,240
motion of it in very precisely much

810
00:31:32,310 --> 00:31:30,720
better than we did with umuah and figure

811
00:31:33,909 --> 00:31:32,320
out whether there are any forces in

812
00:31:36,549 --> 00:31:33,919
addition to the force of gravity from

813
00:31:38,710 --> 00:31:36,559

the sun acting on it and also the james

814

00:31:40,070 --> 00:31:38,720

webb space telescope could allow us to

815

00:31:42,389 --> 00:31:40,080

learn about the composition of the

816

00:31:45,110 --> 00:31:42,399

object from doing spectroscopy of the

817

00:31:49,110 --> 00:31:45,120

reflected light an emitted light from

818

00:31:50,389 --> 00:31:49,120

the object so all together it offers us

819

00:31:51,269 --> 00:31:50,399

much more

820

00:31:54,149 --> 00:31:51,279

um

821

00:31:56,389 --> 00:31:54,159

sensitivity and and and information

822

00:31:58,789 --> 00:31:56,399

about the next

823

00:32:00,630 --> 00:31:58,799

and then previously i i mentioned the

824

00:32:04,310 --> 00:32:00,640

fact that we the galileo project might

825

00:32:07,750 --> 00:32:04,320

want to design a space mission to image

826
00:32:10,950 --> 00:32:07,760
the next muah but with the web telescope

827
00:32:11,830 --> 00:32:10,960
and with existing new telescopes on on

828
00:32:13,509 --> 00:32:11,840
earth

829
00:32:16,870 --> 00:32:13,519
we will get much more information about

830
00:32:19,029 --> 00:32:16,880
the next more even before we date it we

831
00:32:21,590 --> 00:32:19,039
before we run the vu with it

832
00:32:24,549 --> 00:32:21,600
so all together i'm very excited that

833
00:32:27,269 --> 00:32:24,559
the coming years you know will bring us

834
00:32:29,669 --> 00:32:27,279
new data either from the galileo project

835
00:32:31,110 --> 00:32:29,679
or from other

836
00:32:32,149 --> 00:32:31,120
telescopes that

837
00:32:34,389 --> 00:32:32,159
you know will

838
00:32:37,990 --> 00:32:34,399

advance our knowledge because

839

00:32:40,149 --> 00:32:38,000

rather than relying on prejudice we can

840

00:32:42,389 --> 00:32:40,159

rely on data on evidence and you know

841

00:32:44,950 --> 00:32:42,399

that's the way kids behave they

842

00:32:47,190 --> 00:32:44,960

they learn from experience you know and

843

00:32:49,509 --> 00:32:47,200

uh i very much hope that you know so

844

00:32:52,149 --> 00:32:49,519

people ask me how would you change the

845

00:32:54,310 --> 00:32:52,159

opinion of your colleagues and i say

846

00:32:56,070 --> 00:32:54,320

you know first of all i don't feel an

847

00:32:57,750 --> 00:32:56,080

obligation to change their opinion if i

848

00:32:59,190 --> 00:32:57,760

do get a high resolution image of an

849

00:33:01,750 --> 00:32:59,200

object that shows that it's a piece of

850

00:33:03,669 --> 00:33:01,760

equipment from another civilization

851
00:33:05,590 --> 00:33:03,679
you know let let other people catch up

852
00:33:07,269 --> 00:33:05,600
with me it's just like

853
00:33:08,950 --> 00:33:07,279
galileo galilei looking through his

854
00:33:11,190 --> 00:33:08,960
telescope realize that the earth moves

855
00:33:14,149 --> 00:33:11,200
around the sun took a while for other

856
00:33:16,149 --> 00:33:14,159
people to catch up um today they would

857
00:33:18,310 --> 00:33:16,159
have cancelled him on social media while

858
00:33:19,990 --> 00:33:18,320
he was alive that but that's not an

859
00:33:22,070 --> 00:33:20,000
issue because the earth moves around the

860
00:33:24,389 --> 00:33:22,080
sun it doesn't really matter so we just

861
00:33:25,990 --> 00:33:24,399
need to figure out what's going on

862
00:33:27,830 --> 00:33:26,000
and then whether people catch up with it

863
00:33:30,149 --> 00:33:27,840

or not whether it's popular on twitter

864

00:33:32,389 --> 00:33:30,159

is a completely secondary issue

865

00:33:33,909 --> 00:33:32,399

yeah i'd i'd love to ask you a question

866

00:33:36,389 --> 00:33:33,919

too and circle back with the hubble

867

00:33:37,830 --> 00:33:36,399

space telescope uh because you know

868

00:33:39,909 --> 00:33:37,840

we're looking the information that just

869

00:33:41,509 --> 00:33:39,919

came out about finding an image or sorry

870

00:33:43,830 --> 00:33:41,519

having the distant star in the image

871

00:33:45,029 --> 00:33:43,840

that came out the hubble is using

872

00:33:47,830 --> 00:33:45,039

something a technique called

873

00:33:49,990 --> 00:33:47,840

gravitational lensing that magnifies

874

00:33:51,909 --> 00:33:50,000

this distant star are you going to be

875

00:33:53,830 --> 00:33:51,919

looking and i have to bring in the ufo

876

00:33:55,830 --> 00:33:53,840

conversation are you going to look at

877

00:33:58,149 --> 00:33:55,840

using gravitational lensing for

878

00:34:00,149 --> 00:33:58,159

something to identify smaller objects

879

00:34:02,070 --> 00:34:00,159

like ufos you know

880

00:34:03,269 --> 00:34:02,080

within even our planet and then outside

881

00:34:04,630 --> 00:34:03,279

of it as well

882

00:34:07,110 --> 00:34:04,640

so let me first explain what

883

00:34:08,230 --> 00:34:07,120

gravitational lensing is actually

884

00:34:11,109 --> 00:34:08,240

the first

885

00:34:14,629 --> 00:34:11,119

real test of einstein's theory of

886

00:34:15,909 --> 00:34:14,639

gravity uh was the deflection of light

887

00:34:17,909 --> 00:34:15,919

by the sun

888

00:34:20,629 --> 00:34:17,919

the sun actually the force of gravity of

889

00:34:24,470 --> 00:34:20,639

the sun can deflect light and that was

890

00:34:26,470 --> 00:34:24,480

detected and conf you know agreed with

891

00:34:27,829 --> 00:34:26,480

the prediction of the theory which is a

892

00:34:30,550 --> 00:34:27,839

factor of two

893

00:34:32,069 --> 00:34:30,560

off what newtonian gravity would have

894

00:34:35,109 --> 00:34:32,079

predicted so

895

00:34:38,389 --> 00:34:35,119

um then einstein around 1940 wrote a

896

00:34:40,389 --> 00:34:38,399

paper saying in principle a star can act

897

00:34:41,990 --> 00:34:40,399

as a gravitational lens if you have a

898

00:34:43,829 --> 00:34:42,000

source behind it

899

00:34:45,669 --> 00:34:43,839

it can focus the light from the

900

00:34:46,869 --> 00:34:45,679

background source if it lines up with

901
00:34:49,030 --> 00:34:46,879
the star

902
00:34:51,829 --> 00:34:49,040
and magnify the amount of light that you

903
00:34:54,230 --> 00:34:51,839
see just like a magnifying glass

904
00:34:57,030 --> 00:34:54,240
and except it's using the the force of

905
00:34:59,270 --> 00:34:57,040
gravity to focus the light rays

906
00:35:02,069 --> 00:34:59,280
and then that

907
00:35:05,109 --> 00:35:02,079
prediction but einstein commented well

908
00:35:07,109 --> 00:35:05,119
that would never be detected because

909
00:35:07,910 --> 00:35:07,119
the chance of that happening is small

910
00:35:09,750 --> 00:35:07,920
and

911
00:35:11,589 --> 00:35:09,760
you know but

912
00:35:14,069 --> 00:35:11,599
for example in the milky way galaxy to

913
00:35:17,030 --> 00:35:14,079

observe gravitational lensing by a star

914

00:35:19,430 --> 00:35:17,040

you know the chance you need to monitor

915

00:35:22,230 --> 00:35:19,440

millions of stars okay and it turns out

916

00:35:24,150 --> 00:35:22,240

that about two decades ago

917

00:35:26,390 --> 00:35:24,160

you know that was demos actually three

918

00:35:29,270 --> 00:35:26,400

decades ago that was demonstrated to be

919

00:35:30,790 --> 00:35:29,280

possible um and

920

00:35:33,270 --> 00:35:30,800

uh we

921

00:35:35,030 --> 00:35:33,280

monitored astronomers monitored millions

922

00:35:37,430 --> 00:35:35,040

of stars and were able to detect the

923

00:35:38,870 --> 00:35:37,440

effect of gravitational lensing every

924

00:35:41,510 --> 00:35:38,880

now and then

925

00:35:43,349 --> 00:35:41,520

and it was used to figure out if the

926
00:35:45,510 --> 00:35:43,359
dark matter is made of

927
00:35:48,069 --> 00:35:45,520
compact objects because then they would

928
00:35:50,550 --> 00:35:48,079
length without you seeing anything

929
00:35:53,109 --> 00:35:50,560
the object is dark but

930
00:35:54,310 --> 00:35:53,119
very tight limits were put on the dark

931
00:35:57,109 --> 00:35:54,320
matter being

932
00:35:58,950 --> 00:35:57,119
you know of the mass range of of around

933
00:36:01,190 --> 00:35:58,960
the mass of the sun based on this

934
00:36:02,790 --> 00:36:01,200
experiment we we saw some

935
00:36:04,390 --> 00:36:02,800
lensing events but

936
00:36:06,230 --> 00:36:04,400
at a much lower

937
00:36:08,390 --> 00:36:06,240
uh abundance than you would expect if

938
00:36:11,109 --> 00:36:08,400

the dark matter was made of

939

00:36:13,190 --> 00:36:11,119

objects um like

940

00:36:16,710 --> 00:36:13,200

primordial black hole of the mass of the

941

00:36:19,109 --> 00:36:16,720

sun okay so at any event um we also see

942

00:36:22,230 --> 00:36:19,119

gravitational lensing by bigger systems

943

00:36:25,190 --> 00:36:22,240

not just an individual star we see

944

00:36:27,589 --> 00:36:25,200

galaxies lensing the light from a

945

00:36:29,670 --> 00:36:27,599

background source bright source

946

00:36:32,390 --> 00:36:29,680

and we see also clusters of galaxies

947

00:36:33,349 --> 00:36:32,400

they produce beautiful arcs

948

00:36:36,630 --> 00:36:33,359

and

949

00:36:39,430 --> 00:36:36,640

uh there was this recent report where it

950

00:36:41,430 --> 00:36:39,440

so happened that the very bright star

951
00:36:42,950 --> 00:36:41,440
early on in the universe you know when

952
00:36:45,990 --> 00:36:42,960
the universe was just a billion years

953
00:36:47,829 --> 00:36:46,000
old uh happen to lie behind the

954
00:36:50,230 --> 00:36:47,839
so-called caustic where you get very

955
00:36:51,510 --> 00:36:50,240
large magnification by a cluster of

956
00:36:53,190 --> 00:36:51,520
galaxies

957
00:36:54,870 --> 00:36:53,200
and it's

958
00:36:57,190 --> 00:36:54,880
the amount of light that we receive from

959
00:36:59,430 --> 00:36:57,200
it was amplified so much that we could

960
00:37:02,069 --> 00:36:59,440
detect a single star which is quite

961
00:37:04,870 --> 00:37:02,079
remarkable uh we can also detect a

962
00:37:07,670 --> 00:37:04,880
single star when it explodes uh in the

963
00:37:10,069 --> 00:37:07,680

form of a gamma ray burst that is also

964

00:37:11,750 --> 00:37:10,079

observed now you have to understand the

965

00:37:14,550 --> 00:37:11,760

chance of gravitational lensing is small

966

00:37:16,150 --> 00:37:14,560

you need to be lucky uh and so you can't

967

00:37:17,990 --> 00:37:16,160

really use it

968

00:37:19,670 --> 00:37:18,000

um you know

969

00:37:21,270 --> 00:37:19,680

to figure out

970

00:37:22,870 --> 00:37:21,280

um you know

971

00:37:24,150 --> 00:37:22,880

the nature of

972

00:37:26,710 --> 00:37:24,160

things that

973

00:37:28,310 --> 00:37:26,720

uh are are not very abundant you know

974

00:37:29,990 --> 00:37:28,320

you need a lot of them before one of

975

00:37:32,870 --> 00:37:30,000

them will be lanced

976
00:37:36,310 --> 00:37:34,470
i don't see a simple way of using

977
