

T H A T

UFO

P O D C A S T

AVI LOEB



1
00:00:06,789 --> 00:00:05,510

[Music]

2
00:00:08,790 --> 00:00:06,799

there's a whole fleet of them look on

3
00:00:10,950 --> 00:00:08,800

the sa

4
00:00:14,310 --> 00:00:10,960

my gosh they're all going against the

5
00:00:18,950 --> 00:00:16,390

it was basically a cube with inside of

6
00:00:32,990 --> 00:00:18,960

sphere where the points of the cube

7
00:00:38,709 --> 00:00:37,110

[Music]

8
00:00:40,630 --> 00:00:38,719

so this isn't anything that just is

9
00:00:44,960 --> 00:00:40,640

limited to the united states

10
00:00:49,750 --> 00:00:44,970

it's a worldwide phenomenon

11
00:00:53,990 --> 00:00:51,830

hi everyone and welcome to that ufo

12
00:00:55,830 --> 00:00:54,000

podcast my name is andy and joining me

13
00:00:58,150 --> 00:00:55,840

for this very special conversation i've

14

00:01:00,549 --> 00:00:58,160

got dan dan welcome

15

00:01:01,910 --> 00:01:00,559

hi it's great to be here yeah it's good

16

00:01:02,869 --> 00:01:01,920

to have dan on board for one of the

17

00:01:04,469 --> 00:01:02,879

interviews now

18

00:01:06,390 --> 00:01:04,479

in january i had the privilege of

19

00:01:07,190 --> 00:01:06,400

speaking to avila webb we talked his

20

00:01:09,270 --> 00:01:07,200

background

21

00:01:11,109 --> 00:01:09,280

his interest in ufos and struggles

22

00:01:11,990 --> 00:01:11,119

within the scientific community having a

23

00:01:15,109 --> 00:01:12,000

conversation about

24

00:01:16,310 --> 00:01:15,119

80 objects and the like at the time avi

25

00:01:18,469 --> 00:01:16,320

told myself and

26

00:01:20,469 --> 00:01:18,479

many many other interviewers he wants to

27

00:01:23,109 --> 00:01:20,479

get involved in studying the phenomenon

28

00:01:24,950 --> 00:01:23,119

scientifically but that requires serious

29

00:01:27,190 --> 00:01:24,960

people to get on board and of course

30

00:01:29,030 --> 00:01:27,200

funding i'm delighted to see that has

31

00:01:31,109 --> 00:01:29,040

since happened and this had resulted in

32

00:01:32,950 --> 00:01:31,119

the launch of the galileo project

33

00:01:34,550 --> 00:01:32,960

joining me now to discuss the details

34

00:01:36,469 --> 00:01:34,560

and answer your questions

35

00:01:38,710 --> 00:01:36,479

is avi loheb avi welcome back to the

36

00:01:40,950 --> 00:01:38,720

podcast thanks for having me

37

00:01:42,469 --> 00:01:40,960

no it's great to speak to you listen avi

38

00:01:44,630 --> 00:01:42,479

uh the announcement last week of the

39

00:01:46,550 --> 00:01:44,640

galileo project was met with a lot of

40

00:01:48,789 --> 00:01:46,560

positivity in the community

41

00:01:50,710 --> 00:01:48,799

it seems to be finally that serious

42

00:01:52,550 --> 00:01:50,720

scientific and academic research

43

00:01:55,270 --> 00:01:52,560

group we've been looking for can you

44

00:01:58,550 --> 00:01:55,280

tell us how the project came about

45

00:01:59,990 --> 00:01:58,560

yeah so um the report to congress came

46

00:02:02,389 --> 00:02:00,000

out a month ago

47

00:02:03,510 --> 00:02:02,399

about the uap unidentified aerial

48

00:02:06,310 --> 00:02:03,520

phenomenon

49

00:02:07,350 --> 00:02:06,320

and that report was quite remarkable in

50

00:02:10,790 --> 00:02:07,360

the sense that

51
00:02:12,150 --> 00:02:10,800
it claimed that some of these objects uh

52
00:02:14,070 --> 00:02:12,160
should be real because they were

53
00:02:17,750 --> 00:02:14,080
detected by multiple instruments

54
00:02:20,150 --> 00:02:17,760
infrared sensors optical cameras

55
00:02:22,229 --> 00:02:20,160
radar systems and many people seeing the

56
00:02:24,229 --> 00:02:22,239
same thing at the same time and

57
00:02:26,710 --> 00:02:24,239
that was a very significant statement

58
00:02:28,630 --> 00:02:26,720
because it admits the failure of the

59
00:02:31,430 --> 00:02:28,640
intelligence agencies in the us to

60
00:02:33,910 --> 00:02:31,440
identify what they are being paid for

61
00:02:34,630 --> 00:02:33,920
basically uh objects above the sky of

62
00:02:37,990 --> 00:02:34,640
the us

63
00:02:39,350 --> 00:02:38,000

and it's unusual for a government agency

64

00:02:43,190 --> 00:02:39,360

to admit a failure

65

00:02:43,750 --> 00:02:43,200

to congress um and at that point it

66

00:02:47,350 --> 00:02:43,760

looked

67

00:02:49,589 --> 00:02:47,360

intriguing enough to me

68

00:02:50,869 --> 00:02:49,599

that this subject should move away from

69

00:02:53,509 --> 00:02:50,879

the talking points of

70

00:02:55,509 --> 00:02:53,519

politicians national security advisers

71

00:02:56,630 --> 00:02:55,519

or military personnel to the realm of

72

00:02:59,430 --> 00:02:56,640

science

73

00:03:00,710 --> 00:02:59,440

and interestingly around the same time

74

00:03:04,229 --> 00:03:00,720

the head of nasa

75

00:03:05,430 --> 00:03:04,239

bill nelson said that he saw some of the

76

00:03:06,470 --> 00:03:05,440

classified data and you should

77

00:03:08,710 --> 00:03:06,480

understand that

78

00:03:10,630 --> 00:03:08,720

the data that was released to the public

79

00:03:14,229 --> 00:03:10,640

is just the tip of the iceberg there is

80

00:03:15,990 --> 00:03:14,239

much more data that is classified

81

00:03:18,550 --> 00:03:16,000

because it was obtained by classified

82

00:03:22,470 --> 00:03:18,560

sensors that the us

83

00:03:25,430 --> 00:03:22,480

does not want to of course expose

84

00:03:26,149 --> 00:03:25,440

to other nations and uh and bill nelson

85

00:03:28,869 --> 00:03:26,159

said that

86

00:03:29,509 --> 00:03:28,879

now is time for science scientists to to

87

00:03:32,470 --> 00:03:29,519

address

88

00:03:33,350 --> 00:03:32,480

the nature of these objects and i was

89

00:03:36,710 --> 00:03:33,360

thrilled to

90

00:03:38,309 --> 00:03:36,720

hear him say that so i approached people

91

00:03:41,750 --> 00:03:38,319

under him and i said

92

00:03:45,270 --> 00:03:41,760

i'm here to serve make your boss happy

93

00:03:48,550 --> 00:03:45,280

and they never got back to me so

94

00:03:50,070 --> 00:03:48,560

a week later um i get a note from the

95

00:03:52,869 --> 00:03:50,080

administrator at harvard

96

00:03:53,670 --> 00:03:52,879

um saying um you have a new research

97

00:03:55,429 --> 00:03:53,680

fund

98

00:03:58,470 --> 00:03:55,439

and i say what do you mean i have a new

99

00:04:02,470 --> 00:03:58,480

research fund i never had that before

100

00:04:04,869 --> 00:04:02,480

and she says yeah someone gave donated

101
00:04:06,070 --> 00:04:04,879
money for your research no strings

102
00:04:09,030 --> 00:04:06,080
attached and

103
00:04:10,710 --> 00:04:09,040
i said okay but then please tell me the

104
00:04:11,830 --> 00:04:10,720
name of that person because i want to

105
00:04:14,630 --> 00:04:11,840
thank that person

106
00:04:14,949 --> 00:04:14,640
you know and she said i don't know you

107
00:04:16,550 --> 00:04:14,959
know

108
00:04:19,030 --> 00:04:16,560
we have to go through the development

109
00:04:21,670 --> 00:04:19,040
office at harvard and i said

110
00:04:23,030 --> 00:04:21,680
okay well that's an elementary request

111
00:04:25,030 --> 00:04:23,040
if i get money

112
00:04:27,350 --> 00:04:25,040
i think it's completely legitimate for

113
00:04:29,110 --> 00:04:27,360

me to know who gave me that money and

114

00:04:29,830 --> 00:04:29,120

think that person i've never met that

115

00:04:35,990 --> 00:04:29,840

person

116

00:04:38,230 --> 00:04:36,000

he or she is giving me the money so

117

00:04:38,950 --> 00:04:38,240

please let me know how to approach that

118

00:04:41,590 --> 00:04:38,960

person

119

00:04:42,469 --> 00:04:41,600

and it took them a day to get back to me

120

00:04:46,550 --> 00:04:42,479

and then

121

00:04:48,230 --> 00:04:46,560

week later another person

122

00:04:50,070 --> 00:04:48,240

showed up a multi-billionaire showed up

123

00:04:52,150 --> 00:04:50,080

in my in the porch of my home and

124

00:04:53,270 --> 00:04:52,160

had questions about my book so these

125

00:04:55,830 --> 00:04:53,280

people simply

126

00:04:57,749 --> 00:04:55,840

either read my book or listen to the

127

00:04:59,830 --> 00:04:57,759

thousand interviews that i had over the

128

00:05:02,310 --> 00:04:59,840

past six months about the book

129

00:05:02,950 --> 00:05:02,320

the book was translated in 25 languages

130

00:05:07,350 --> 00:05:02,960

it became

131

00:05:10,070 --> 00:05:07,360

bestseller in many countries and so they

132

00:05:11,590 --> 00:05:10,080

i think were excited by the vision that

133

00:05:14,310 --> 00:05:11,600

i'm talking about and

134

00:05:15,710 --> 00:05:14,320

so then within a couple of weeks i

135

00:05:18,950 --> 00:05:15,720

received the

136

00:05:20,870 --> 00:05:18,960

1.75 million dollars in donations from

137

00:05:23,510 --> 00:05:20,880

people i've never met

138

00:05:24,230 --> 00:05:23,520

at which point i said i have enough

139

00:05:27,350 --> 00:05:24,240

money

140

00:05:29,590 --> 00:05:27,360

to move on

141

00:05:31,189 --> 00:05:29,600

with a scientific project and i

142

00:05:31,990 --> 00:05:31,199

assembled the team of exceptional

143

00:05:35,350 --> 00:05:32,000

scientists

144

00:05:38,629 --> 00:05:35,360

mostly astronomers and

145

00:05:40,550 --> 00:05:38,639

defined the galileo project and

146

00:05:42,390 --> 00:05:40,560

and that is a project aimed at

147

00:05:45,110 --> 00:05:42,400

assembling new data

148

00:05:47,110 --> 00:05:45,120

so we don't want to look at classified

149

00:05:48,950 --> 00:05:47,120

data by the government

150

00:05:51,110 --> 00:05:48,960

because that will tie our hands it will

151
00:05:53,350 --> 00:05:51,120
not allow us to be free

152
00:05:54,550 --> 00:05:53,360