00:37:38,150 --> 00:37:36,320
gravitational lensing just because the

978
00:37:39,910 --> 00:37:38,160
probability of having a source behind

979
00:37:42,470 --> 00:37:39,920
the lens is so small

980
00:37:45,910 --> 00:37:42,480
for the search for um technological

981
00:37:47,910 --> 00:37:45,920
signatures but maybe there will be

982
00:37:49,750 --> 00:37:47,920
it's much easier to look directly for

983
00:37:51,990 --> 00:37:49,760
technological signatures so aside from

984
00:37:54,150 --> 00:37:52,000
filing doing extraterrestrial

985
00:37:56,310 --> 00:37:54,160
uh archaeology looking for objects in

986
00:38:00,230 --> 00:37:56,320
space that i was talking about before

987
00:38:02,390 --> 00:38:00,240
you can look for city lights on the

988
00:38:05,030 --> 00:38:02,400

night side of a planet you can look for

989

00:38:06,790 --> 00:38:05,040

industrial pollution there are lots of

990

00:38:09,270 --> 00:38:06,800

uh interes

991

00:38:12,550 --> 00:38:09,280

there are lots of um techno signatures

992

00:38:14,790 --> 00:38:12,560

that you can imagine searching for

993

00:38:16,829 --> 00:38:14,800

uh on other planets without

994

00:38:19,349 --> 00:38:16,839

gravitational lensing

995

00:38:21,510 --> 00:38:19,359

um so but

996

00:38:22,950 --> 00:38:21,520

who knows maybe one day there will be a

997

00:38:25,190 --> 00:38:22,960

detection of

998

00:38:26,950 --> 00:38:25,200

a signal that was magnified by

999

00:38:28,950 --> 00:38:26,960

gravitational lensing that

1000

00:38:30,550 --> 00:38:28,960

originated from a technological

1001

00:38:31,510 --> 00:38:30,560

civilization

1002

00:38:33,510 --> 00:38:31,520

nice

1003

00:38:36,069 --> 00:38:33,520

interesting yeah well i mean while we're

1004

00:38:38,550 --> 00:38:36,079

on techno signature avi um i'm gonna

1005

00:38:40,470 --> 00:38:38,560

move to a couple listener questions here

1006

00:38:44,630 --> 00:38:40,480

um because i know our time is running a

1007

00:38:47,510 --> 00:38:44,640

little short um but n8 on twitter asks

1008

00:38:48,870 --> 00:38:47,520

if um if we do discover the existence of

1009

00:38:51,750 --> 00:38:48,880

an advanced extraterrestrial

1010

00:38:53,670 --> 00:38:51,760

civilization what comes next after that

1011

00:38:56,150 --> 00:38:53,680

discovery what's like the next step

1012

00:38:58,630 --> 00:38:56,160

after we find it i would imagine a ton

1013

00:39:01,990 --> 00:38:58,640

of peer review would be involved um but

1014

00:39:04,790 --> 00:39:02,000

yeah in your opinion say galileo

1015

00:39:08,550 --> 00:39:04,800

does reach its goal and its mission

1016

00:39:09,990 --> 00:39:08,560

what comes next after that okay so um

1017

00:39:12,550 --> 00:39:10,000

it's really an important question

1018

00:39:14,870 --> 00:39:12,560

because if we find an object

1019

00:39:16,950 --> 00:39:14,880

that is functional let's imagine the

1020

00:39:18,950 --> 00:39:16,960

category of a functional object that has

1021

00:39:20,790 --> 00:39:18,960

maybe artificial intelligence trying to

1022

00:39:22,390 --> 00:39:20,800

seek some information

1023

00:39:25,109 --> 00:39:22,400

near earth of course that's very

1024

00:39:29,430 --> 00:39:25,119

different from finding space trash okay

1025

00:39:31,430 --> 00:39:29,440

so if we find something like that

1026

00:39:33,349 --> 00:39:31,440

the question is what to do about it it's

1027

00:39:35,030 --> 00:39:33,359

just like finding a visitor in your

1028

00:39:37,030 --> 00:39:35,040

backyard now

1029

00:39:39,109 --> 00:39:37,040

when people thought about protocols for

1030

00:39:41,190 --> 00:39:39,119

response

1031

00:39:43,510 --> 00:39:41,200

they thought about detecting a radio

1032

00:39:45,670 --> 00:39:43,520

signal from a star that is you know

1033

00:39:47,510 --> 00:39:45,680

thousands of light years away and you

1034

00:39:49,030 --> 00:39:47,520

have plenty of time to decide how to

1035

00:39:50,950 --> 00:39:49,040

respond to that

1036

00:39:53,510 --> 00:39:50,960

but if you have a visitor in your

1037

00:39:55,670 --> 00:39:53,520

backyard you need to decide

1038

00:39:57,829 --> 00:39:55,680

immediately what to do

1039

00:40:00,870 --> 00:39:57,839

and we don't have a protocol for that

1040

00:40:02,870 --> 00:40:00,880

and the question is who represents

1041

00:40:04,630 --> 00:40:02,880

earth who represents humanity we don't

1042

00:40:06,230 --> 00:40:04,640

have an organization that does it and

1043

00:40:08,710 --> 00:40:06,240

frankly even if we established an

1044

00:40:10,790 --> 00:40:08,720

organization that represents humanity i

1045

00:40:12,630 --> 00:40:10,800

would worry about some

1046

00:40:14,150 --> 00:40:12,640

some people outside of the organization

1047

00:40:16,630 --> 00:40:14,160

that will decide to engage with the

1048

00:40:19,990 --> 00:40:16,640

object on their own i don't think we

1049

00:40:22,790 --> 00:40:20,000

will have full control over everyone

1050

00:40:24,870 --> 00:40:22,800

so that could pose a risk to everyone

1051

00:40:27,750 --> 00:40:24,880

depending on the capabilities of that

1052

00:40:29,670 --> 00:40:27,760

object that we find and uh of course the

1053

00:40:31,910 --> 00:40:29,680

blueprint of that object what does it

1054

00:40:34,150 --> 00:40:31,920

what is it trying to accomplish and i

1055

00:40:37,430 --> 00:40:34,160

actually had a conversation with henry

1056

00:40:40,710 --> 00:40:37,440

kissinger uh a few months ago about this

1057

00:40:43,829 --> 00:40:40,720

he's 98 years old and i asked him

1058

00:40:45,190 --> 00:40:43,839

based on your real politic how would you

1059

00:40:49,349 --> 00:40:45,200

approach

1060

00:40:51,349 --> 00:40:49,359

uh an object that came from a culture

1061

00:40:53,190 --> 00:40:51,359

that you know nothing about

1062

00:40:55,670 --> 00:40:53,200

based on your experience and he said you

1063

00:40:57,750 --> 00:40:55,680

know based on my experience with

1064

00:40:59,109 --> 00:40:57,760

china and russia that the the first

1065

00:40:59,990 --> 00:40:59,119

thing to do is

1066

00:41:02,790 --> 00:41:00,000

um

1067

00:41:05,270 --> 00:41:02,800

try and figure out what

1068

00:41:07,670 --> 00:41:05,280

the goals of the other side are and what

1069

00:41:09,589 --> 00:41:07,680

what is it trying to accomplish and then

1070

00:41:11,589 --> 00:41:09,599

respond accordingly so

1071

00:41:13,510 --> 00:41:11,599

i think this is the wise thing to do to

1072

00:41:15,349 --> 00:41:13,520

collect as much information as possible

1073

00:41:16,550 --> 00:41:15,359

about what information this object is

1074

00:41:17,829 --> 00:41:16,560

seeking

1075

00:41:20,470 --> 00:41:17,839

uh and then

1076

00:41:23,750 --> 00:41:20,480

think about you know what would be

1077

00:41:25,349 --> 00:41:23,760

our best response to that and figure out

1078

00:41:26,150 --> 00:41:25,359

what the intent is

1079

00:41:29,910 --> 00:41:26,160

um

1080

00:41:32,309 --> 00:41:29,920

because

1081

00:41:34,950 --> 00:41:32,319

you know this equipment might represent

1082

00:41:37,589 --> 00:41:34,960

technologies that are much more advanced

1083

00:41:39,910 --> 00:41:37,599

than what we possess and then we will

1084

00:41:42,390 --> 00:41:39,920

never be able to reverse engineer and

1085

00:41:44,470 --> 00:41:42,400

figure out what the object is doing and

1086

00:41:46,870 --> 00:41:44,480

sort of like a cave dweller going to new

1087

00:41:48,710 --> 00:41:46,880

york city and seeing all the gadgets

1088

00:41:51,109 --> 00:41:48,720

you know that

1089

00:41:52,950 --> 00:41:51,119

that may become a mythical story for the

1090

00:41:54,390 --> 00:41:52,960

cave dwellers but

1091

00:41:55,910 --> 00:41:54,400

it will not allow them to reverse

1092

00:41:59,990 --> 00:41:55,920

engineer what they found in new york

1093

00:42:03,109 --> 00:42:00,000

city on a short time scale um and so

1094

00:42:05,589 --> 00:42:03,119

we might be at all with

1095

00:42:07,109 --> 00:42:05,599

the magic that such equipment is

1096

00:42:09,670 --> 00:42:07,119

exhibiting because our knowledge of

1097

00:42:11,510 --> 00:42:09,680

physics is incomplete you know we know

1098

00:42:13,430 --> 00:42:11,520

that we have some holes in our

1099

00:42:15,510 --> 00:42:13,440

understanding you know for example

1100

00:42:18,069 --> 00:42:15,520

imagine that the

1101

00:42:20,710 --> 00:42:18,079

dark matter is being used as rocket fuel

1102

00:42:22,309 --> 00:42:20,720

you know we would never see it uh if you

1103

00:42:24,710 --> 00:42:22,319

know that that's the most abundant

1104

00:42:26,150 --> 00:42:24,720

substance in the universe why not use it

1105

00:42:28,790 --> 00:42:26,160

for rocket fuel if you know what it is

1106

00:42:31,030 --> 00:42:28,800

if you know how to engineer it

1107

00:42:32,870 --> 00:42:31,040

that would look strange to us we would

1108

00:42:34,790 --> 00:42:32,880

see propulsion without anything coming

1109

00:42:36,470 --> 00:42:34,800

out of the exhaust

1110

00:42:38,150 --> 00:42:36,480

this is just one example of course you

1111

00:42:39,670 --> 00:42:38,160

can think about using the vacuum we know

1112

00:42:42,150 --> 00:42:39,680

that the universe is accelerating we

1113

00:42:43,589 --> 00:42:42,160

don't know what the dark energy is

1114

00:42:45,510 --> 00:42:43,599

so there are lots of holes in our

1115

00:42:47,750 --> 00:42:45,520

understanding that in principle an

1116

00:42:49,030 --> 00:42:47,760

advanced scientific civilization might

1117

00:42:51,990 --> 00:42:49,040

be able to

1118

00:42:52,950 --> 00:42:52,000

use once they acquire the knowledge uh

1119

00:42:55,589 --> 00:42:52,960

uh

1120

00:42:59,109 --> 00:42:55,599

and and it would be difficult for us to

1121

00:43:01,990 --> 00:42:59,119

understand that um but

1122

00:43:04,150 --> 00:43:02,000

that is a very challenging issue of how

1123

00:43:06,309 --> 00:43:04,160

to deal with an object now of course if

1124

00:43:09,670 --> 00:43:06,319

it's space trash the situation is much

1125

00:43:11,190 --> 00:43:09,680

simpler and then maybe the gap would not

1126

00:43:13,190 --> 00:43:11,200

be as big

1127

00:43:16,069 --> 00:43:13,200

my fundamental point is that

1128

00:43:17,510 --> 00:43:16,079

a very advanced scientific civilization

1129

00:43:19,190 --> 00:43:17,520

is a good approximation to what

1130

00:43:21,829 --> 00:43:19,200

religious texts

1131

00:43:23,349 --> 00:43:21,839

call this god because

1132

00:43:25,109 --> 00:43:23,359

you know they might be able to produce

1133

00:43:26,710 --> 00:43:25,119

synthetic life in the laboratory they

1134

00:43:28,550 --> 00:43:26,720

might be able to even produce baby

1135

00:43:30,390 --> 00:43:28,560

universes in laboratory

1136

00:43:32,309 --> 00:43:30,400

if they understand how to unify quantum

1137

00:43:35,270 --> 00:43:32,319

mechanics and gravity so

1138

00:43:35,450 --> 00:43:35,280

i think we have a lot of room to learn

1139

00:43:36,950 --> 00:43:35,460
from

1140

00:43:39,030 --> 00:43:36,960
[Music]