we don't want to listen to eyewitness

153
00:05:55,590 --> 00:05:54,560
testimonies

154
00:05:57,749 --> 00:05:55,600
you know science is about

155
00:05:59,189 --> 00:05:57,759
reproducibility of results we want to

156
00:06:02,230 --> 00:05:59,199
look at the sky

157
00:06:05,029 --> 00:06:02,240
in most places the sky is not classified

158
00:06:07,029 --> 00:06:05,039
astronomers look at the sky all the time

159
00:06:07,990 --> 00:06:07,039
and we want to use telescopes that are

160
00:06:11,029 --> 00:06:08,000
connected

161
00:06:13,350 --> 00:06:11,039
to cameras that fit the video

162
00:06:14,550 --> 00:06:13,360
of the sky to computer systems that will

163
00:06:16,309 --> 00:06:14,560

identify

164

00:06:18,150 --> 00:06:16,319

objects of interest and then monitor

165

00:06:19,270 --> 00:06:18,160

them and it's very different from

166

00:06:23,029 --> 00:06:19,280

astronomers

167

00:06:25,029 --> 00:06:23,039

job you know when a bird flies above

168

00:06:27,189 --> 00:06:25,039

a telescope usually astronomers ignore

169

00:06:29,430 --> 00:06:27,199

it we will look at it

170

00:06:30,629 --> 00:06:29,440

so we are doing although we are using

171

00:06:31,830 --> 00:06:30,639

telescopes

172

00:06:34,710 --> 00:06:31,840

we are doing something different we are

173

00:06:38,070 --> 00:06:34,720

looking for something else objects

174

00:06:41,110 --> 00:06:38,080

that are flying and

175

00:06:43,510 --> 00:06:41,120

look weird they don't look like a plane

176
00:06:44,550 --> 00:06:43,520
they don't look like a drone they don't

177
00:06:47,590 --> 00:06:44,560
look like

178
00:06:47,990 --> 00:06:47,600
a bird and of course the way to figure

179
00:06:51,110 --> 00:06:48,000
it out

180
00:06:51,670 --> 00:06:51,120
is not to use an iphone and look at the

181
00:06:53,430 --> 00:06:51,680
sky

182
00:06:55,029 --> 00:06:53,440
because that has a very small aperture

183
00:06:56,070 --> 00:06:55,039
you can't really resolve you everything

184
00:06:58,390 --> 00:06:56,080
looks fuzzy

185
00:06:59,589 --> 00:06:58,400
so it doesn't you know a lot of people

186
00:07:02,309 --> 00:06:59,599
came to me and said

187
00:07:04,390 --> 00:07:02,319
why not rely on thousands of people that

188
00:07:06,230 --> 00:07:04,400

have iphones and ask them to send you

189

00:07:07,029 --> 00:07:06,240

the images i said i don't want those

190

00:07:09,270 --> 00:07:07,039

images

191

00:07:10,870 --> 00:07:09,280

because they will always be fuzzy that's

192

00:07:13,029 --> 00:07:10,880

of no help to me

193

00:07:14,629 --> 00:07:13,039

and i don't want past reports by

194

00:07:16,710 --> 00:07:14,639

eyewitnesses

195

00:07:19,029 --> 00:07:16,720

because you cannot use it in scientific

196

00:07:21,270 --> 00:07:19,039

evidence i mean in the courtroom

197

00:07:22,790 --> 00:07:21,280

you can rely on corroborating evidence

198

00:07:24,950 --> 00:07:22,800

of eyewitnesses

199

00:07:27,830 --> 00:07:24,960

to put a person in jail that's in the

200

00:07:30,390 --> 00:07:27,840

courtroom but it doesn't hold water

201
00:07:31,510 --> 00:07:30,400
in science you can't write a scientific

202
00:07:35,350 --> 00:07:31,520
paper saying

203
00:07:36,550 --> 00:07:35,360
this person told me that okay that's not

204
00:07:39,110 --> 00:07:36,560
sufficient evidence

205
00:07:41,189 --> 00:07:39,120
you have to use instruments that collect

206
00:07:43,589 --> 00:07:41,199
quantitative data

207
00:07:44,710 --> 00:07:43,599
and by quantitative i mean getting a

208
00:07:48,070 --> 00:07:44,720
high resolution

209
00:07:50,629 --> 00:07:48,080
image of a uap a megapixel image

210
00:07:52,710 --> 00:07:50,639
so to do that for example if you have an

211
00:07:54,950 --> 00:07:52,720
object the size of a person

212
00:07:57,670 --> 00:07:54,960
okay and suppose you want to get a

213
00:07:59,830 --> 00:07:57,680

megapixel image of that object at a

214

00:08:04,309 --> 00:07:59,840

distance of a kilometer

215

00:08:07,670 --> 00:08:04,319

for that you you you need to use a meter

216

00:08:08,309 --> 00:08:07,680

scale telescope this is just standard

217

00:08:10,070 --> 00:08:08,319

optics

218

00:08:12,710 --> 00:08:10,080

so that explains to you why an iphone

219

00:08:16,150 --> 00:08:12,720

cannot do the job an iphone has an

220

00:08:18,230 --> 00:08:16,160

aperture a camera that is a millimeter

221

00:08:19,670 --> 00:08:18,240

in size and that's a thousand times

222

00:08:22,629 --> 00:08:19,680

smaller than a meter

223

00:08:24,150 --> 00:08:22,639

so you have a resolution that is worse

224

00:08:26,469 --> 00:08:24,160

by a factor of a thousand

225

00:08:29,270 --> 00:08:26,479

so i don't want to use an iphone i want

226

00:08:31,189 --> 00:08:29,280

to use a one meter size

227

00:08:32,790 --> 00:08:31,199

telescope and by the way i checked

228

00:08:34,949 --> 00:08:32,800