1141

00:43:41,030 --> 00:43:39,040
a gap in technology

1142

00:43:42,870 --> 00:43:41,040
and it offers also a business

1143

00:43:45,990 --> 00:43:42,880
opportunity for people to import those

1144

00:43:47,670 --> 00:43:46,000
technologies to earth you know

1145

00:43:50,630 --> 00:43:47,680
that's why i think

1146

00:43:52,710 --> 00:43:50,640
wealthy individuals should put

1147

00:43:56,470 --> 00:43:52,720
some money into this search

1148

00:43:59,109 --> 00:43:56,480
because it offers opportunities to

1149

00:44:01,670 --> 00:43:59,119
leap forward in a way that would take us

1150

00:44:02,710 --> 00:44:01,680
a lot of time to do ourselves

1151
00:44:06,309 --> 00:44:02,720
right

1152
00:44:08,230 --> 00:44:06,319
people

1153
00:44:11,030 --> 00:44:08,240
invested

1154
00:44:12,870 --> 00:44:11,040
yeah yeah that's space trash but no

1155
00:44:15,109 --> 00:44:12,880
that's such a good point um i know

1156
00:44:16,870 --> 00:44:15,119
christopher plane said black what do you

1157
00:44:19,910 --> 00:44:16,880
say black matter as rocket fuel that's

1158
00:44:21,910 --> 00:44:19,920
why i love avi yeah it's so like think

1159
00:44:24,710 --> 00:44:21,920
just think if we had this like endless

1160
00:44:26,550 --> 00:44:24,720
amount of oh god it blows my mind um

1161
00:44:28,950 --> 00:44:26,560
chrissy i've got a few listener

1162
00:44:31,190 --> 00:44:28,960
questions and comments here in the um

1163
00:44:33,510 --> 00:44:31,200

the star chat but is there anything else

1164

00:44:35,430 --> 00:44:33,520

you want to ask avi before i run through

1165

00:44:36,950 --> 00:44:35,440

those with them quickly for sure i just

1166

00:44:38,630 --> 00:44:36,960

wanted to chat a little bit about the

1167

00:44:39,910 --> 00:44:38,640

harvard telescope that you're building

1168

00:44:41,510 --> 00:44:39,920

right now or who will be currently

1169

00:44:43,750 --> 00:44:41,520

building can you talk a little bit about

1170

00:44:46,230 --> 00:44:43,760

that and what it will look like and and

1171

00:44:48,790 --> 00:44:46,240

when that when you'll start using it

1172

00:44:50,790 --> 00:44:48,800

yeah so we plan to start the assembly

1173

00:44:53,109 --> 00:44:50,800

uh in a month

1174

00:44:54,390 --> 00:44:53,119

we ordered all the components

1175

00:44:56,470 --> 00:44:54,400

uh and

1176

00:44:58,950 --> 00:44:56,480

it will basically include the

1177

00:45:00,790 --> 00:44:58,960

a set of eight infrared cameras that

1178

00:45:02,870 --> 00:45:00,800

monitor the entire sky

1179

00:45:04,790 --> 00:45:02,880

at all times so

1180

00:45:06,950 --> 00:45:04,800

the system takes a video of the sky in

1181

00:45:09,349 --> 00:45:06,960

the infrared we also have a visible

1182

00:45:10,950 --> 00:45:09,359

light camera that has a fish eye lens

1183

00:45:14,069 --> 00:45:10,960

that looks at the entire sky at all

1184

00:45:16,150 --> 00:45:14,079

times and we have radio sensors

1185

00:45:18,390 --> 00:45:16,160

and then also

1186

00:45:20,950 --> 00:45:18,400

an audio sensor that

1187

00:45:23,589 --> 00:45:20,960

at the same time records everything uh

1188

00:45:25,349 --> 00:45:23,599

in the sky and and that data will be

1189

00:45:27,990 --> 00:45:25,359

processed by

1190

00:45:29,349 --> 00:45:28,000

a software that that will use artificial

1191

00:45:32,069 --> 00:45:29,359

intelligence machine learning to

1192

00:45:33,990 --> 00:45:32,079

identify the type of objects we see and

1193

00:45:36,230 --> 00:45:34,000

there are two categories of objects that

1194

00:45:40,069 --> 00:45:36,240

we can think of one is

1195

00:45:42,630 --> 00:45:40,079

natural objects like a bird

1196

00:45:44,390 --> 00:45:42,640

light lightning in the atmosphere

1197

00:45:47,510 --> 00:45:44,400

meteor

1198

00:45:48,710 --> 00:45:47,520

or human-made objects like drones

1199

00:45:50,309 --> 00:45:48,720

airplanes

1200

00:45:52,550 --> 00:45:50,319

satellites

1201
00:45:54,069 --> 00:45:52,560
now um

1202
00:45:55,190 --> 00:45:54,079
we will

1203
00:45:57,190 --> 00:45:55,200
of course

1204
00:45:59,190 --> 00:45:57,200
try to see if any object we see can

1205
00:46:01,030 --> 00:45:59,200
belong to one of these two categories

1206
00:46:03,190 --> 00:46:01,040
and if there is anything else that

1207
00:46:04,790 --> 00:46:03,200
behaves in ways that we cannot explain

1208
00:46:06,710 --> 00:46:04,800
that would be of course the most

1209
00:46:07,910 --> 00:46:06,720
exciting uh but it's a fishing

1210
00:46:10,470 --> 00:46:07,920
expedition

1211
00:46:12,309 --> 00:46:10,480
you see uh and i should say the

1212
00:46:15,030 --> 00:46:12,319
the meteor

1213
00:46:16,950 --> 00:46:15,040

expedition that i mentioned before is an

1214

00:46:18,470 --> 00:46:16,960

actual fishing expedition we will go

1215

00:46:21,030 --> 00:46:18,480

into the ocean

1216

00:46:23,190 --> 00:46:21,040

and the fish for the fragments from the

1217

00:46:25,829 --> 00:46:23,200

meteor so it gives a whole new meaning

1218

00:46:26,950 --> 00:46:25,839

to the term fishing expedition but in

1219

00:46:29,829 --> 00:46:26,960

this case

1220

00:46:31,829 --> 00:46:29,839

we use telescopes as our fishing net

1221

00:46:35,030 --> 00:46:31,839

and they try to see which objects are in

1222

00:46:36,790 --> 00:46:35,040

the sky now once the telescope system

1223

00:46:38,550 --> 00:46:36,800

on the hub on the roof of the harvard

1224

00:46:40,470 --> 00:46:38,560

college observatory will work and by the

1225

00:46:42,710 --> 00:46:40,480

way the reason we chose it is simply

1226
00:46:45,190 --> 00:46:42,720
because it's local and we can make sure

1227
00:46:48,150 --> 00:46:45,200
the instrumentation works and in the the

1228
00:46:50,630 --> 00:46:48,160
sky is very often cloudy there was never

1229
00:46:52,309 --> 00:46:50,640
a major discovery made from uh the

1230
00:46:54,630 --> 00:46:52,319
harvard college observatory you know

1231
00:46:57,510 --> 00:46:54,640
observational astronomy um

1232
00:46:58,950 --> 00:46:57,520
so we will once it works the system we

1233
00:47:01,430 --> 00:46:58,960
will move it to

1234
00:47:02,630 --> 00:47:01,440
a location that allows us to learn more

1235
00:47:05,109 --> 00:47:02,640
about

1236
00:47:07,510 --> 00:47:05,119
those unidentified aerial phenomena and

1237
00:47:10,230 --> 00:47:07,520
we will build copies of it and the

1238
00:47:13,510 --> 00:47:10,240

number of copies we build will depend on

1239

00:47:15,430 --> 00:47:13,520

how much money we have

1240

00:47:17,030 --> 00:47:15,440

so we can build a few of those with the

1241

00:47:18,550 --> 00:47:17,040

money we have right now 2 million

1242

00:47:19,270 --> 00:47:18,560

dollars

1243

00:47:21,990 --> 00:47:19,280

but

1244

00:47:23,190 --> 00:47:22,000

my hope is we will get eventually we we

1245

00:47:24,630 --> 00:47:23,200

should get

1246

00:47:26,950 --> 00:47:24,640

to a hundred million dollars because

1247

00:47:29,430 --> 00:47:26,960

that will give us access to hundreds of

1248

00:47:32,470 --> 00:47:29,440

such systems and then we cover enough of

1249

00:47:34,390 --> 00:47:32,480

the sky to get to the bottom of the

1250

00:47:36,710 --> 00:47:34,400

nature of those unidentified aerial

1251

00:47:38,630 --> 00:47:36,720

phenomena and a hundred million dollars

1252

00:47:40,950 --> 00:47:38,640

is not a lot of money it's just one

1253

00:47:43,430 --> 00:47:40,960

percent of the cost of the large hadron

1254

00:47:46,630 --> 00:47:43,440

collider it's an amount that

1255

00:47:48,150 --> 00:47:46,640

is often allocated to medium-sized

1256

00:47:50,069 --> 00:47:48,160

science projects

1257

00:47:53,510 --> 00:47:50,079

and it's an amount that the private

1258

00:47:57,109 --> 00:47:53,520

donor of sufficient wealth can easily

1259

00:47:58,150 --> 00:47:57,119

provide so i very much hope that we will

1260

00:47:59,670 --> 00:47:58,160

inspire

1261

00:48:01,190 --> 00:47:59,680

such a donor

1262

00:48:03,829 --> 00:48:01,200

i hope so too

1263

00:48:07,270 --> 00:48:03,839

yeah i think we all do um

1264

00:48:08,549 --> 00:48:07,280

well uh luis is our moderator today and

1265

00:48:10,549 --> 00:48:08,559

he's gonna be

1266

00:48:12,309 --> 00:48:10,559

putting up some of our starred questions

1267

00:48:15,829 --> 00:48:12,319

and answers here but while he's doing

1268

00:48:17,910 --> 00:48:15,839

that um avi this is a good one uh jesper

1269

00:48:20,549 --> 00:48:17,920

on facebook actually asks and i'll get

1270

00:48:22,710 --> 00:48:20,559

to that one in just a minute luis um

1271

00:48:25,190 --> 00:48:22,720

with galileo will we be able as the

1272

00:48:26,790 --> 00:48:25,200

public to like watch as these things

1273

00:48:29,510 --> 00:48:26,800

happen will there be like some sort of

1274

00:48:31,589 --> 00:48:29,520

app or like notification that like

1275

00:48:33,670 --> 00:48:31,599

people in the public can be like oh that

1276
00:48:35,829 --> 00:48:33,680
they're monitoring an object now like we

1277
00:48:38,470 --> 00:48:35,839
can go live stream and see what they're

1278
00:48:40,950 --> 00:48:38,480
looking at or or would that hinder the

1279
00:48:42,390 --> 00:48:40,960
actual research being done like anything

1280
00:48:44,390 --> 00:48:42,400
planned like that

1281
00:48:46,710 --> 00:48:44,400
well we are worried about false alarms

1282
00:48:49,030 --> 00:48:46,720
so we don't want to create false alarms

1283
00:48:49,750 --> 00:48:49,040
and the way it's done in science is that

1284
00:48:53,349 --> 00:48:49,760
we

1285
00:48:54,549 --> 00:48:53,359
process it through the software first

1286
00:48:55,910 --> 00:48:54,559
and then

1287
00:48:56,950 --> 00:48:55,920
make sure that

1288
00:48:59,910 --> 00:48:56,960

it's not

1289

00:49:03,270 --> 00:48:59,920

an artifact of the instrumentation and

1290

00:49:06,230 --> 00:49:03,280

and then that we understand uh what we

1291

00:49:09,349 --> 00:49:06,240

are seeing and and then we would report

1292

00:49:11,349 --> 00:49:09,359

in an open way to the public um so

1293

00:49:14,069 --> 00:49:11,359

eventually we'll release the data make

1294

00:49:15,670 --> 00:49:14,079

it open but there may be a some weeks in

1295

00:49:18,069 --> 00:49:15,680

between the time that we acquired the

1296

00:49:19,750 --> 00:49:18,079

data and the time to release it just not

1297

00:49:21,390 --> 00:49:19,760

to create false alarms you know of

1298

00:49:24,390 --> 00:49:21,400

confusion and

1299

00:49:25,829 --> 00:49:24,400

misinterpretation and um i don't think

1300

00:49:26,950 --> 00:49:25,839

you have to worry too much about it

1301
00:49:29,349 --> 00:49:26,960
because

1302
00:49:31,349 --> 00:49:29,359
such a project was not done

1303
00:49:32,309 --> 00:49:31,359
a scientific project of this magnitude

1304
00:49:34,309 --> 00:49:32,319
and

1305
00:49:36,470 --> 00:49:34,319
um you know it's the first time we do it

1306
00:49:38,630 --> 00:49:36,480
we have to learn make sure that we

1307
00:49:40,950 --> 00:49:38,640
understand what we're seeing and

1308
00:49:42,630 --> 00:49:40,960
a few months of a delay is not really a

1309
00:49:45,910 --> 00:49:42,640
big deal

1310
00:49:48,549 --> 00:49:45,920
in this context you know we uh

1311
00:49:50,069 --> 00:49:48,559
if if we find the answer a few

1312
00:49:52,470 --> 00:49:50,079
within a year

1313
00:49:53,349 --> 00:49:52,480

that would be amazing you know that

1314

00:49:55,430 --> 00:49:53,359

so

1315

00:49:57,030 --> 00:49:55,440

just waiting a little bit to make sure

1316

00:49:59,510 --> 00:49:57,040

the data is reliable and that we

1317

00:50:01,349 --> 00:49:59,520

understand it is worthwhile so that we

1318

00:50:04,710 --> 00:50:01,359

don't create

1319

00:50:06,950 --> 00:50:04,720

you know uh false alarms and then people

1320

00:50:08,390 --> 00:50:06,960

stop paying attention after a while

1321

00:50:10,230 --> 00:50:08,400

yeah you don't want it to affect any

1322

00:50:12,630 --> 00:50:10,240

credibility and that makes that makes

1323

00:50:14,790 --> 00:50:12,640

100 sense totally you know in a field

1324

00:50:17,349 --> 00:50:14,800

full of hype you know we have to be

1325

00:50:19,990 --> 00:50:17,359

careful we constantly have to be careful

1326
00:50:20,710 --> 00:50:20,000
and not um put our expectations too high

1327
00:50:23,349 --> 00:50:20,720
yeah

1328
00:50:25,109 --> 00:50:23,359
the other thing to keep in mind is and

1329
00:50:27,190 --> 00:50:25,119
you know we we have the government

1330
00:50:28,710 --> 00:50:27,200
reporting about military

1331
00:50:31,030 --> 00:50:28,720
data and

1332
00:50:32,710 --> 00:50:31,040
you know a a camera in the cockpit of a

1333
00:50:35,190 --> 00:50:32,720
fighter jet is not

1334
00:50:36,390 --> 00:50:35,200
something you can

1335
00:50:38,710 --> 00:50:36,400
be certain

1336
00:50:40,549 --> 00:50:38,720
about in terms of having full control

1337
00:50:42,309 --> 00:50:40,559
over it so

1338
00:50:44,069 --> 00:50:42,319

we want to have full control over our

1339

00:50:45,510 --> 00:50:44,079

instruments and and that means also

1340

00:50:47,829 --> 00:50:45,520

understanding them and

1341

00:50:49,030 --> 00:50:47,839

that makes the project scientific uh

1342

00:50:52,549 --> 00:50:49,040

rather than

1343

00:50:57,510 --> 00:50:55,190

in a way i mean we pay a price for

1344

00:51:00,309 --> 00:50:57,520

trying to be more rigorous but trying to

1345

00:51:01,750 --> 00:51:00,319

be more reliable uh the price is that we

1346

00:51:04,069 --> 00:51:01,760

just have to wait

1347

00:51:05,589 --> 00:51:04,079

some weeks before we release the data to

1348

00:51:08,549 --> 00:51:05,599

make sure that we understand where it's

1349

00:51:10,309 --> 00:51:08,559

coming from but but that delay is really

1350

00:51:12,069 --> 00:51:10,319

negligible compared to the amount of

1351
00:51:13,910 --> 00:51:12,079
time we waited so far

1352
00:51:15,670 --> 00:51:13,920
since the first government reports came

1353
00:51:19,270 --> 00:51:15,680
up

1354
00:51:22,790 --> 00:51:19,280
welcome to

1355
00:51:24,710 --> 00:51:22,800
ufology and the government but um luis

1356
00:51:26,950 --> 00:51:24,720
go ahead and throw some of those up man

1357
00:51:29,270 --> 00:51:26,960
um for avi before we get him out of here

1358
00:51:31,910 --> 00:51:29,280
he's got another interview as well he's

1359
00:51:33,670 --> 00:51:31,920
a busy man um ryan please ask dr loeb if

1360
00:51:36,870 --> 00:51:33,680
he has seen the data or knows about it

1361
00:51:39,030 --> 00:51:36,880
collected by you uapx team um they're

1362
00:51:41,750 --> 00:51:39,040
coming out with a documentary in the

1363
00:51:44,230 --> 00:51:41,760

next few weeks about uh some interesting

1364

00:51:46,309 --> 00:51:44,240

data i was able to advance screen this

1365

00:51:48,870 --> 00:51:46,319

documentary and i was pretty intrigued

1366

00:51:51,670 --> 00:51:48,880

by what they captured both on video and

1367

00:51:53,750 --> 00:51:51,680

um you know with the data they collected

1368

00:51:57,430 --> 00:51:53,760

but yes will you be working with any

1369

00:51:59,270 --> 00:51:57,440

other independent organizations or or or

1370

00:52:01,589 --> 00:51:59,280

even government i know a lot of people

1371

00:52:04,710 --> 00:52:01,599

have questions and concerns about that

1372

00:52:06,150 --> 00:52:04,720

as well with galileo um how will they

1373

00:52:08,150 --> 00:52:06,160

play any role in this any other

1374

00:52:09,349 --> 00:52:08,160

organizations whether governmental or

1375

00:52:11,510 --> 00:52:09,359

independent

1376

00:52:13,349 --> 00:52:11,520

well i think the trailer they produced

1377

00:52:16,549 --> 00:52:13,359

the documentary about this

1378

00:52:19,750 --> 00:52:16,559

expedition they had uh last summer and

1379

00:52:22,870 --> 00:52:19,760

um the trailer talks about them seeing

1380

00:52:24,790 --> 00:52:22,880

unusual things near catalina island and

1381

00:52:26,390 --> 00:52:24,800

of course that's the site

1382

00:52:28,630 --> 00:52:26,400

where

1383

00:52:30,230 --> 00:52:28,640

the navy also reported interesting

1384

00:52:31,349 --> 00:52:30,240

things happening and

1385

00:52:33,349 --> 00:52:31,359

um

1386

00:52:34,710 --> 00:52:33,359

we still have to see the actual data the

1387

00:52:37,030 --> 00:52:34,720

trailer is of course just an

1388

00:52:39,349 --> 00:52:37,040

advertisement for the documentary and

1389

00:52:41,670 --> 00:52:39,359

it's not scientific in any way

1390

00:52:44,069 --> 00:52:41,680

uh so i very much look forward to seeing

1391

00:52:48,069 --> 00:52:44,079

i mean they must be writing some

1392

00:52:49,910 --> 00:52:48,079

article about it uh or articles and i i

1393

00:52:51,430 --> 00:52:49,920

look forward to seeing the data itself

1394

00:52:52,870 --> 00:52:51,440

and of course the galileo project will

1395

00:52:53,829 --> 00:52:52,880

be glad to

1396

00:53:03,270 --> 00:52:53,839

to

1397

00:53:05,829 --> 00:53:03,280

it and there are some members of

1398

00:53:09,190 --> 00:53:05,839

the galileo project affiliates that

1399

00:53:11,109 --> 00:53:09,200

are part of the of the uapx team

1400

00:53:13,349 --> 00:53:11,119

and they told me that they have some

1401

00:53:14,790 --> 00:53:13,359

interesting results but i i don't know

1402

00:53:16,390 --> 00:53:14,800

the nature of them and

1403

00:53:17,990 --> 00:53:16,400

of course it's all about the quality of

1404

00:53:19,990 --> 00:53:18,000

the data you see

1405

00:53:21,910 --> 00:53:20,000

you can have interesting results the

1406

00:53:23,910 --> 00:53:21,920

question is how much uncertainty there

1407

00:53:25,589 --> 00:53:23,920

is i mean you can argue that you're

1408

00:53:27,270 --> 00:53:25,599

seeing a wormhole and it might be a

1409

00:53:29,430 --> 00:53:27,280

flock of birds

1410

00:53:33,349 --> 00:53:29,440

so the question is really

1411

00:53:35,109 --> 00:53:33,359

how high quality is the data and

1412

00:53:37,270 --> 00:53:35,119

how conclusive it is that's the

1413

00:53:40,230 --> 00:53:37,280

fundamental question not whether the

1414

00:53:43,430 --> 00:53:40,240

data indicates weird things but whether

1415

00:53:45,750 --> 00:53:43,440

the weird things are can be analyzed at

1416

00:53:48,150 --> 00:53:45,760

a high enough fidelity to demonstrate

1417

00:53:50,710 --> 00:53:48,160

that they are not natural things

1418

00:53:52,549 --> 00:53:50,720

yeah and i think they are releasing um i

1419

00:53:54,710 --> 00:53:52,559

was there for that expedition for just a

1420

00:53:57,430 --> 00:53:54,720

section of it off catalina island myself

1421

00:53:59,990 --> 00:53:57,440

but i wasn't there for the other parts

1422

00:54:01,670 --> 00:54:00,000

um of wormhole and everything else they

1423

00:54:03,270 --> 00:54:01,680

speak to but from what i've heard i

1424

00:54:05,190 --> 00:54:03,280

believe that they are releasing the data

1425

00:54:07,030 --> 00:54:05,200

after so that it can be reviewed which

1426

00:54:08,390 --> 00:54:07,040

they should because everyone if it you

1427

00:54:09,750 --> 00:54:08,400

know if you're going to say those

1428

00:54:11,190 --> 00:54:09,760

statements you really need to have other

1429

00:54:13,430 --> 00:54:11,200

people looking at in the scientific

1430

00:54:16,069 --> 00:54:13,440

community right and you know science is

1431

00:54:18,710 --> 00:54:16,079

about reproducibility of results and

1432

00:54:20,390 --> 00:54:18,720

um if they found something

1433

00:54:21,750 --> 00:54:20,400

that they would claim is beyond the

1434

00:54:23,190 --> 00:54:21,760

reasonable doubt

1435

00:54:25,349 --> 00:54:23,200

then the gallow project should be able

1436

00:54:27,910 --> 00:54:25,359

to find it as well it should be there

1437

00:54:29,670 --> 00:54:27,920

you know or in other locations so

1438

00:54:32,790 --> 00:54:29,680

eventually we'll get to the bottom of it

1439

00:54:36,150 --> 00:54:32,800

and it doesn't really matter who gets

1440

00:54:38,630 --> 00:54:36,160

the data first and it's really about

1441

00:54:40,630 --> 00:54:38,640

figuring out the reality that we live in

1442

00:54:41,910 --> 00:54:40,640

what is our cosmic neighborhood do we

1443

00:54:44,069 --> 00:54:41,920

have neighbors

1444

00:54:46,630 --> 00:54:44,079

are they smarter than we are

1445

00:54:48,470 --> 00:54:46,640

you know who finds it is less important

1446

00:54:51,190 --> 00:54:48,480

which window we are looking through is

1447

00:54:53,349 --> 00:54:51,200

less important fundamental question is

1448

00:54:54,150 --> 00:54:53,359

are we alone or is there someone out

1449

00:54:56,069 --> 00:54:54,160

there

1450

00:54:57,190 --> 00:54:56,079

and of course sitting on the sofa and

1451

00:54:59,109 --> 00:54:57,200

claiming

1452

00:55:00,549 --> 00:54:59,119

nobody is knocking on my door is not the

1453

00:55:03,270 --> 00:55:00,559

right approach you have to look through

1454

00:55:04,950 --> 00:55:03,280

your windows and i'm very glad that

1455

00:55:07,510 --> 00:55:04,960

uapx is

1456

00:55:10,470 --> 00:55:07,520

has some data but uh the galileo project

1457

00:55:13,190 --> 00:55:10,480

will obviously try to get more data of

1458

00:55:14,309 --> 00:55:13,200

the best quality we can assemble

1459

00:55:16,710 --> 00:55:14,319

i love it

1460

00:55:19,030 --> 00:55:16,720

yeah i mean hey the earth is a big house

1461

00:55:21,990 --> 00:55:19,040

there's plenty of windows to look out of

1462

00:55:24,390 --> 00:55:22,000

right so i love that um the sky is not

1463

00:55:26,870 --> 00:55:24,400

classified that's the other thing i mean

1464

00:55:29,510 --> 00:55:26,880

looking for the government to declassify

1465

00:55:30,470 --> 00:55:29,520

data is like waiting for godot this play

1466

00:55:32,470 --> 00:55:30,480

but

1467

00:55:36,390 --> 00:55:32,480

it's searcher

1468

00:55:38,230 --> 00:55:36,400

i mean i mean rather than age uh as you

1469

00:55:40,470 --> 00:55:38,240

wait for someone else to do something is

1470

00:55:41,589 --> 00:55:40,480

to do it yourself you know

1471

00:55:42,470 --> 00:55:41,599

anyway

1472

00:55:45,430 --> 00:55:42,480

yep

1473

00:55:47,430 --> 00:55:45,440

as a theater buff avi you just hit me in

1474

00:55:50,309 --> 00:55:47,440

the heartstrings man bringing up waiting

1475

00:55:52,069 --> 00:55:50,319

for godot i love it um here's one last

1476

00:55:55,109 --> 00:55:52,079

question for avi um i know you got to

1477

00:55:57,589 --> 00:55:55,119

get going um grant asks uh

1478

00:55:59,109 --> 00:55:57,599

does the proximity of omua to earth

1479

00:56:00,549 --> 00:55:59,119

after its um

1480

00:56:03,109 --> 00:56:00,559

perihelion

1481

00:56:07,109 --> 00:56:03,119

support the e.t hypothesis

1482

00:56:09,349 --> 00:56:07,119

no i mean in the trajectory the orbit of

1483

00:56:11,829 --> 00:56:09,359

was shaped mainly by the sun's gravity

1484

00:56:12,950 --> 00:56:11,839

the additional force that was acting on

1485

00:56:15,430 --> 00:56:12,960

it was

1486

00:56:17,910 --> 00:56:15,440

at a very low level

1487

00:56:19,510 --> 00:56:17,920

less than a percent uh of the sun's

1488

00:56:22,950 --> 00:56:19,520

gravity so

1489

00:56:25,990 --> 00:56:22,960

the the um was in the in the part of the

1490

00:56:28,309 --> 00:56:26,000

trajectory that we could monitor it was

1491

00:56:30,470 --> 00:56:28,319

moving mainly as a result of the

1492

00:56:32,870 --> 00:56:30,480

gravitational force of the sun mainly

1493

00:56:35,270 --> 00:56:32,880

but there was this additional force and

1494

00:56:37,349 --> 00:56:35,280

we interpreted it to to mean that it's

1495

00:56:39,589 --> 00:56:37,359

pushed by reflecting sunlight and in

1496

00:56:42,390 --> 00:56:39,599

september 2020 there was another object

1497

00:56:43,990 --> 00:56:42,400

that exhibited the similar quality

1498

00:56:46,230 --> 00:56:44,000

pushed by reflecting sunlight no

1499

00:56:48,349 --> 00:56:46,240

cometary tail and it ended up being a

1500

00:56:51,910 --> 00:56:48,359

rocket booster from

1501
00:56:53,670 --> 00:56:51,920
1966 that nasa launched and

1502
00:56:56,789 --> 00:56:53,680
the fact that the same telescope in

1503
00:57:00,390 --> 00:56:56,799
hawaii pan stars discovered both of them

1504
00:57:03,270 --> 00:57:00,400
and concluded the second one was indeed

1505
00:57:04,710 --> 00:57:03,280
artificial because we we made it to me

1506
00:57:06,630 --> 00:57:04,720
illustrates that we can tell the

1507
00:57:09,430 --> 00:57:06,640
difference between a rock and a very

1508
00:57:10,230 --> 00:57:09,440
thin object and this second object was

1509
00:57:13,190 --> 00:57:10,240
not

1510
00:57:15,190 --> 00:57:13,200
uh actually um designed to be a light

1511
00:57:17,430 --> 00:57:15,200
sail to be propelled by reflecting

1512
00:57:19,430 --> 00:57:17,440
sunlight it was just thin

1513
00:57:22,230 --> 00:57:19,440

okay so um

1514

00:57:23,990 --> 00:57:22,240

it may well be that omumu was just in

1515

00:57:26,549 --> 00:57:24,000

for a completely different reason and

1516

00:57:28,950 --> 00:57:26,559

the question is you know what was uh the

1517

00:57:31,750 --> 00:57:28,960

reason and what was the nature of of it

1518

00:57:35,109 --> 00:57:31,760

but to to gain understanding we need

1519

00:57:38,230 --> 00:57:35,119

more data on a another object like

1520

00:57:40,390 --> 00:57:38,240

so sort of like dating going on a date

1521

00:57:42,150 --> 00:57:40,400

and liking the person you went out with

1522

00:57:45,589 --> 00:57:42,160

but then the person is out the door you

1523

00:57:47,510 --> 00:57:45,599

can find them uh and then you're just

1524

00:57:49,190 --> 00:57:47,520

trying to date the next

1525

00:57:50,950 --> 00:57:49,200

which is what we plan to do in the

1526

00:57:53,190 --> 00:57:50,960

coming years

1527

00:57:56,630 --> 00:57:53,200

wonderful sounds like my uh

1528

00:57:57,589 --> 00:57:56,640

good analogy new york city yeah yeah

1529

00:57:59,430 --> 00:57:57,599

um

1530

00:58:01,190 --> 00:57:59,440

this has been incredible man again i

1531

00:58:03,430 --> 00:58:01,200

don't wanna you have another interview

1532

00:58:06,230 --> 00:58:03,440

coming up in a few minutes let you go um

1533

00:58:07,589 --> 00:58:06,240

but last question before we leave you

1534

00:58:09,670 --> 00:58:07,599

here um

1535

00:58:13,190 --> 00:58:09,680

is there anything you can tease with us

1536

00:58:15,190 --> 00:58:13,200

with any upcoming uh data from galileo

1537

00:58:17,670 --> 00:58:15,200

or um you know

1538

00:58:19,750 --> 00:58:17,680

timely endeavors you're gonna be doing

1539

00:58:21,510 --> 00:58:19,760

or conferences you'll be speaking at

1540

00:58:23,910 --> 00:58:21,520

anything you can share with us with what

1541

00:58:26,789 --> 00:58:23,920

comes next for you oh lots of things

1542

00:58:30,069 --> 00:58:26,799

every day brings new things i should say

1543

00:58:31,990 --> 00:58:30,079

uh i'm surprised every day uh i had 2500

1544

00:58:34,630 --> 00:58:32,000

interviews over the past year but that

1545

00:58:36,710 --> 00:58:34,640

was the list of my surprises

1546

00:58:38,710 --> 00:58:36,720

um i i meet

1547

00:58:39,990 --> 00:58:38,720

quite unusual people that i've never met

1548

00:58:41,030 --> 00:58:40,000

before and

1549

00:58:43,750 --> 00:58:41,040

um

1550

00:58:45,990 --> 00:58:43,760

it brings up new opportunities and you

1551

00:58:48,470 --> 00:58:46,000

know this meteor for example

1552

00:58:50,549 --> 00:58:48,480

opens the door for an expedition i think

1553

00:58:51,349 --> 00:58:50,559

that would be very exciting

1554

00:58:53,190 --> 00:58:51,359

uh

1555

00:58:54,789 --> 00:58:53,200

you know just figuring out what this

1556

00:58:57,430 --> 00:58:54,799

meteor that came from outside the solar

1557

00:58:59,430 --> 00:58:57,440

system was made of and checking whether

1558

00:59:01,750 --> 00:58:59,440

it was a rock or something else you know

1559

00:59:04,390 --> 00:59:01,760

that i would find find that very

1560

00:59:07,589 --> 00:59:04,400

exciting and in principle it can be done

1561

00:59:09,750 --> 00:59:07,599

relatively soon uh and with the galileo

1562

00:59:12,150 --> 00:59:09,760

project the rest you know building these

1563

00:59:14,870 --> 00:59:12,160

telescope systems you know we're still

1564

00:59:17,430 --> 00:59:14,880

in the early phase so i have to wait

1565

00:59:19,750 --> 00:59:17,440

at least a few months before i can start

1566

00:59:21,670 --> 00:59:19,760

getting excited by the data because

1567

00:59:24,470 --> 00:59:21,680

that's you know we need to keep our eyes

1568

00:59:25,990 --> 00:59:24,480

on the ball not on the audience that's

1569

00:59:28,230 --> 00:59:26,000

what i've been telling the galileo

1570

00:59:29,670 --> 00:59:28,240

project members all along it doesn't

1571

00:59:31,829 --> 00:59:29,680

really matter what the audience is

1572

00:59:33,910 --> 00:59:31,839

saying don't look at the audience just

1573

00:59:35,270 --> 00:59:33,920

keep your eyes on the ball we need to

1574

00:59:37,270 --> 00:59:35,280

get this ball

1575

00:59:38,710 --> 00:59:37,280

you know through the hoop

1576

00:59:45,190 --> 00:59:38,720

and

1577

00:59:47,430 --> 00:59:45,200

catch whatever fish come through our

1578

00:59:49,910 --> 00:59:47,440

fishing net you know in this case

1579

00:59:52,710 --> 00:59:49,920

uh also in the case of the meteor you

1580

00:59:54,470 --> 00:59:52,720

know um and i i'm very hopeful that

1581

00:59:56,950 --> 00:59:54,480

within a year or two

1582

00:59:59,109 --> 00:59:56,960

we'll know much more than we know now so

1583

01:00:01,990 --> 00:59:59,119

just stay tuned and then

1584

01:00:04,789 --> 01:00:02,000

and you know keep monitoring what's

1585

01:00:06,630 --> 01:00:04,799

happening every few days or a week i i

1586

01:00:08,390 --> 01:00:06,640

write a commentary about the new

1587

01:00:11,109 --> 01:00:08,400

developments

1588

01:00:12,950 --> 01:00:11,119

and then you know i

1589

01:00:14,870 --> 01:00:12,960

fundamentally i don't want to look at

1590

01:00:17,670 --> 01:00:14,880

any classified data because that would

1591

01:00:19,510 --> 01:00:17,680

limit my ability to speak freely so you

1592

01:00:22,150 --> 01:00:19,520

can rest assured that

1593

01:00:23,829 --> 01:00:22,160

what you see is what you get with me

1594

01:00:26,069 --> 01:00:23,839

it's wonderful

1595

01:00:27,670 --> 01:00:26,079

uh i couldn't think of a better way to

1596

01:00:30,069 --> 01:00:27,680

end it i also didn't think we would talk

1597

01:00:32,630 --> 01:00:30,079

about fishing dating or basketball in

1598

01:00:34,710 --> 01:00:32,640

this conversation so avi

1599

01:00:36,670 --> 01:00:34,720

thank you thank you for again

1600

01:00:38,630 --> 01:00:36,680

reinvigorating so many of the

1601
01:00:41,349 --> 01:00:38,640
scientific-minded people out there on

1602
01:00:43,829 --> 01:00:41,359
this topic of uap and beyond the topic

1603
01:00:46,309 --> 01:00:43,839
of uap thank you for your time what

1604
01:00:47,990 --> 01:00:46,319
you're doing and um of course where can

1605
01:00:49,750 --> 01:00:48,000
we find everything you're up to if

1606
01:00:52,630 --> 01:00:49,760
people want to reach out on my

1607
01:00:54,470 --> 01:00:52,640
professional website um

1608
01:00:56,710 --> 01:00:54,480
at harvard university