online and

229

00:08:36,149 --> 00:08:34,959

there is a website that sells such

230

00:08:39,430 --> 00:08:36,159

telescopes

231

00:08:40,389 --> 00:08:39,440

it says add to the bag you just click on

232

00:08:43,110 --> 00:08:40,399

that

233

00:08:44,470 --> 00:08:43,120

and the cost is half a million dollars

234

00:08:46,150 --> 00:08:44,480

so apparently there are people willing

235

00:08:47,110 --> 00:08:46,160

to pay half a million dollars for a one

236

00:08:49,990 --> 00:08:47,120

minute

237

00:08:51,430 --> 00:08:50,000

telescope otherwise they won't be add to

238

00:08:53,670 --> 00:08:51,440

the bag

239

00:08:55,030 --> 00:08:53,680

item let me ask you have it because that

240

00:08:56,630 --> 00:08:55,040

means you can buy three of them and

241

00:08:57,190 --> 00:08:56,640

still have some change left over at the

242

00:09:00,470 --> 00:08:57,200

minute

243

00:09:01,670 --> 00:09:00,480

now uh those donors i take it they want

244

00:09:04,070 --> 00:09:01,680

to remain anonymous

245

00:09:05,190 --> 00:09:04,080

because you've not named them oh no no

246

00:09:09,269 --> 00:09:05,200

uh

247

00:09:12,550 --> 00:09:09,279

advisory

248

00:09:15,430 --> 00:09:12,560

board on the website of the galileo

249

00:09:16,470 --> 00:09:15,440

project uh and you know the announcement

250

00:09:20,070 --> 00:09:16,480

that we had

251
00:09:24,710 --> 00:09:20,080
on monday july 26th

252
00:09:27,990 --> 00:09:24,720
uh was not to announce a gift

253
00:09:29,269 --> 00:09:28,000
it was to announce a project okay and

254
00:09:32,790 --> 00:09:29,279
that's what

255
00:09:36,790 --> 00:09:32,800
uh we are all about trying to

256
00:09:39,590 --> 00:09:36,800
assemble scientific data that is open

257
00:09:41,190 --> 00:09:39,600
from telescopes that we are defining

258
00:09:42,310 --> 00:09:41,200
right now so we are deciding what kind

259
00:09:44,230 --> 00:09:42,320
of instruments we

260
00:09:45,750 --> 00:09:44,240
want to purchase off the shelf by the

261
00:09:48,710 --> 00:09:45,760
way these are not

262
00:09:50,310 --> 00:09:48,720
new instruments that we produce but

263
00:09:51,269 --> 00:09:50,320

things that you can buy and put them

264

00:09:52,870 --> 00:09:51,279

together

265

00:09:55,190 --> 00:09:52,880

and then test them and put them in

266

00:09:57,030 --> 00:09:55,200

locations various locations and

267

00:09:58,550 --> 00:09:57,040

you know we with the money we have we

268

00:10:01,750 --> 00:09:58,560

can get maybe 10 or

269

00:10:03,910 --> 00:10:01,760

several tens of telescope systems

270

00:10:05,110 --> 00:10:03,920

but what we really need is a factor of

271

00:10:07,430 --> 00:10:05,120

10 more

272

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

so if we had the funding at a level

273

00:10:13,190 --> 00:10:09,680

above 10 million that would really

274

00:10:14,870 --> 00:10:13,200

help us if there's anyone out there

275

00:10:16,949 --> 00:10:14,880

yeah and if anyone's listening with that

276

00:10:19,750 --> 00:10:16,959

sort of revenue then then please do get

277

00:10:22,310 --> 00:10:19,760

in touch with avia and his group

278

00:10:23,430 --> 00:10:22,320

1.75 million is a lot of money to to

279

00:10:24,949 --> 00:10:23,440

many people

280

00:10:27,509 --> 00:10:24,959

it's obviously been enough to get the

281

00:10:28,310 --> 00:10:27,519

project started what can you begin to

282

00:10:31,350 --> 00:10:28,320

accomplish

283

00:10:33,430 --> 00:10:31,360

with 1.75 million dollars in funding

284

00:10:35,030 --> 00:10:33,440

well we can produce at least 10

285

00:10:37,750 --> 00:10:35,040

telescope systems

286

00:10:39,030 --> 00:10:37,760

each of which you know will uh provide

287

00:10:41,750 --> 00:10:39,040

us with

288

00:10:43,509 --> 00:10:41,760

a high resolution imaging of the sky

289

00:10:45,190 --> 00:10:43,519

basically a video of the sky where

290

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

wherever it's located

291

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

and we have to decide where to put these

292

00:10:50,870 --> 00:10:48,880

systems and the reason i said the

293

00:10:53,350 --> 00:10:50,880

hundred telescopes are needed is

294

00:10:54,870 --> 00:10:53,360

based on the rate by which report uap

295

00:10:57,590 --> 00:10:54,880

reports came

296

00:10:58,790 --> 00:10:57,600

uh you can get a sense of how frequently

297

00:11:00,389 --> 00:10:58,800

they come along and

298

00:11:02,230 --> 00:11:00,399

if you want to detect something in a

299

00:11:05,110 --> 00:11:02,240

year time scale

300

00:11:06,389 --> 00:11:05,120

you need 100 telescopes but then where

301
00:11:09,509 --> 00:11:06,399
to put them

302
00:11:11,670 --> 00:11:09,519
is a matter of debate

303
00:11:13,030 --> 00:11:11,680
for example you can put them on mountain

304