1609
01:00:59,670 --> 01:00:56,720
there are two websites one of them has

1610
01:01:01,829 --> 01:00:59,680
my image on the top right and under it

1611
01:01:05,270 --> 01:01:01,839
you will see a lot of videos from recent

1612
01:01:07,349 --> 01:01:05,280
appearances but also the opinion essays

1613
01:01:08,950 --> 01:01:07,359

that i write every few days you can

1614

01:01:11,270 --> 01:01:08,960

click on that there is a listing of all

1615

01:01:12,630 --> 01:01:11,280

of them and you can pretty much stay up

1616

01:01:14,309 --> 01:01:12,640

to date and

1617

01:01:17,030 --> 01:01:14,319

of course my book extraterrestrial

1618

01:01:19,670 --> 01:01:17,040

appeared a year ago i'm now working on a

1619

01:01:21,670 --> 01:01:19,680

follow-up uh so stay tuned for that in a

1620

01:01:23,430 --> 01:01:21,680

year or so

1621

01:01:24,789 --> 01:01:23,440

lots of things are happening it's it's

1622

01:01:26,870 --> 01:01:24,799

really exciting

1623

01:01:28,630 --> 01:01:26,880

it's awesome i love it

1624

01:01:31,670 --> 01:01:28,640

you heard it here first guys another

1625

01:01:33,750 --> 01:01:31,680

book coming from avilo avi thank you so

1626
01:01:35,510 --> 01:01:33,760
much for joining us again on somewhere

1627
01:01:38,230 --> 01:01:35,520
in the skies we're going to let you go

1628
01:01:40,470 --> 01:01:38,240
here and bring in luis and we thank him

1629
01:01:42,069 --> 01:01:40,480
for all his help but please have a great

1630
01:01:44,390 --> 01:01:42,079
afternoon good luck with the rest of

1631
01:01:45,670 --> 01:01:44,400
your interviews and uh keep up the

1632
01:01:47,190 --> 01:01:45,680
amazing work

1633
01:01:48,630 --> 01:01:47,200
good to see you avi

1634
01:01:50,950 --> 01:01:48,640
thanks for hosting me

1635
01:01:53,190 --> 01:01:50,960
thank you

1636
01:01:55,349 --> 01:01:53,200
wow it's so good

1637
01:01:57,910 --> 01:01:55,359
who doesn't love it

1638
01:02:00,390 --> 01:01:57,920

and you know as professionals chrissy

1639

01:02:03,029 --> 01:02:00,400

and i we over prepare for every

1640

01:02:05,430 --> 01:02:03,039

interview always yeah i had 50 more

1641

01:02:07,510 --> 01:02:05,440

questions from patreon members listeners

1642

01:02:09,109 --> 01:02:07,520

in the chat here and i do apologize guys

1643

01:02:11,510 --> 01:02:09,119

again it's hard like we have such

1644

01:02:15,109 --> 01:02:11,520

limited time um but i think he really

1645

01:02:17,029 --> 01:02:15,119

covered a lot and it just oh god

1646

01:02:19,270 --> 01:02:17,039

especially in like today's world like it

1647

01:02:21,990 --> 01:02:19,280

just made me so hopeful of everything

1648

01:02:23,670 --> 01:02:22,000

that he's doing um luis get your butt in

1649

01:02:29,270 --> 01:02:23,680

here kidding

1650

01:02:33,190 --> 01:02:31,109

hey guys

1651
01:02:34,630 --> 01:02:33,200
what's up man how are you not much my

1652
01:02:36,549 --> 01:02:34,640
girlfriend is doing an interview of a

1653
01:02:39,910 --> 01:02:36,559
new employee in the background so you

1654
01:02:42,230 --> 01:02:39,920
probably can hear her talking so i i

1655
01:02:44,150 --> 01:02:42,240
might my questions will my answers will

1656
01:02:45,910 --> 01:02:44,160
be as short as possible

1657
01:02:48,390 --> 01:02:45,920
okay but yeah that was a great interview

1658
01:02:51,270 --> 01:02:48,400
you guys it was awesome thank you for

1659
01:02:53,589 --> 01:02:51,280
your help again it was like again it's

1660
01:02:56,630 --> 01:02:53,599
so hard doing these things when you're a

1661
01:02:59,109 --> 01:02:56,640
one or two man woman show so no we

1662
01:03:01,670 --> 01:02:59,119
appreciate your time man um is there

1663
01:03:03,029 --> 01:03:01,680

anything you wanted to you wanted to add

1664

01:03:05,190 --> 01:03:03,039

about um

1665

01:03:06,950 --> 01:03:05,200

what he brought up tonight um anything

1666

01:03:08,150 --> 01:03:06,960

we didn't get to that you hope we can in

1667

01:03:10,789 --> 01:03:08,160

the future

1668

01:03:13,430 --> 01:03:10,799

and um yeah yeah let's start with that

1669

01:03:15,829 --> 01:03:13,440

oh i would say

1670

01:03:17,910 --> 01:03:15,839

um i'm i'm interested to see how much

1671

01:03:19,430 --> 01:03:17,920

money he's raised so far and how long he

1672

01:03:21,990 --> 01:03:19,440

thinks it'll take to get to that 100

1673

01:03:24,390 --> 01:03:22,000

million mark or if there's anything that

1674

01:03:26,549 --> 01:03:24,400

he thinks might propel that

1675

01:03:28,829 --> 01:03:26,559

investor to actually pull the trigger

1676

01:03:31,589 --> 01:03:28,839

and spend that money

1677

01:03:33,589 --> 01:03:31,599

um so i'm interested in that aspect of

1678

01:03:35,829 --> 01:03:33,599

it um and then the other thing i wanted

1679

01:03:37,750 --> 01:03:35,839

to just touch base because he brett did

1680

01:03:39,829 --> 01:03:37,760

pay ten dollars but the way his question

1681

01:03:42,470 --> 01:03:39,839

was rain was a little rude

1682

01:03:45,349 --> 01:03:42,480

so that's why we didn't ask the question

1683

01:03:47,910 --> 01:03:45,359

uh but if i had to take a guess and it's

1684

01:03:49,750 --> 01:03:47,920

a it's a decent question but just i

1685

01:03:51,750 --> 01:03:49,760

to read this to him feels like we're

1686

01:03:53,349 --> 01:03:51,760

accusing him of something so that's the

1687

01:03:54,950 --> 01:03:53,359

problem with text brett we know you

1688

01:03:57,910 --> 01:03:54,960

didn't mean it

1689

01:04:00,549 --> 01:03:57,920

um but yeah let's clarify on this ravi

1690

01:04:02,150 --> 01:04:00,559

is going to be speaking at an event

1691

01:04:03,990 --> 01:04:02,160

i know there's not much we can share

1692

01:04:05,829 --> 01:04:04,000

about it this is a very

1693

01:04:07,910 --> 01:04:05,839

tight-lipped group that is um putting

1694

01:04:10,950 --> 01:04:07,920

this together and they're doing that for

1695

01:04:13,190 --> 01:04:10,960

a reason like there's a lot of uh things

1696

01:04:16,150 --> 01:04:13,200

that have to be vetted and in sourced

1697

01:04:18,710 --> 01:04:16,160

and and organized but um this disclosure

1698

01:04:20,710 --> 01:04:18,720

symposium i know this is something the

1699

01:04:22,789 --> 01:04:20,720

debrief is involved with again i don't

1700

01:04:24,470 --> 01:04:22,799

know how much they can share chrissy if

1701

01:04:26,789 --> 01:04:24,480

there is anything you can share fine if

1702

01:04:28,870 --> 01:04:26,799

not we understand but there will be

1703

01:04:31,270 --> 01:04:28,880

videos apparently um that avi is going

1704

01:04:34,470 --> 01:04:31,280

to be looking at that's all i know as a

1705

01:04:35,829 --> 01:04:34,480

position oh the ufo community you know i

1706

01:04:37,750 --> 01:04:35,839

think people just stay tuned for the

1707

01:04:40,150 --> 01:04:37,760

disclosure conference and i also just

1708

01:04:42,470 --> 01:04:40,160

think that you know avi's there for a

1709

01:04:45,349 --> 01:04:42,480

reason as a speaker to talk about ufos

1710

01:04:48,069 --> 01:04:45,359

on a on a overall basis as well not just

1711

01:04:49,349 --> 01:04:48,079

on specifics so i say you know people

1712

01:04:51,029 --> 01:04:49,359

take tune and i know there's a lot of

1713

01:04:52,789 --> 01:04:51,039

people that have conversations of what

1714

01:04:54,470 --> 01:04:52,799

it will be and not but i think everyone

1715

01:04:56,710 --> 01:04:54,480

just has to wait and the debriefing will

1716

01:04:58,789 --> 01:04:56,720

be there and we're covering so that is

1717

01:05:00,950 --> 01:04:58,799

we are a media sponsor and we will be

1718

01:05:03,270 --> 01:05:00,960

covering the event as well so i think

1719

01:05:04,390 --> 01:05:03,280

just stay tuned it's not too far away

1720

01:05:06,309 --> 01:05:04,400

well i can i

1721

01:05:09,349 --> 01:05:06,319

also i was just i was going to quickly

1722

01:05:11,349 --> 01:05:09,359

add like avi doesn't know what's going

1723

01:05:12,789 --> 01:05:11,359

on at the symposium he's just been asked

1724

01:05:15,190 --> 01:05:12,799

to speak there he doesn't produce the

1725

01:05:17,029 --> 01:05:15,200

symposium he doesn't he doesn't pick the

1726

01:05:18,549 --> 01:05:17,039

speakers he doesn't know

1727

01:05:21,029 --> 01:05:18,559

probably about this video that they're

1728

01:05:23,589 --> 01:05:21,039

releasing at this thing um so i would

1729

01:05:25,510 --> 01:05:23,599

just say take that in mind as well

1730

01:05:27,589 --> 01:05:25,520

yeah and i think yeah that's and any

1731

01:05:29,510 --> 01:05:27,599

speakers that are there you know being

1732

01:05:31,430 --> 01:05:29,520

privity to anything is really difficult

1733

01:05:32,470 --> 01:05:31,440

because things get leaked all the time

1734

01:05:34,230 --> 01:05:32,480

right so

1735

01:05:35,990 --> 01:05:34,240

i think it's just waiting and and

1736

01:05:39,270 --> 01:05:36,000

spending the time and know that you know

1737

01:05:40,789 --> 01:05:39,280

i nothing illegal illicit is going on so

1738

01:05:42,309 --> 01:05:40,799

that for sure we would the debrief

1739

01:05:45,109 --> 01:05:42,319

wouldn't be attached to that as a news

1740

01:05:46,870 --> 01:05:45,119

outlet so rest assured on that but you

1741

01:05:48,789 --> 01:05:46,880

know we will be covering so if you go to

1742

01:05:50,710 --> 01:05:48,799

the debrief.org you'll be able to see

1743

01:05:52,870 --> 01:05:50,720

all the articles and and live coverage

1744

01:05:55,510 --> 01:05:52,880

when it comes to live streaming there

1745

01:05:57,109 --> 01:05:55,520

along with myself doing interviews um so

1746

01:05:58,549 --> 01:05:57,119

yeah so we'll we'll be there covering

1747

01:05:59,750 --> 01:05:58,559

and avi will be there as well so i'm

1748

01:06:01,670 --> 01:05:59,760

really looking forward to meeting him in

1749

01:06:03,670 --> 01:06:01,680

real life which will be great digital is

1750

01:06:05,510 --> 01:06:03,680

wonderful real life is better yeah i

1751

01:06:07,589 --> 01:06:05,520

know totally different ball game i know

1752

01:06:08,950 --> 01:06:07,599

that's how i felt when i first met uh

1753

01:06:11,190 --> 01:06:08,960

peter robbins i was like oh my god

1754

01:06:13,029 --> 01:06:11,200

you're here

1755

01:06:14,950 --> 01:06:13,039

oh i love the comment obvious hot

1756

01:06:16,950 --> 01:06:14,960

obviously

1757

01:06:19,510 --> 01:06:16,960

i saw that pop up so much and i like

1758

01:06:22,069 --> 01:06:19,520

giggle to myself you have to

1759

01:06:24,230 --> 01:06:22,079

abby and obviously i talked a little off

1760

01:06:26,710 --> 01:06:24,240

air about um him going to all these big

1761

01:06:28,630 --> 01:06:26,720

events schmoozing with you know rich

1762

01:06:30,789 --> 01:06:28,640

people trying to get money and she's

1763

01:06:32,870 --> 01:06:30,799

like you be careful out there you're

1764

01:06:35,029 --> 01:06:32,880

you're a wanted man and i think some of

1765

01:06:37,589 --> 01:06:35,039

our audience would have to agree i mean

1766

01:06:40,309 --> 01:06:37,599

there's nothing sexier than a

1767

01:06:42,150 --> 01:06:40,319

intelligent mind in my opinion and i'm

1768

01:06:45,670 --> 01:06:42,160

sure a lot of you out there unless

1769

01:06:46,710 --> 01:06:45,680

you're all um very surface level people

1770

01:06:49,349 --> 01:06:46,720

um

1771

01:06:51,430 --> 01:06:49,359

yeah yeah nothing sexier than a brain

1772

01:06:53,430 --> 01:06:51,440

yeah a hundred percent

1773

01:06:55,829 --> 01:06:53,440

um i'm just looking at the start thing

1774

01:06:57,109 --> 01:06:55,839

that's not not as funny as this comment

1775

01:07:04,230 --> 01:06:57,119

though

1776

01:07:07,270 --> 01:07:05,430

um

1777

01:07:08,630 --> 01:07:07,280

i hope we don't get flagged for that

1778

01:07:13,029 --> 01:07:08,640

that

1779

01:07:14,870 --> 01:07:13,039

not getting a flag

1780

01:07:16,549 --> 01:07:14,880

sometimes moments are allowed to be kept

1781

01:07:18,390 --> 01:07:16,559

to yourself

1782

01:07:20,870 --> 01:07:18,400

damn it luis you failed no i'm just

1783

01:07:23,589 --> 01:07:20,880

kidding no you did an incredible job man

1784

01:07:26,549 --> 01:07:23,599

um well i want to ask you please on a um

1785

01:07:29,510 --> 01:07:26,559

a more timely note you obviously you've

1786

01:07:32,390 --> 01:07:29,520

been on vacation over at ucr well well

1787

01:07:36,069 --> 01:07:32,400

deserved um the work you guys produce is

1788

01:07:39,589 --> 01:07:36,079

incredible i'm honored to be a um a

1789

01:07:43,829 --> 01:07:39,599

viewer and sometimes guest um

1790

01:07:45,750 --> 01:07:43,839

and yeah you guys needed it and um i i

1791

01:07:48,150 --> 01:07:45,760

think it's great that you're gonna take

1792

01:07:50,470 --> 01:07:48,160

a break come back with a new format um

1793

01:07:52,150 --> 01:07:50,480

you've already teased some of the stuff

1794

01:07:53,589 --> 01:07:52,160

you guys are gonna be doing so i can't

1795

01:07:56,309 --> 01:07:53,599

wait but

1796

01:07:58,470 --> 01:07:56,319

but there has been some breaking news uh

1797

01:08:00,230 --> 01:07:58,480

by our friend john greenwald and a lot

1798

01:08:03,190 --> 01:08:00,240

of stuff going on while you've been on

1799

01:08:06,230 --> 01:08:03,200

vacation so of course the professional

1800

01:08:08,309 --> 01:08:06,240

and passionate person you are you said

1801
01:08:10,549 --> 01:08:08,319
coming out coming out of the cave and

1802
01:08:12,630 --> 01:08:10,559
i'm doing a show so can you tell us a

1803
01:08:14,390 --> 01:08:12,640
little about this impromptu show we can

1804
01:08:17,030 --> 01:08:14,400
expect

1805
01:08:19,749 --> 01:08:17,040
well i i did see the the release by john

1806
01:08:21,510 --> 01:08:19,759
greenwald and i was like oh

1807
01:08:23,269 --> 01:08:21,520
i want to talk about that but it's too

1808
01:08:25,269 --> 01:08:23,279
early man i literally just started my

1809
01:08:27,349 --> 01:08:25,279
vacation and i'm like no i said i was

1810
01:08:29,430 --> 01:08:27,359
going to take a break taking a break but

1811
01:08:30,630 --> 01:08:29,440
i also did say that if something big

1812
01:08:32,789 --> 01:08:30,640
happened

1813
01:08:34,950 --> 01:08:32,799

i would come back and do a show

1814

01:08:37,189 --> 01:08:34,960

and then we got to mcmillan's article

1815

01:08:40,070 --> 01:08:37,199

yesterday which i thought was

1816

01:08:42,390 --> 01:08:40,080

incredible it has big implications

1817

01:08:44,070 --> 01:08:42,400

and crazy curious to know what's going

1818

01:08:47,749 --> 01:08:44,080

to be foyed out of it

1819

01:08:49,749 --> 01:08:47,759

um so i think i think this story is not

1820

01:08:50,950 --> 01:08:49,759

have has had its final nail in the

1821

01:08:52,470 --> 01:08:50,960

coffin there i think there's going to be

1822

01:08:53,189 --> 01:08:52,480

a lot of other stuff that maybe we're

1823

01:08:55,510 --> 01:08:53,199

gonna

1824

01:08:56,470 --> 01:08:55,520

learn about this situation but it's just

1825

01:09:00,149 --> 01:08:56,480

can you

1826

01:09:02,550 --> 01:09:00,159

little bit about what the story is for

1827

01:09:05,269 --> 01:09:02,560

anyone who's not aware this was you know

1828

01:09:07,269 --> 01:09:05,279

something that elizondo's been preaching

1829

01:09:09,910 --> 01:09:07,279

about for a long time now about people

1830

01:09:12,309 --> 01:09:09,920

that messed with him when he left the

1831

01:09:15,030 --> 01:09:12,319

pentagon when he left dod and everything

1832

01:09:16,870 --> 01:09:15,040

um and lo and behold as usual a lot of

1833

01:09:19,189 --> 01:09:16,880

things elizondo say

1834

01:09:22,070 --> 01:09:19,199

says eventually comes true and we're

1835

01:09:24,630 --> 01:09:22,080

finding out the hard way and the um

1836

01:09:26,309 --> 01:09:24,640

disturbing way that something he did say

1837

01:09:27,990 --> 01:09:26,319

is pretty much true so yeah could you

1838

01:09:29,189 --> 01:09:28,000

would you mind giving us a little tease

1839

01:09:31,910 --> 01:09:29,199

about what you guys would be talking

1840

01:09:34,070 --> 01:09:31,920

about uh so basically yeah so tim did a

1841

01:09:36,470 --> 01:09:34,080

two-year investigation into this story

1842

01:09:38,870 --> 01:09:36,480

and this is part of the ig complaint

1843

01:09:40,709 --> 01:09:38,880

that lou elizondo put in but a gentleman

1844

01:09:42,789 --> 01:09:40,719

by the name of gary reed who is the head

1845

01:09:46,229 --> 01:09:42,799

of counterintelligence at the department

1846

01:09:47,669 --> 01:09:46,239

of defense um the big story here

1847

01:09:48,950 --> 01:09:47,679

is that he

1848

01:09:51,910 --> 01:09:48,960

bundled the

1849

01:09:55,110 --> 01:09:51,920

the uh and that's putting it mildly he

1850

01:09:57,189 --> 01:09:55,120

really messed up the um evacuation from

1851
01:09:58,070 --> 01:09:57,199
afghanistan and the coordination of that

1852
01:10:00,550 --> 01:09:58,080
i mean

1853
01:10:02,470 --> 01:10:00,560
royally he

1854
01:10:04,070 --> 01:10:02,480
there's people that have died and have

1855
01:10:07,030 --> 01:10:04,080
been put

1856
01:10:09,910 --> 01:10:07,040
in very terrible videos

1857
01:10:12,550 --> 01:10:09,920
yeah no insane like but but and that had

1858
01:10:14,470 --> 01:10:12,560
a direct connection to his incompetence

1859
01:10:17,030 --> 01:10:14,480
on that so that to me is the biggest

1860
01:10:19,910 --> 01:10:17,040
part of this story and then there's also

1861
01:10:22,070 --> 01:10:19,920
sexual misconduct allegations from the

1862
01:10:24,709 --> 01:10:22,080
same person this gentleman gary reed or

1863
01:10:27,350 --> 01:10:24,719

yeah gary reed um and then not to be

1864

01:10:28,709 --> 01:10:27,360
mistaken for harry reid right yes

1865

01:10:31,669 --> 01:10:28,719
that's the last thing

1866

01:10:37,270 --> 01:10:34,070
so that was sort of the next thing that

1867

01:10:40,070 --> 01:10:37,280
was very disturbing about the article um

1868

01:10:41,590 --> 01:10:40,080
that there were multiple women that have

1869

01:10:43,350 --> 01:10:41,600
considered his

1870

01:10:46,550 --> 01:10:43,360
advancements on them

1871

01:10:48,229 --> 01:10:46,560
uh pretty gross and grotesque uh but but

1872

01:10:51,350 --> 01:10:48,239
they have the fear of well if i report

1873

01:10:54,229 --> 01:10:51,360
it then i don't get promoted promoted uh

1874

01:10:55,669 --> 01:10:54,239
and the people there was one victim if

1875

01:10:58,870 --> 01:10:55,679
we want to call her that i'm not sure

1876

01:11:01,510 --> 01:10:58,880

but she she apparently was into it and

1877

01:11:05,270 --> 01:11:01,520

she got promoted and she sort of reaped

1878

01:11:07,830 --> 01:11:05,280

the rewards of playing ball with this

1879

01:11:09,910 --> 01:11:07,840

power hungry you know

1880

01:11:13,110 --> 01:11:09,920

high-level executive within the

1881

01:11:15,990 --> 01:11:13,120

department of defense so that's a second

1882

01:11:18,390 --> 01:11:16,000

the third thing is the ufo aspect of it

1883

01:11:19,830 --> 01:11:18,400

which is this is the linchpin this was

1884

01:11:23,030 --> 01:11:19,840

the guy

1885

01:11:25,030 --> 01:11:23,040

who was basically holding a grudge

1886

01:11:26,470 --> 01:11:25,040

against louis lozando this is the guy

1887

01:11:28,310 --> 01:11:26,480

that wasn't passing along the

1888

01:11:30,070 --> 01:11:28,320

information like he should have this is

1889

01:11:31,590 --> 01:11:30,080

the guy that that

1890

01:11:33,910 --> 01:11:31,600

that is

1891

01:11:35,669 --> 01:11:33,920

reporting directly to susan goff and

1892

01:11:36,870 --> 01:11:35,679

telling her

1893

01:11:39,189 --> 01:11:36,880

that he had nothing to do with the

1894

01:11:41,510 --> 01:11:39,199

program and this i'm curious to know if

1895

01:11:43,270 --> 01:11:41,520

he had anything to do with deleting his

1896

01:11:44,790 --> 01:11:43,280

emails uh that's something i want to

1897

01:11:46,870 --> 01:11:44,800

talk to tim about and there's there's a

1898

01:11:48,790 --> 01:11:46,880

lot of other things that tim couldn't

1899

01:11:50,630 --> 01:11:48,800

put into this article so we're gonna try

1900

01:11:52,709 --> 01:11:50,640

and get as you know as much as we can

1901

01:11:55,270 --> 01:11:52,719

from him in the next hour uh or that for

1902

01:11:57,510 --> 01:11:55,280

the hour that we have them um and yeah

1903

01:11:59,350 --> 01:11:57,520

so that's the synopsis that's sort of

1904

01:12:01,430 --> 01:11:59,360

the the you know and the thing that you

1905

01:12:02,390 --> 01:12:01,440

said like

1906

01:12:04,390 --> 01:12:02,400

you know

1907

01:12:06,870 --> 01:12:04,400

we've gotten a lot of heat in the last

1908

01:12:09,030 --> 01:12:06,880

in the last month uh from our louis

1909

01:12:12,390 --> 01:12:09,040

lozando interview but i've consistently

1910

01:12:14,149 --> 01:12:12,400

said that when it comes to the

1911

01:12:16,149 --> 01:12:14,159

the

1912

01:12:18,630 --> 01:12:16,159

congressional and

1913

01:12:20,390 --> 01:12:18,640

um logistics aspect of this conversation

1914

01:12:23,110 --> 01:12:20,400

he's been right every time he's

1915

01:12:25,430 --> 01:12:23,120

predicted so many things and things that

1916

01:12:27,430 --> 01:12:25,440

we're just not listening to him when he

1917

01:12:30,470 --> 01:12:27,440

talks about them and this was one of

1918

01:12:33,350 --> 01:12:30,480

them this was like he hinted like

1919

01:12:36,070 --> 01:12:33,360

we asked him like could this information

1920

01:12:37,110 --> 01:12:36,080

really be held up by an uh something as

1921

01:12:40,149 --> 01:12:37,120

simple

1922

01:12:42,390 --> 01:12:40,159

as an office grudge as somebody not

1923

01:12:43,990 --> 01:12:42,400

liking somebody it's real could it be

1924

01:12:48,310 --> 01:12:44,000

that and if so

1925

01:12:49,430 --> 01:12:48,320

how absurd is that and how do we rectify

1926

01:12:52,310 --> 01:12:49,440

things like that because if it's

1927

01:12:54,870 --> 01:12:52,320

happening at this level to someone with

1928

01:12:56,310 --> 01:12:54,880

the pedigree and the resume of a lou

1929

01:12:58,630 --> 01:12:56,320

elizondo

1930

01:13:01,750 --> 01:12:58,640

who else is stuff like this happening to

1931

01:13:04,070 --> 01:13:01,760

and how do we rectify those things uh i

1932

01:13:05,590 --> 01:13:04,080

would say it's maybe deeper than that i

1933

01:13:07,189 --> 01:13:05,600

would there's probably that's probably

1934

01:13:09,830 --> 01:13:07,199

imagine part of it and there's probably

1935

01:13:12,149 --> 01:13:09,840

so much going on for sure that's gonna

1936

01:13:13,990 --> 01:13:12,159

come to the surface but you know i was

1937

01:13:17,510 --> 01:13:14,000

talking to tim about this too and just

1938

01:13:20,070 --> 01:13:17,520

in general getting let go of the dod and

1939

01:13:21,830 --> 01:13:20,080

from anywhere and being ousted is really

1940

01:13:23,189 --> 01:13:21,840

hard like i think that's what people

1941

01:13:24,790 --> 01:13:23,199

have to remember too like this that

1942

01:13:27,110 --> 01:13:24,800

doesn't happen

1943

01:13:29,110 --> 01:13:27,120

very much so for sure there's something

1944

01:13:31,030 --> 01:13:29,120

going on and i know tim's been working

1945

01:13:32,229 --> 01:13:31,040

on this story for a very long time so

1946

01:13:33,750 --> 01:13:32,239

i'm happy that he's going to be talking

1947

01:13:35,669 --> 01:13:33,760

about a little more in depth but for

1948

01:13:38,470 --> 01:13:35,679

sure there'll be there's lags to this

1949

01:13:40,870 --> 01:13:38,480

it's not done yet yeah and you know i

1950

01:13:43,510 --> 01:13:40,880

think it's appropriate that we say

1951

01:13:46,790 --> 01:13:43,520

grudge maybe we are looking at project

1952

01:13:49,510 --> 01:13:46,800

grudge part two now we hear that like

1953

01:13:51,910 --> 01:13:49,520

you know before this dude left this and

1954

01:13:54,870 --> 01:13:51,920

again this is all rumor mill welcome to

1955

01:13:57,430 --> 01:13:54,880

ufo twitter but um that

1956

01:13:59,110 --> 01:13:57,440

everything he did with elizondo and

1957

01:14:02,310 --> 01:13:59,120

everything that we

1958

01:14:04,390 --> 01:14:02,320

want from these new pentagon groups that

1959

01:14:06,709 --> 01:14:04,400

are going to be looking into uap

1960

01:14:08,149 --> 01:14:06,719

everything literally everything is being

1961

01:14:11,189 --> 01:14:08,159

funneled to

1962

01:14:13,510 --> 01:14:11,199

who else but susan goff and we know she

1963

01:14:14,950 --> 01:14:13,520

was tight with this dude and we know

1964

01:14:15,910 --> 01:14:14,960

that um

1965

01:14:19,350 --> 01:14:15,920

that

1966

01:14:20,950 --> 01:14:19,360

anything coming out of the pentagon with

1967

01:14:24,390 --> 01:14:20,960

the uap is going to be classified

1968

01:14:25,270 --> 01:14:24,400

anything so it's sobering to think that

1969

01:14:27,430 --> 01:14:25,280

way

1970

01:14:28,630 --> 01:14:27,440

well here's the thing though is that the

1971

01:14:31,830 --> 01:14:28,640

guy

1972

01:14:34,229 --> 01:14:31,840

who

1973

01:14:37,189 --> 01:14:34,239

essentially was going to be

1974

01:14:38,790 --> 01:14:37,199

overseeing the aoi msg

1975

01:14:42,310 --> 01:14:38,800

was gary reed

1976

01:14:44,870 --> 01:14:42,320

he's gone good this is this is the this

1977

01:14:46,709 --> 01:14:44,880

is the i think i think

1978

01:14:48,550 --> 01:14:46,719

this is the reason why christopher

1979

01:14:51,189 --> 01:14:48,560

mellon and lou elizondo a few months

1980

01:14:54,550 --> 01:14:51,199

back were like yo this office

1981

01:14:56,390 --> 01:14:54,560

no like we want a separate independent

1982

01:14:58,790 --> 01:14:56,400

office because they knew it was gonna go

1983

01:15:00,870 --> 01:14:58,800

under gary reid's supervision and with

1984

01:15:03,270 --> 01:15:00,880

him at the head of it they knew it would

1985

01:15:06,390 --> 01:15:03,280

probably be smacked up against the wall

1986

01:15:09,510 --> 01:15:06,400

and so that's a very good reason as to

1987

01:15:12,390 --> 01:15:09,520

why they were raising alarm bells

1988

01:15:13,350 --> 01:15:12,400

and it makes sense now in retrospect um

1989

01:15:14,950 --> 01:15:13,360

but

1990

01:15:16,070 --> 01:15:14,960

yeah i mean oh man that's important i

1991

01:15:18,229 --> 01:15:16,080

don't even think about that they're

1992

01:15:19,669 --> 01:15:18,239

playing a strong game yeah yeah the

1993

01:15:21,510 --> 01:15:19,679

strategy might change we'll see that

1994

01:15:23,350 --> 01:15:21,520

through susan goff too and how she

1995

01:15:25,590 --> 01:15:23,360

starts coming out when footage comes

1996

01:15:28,070 --> 01:15:25,600

forward in new statements that's gonna

1997

01:15:29,590 --> 01:15:28,080

change when you have uh intelligence you

1998

01:15:31,110 --> 01:15:29,600

know obviously you're your boss and

1999

01:15:33,430 --> 01:15:31,120

you're in cahoots with somebody and

2000

01:15:35,669 --> 01:15:33,440

you're that close we'll see who's gonna

2001

01:15:37,510 --> 01:15:35,679

what how her statements will evolve now

2002

01:15:39,430 --> 01:15:37,520

i'm very curious because she's been

2003

01:15:41,110 --> 01:15:39,440

pretty quiet after her last statements

2004

01:15:42,310 --> 01:15:41,120

that came out and people ripped them

2005

01:15:44,390 --> 01:15:42,320

apart

2006

01:15:46,950 --> 01:15:44,400

it's not and to be honest as a pr person

2007

01:15:47,750 --> 01:15:46,960

it's not easy it's not an easy challenge

2008

01:15:50,149 --> 01:15:47,760

i've

2009

01:15:52,310 --> 01:15:50,159

never had anything but a pleasurable

2010

01:15:54,229 --> 01:15:52,320

experience uh dealing with susan goff

2011

01:15:55,669 --> 01:15:54,239

when it comes right and i and i also

2012

01:15:57,430 --> 01:15:55,679

think that

2013

01:15:59,750 --> 01:15:57,440

right for sure and it's not the easiest

2014

01:16:02,310 --> 01:15:59,760

job and remember she is the one that has

2015

01:16:04,310 --> 01:16:02,320

to say this this is not her decision too

2016

01:16:06,950 --> 01:16:04,320

right she is the mouthpiece and i mean

2017

01:16:09,189 --> 01:16:06,960

that in the most nice way lack of words

2018

01:16:10,950 --> 01:16:09,199

um in that where she's expressing this

2019

01:16:12,470 --> 01:16:10,960

and just disseminating this information

2020

01:16:14,310 --> 01:16:12,480

too so i'm not defending her i don't

2021

01:16:15,830 --> 01:16:14,320

know her personally in any form but it's

2022

01:16:17,510 --> 01:16:15,840

not the easiest job but i believe that

2023

01:16:20,310 --> 01:16:17,520

her statements need to evolve and she

2024

01:16:22,390 --> 01:16:20,320

should pro if she actually believes and

2025

01:16:24,229 --> 01:16:22,400

understands what's going on and wants to

2026

01:16:25,910 --> 01:16:24,239

have a little bit more transparency then

2027

01:16:27,110 --> 01:16:25,920

she needs to start showing that and

2028

01:16:28,630 --> 01:16:27,120

that's through statements on how you

2029

01:16:31,030 --> 01:16:28,640

speak to the media and everybody else in

2030

01:16:33,669 --> 01:16:31,040

this community so we'll see

2031

01:16:35,910 --> 01:16:33,679

but it also shows a little bit that

2032

01:16:38,149 --> 01:16:35,920

he's not really paying attention to this

2033

01:16:40,790 --> 01:16:38,159

as much as we think she is because she's

2034

01:16:42,870 --> 01:16:40,800

relying on what's being told to her and

2035

01:16:45,430 --> 01:16:42,880

because gary reed told her that she had

2036

01:16:47,189 --> 01:16:45,440

nothing to do with any of these programs

2037

01:16:49,030 --> 01:16:47,199

she then put out a statement as that

2038

01:16:50,470 --> 01:16:49,040

spokesperson saying

2039

01:16:52,149 --> 01:16:50,480

he had nothing to do with this program

2040

01:16:53,990 --> 01:16:52,159

and then he had to go to senator harry

2041

01:16:56,310 --> 01:16:54,000

reid and have him write a letter

2042

01:16:59,110 --> 01:16:56,320

literally on his deathbed to to

2043

01:17:02,470 --> 01:16:59,120

straighten up what was going on so see

2044

01:17:05,270 --> 01:17:02,480

susan goff has a little bit of um

2045

01:17:09,110 --> 01:17:05,280

how much power does she have though

2046

01:17:10,550 --> 01:17:09,120

that's the question i know i'd like to

2047

01:17:12,070 --> 01:17:10,560

we don't know great question i don't

2048

01:17:14,709 --> 01:17:12,080

know but i don't know

2049

01:17:16,229 --> 01:17:14,719

they're reporting to her though you know

2050

01:17:18,470 --> 01:17:16,239

they're the ones reporting to her and

2051
01:17:19,350 --> 01:17:18,480
she's the one making these statements

2052
01:17:21,270 --> 01:17:19,360
so

2053
01:17:22,630 --> 01:17:21,280
if she is formulating it and i think

2054
01:17:24,310 --> 01:17:22,640
that's part of it it's different than

2055
01:17:26,550 --> 01:17:24,320
being a forefront in the face of

2056
01:17:28,310 --> 01:17:26,560
something rather than having people as a

2057
01:17:29,750 --> 01:17:28,320
group formulating what's going to go

2058
01:17:31,910 --> 01:17:29,760
forward in the public it's not one

2059
01:17:34,149 --> 01:17:31,920
person doing this and i i know as a pr

2060
01:17:35,910 --> 01:17:34,159
person it's multiple people working on

2061