00:11:14,150 --> 00:11:13,040
tops that's where astronomical

305
00:11:16,790 --> 00:11:14,160
observatories

306
00:11:18,710 --> 00:11:16,800
are usually located simply because the

307
00:11:20,710 --> 00:11:18,720
atmosphere is more dilute

308
00:11:22,150 --> 00:11:20,720
up there and you don't have as much

309
00:11:24,389 --> 00:11:22,160
blurring of the images

310
00:11:26,230 --> 00:11:24,399
so you can look towards the horizon and

311
00:11:29,430 --> 00:11:26,240
see a great distance

312
00:11:31,350 --> 00:11:29,440
and then but we also want to sample

313
00:11:32,949 --> 00:11:31,360

other locations so having more

314

00:11:35,190 --> 00:11:32,959

telescopes has the other

315

00:11:36,949 --> 00:11:35,200

added benefit that you can spread them

316

00:11:39,670 --> 00:11:36,959

in many different locations so

317

00:11:40,389 --> 00:11:39,680

for example if you ap concentrate

318

00:11:43,750 --> 00:11:40,399

cluster

319

00:11:45,110 --> 00:11:43,760

in some preferred locations uh the more

320

00:11:46,790 --> 00:11:45,120

locations you visit

321

00:11:48,630 --> 00:11:46,800

the better chance you have of finding

322

00:11:51,430 --> 00:11:48,640

them you mentioned

323

00:11:53,829 --> 00:11:51,440

the classified data that obviously was

324

00:11:56,389 --> 00:11:53,839

part of the uap task force report

325

00:11:57,750 --> 00:11:56,399

have you or your group been privy to any

326

00:11:59,670 --> 00:11:57,760

of that classified data

327

00:12:01,190 --> 00:11:59,680

which would influence your decisions

328

00:12:03,430 --> 00:12:01,200

going forward

329

00:12:05,509 --> 00:12:03,440

no and in fact i don't want to see

330

00:12:08,949 --> 00:12:05,519

anything classified because

331

00:12:10,470 --> 00:12:08,959

then the government would tie my hands i

332

00:12:13,590 --> 00:12:10,480

wouldn't be able to

333

00:12:15,750 --> 00:12:13,600

freely speak about anything i do because

334

00:12:17,750 --> 00:12:15,760

even subconsciously if i collect

335

00:12:20,949 --> 00:12:17,760

assemble new data

336

00:12:22,949 --> 00:12:20,959

there would be this risk that i speak

337

00:12:24,470 --> 00:12:22,959

because i know something else you know

338

00:12:26,949 --> 00:12:24,480

and uh i just

339

00:12:28,870 --> 00:12:26,959

want to be free as a scientist i prefer

340

00:12:29,670 --> 00:12:28,880

to deal with open data the public can

341

00:12:31,430 --> 00:12:29,680

see it

342

00:12:33,590 --> 00:12:31,440

and then the public can also analyze it

343

00:12:35,910 --> 00:12:33,600

in a different way than our team will

344

00:12:37,350 --> 00:12:35,920

so that's the beauty of science that

345

00:12:40,069 --> 00:12:37,360

it's transparent

346

00:12:40,870 --> 00:12:40,079

you share evidence-based knowledge and

347

00:12:43,269 --> 00:12:40,880

what happens

348

00:12:44,629 --> 00:12:43,279

right now or until the galileo project

349

00:12:46,629 --> 00:12:44,639

was announced was

350

00:12:48,069 --> 00:12:46,639

that you know there would be these

351
00:12:50,629 --> 00:12:48,079
claims of something

352
00:12:51,990 --> 00:12:50,639
some unusual objects and then the public

353
00:12:53,829 --> 00:12:52,000
would speculate

354
00:12:55,829 --> 00:12:53,839
and the scientific community would

355
00:12:58,470 --> 00:12:55,839
ridicule and dismiss it

356
00:12:59,590 --> 00:12:58,480
and then nobody would actually clear up

357
00:13:01,990 --> 00:12:59,600
the fog

358
00:13:04,230 --> 00:13:02,000
what is really going on and you know you

359
00:13:07,190 --> 00:13:04,240
would you don't want to ask

360
00:13:08,870 --> 00:13:07,200
politicians or military personnel to

361
00:13:11,030 --> 00:13:08,880
explain what we see on the sky

362
00:13:12,230 --> 00:13:11,040
it's just like asking a plumber to bake

363
00:13:13,750 --> 00:13:12,240

you a cake

364

00:13:15,590 --> 00:13:13,760

you know these people were not trained

365

00:13:17,829 --> 00:13:15,600

the scientists

366

00:13:22,069 --> 00:13:17,839

what you want to do is ask astronomers

367

00:13:25,990 --> 00:13:24,710

so on the galileo project page there's a

368

00:13:27,990 --> 00:13:26,000

this really cool link that

369

00:13:29,350 --> 00:13:28,000

is called a research affiliate and i've

370

00:13:30,790 --> 00:13:29,360

noticed over the past week there have

371

00:13:32,470 --> 00:13:30,800

been a few names added there

372

00:13:34,069 --> 00:13:32,480

i wonder if you might be able to talk

373

00:13:35,990 --> 00:13:34,079

about some of those names and you know

374

00:13:37,910 --> 00:13:36,000

what work you plan to do together

375

00:13:40,310 --> 00:13:37,920

yeah so that was the amazing thing that

376

00:13:40,710 --> 00:13:40,320

um well first of all that a few weeks

377

00:13:43,189 --> 00:13:40,720

ago

378

00:13:44,710 --> 00:13:43,199

a a number of individuals approached me

379