01:17:37,750 --> 01:17:35,920
statements together and this has to be

2062
01:17:39,750 --> 01:17:37,760
passed around you have to confirm things

2063
01:17:42,149 --> 01:17:39,760

you she just can't and if she is i would

2064

01:17:44,149 --> 01:17:42,159

be shocked but most of the time even in

2065

01:17:45,669 --> 01:17:44,159

a corporate section you have to be able

2066

01:17:47,189 --> 01:17:45,679

to have everything approved before it

2067

01:17:49,350 --> 01:17:47,199

goes forward and i would imagine in a

2068

01:17:51,110 --> 01:17:49,360

topic like this she's not the one

2069

01:17:53,350 --> 01:17:51,120

writing all of it i would imagine that

2070

01:17:55,830 --> 01:17:53,360

there's other ghostwriters too so again

2071

01:17:57,669 --> 01:17:55,840

not defending her but knowing knowing pr

2072

01:17:59,990 --> 01:17:57,679

and knowing how it works internally

2073

01:18:01,830 --> 01:18:00,000

there's way more players and we'll you

2074

01:18:05,189 --> 01:18:01,840

know again like the story's not done yet

2075

01:18:07,590 --> 01:18:05,199

well and there's going to be more

2076

01:18:09,669 --> 01:18:07,600

oh sorry

2077

01:18:22,310 --> 01:18:09,679

yeah yeah yeah go ahead you go oh we had

2078

01:18:28,070 --> 01:18:24,950

i was just gonna say

2079

01:18:29,990 --> 01:18:28,080

this new group or groups um we're not

2080

01:18:32,790 --> 01:18:30,000

talking anymore of like

2081

01:18:35,590 --> 01:18:32,800

you know just elizondo like the one-man

2082

01:18:38,229 --> 01:18:35,600

team over at atip or whatnot like we're

2083

01:18:40,550 --> 01:18:38,239

talking about an actually fully formed

2084

01:18:42,390 --> 01:18:40,560

group that's gonna be involved in this

2085

01:18:44,229 --> 01:18:42,400

so you're right chrissy like there are

2086

01:18:47,669 --> 01:18:44,239

gonna be different opinions and voices

2087

01:18:49,510 --> 01:18:47,679

involved um you know i really hope

2088

01:18:51,830 --> 01:18:49,520

everything gillibrand brought forward is

2089

01:18:54,070 --> 01:18:51,840

going to remain in play with all this we

2090

01:18:55,750 --> 01:18:54,080

still don't really know like is it gonna

2091

01:18:58,470 --> 01:18:55,760

be two separate groups are they gonna

2092

01:19:00,709 --> 01:18:58,480

emerge what's it gonna be who's gonna

2093

01:19:03,030 --> 01:19:00,719

like you know be the rebellious one to

2094

01:19:04,070 --> 01:19:03,040

be like uh uh uh-uh no we owe this to

2095

01:19:06,229 --> 01:19:04,080

the public

2096

01:19:08,470 --> 01:19:06,239

we don't know like it's uncertain of

2097

01:19:10,870 --> 01:19:08,480

what any of this is going to be and as

2098

01:19:13,669 --> 01:19:10,880

the public we just kind of have to wait

2099

01:19:14,870 --> 01:19:13,679

to see what that next um report is like

2100

01:19:16,870 --> 01:19:14,880

will it be

2101
01:19:18,630 --> 01:19:16,880
the classified version that greenwald

2102
01:19:21,430 --> 01:19:18,640
released of like

2103
01:19:23,510 --> 01:19:21,440
50 million redactions or will

2104
01:19:25,910 --> 01:19:23,520
something like the big phone home 3

2105
01:19:28,070 --> 01:19:25,920
again like hammer these people and get

2106
01:19:30,950 --> 01:19:28,080
more congressional people to be like

2107
01:19:33,270 --> 01:19:30,960
enough enough of like the corrupt nature

2108
01:19:35,590 --> 01:19:33,280
of everything and like just be

2109
01:19:38,070 --> 01:19:35,600
transparent with the public again we

2110
01:19:40,229 --> 01:19:38,080
know national security is of an issue we

2111
01:19:41,830 --> 01:19:40,239
understand that but you can't say that

2112
01:19:44,470 --> 01:19:41,840
100 of what you're going to be looking

2113
01:19:45,990 --> 01:19:44,480

into is classified that's ridiculous

2114

01:19:48,310 --> 01:19:46,000

yeah and i don't think we're asking for

2115

01:19:51,750 --> 01:19:48,320

them to divulge national security that's

2116

01:19:54,310 --> 01:19:51,760

never especially right now exactly yeah

2117

01:19:57,189 --> 01:19:54,320

and i know it's an unfortunate time that

2118

01:19:59,270 --> 01:19:57,199

like the uap thing is so big when like

2119

01:20:03,030 --> 01:19:59,280

we're dealing with highly sensitive

2120

01:20:05,590 --> 01:20:03,040

national security um you know whether

2121

01:20:07,510 --> 01:20:05,600

in europe or here and that always

2122

01:20:10,870 --> 01:20:07,520

frustrates me that it seems like the uap

2123

01:20:14,870 --> 01:20:10,880

topic just starts to catch like you know

2124

01:20:17,189 --> 01:20:14,880

major waves when other really big things

2125

01:20:18,950 --> 01:20:17,199

overshadow it so yeah i don't think

2126

01:20:20,790 --> 01:20:18,960

we'll go through ebbs and flows i think

2127

01:20:22,550 --> 01:20:20,800

it's natural to go through flows and

2128

01:20:24,550 --> 01:20:22,560

like personally i feel that the ukraine

2129

01:20:26,390 --> 01:20:24,560

stuff should shadow it right now i'm

2130

01:20:27,669 --> 01:20:26,400

okay with that absolutely right

2131

01:20:29,110 --> 01:20:27,679

absolutely right and we there's still

2132

01:20:30,709 --> 01:20:29,120

information that can come forward and we

2133

01:20:32,629 --> 01:20:30,719

can still talk about it and report about

2134

01:20:34,470 --> 01:20:32,639

it but yeah like what's going on around

2135

01:20:36,550 --> 01:20:34,480

the world right now you know ufos can

2136

01:20:37,830 --> 01:20:36,560

take a little bit of a back seat but it

2137

01:20:39,590 --> 01:20:37,840

obviously it's not going to we're not

2138

01:20:41,110 --> 01:20:39,600

going to stop asking questions you know

2139

01:20:43,430 --> 01:20:41,120

i understand that major media is going

2140

01:20:46,149 --> 01:20:43,440

to focus on something that is obviously

2141

01:20:47,510 --> 01:20:46,159

happening to us on our own planet so it

2142

01:20:49,270 --> 01:20:47,520

makes sense but it doesn't mean that

2143

01:20:50,709 --> 01:20:49,280

yeah people that are having youtube

2144

01:20:52,390 --> 01:20:50,719

shows and people that are reporting

2145

01:20:54,070 --> 01:20:52,400

about this just don't stop because

2146

01:20:55,270 --> 01:20:54,080

there's always going to be conversations

2147

01:20:56,229 --> 01:20:55,280

you know and

2148

01:21:02,310 --> 01:20:56,239

and

2149

01:21:04,470 --> 01:21:02,320

will let you guys go after i ask you

2150

01:21:06,390 --> 01:21:04,480

this um unless there's anything else you

2151
01:21:08,070 --> 01:21:06,400
want to cover and i have to ask this

2152
01:21:09,910 --> 01:21:08,080
because it's been on my mind for a while

2153
01:21:12,229 --> 01:21:09,920
and i haven't really like talked about

2154
01:21:14,950 --> 01:21:12,239
it with anyone

2155
01:21:17,430 --> 01:21:14,960
all of this all of it ever since the new

2156
01:21:19,750 --> 01:21:17,440
york times ever since elizondo left ever

2157
01:21:22,709 --> 01:21:19,760
since we're hearing it's not china it's

2158
01:21:25,590 --> 01:21:22,719
not russia it's not u.s tech um

2159
01:21:27,830 --> 01:21:25,600
we've learned ever since the public

2160
01:21:29,990 --> 01:21:27,840
first learned about the crisis in

2161
01:21:30,950 --> 01:21:30,000
ukraine um

2162
01:21:33,750 --> 01:21:30,960
that

2163
01:21:35,350 --> 01:21:33,760

we knew this was coming ukraine knew

2164

01:21:37,830 --> 01:21:35,360

this was coming they have been talking

2165

01:21:41,110 --> 01:21:37,840

about it for a long time that this is

2166

01:21:43,910 --> 01:21:41,120

going to happen um you know and

2167

01:21:46,149 --> 01:21:43,920

biden said it is it is um in a speech

2168

01:21:48,310 --> 01:21:46,159

like we were aware uh we had a lot of

2169

01:21:50,229 --> 01:21:48,320

intelligence about this and

2170

01:21:52,470 --> 01:21:50,239

a lot of went into it preparing blah

2171

01:21:54,149 --> 01:21:52,480

blah blah um

2172

01:21:56,870 --> 01:21:54,159

if you're thinking they were aware of

2173

01:21:58,310 --> 01:21:56,880

this maybe one or two years three years

2174

01:22:00,229 --> 01:21:58,320

ahead of time that

2175

01:22:02,390 --> 01:22:00,239

something like this was inevitably going

2176

01:22:04,550 --> 01:22:02,400

to happen um

2177

01:22:06,790 --> 01:22:04,560

lo and behold it's the same time that

2178

01:22:09,030 --> 01:22:06,800

all of this uap stuff starts coming out

2179

01:22:11,750 --> 01:22:09,040

and we start hearing it's not russia

2180

01:22:12,950 --> 01:22:11,760

it's not china it's not the us tech

2181

01:22:15,750 --> 01:22:12,960

again

2182

01:22:17,430 --> 01:22:15,760

is this all somehow connected i don't

2183

01:22:20,790 --> 01:22:17,440

want to go into that big

2184

01:22:23,270 --> 01:22:20,800

tin foil hat area but it does make me

2185

01:22:25,110 --> 01:22:23,280

wonder you know why did people come out

2186

01:22:28,629 --> 01:22:25,120

and say um

2187

01:22:30,709 --> 01:22:28,639

this highly advanced technology is not

2188

01:22:33,510 --> 01:22:30,719

one of the major players in this war

2189

01:22:34,310 --> 01:22:33,520

going on right now um and it's not the

2190

01:22:36,470 --> 01:22:34,320

other

2191

01:22:38,870 --> 01:22:36,480

superpower that is

2192

01:22:41,189 --> 01:22:38,880

pretty darn close to that other

2193

01:22:44,229 --> 01:22:41,199

superpower um and then we're over here

2194

01:22:45,990 --> 01:22:44,239

saying it ain't us um when in reality

2195

01:22:48,709 --> 01:22:46,000

maybe some of it is us and this is our

2196

01:22:51,510 --> 01:22:48,719

way of being like we got our eyes on you

2197

01:22:53,669 --> 01:22:51,520

okay i know i'm blabbing and i know

2198

01:22:55,910 --> 01:22:53,679

there may be nothing to this but it does

2199

01:22:58,229 --> 01:22:55,920

make me wonder it really really does

2200

01:23:01,990 --> 01:22:58,239

yeah i still i am not opposed to it

2201

01:23:03,350 --> 01:23:02,000

being internal tech like i'm i'm not

2202

01:23:05,030 --> 01:23:03,360

misinformation campaign's been

2203

01:23:06,470 --> 01:23:05,040

campaign's been going on for years so i

2204

01:23:07,990 --> 01:23:06,480

think it's still a possibility it's

2205

01:23:09,830 --> 01:23:08,000

still plausible we just won't find out

2206

01:23:11,510 --> 01:23:09,840

until later if it is

2207

01:23:13,030 --> 01:23:11,520

i would say for russia again i am not a

2208

01:23:15,030 --> 01:23:13,040

defense reporter this is where great

2209

01:23:16,550 --> 01:23:15,040

question asked him uh at the debrief

2210

01:23:17,910 --> 01:23:16,560

about this there you go louise there's

2211

01:23:19,910 --> 01:23:17,920

one yeah

2212

01:23:21,590 --> 01:23:19,920

but i would say that from what i know

2213

01:23:23,350 --> 01:23:21,600

and what i've been following tim and and

2214

01:23:25,350 --> 01:23:23,360

following all of this with him you know

2215

01:23:27,669 --> 01:23:25,360

just alongside him while he's reporting

2216

01:23:29,830 --> 01:23:27,679

and just reading it i don't think it's

2217

01:23:32,390 --> 01:23:29,840

russian you know they would be using it

2218

01:23:34,149 --> 01:23:32,400

by now no exactly so we would know that

2219

01:23:35,990 --> 01:23:34,159

they would be using that tech if

2220

01:23:38,070 --> 01:23:36,000

anything to fight this war so we don't

2221

01:23:40,229 --> 01:23:38,080

think it's russia china yeah for sure

2222

01:23:41,669 --> 01:23:40,239

you know it's still a major possibility

2223

01:23:42,790 --> 01:23:41,679

like their drone supremacy and

2224

01:23:45,030 --> 01:23:42,800

everything else with them is

2225

01:23:46,950 --> 01:23:45,040

unbelievable and where they're going and

2226

01:23:49,030 --> 01:23:46,960

what they're building so that's an eye

2227

01:23:51,110 --> 01:23:49,040

there too but yeah it can be internal

2228

01:23:52,870 --> 01:23:51,120

and i i would never hold it against the

2229

01:23:54,950 --> 01:23:52,880

state well i say hold it against them

2230

01:23:57,669 --> 01:23:54,960

but i would wouldn't be surprised if it

2231

01:23:59,510 --> 01:23:57,679

wasn't the states uh doing it you know

2232

01:24:01,189 --> 01:23:59,520

and it yeah i think we have to be

2233

01:24:03,590 --> 01:24:01,199

mindful of all of it because why can't

2234

01:24:05,270 --> 01:24:03,600

it be internal tech why some of it might

2235

01:24:08,709 --> 01:24:05,280

be foreign adversaries at one point in

2236

01:24:10,229 --> 01:24:08,719

time maybe not right now um or and be

2237

01:24:11,750 --> 01:24:10,239

ufos i you know i've been saying this

2238

01:24:13,750 --> 01:24:11,760

for the longest time

2239

01:24:15,350 --> 01:24:13,760

like i'm like yeah i've been saying the

2240

01:24:16,790 --> 01:24:15,360

beginning like why not i'm like we have

2241

01:24:19,110 --> 01:24:16,800

to be open-minded it's not black and

2242

01:24:21,430 --> 01:24:19,120

white or one or the other yeah exactly

2243

01:24:23,350 --> 01:24:21,440

and we might find out more so

2244

01:24:25,270 --> 01:24:23,360

you know here's just hoping and then we

2245

01:24:28,629 --> 01:24:25,280

just keep reporting

2246

01:24:31,430 --> 01:24:28,639

yeah i agree i i'll never put uh

2247

01:24:32,550 --> 01:24:31,440

anything past the possibility of human

2248

01:24:35,110 --> 01:24:32,560

ingenuity

2249

01:24:37,830 --> 01:24:35,120

so exactly that's for sure but um just

2250

01:24:40,390 --> 01:24:37,840

real quick going back i mean the

2251

01:24:43,030 --> 01:24:40,400

the timing of it ryan

2252

01:24:45,910 --> 01:24:43,040

i think it's just gross coincidence you

2253

01:24:47,030 --> 01:24:45,920

know stuff happens around the world all

2254

01:24:48,790 --> 01:24:47,040

the time

2255

01:24:50,550 --> 01:24:48,800

major things happen around the world all

2256

01:24:53,270 --> 01:24:50,560

the time if it wasn't going to be

2257

01:24:54,629 --> 01:24:53,280

afghanistan it would be you know just

2258

01:24:58,709 --> 01:24:54,639

what happened in new york city over the

2259

01:25:00,870 --> 01:24:58,719

weekend or right um you know

2260

01:25:02,790 --> 01:25:00,880

anything i mean when when we had you

2261

01:25:04,709 --> 01:25:02,800

know the last big phone home the

2262

01:25:07,030 --> 01:25:04,719

two weeks a week and a half before the

2263

01:25:08,070 --> 01:25:07,040

afghani refugee crisis happened so it

2264

01:25:09,750 --> 01:25:08,080

was like

2265

01:25:11,669 --> 01:25:09,760

why are you guys being so insensitive

2266

01:25:13,830 --> 01:25:11,679

hey when is a good time to talk about

2267

01:25:15,910 --> 01:25:13,840

this like there's a world that goes off

2268

01:25:18,149 --> 01:25:15,920

there's always gonna be stuff going on

2269

01:25:19,669 --> 01:25:18,159

if you're but try to be aware and try be

2270

01:25:20,870 --> 01:25:19,679

sensitive to it is the best thing you

2271

01:25:22,070 --> 01:25:20,880

can do but

2272

01:25:25,270 --> 01:25:22,080

there's

2273

01:25:27,350 --> 01:25:25,280

you can't predict world events so um

2274

01:25:29,350 --> 01:25:27,360

well i think the best thing yeah i think

2275

01:25:30,950 --> 01:25:29,360

the best thing you can do is yeah is it

2276

01:25:32,629 --> 01:25:30,960

even acknowledge that like what you're

2277

01:25:35,189 --> 01:25:32,639

doing is saying like this is happening

2278

01:25:36,629 --> 01:25:35,199

around the world and then also so people

2279

01:25:38,550 --> 01:25:36,639

have a little bit of an update what's

2280

01:25:40,390 --> 01:25:38,560

going on in other countries

2281

01:25:41,990 --> 01:25:40,400

like gosh there's so many other

2282

01:25:44,550 --> 01:25:42,000

countries outside of the ukraine right

2283

01:25:46,709 --> 01:25:44,560

now that are in horrible conditions

2284

01:25:48,790 --> 01:25:46,719