00:13:48,310 --> 00:13:44,720

and and gave me this

380

00:13:50,790 --> 00:13:48,320

sum of money for 1.75 million dollars

381

00:13:51,430 --> 00:13:50,800

and then after the project was announced

382

00:13:53,350 --> 00:13:51,440

i got

383

00:13:55,509 --> 00:13:53,360

thousands of emails from people that

384

00:13:58,550 --> 00:13:55,519

want to get involved then

385

00:13:59,670 --> 00:13:58,560

you see some of them as affiliates and

386

00:14:02,710 --> 00:13:59,680

then

387

00:14:05,590 --> 00:14:02,720

it basically underscores what i was

388

00:14:07,509 --> 00:14:05,600

trying to say for six months now in a

389

00:14:10,629 --> 00:14:07,519

thousand interviews which is

390

00:14:12,150 --> 00:14:10,639

that scientists should not reject or

391

00:14:14,150 --> 00:14:12,160

ridicule this subject

392

00:14:16,470 --> 00:14:14,160

because the public is very interested

393

00:14:19,670 --> 00:14:16,480

and it's an opportunity

394

00:14:22,710 --> 00:14:19,680

to attract funds to science

395

00:14:26,389 --> 00:14:22,720

and to attract young people

396

00:14:29,350 --> 00:14:26,399

talented people to science and

397

00:14:31,030 --> 00:14:29,360

it's a missed opportunity to say we know

398

00:14:32,710 --> 00:14:31,040

the answer in advance we don't need to

399

00:14:34,710 --> 00:14:32,720

look at the sky

400

00:14:35,750 --> 00:14:34,720

it's similar to what the philosophers

401
00:14:38,069 --> 00:14:35,760
said

402
00:14:39,670 --> 00:14:38,079
during the days of galileo they did not

403
00:14:40,710 --> 00:14:39,680
want to look through the telescope of

404
00:14:42,710 --> 00:14:40,720
galileo and they

405
00:14:45,110 --> 00:14:42,720
they knew that the sun moves around the

406
00:14:46,310 --> 00:14:45,120
earth and they put galileo in house

407
00:14:48,310 --> 00:14:46,320
arrest

408
00:14:50,389 --> 00:14:48,320
today galileo would have been cancelled

409
00:14:54,150 --> 00:14:50,399
on social media

410
00:14:55,990 --> 00:14:54,160
so we don't want to repeat that mistake

411
00:14:58,230 --> 00:14:56,000
we want to collect data and what's the

412
00:15:01,990 --> 00:14:58,240
worst thing that can happen

413
00:15:05,269 --> 00:15:02,000

that out of private donations my group

414

00:15:07,670 --> 00:15:05,279

ends up collecting data and finding

415

00:15:10,790 --> 00:15:07,680

that these uap are some natural

416

00:15:14,069 --> 00:15:10,800

phenomena that we haven't anticipated

417

00:15:16,550 --> 00:15:14,079

how bad could it be i mean so we

418

00:15:18,790 --> 00:15:16,560

explain something that other people

419

00:15:21,910 --> 00:15:18,800

speculated about in the past

420

00:15:24,230 --> 00:15:21,920

and we figure it out why should anyone

421

00:15:26,629 --> 00:15:24,240

have a problem with that

422

00:15:29,590 --> 00:15:26,639

except for the same reason that

423

00:15:33,189 --> 00:15:29,600

philosophers had a problem with galileo

424

00:15:36,310 --> 00:15:33,199

many centuries ago because

425

00:15:38,870 --> 00:15:36,320

it bothers them to look for

426

00:15:41,110 --> 00:15:38,880

the evidence they think they know the

427

00:15:42,790 --> 00:15:41,120

answer before checking the evidence

428

00:15:44,150 --> 00:15:42,800

and that's unfortunate because i would

429

00:15:47,430 --> 00:15:44,160

think that we learned the lesson

430

00:15:49,590 --> 00:15:47,440

we are in the 21st century right we say

431

00:15:52,629 --> 00:15:49,600

that science leads the way

432

00:15:54,069 --> 00:15:52,639

yet scientists behave just like the

433

00:15:56,310 --> 00:15:54,079

philosophers during the days of

434

00:15:57,269 --> 00:15:56,320

so how is that possible how did we get

435

00:15:59,430 --> 00:15:57,279

to that point

436

00:16:01,030 --> 00:15:59,440

it's completely unclear to me i think

437

00:16:01,910 --> 00:16:01,040

this subject should be part of the

438

00:16:05,189 --> 00:16:01,920

mainstream

439

00:16:07,910 --> 00:16:05,199

why should we search for dark matter

440

00:16:09,590 --> 00:16:07,920

of specific types you know it's a matter

441

00:16:11,110 --> 00:16:09,600

of curiosity we don't know what most of

442

00:16:14,069 --> 00:16:11,120

the matter in the universe is

443

00:16:15,670 --> 00:16:14,079

okay so then we say okay maybe maybe

444

00:16:16,310 --> 00:16:15,680

it's weekly interacting massive

445

00:16:18,069 --> 00:16:16,320

particles

446

00:16:20,310 --> 00:16:18,079

okay we don't know that for sure we're

447

00:16:22,710 --> 00:16:20,320

searching in the dark so then we invest

448

00:16:25,269 --> 00:16:22,720

hundreds of millions of dollars you know

449

00:16:27,590 --> 00:16:25,279

40 years of search

450

00:16:28,870 --> 00:16:27,600

that produced nothing we just have

451
00:16:33,350 --> 00:16:28,880
limits

452
00:16:35,189 --> 00:16:33,360
and i asked once an experimentalist

453
00:16:37,269 --> 00:16:35,199
how long will you continue to search you

454
00:16:40,710 --> 00:16:37,279
haven't found it you put limits

455
00:16:42,870 --> 00:16:40,720
and he said as long as i'm funded

456
00:16:44,710 --> 00:16:42,880
so i'm saying okay that's legitimate

457
00:16:46,310 --> 00:16:44,720
that's part of the mainstream if you ask

458
00:16:48,949 --> 00:16:46,320
any astronomer

459
00:16:50,629 --> 00:16:48,959
he or she will tell you of course we

460
00:16:52,870 --> 00:16:50,639
need to search for dark matter it makes

461
00:16:54,949 --> 00:16:52,880
a lot of sense

462
00:16:56,069 --> 00:16:54,959
then you tell them it's a search in the

463
00:16:59,189 --> 00:16:56,079

dark right

464

00:17:01,430 --> 00:16:59,199

so why not search also for technological

465

00:17:02,470 --> 00:17:01,440

debris that was left behind by some

466

00:17:05,189 --> 00:17:02,480

civilizations

467

00:17:07,110 --> 00:17:05,199

that existed before us because we know

468

00:17:09,350 --> 00:17:07,120

that half of the sun-like stars

469

00:17:10,949 --> 00:17:09,360

had a planet the size of the earth

470

00:17:13,110 --> 00:17:10,959

roughly the same separation

471

00:17:15,429 --> 00:17:13,120

we know that we exist so we're just

472

00:17:19,429 --> 00:17:15,439

looking for things like us

473

00:17:21,590 --> 00:17:19,439

in our past why not

474

00:17:22,870 --> 00:17:21,600

they would tell you because it's a

475

00:17:26,150 --> 00:17:22,880

speculation

476

00:17:27,829 --> 00:17:26,160

because we have no extraordinary

477

00:17:30,870 --> 00:17:27,839

evidence for that

478

00:17:33,750 --> 00:17:30,880

we should ban any discussion on that

479

00:17:35,430 --> 00:17:33,760

and i say why didn't you ban ban any

480

00:17:36,230 --> 00:17:35,440

discussion on weekly interacting massive

481

00:17:38,710 --> 00:17:36,240

particles

482

00:17:40,390 --> 00:17:38,720

when there was no extraordinary evidence

483

00:17:42,070 --> 00:17:40,400

that weakly interacting massive

484

00:17:43,909 --> 00:17:42,080

particles are the dark matter

485

00:17:45,430 --> 00:17:43,919

of course you might say there is dark

486

00:17:47,830 --> 00:17:45,440

matter we know it exists

487

00:17:49,110 --> 00:17:47,840

yes but not necessarily weekly

488

00:17:51,190 --> 00:17:49,120

interacting massive particles

489

00:17:54,310 --> 00:17:51,200

yet you invested hundreds of millions of

490

00:17:57,909 --> 00:17:54,320

dollars in that particular direction

491

00:17:59,909 --> 00:17:57,919

okay spent decades searching for it

492

00:18:01,190 --> 00:17:59,919

and haven't found it this particular

493

00:18:03,830 --> 00:18:01,200

particle

494

00:18:05,190 --> 00:18:03,840

so i have nothing against that it could

495

00:18:07,110 --> 00:18:05,200

be part of the mainstream

496

00:18:09,110 --> 00:18:07,120

and by the way if the dark matter is

497

00:18:11,590 --> 00:18:09,120

weakly interacting massive particles

498

00:18:13,270 --> 00:18:11,600

it will have very little impact on our

499

00:18:15,590 --> 00:18:13,280

daily lives

500

00:18:16,950 --> 00:18:15,600

right it will not appear in the news

501
00:18:19,750 --> 00:18:16,960
every day afterwards

502
00:18:20,870 --> 00:18:19,760
if we find it it will be a nobel prize

503
00:18:22,950 --> 00:18:20,880
it will give

504
00:18:24,230 --> 00:18:22,960
some recognition to the scientists that

505
00:18:26,830 --> 00:18:24,240
find it

506
00:18:28,230 --> 00:18:26,840
but it will not have a major impact on

507
00:18:30,470 --> 00:18:28,240
society

508
00:18:33,029 --> 00:18:30,480
but if we find a relic of another

509
00:18:35,190 --> 00:18:33,039
civilization that is smarter than we are

510
00:18:36,870 --> 00:18:35,200
that would have a huge impact on society

511
00:18:40,310 --> 00:18:36,880
so how dare we

512
00:18:43,270 --> 00:18:40,320
ignore that question ridicule it

513
00:18:44,150 --> 00:18:43,280

push it to the side and not invest any

514

00:18:45,669 --> 00:18:44,160
funds

515

00:18:47,350 --> 00:18:45,679
in the search because we need

516

00:18:48,150 --> 00:18:47,360
extraordinary evidence before we will

517

00:18:51,669 --> 00:18:48,160
even

518

00:18:54,710 --> 00:18:51,679
contemplate the legitimacy of discussing

519

00:19:01,110 --> 00:18:58,549
in the 21st century

520

00:19:02,070 --> 00:19:01,120
when you look at twitter you see

521

00:19:05,110 --> 00:19:02,080
scientists

522

00:19:08,549 --> 00:19:05,120
ridiculing this subject how is that

523

00:19:11,830 --> 00:19:08,559
possible i mean i don't know the answer

524

00:19:14,070 --> 00:19:11,840
maybe you know it it reminds me of um

525

00:19:15,750 --> 00:19:14,080
the work with black holes and exoplanets

526

00:19:17,270 --> 00:19:15,760

you know many many years ago people are

527

00:19:20,789 --> 00:19:17,280

theorized about these we just gave

528

00:19:22,470 --> 00:19:20,799