so and like dealing with civil wars

2285

01:25:50,950 --> 01:25:48,800

internal wars you know still battling

2286

01:25:53,189 --> 01:25:50,960

with yeah yeah exactly so it's

2287

01:25:54,870 --> 01:25:53,199

domestically speaking there's a ton of

2288

01:25:56,870 --> 01:25:54,880

people in pain

2289

01:25:58,550 --> 01:25:56,880

like real world pain

2290

01:25:59,990 --> 01:25:58,560

so this conversation is always going to

2291

01:26:01,750 --> 01:26:00,000

be inconvenient

2292

01:26:03,669 --> 01:26:01,760

yeah so i think acknowledging what's

2293

01:26:04,950 --> 01:26:03,679

happening currently in current events on

2294

01:26:06,709 --> 01:26:04,960

our own planet and what's happening

2295

01:26:08,629 --> 01:26:06,719

makes sense and then moving into the

2296

01:26:10,629 --> 01:26:08,639

topic that is ufos because the average

2297

01:26:13,110 --> 01:26:10,639

person that might be watching the show

2298

01:26:14,870 --> 01:26:13,120

is consumed with ufos which makes sense

2299

01:26:16,470 --> 01:26:14,880

but they might miss that topic that's

2300

01:26:18,149 --> 01:26:16,480

happening in the world so i think that

2301

01:26:19,590 --> 01:26:18,159

there's there's a place for both of it

2302

01:26:21,510 --> 01:26:19,600

and i don't think it's insensitive

2303

01:26:23,270 --> 01:26:21,520

depending if you acknowledge it if you

2304

01:26:25,270 --> 01:26:23,280

just acknowledge it then yeah i can i

2305

01:26:26,550 --> 01:26:25,280

can see that but you know again there's

2306

01:26:28,149 --> 01:26:26,560

always going to be something happening

2307

01:26:30,870 --> 01:26:28,159

and there's always a conversation right

2308

01:26:32,870 --> 01:26:30,880

now around ufos so

2309

01:26:36,390 --> 01:26:32,880

well real quick i wanted to get back to

2310

01:26:38,070 --> 01:26:36,400

two things this using golf related um i

2311

01:26:40,149 --> 01:26:38,080

would have liked to seen a correction

2312

01:26:41,510 --> 01:26:40,159

out of her office from a pr perspective

2313

01:26:43,750 --> 01:26:41,520

making a correction on what you said

2314

01:26:45,590 --> 01:26:43,760

about louis lozando and apologizing for

2315

01:26:46,870 --> 01:26:45,600

that i think would have been

2316

01:26:48,149 --> 01:26:46,880

appropriate probably won't see that

2317

01:26:54,229 --> 01:26:48,159

especially one

2318

01:26:59,189 --> 01:26:57,270

military like looking at like defense pr

2319

01:27:00,629 --> 01:26:59,199

and and anything in the dod is very

2320

01:27:02,470 --> 01:27:00,639

different than how they you would do

2321

01:27:04,070 --> 01:27:02,480

average pr like for our side with

2322

01:27:06,390 --> 01:27:04,080

consumer brands or you know corporate

2323

01:27:08,229 --> 01:27:06,400

companies there are different tactics i

2324

01:27:10,470 --> 01:27:08,239

don't think that they should be all the

2325

01:27:13,189 --> 01:27:10,480

time i'm i'm very much for transparency

2326

01:27:15,030 --> 01:27:13,199

to when you can but you won't see a st

2327

01:27:17,030 --> 01:27:15,040

you won't see her apologize because then

2328

01:27:19,189 --> 01:27:17,040

it just means they're guilty you know it

2329

01:27:20,709 --> 01:27:19,199

always right so it it leads to that but

2330

01:27:22,390 --> 01:27:20,719

if anything what they'll do is you know

2331

01:27:25,030 --> 01:27:22,400

maybe change their strategy going

2332

01:27:27,189 --> 01:27:25,040

forward and and hopefully do better but

2333

01:27:28,229 --> 01:27:27,199

they won't see a redaction i i if they

2334

01:27:32,790 --> 01:27:28,239

do then

2335

01:27:35,430 --> 01:27:32,800

i'll be very surprised i'll eat my words

2336

01:27:37,669 --> 01:27:35,440

what i was what i was gonna say is you

2337

01:27:39,430 --> 01:27:37,679

know would be a great pr move and this

2338

01:27:42,070 --> 01:27:39,440

is something that christopher mellon

2339

01:27:44,870 --> 01:27:42,080

hinted at in one of his blogs

2340

01:27:47,910 --> 01:27:44,880

is giving louis lozando his old job back

2341

01:27:52,629 --> 01:27:47,920

in this opening at the air at the aoi

2342

01:27:55,030 --> 01:27:52,639

msg and the dod being the that the

2343

01:27:58,390 --> 01:27:55,040

the head of counter intelligence just

2344

01:28:01,110 --> 01:27:58,400

got fired and lou's old job was counter

2345

01:28:03,590 --> 01:28:01,120

intelligence

2346

01:28:06,790 --> 01:28:03,600

do not be shocked if lou ends up

2347

01:28:08,790 --> 01:28:06,800

stepping into that role

2348

01:28:11,430 --> 01:28:08,800

it would be how you imagine absolutely

2349

01:28:13,590 --> 01:28:11,440

the same week as the because

2350

01:28:15,430 --> 01:28:13,600

it just clicked in my head like oh my

2351

01:28:17,910 --> 01:28:15,440

god this could be

2352

01:28:19,510 --> 01:28:17,920

they probably saw this coming a couple

2353

01:28:21,750 --> 01:28:19,520

of months in advance they knew this was

2354

01:28:24,229 --> 01:28:21,760

what the investigation was about and

2355

01:28:25,669 --> 01:28:24,239

that article i think is a lobby to be

2356

01:28:28,149 --> 01:28:25,679

like hey

2357

01:28:29,669 --> 01:28:28,159

this guy would be perfect for the job he

2358

01:28:32,149 --> 01:28:29,679

could do your counter intelligence i

2359

01:28:34,310 --> 01:28:32,159

think he'd be like if lou lazando was in

2360

01:28:36,310 --> 01:28:34,320

charge of the afghan

2361

01:28:39,030 --> 01:28:36,320

evacuation

2362

01:28:41,189 --> 01:28:39,040

i i think he i don't know we we don't

2363

01:28:43,510 --> 01:28:41,199

know but i feel like he'd do a better

2364

01:28:45,990 --> 01:28:43,520

job than what gary reid did and that was

2365

01:28:47,510 --> 01:28:46,000

the reason he got fired i know for sure

2366

01:28:49,110 --> 01:28:47,520

louis lozano is not going to go around

2367

01:28:53,110 --> 01:28:49,120

sexually harassing people at the

2368

01:28:54,950 --> 01:28:53,120

department of defense i i mean and

2369

01:28:57,350 --> 01:28:54,960

gary reed would have been in charge of

2370

01:29:00,070 --> 01:28:57,360

the aoi msg which he

2371

01:29:02,470 --> 01:29:00,080

is essentially a beefed up upgraded

2372

01:29:04,070 --> 01:29:02,480

version of ayton

2373

01:29:05,750 --> 01:29:04,080

it's a perfect fit

2374

01:29:07,430 --> 01:29:05,760

yeah and the other question is what else

2375

01:29:10,390 --> 01:29:07,440

happened this is just from what tim

2376

01:29:12,470 --> 01:29:10,400

knows it's like what else is going on

2377

01:29:13,830 --> 01:29:12,480

like what again i think the story like

2378

01:29:15,590 --> 01:29:13,840

what else is going to come forward what

2379

01:29:18,310 --> 01:29:15,600

didn't make it into that article what

2380

01:29:19,669 --> 01:29:18,320

did it yeah and what is part two

2381

01:29:21,430 --> 01:29:19,679

well hey

2382

01:29:24,629 --> 01:29:21,440

i hope we're gonna learn in a couple

2383

01:29:25,350 --> 01:29:24,639

hours over on ucr listen guys i've taken

2384

01:29:27,510 --> 01:29:25,360

up

2385

01:29:29,430 --> 01:29:27,520

so much of your time we go live in 20

2386

01:29:31,590 --> 01:29:29,440

minutes oh my god get out of here let's

2387

01:29:34,629 --> 01:29:31,600

go yeah we're hanging up go get ready

2388

01:29:36,709 --> 01:29:34,639

for ucr everyone go hop over to ucr

2389

01:29:38,070 --> 01:29:36,719

channel for the first video you will see

2390

01:29:40,149 --> 01:29:38,080

over there it's so good to see the

2391

01:29:42,070 --> 01:29:40,159

notifications pop up again i'm not gonna

2392

01:29:43,990 --> 01:29:42,080

lie made my day made my day but i have

2393

01:29:45,830 --> 01:29:44,000

to go to work now so i'll have to watch

2394

01:29:48,310 --> 01:29:45,840

the archive but um

2395

01:29:50,629 --> 01:29:48,320

of course tell us where we can find ucr

2396

01:29:52,229 --> 01:29:50,639

louise and uh chrissy please let us know

2397

01:29:54,070 --> 01:29:52,239

where you can find your stuff as well

2398

01:29:55,910 --> 01:29:54,080

luis go ahead my man

2399

01:29:58,390 --> 01:29:55,920

uh yeah you can just

2400

01:30:00,070 --> 01:29:58,400

type unidentified celebrity review and

2401

01:30:01,990 --> 01:30:00,080

you'll find it on youtube we're almost

2402

01:30:04,070 --> 01:30:02,000

at 10 000 subscribers or

2403

01:30:05,910 --> 01:30:04,080

couple a handful away

2404

01:30:07,350 --> 01:30:05,920

so uh yeah if you haven't subscribed go

2405

01:30:08,790 --> 01:30:07,360

over subscribe uh we're gonna be talking

2406

01:30:11,270 --> 01:30:08,800

to mcmillan today we come back

2407

01:30:15,430 --> 01:30:11,280

officially uh with our weekly shows on

2408

01:30:18,310 --> 01:30:15,440

the 28th of this month so in uh in in

2409

01:30:21,110 --> 01:30:18,320

almost two weeks um so yeah we're we're

2410

01:30:23,430 --> 01:30:21,120

stoked man we're excited that's exciting

2411

01:30:25,669 --> 01:30:23,440

thanks brother all right yes get out of

2412

01:30:27,669 --> 01:30:25,679

here go get ready thank you for your

2413

01:30:31,140 --> 01:30:27,679

invaluable help and assistance and uh

2414

01:30:32,870 --> 01:30:31,150

we'll talk soon bye louise have fun

2415

01:30:35,270 --> 01:30:32,880

[Laughter]

2416

01:30:37,270 --> 01:30:35,280

chrissy let us know what's coming up

2417

01:30:38,950 --> 01:30:37,280

where we can find your stuff and yeah

2418

01:30:40,550 --> 01:30:38,960

now now i can i've been saying it to you

2419

01:30:42,790 --> 01:30:40,560

a little bit on twitter uh i'm

2420

01:30:45,750 --> 01:30:42,800

interviewing sarah sieger from mit about

2421

01:30:48,149 --> 01:30:45,760

exoplanets so i'm yeah i'm super i'm so

2422

01:30:50,790 --> 01:30:48,159

excited she's also canadian so like

2423

01:30:52,950 --> 01:30:50,800

canadian women right here i know i i

2424

01:30:55,030 --> 01:30:52,960

think i'm just collecting them

2425

01:30:56,950 --> 01:30:55,040

yes i know you're starting now it's

2426

01:30:59,750 --> 01:30:56,960

amazing i'm sorry canadian collection of

2427

01:31:02,070 --> 01:30:59,760

people that love science and ufos uh and

2428

01:31:03,910 --> 01:31:02,080

i will be i have been talking to randall

2429

01:31:05,990 --> 01:31:03,920

nickerson so from that's doing the

2430

01:31:07,990 --> 01:31:06,000

aerial school so we will have something

2431

01:31:10,229 --> 01:31:08,000

hopefully on that too and then i will

2432

01:31:12,070 --> 01:31:10,239

too at the debrief so take a look at

2433

01:31:13,669 --> 01:31:12,080

that the aerial phenomenon movie that's

2434

01:31:15,910 --> 01:31:13,679

going to be coming out at some point we

2435

01:31:18,790 --> 01:31:15,920

don't i don't have a release date i know

2436

01:31:20,550 --> 01:31:18,800

um so i'm excited for that so just yeah

2437

01:31:22,950 --> 01:31:20,560

just stay tuned stay tuned here stay

2438

01:31:24,870 --> 01:31:22,960

tuned at thedebrief.org and head over to

2439

01:31:26,149 --> 01:31:24,880

our youtube channel and you can see some

2440

01:31:29,510 --> 01:31:26,159

some great interviews that will come out

2441

01:31:31,910 --> 01:31:29,520

there shortly so perfect thank you thank

2442

01:31:33,189 --> 01:31:31,920

you chrissy as always great conversation

2443

01:31:35,430 --> 01:31:33,199

all of your help for putting this

2444

01:31:37,750 --> 01:31:35,440

together um i'll let you go i'm going to

2445

01:31:40,390 --> 01:31:37,760

talk shop for a little bit and uh we

2446

01:31:43,189 --> 01:31:40,400

will talk soon okay sounds good bye guys

2447

01:31:47,669 --> 01:31:45,430

awesome and then there was one guys

2448

01:31:50,470 --> 01:31:47,679

thank you thank you for joining us today

2449

01:31:52,310 --> 01:31:50,480

that was incredible avi just uh i could

2450

01:31:54,870 --> 01:31:52,320

listen to him for 10 more hours and we

2451

01:31:56,790 --> 01:31:54,880

will on future episodes so uh before i

2452

01:31:58,870 --> 01:31:56,800

let all of you go thank you thank you

2453

01:32:00,950 --> 01:31:58,880

for watching thank you for the super

2454

01:32:02,870 --> 01:32:00,960

chats for all the amazing questions i do

2455

01:32:05,510 --> 01:32:02,880

apologize if we didn't get to them all

2456

01:32:08,070 --> 01:32:05,520

that's why avi will come back he always

2457

01:32:11,030 --> 01:32:08,080

does he's incredible with his time um

2458

01:32:13,110 --> 01:32:11,040

but of course little talk shop um i'm to

2459

01:32:15,030 --> 01:32:13,120

put some links below for some events i'm

2460

01:32:17,750 --> 01:32:15,040

going to be speaking at in the very near

2461

01:32:20,070 --> 01:32:17,760

future in august and september one in

2462

01:32:21,830 --> 01:32:20,080

missouri and one in michigan so check

2463

01:32:23,830 --> 01:32:21,840

those links below i'm going to edit them

2464

01:32:26,229 --> 01:32:23,840

in right after this if you're not

2465

01:32:27,910 --> 01:32:26,239

subscribed to the channel please do that

2466

01:32:31,030 --> 01:32:27,920

and click the notification button as

2467

01:32:33,189 --> 01:32:31,040

well share the channel we are slowly

2468

01:32:36,629 --> 01:32:33,199

treading behind the ucr getting up to

2469

01:32:38,070 --> 01:32:36,639

that 10k subscription so um thank you

2470

01:32:40,149 --> 01:32:38,080

thank you to everyone who has made this

2471

01:32:43,189 --> 01:32:40,159

show possible uh thank you to our guest

2472

01:32:45,030 --> 01:32:43,199

avi loeb to luis to chrissy to all of

2473

01:32:47,430 --> 01:32:45,040

you for being here uh we're on twitter

2474

01:32:49,590 --> 01:32:47,440

at summer skies instagram summer skies

2475

01:32:51,990 --> 01:32:49,600

pod uh there is a somewhere in the skies

2476

01:32:54,470 --> 01:32:52,000

discord channel now so you can head over

2477

01:32:56,310 --> 01:32:54,480

there link should be below as well

2478

01:32:59,110 --> 01:32:56,320

and other than that guys thank you thank

2479

01:33:00,709 --> 01:32:59,120

you for everything the podcast is um

2480

01:33:02,950 --> 01:33:00,719

every week you can find it wherever you

2481

01:33:04,950 --> 01:33:02,960

get your shows and we've got some

2482

01:33:08,709 --> 01:33:04,960

awesome awesome stuff coming up in the

2483

01:33:10,870 --> 01:33:08,719

very near future so i'm gonna say good

2484

01:33:12,790 --> 01:33:10,880

afternoon good night good morning to

2485

01:33:14,870 --> 01:33:12,800

everyone around the world thank you for

2486

01:33:17,830 --> 01:33:14,880

joining us again on somewhere in the

2487

01:33:23,270 --> 01:33:17,840

skies and we will talk soon all right

2488

01:33:28,709 --> 01:33:25,430

hey guys ryan here the summer in the

2489

01:33:30,870 --> 01:33:28,719

skies podcast is a labor of love every

2490

01:33:33,350 --> 01:33:30,880

week and with that comes many different

2491

01:33:35,990 --> 01:33:33,360

costs to keep the show running that's

2492

01:33:38,149 --> 01:33:36,000

where our patreon campaign comes in you

2493

01:33:40,470 --> 01:33:38,159

give what you think the show is worth

2494

01:33:42,390 --> 01:33:40,480

there's different rewards available all

2495

01:33:44,950 --> 01:33:42,400

the time including shout outs on the

2496

01:33:47,750 --> 01:33:44,960

show early editions of main episodes

2497

01:33:50,310 --> 01:33:47,760

bonus episodes and content and very soon

2498

01:33:53,590 --> 01:33:50,320

monthly patron hangouts where we sit

2499

01:33:55,350 --> 01:33:53,600

back and chat all things ufos so i hope

2500

01:33:57,910 --> 01:33:55,360

you'll consider becoming a patreon

2501

01:34:01,189 --> 01:33:57,920

subscriber today to learn more and to

2502

01:34:03,990 --> 01:34:01,199

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