syracuse a nobel prize um for theorizing

529

00:19:24,310 --> 00:19:22,480

about it and we didn't have a goddamn

530

00:19:26,150 --> 00:19:24,320

photo of the thing and

531

00:19:27,909 --> 00:19:26,160

it lit the world that when we released

532

00:19:29,590 --> 00:19:27,919

the photo of the black hole so just

533

00:19:32,070 --> 00:19:29,600

imagine what a photo of an

534

00:19:33,510 --> 00:19:32,080

extraterrestrial craft would do yeah so

535

00:19:36,150 --> 00:19:33,520

i actually

536

00:19:38,070 --> 00:19:36,160

wrote the first paper that forecast that

537

00:19:40,150 --> 00:19:38,080

the first image

538

00:19:42,310 --> 00:19:40,160

should be taken of m87 which is the

539

00:19:44,470 --> 00:19:42,320

image of the black hole that we now have

540

00:19:46,070 --> 00:19:44,480

i wrote the first paper about 12 years

541

00:19:47,830 --> 00:19:46,080

ago about that

542

00:19:49,990 --> 00:19:47,840

when nobody discussed necessarily

543

00:19:53,270 --> 00:19:50,000

looking at m87 for that photo

544

00:19:55,590 --> 00:19:53,280

okay and i remember back then it was not

545

00:19:57,270 --> 00:19:55,600

a very popular subject

546

00:19:58,710 --> 00:19:57,280

and you know i worked on many such

547

00:20:01,029 --> 00:19:58,720

things along the

548

00:20:02,149 --> 00:20:01,039

years that i've been practicing

549

00:20:04,830 --> 00:20:02,159

astronomy and i

550

00:20:06,310 --> 00:20:04,840

realized that indeed as you say many

551
00:20:09,190 --> 00:20:06,320
times

552
00:20:10,630 --> 00:20:09,200
scientists just dismiss things that

553
00:20:13,270 --> 00:20:10,640
become very fashionable

554
00:20:15,029 --> 00:20:13,280
eventually that become mainstream and

555
00:20:16,230 --> 00:20:15,039
extra planets is a good example when i

556
00:20:19,110 --> 00:20:16,240
was a postdoc i just

557
00:20:20,149 --> 00:20:19,120
entered astrophysics people were saying

558
00:20:22,230 --> 00:20:20,159
oh maybe

559
00:20:23,669 --> 00:20:22,240
stars do not have planets at all you

560
00:20:26,390 --> 00:20:23,679
know we don't know that therefore

561
00:20:30,789 --> 00:20:26,400
don't speak about it and there was a

562
00:20:34,070 --> 00:20:30,799
paper written in 1952

563
00:20:36,710 --> 00:20:34,080

okay by uh an astronomer otto struve

564

00:20:39,590 --> 00:20:36,720

who said well if there happens to be a

565

00:20:41,510 --> 00:20:39,600

planet like jupiter close to a star

566

00:20:43,190 --> 00:20:41,520

we can actually detect the effect that

567

00:20:46,230 --> 00:20:43,200

it has on the star it will pull it back

568

00:20:48,149 --> 00:20:46,240

and forth in a measurable way

569

00:20:50,549 --> 00:20:48,159

or it will block the light from the star

570

00:20:53,350 --> 00:20:50,559

when it passes in front of it

571

00:20:54,710 --> 00:20:53,360

in a measurable way and that paper was

572

00:20:57,830 --> 00:20:54,720

ignored

573

00:21:00,630 --> 00:20:57,840

for four decades by

574

00:21:02,070 --> 00:21:00,640

time allocation committees and i know

575

00:21:03,669 --> 00:21:02,080

from observers that were

576

00:21:05,669 --> 00:21:03,679

you know that were practicing at that

577

00:21:07,830 --> 00:21:05,679

time that they

578

00:21:09,270 --> 00:21:07,840

made proposals for using telescope time

579

00:21:11,510 --> 00:21:09,280

to look for such things

580

00:21:13,750 --> 00:21:11,520

and these proposals were denied because

581

00:21:15,909 --> 00:21:13,760

the astronomers were saying

582

00:21:17,029 --> 00:21:15,919

we know why jupiter is so far from the

583

00:21:18,950 --> 00:21:17,039

sun

584

00:21:20,950 --> 00:21:18,960

having a jupiter close to a star makes

585

00:21:21,909 --> 00:21:20,960

no sense therefore we should not search

586

00:21:25,510 --> 00:21:21,919

for it

587

00:21:28,149 --> 00:21:25,520

and then in 1995 the first

588

00:21:29,909 --> 00:21:28,159

hot jupiter around the sun-like star was

589

00:21:32,390 --> 00:21:29,919

discovered and the nobel prize a few

590

00:21:36,149 --> 00:21:32,400

years ago was given

591

00:21:39,270 --> 00:21:36,159

to uh quilos and mayor

592

00:21:40,870 --> 00:21:39,280

and you ask yourself okay well nothing

593

00:21:41,350 --> 00:21:40,880

bad really happened you know it just

594

00:21:44,549 --> 00:21:41,360

took

595

00:21:46,390 --> 00:21:44,559

some decades of delay my point is for

596

00:21:49,190 --> 00:21:46,400

every baby that was born

597

00:21:51,110 --> 00:21:49,200

barely you know after a long time there

598

00:21:52,230 --> 00:21:51,120

must be a lot of babies that were never

599

00:21:53,669 --> 00:21:52,240

born

600

00:21:55,909 --> 00:21:53,679

because the scientific community

601
00:21:59,510 --> 00:21:55,919
continued to ridicule the subject

602
00:22:00,390 --> 00:21:59,520
for decades even now and one such baby

603
00:22:01,909 --> 00:22:00,400
may be

604
00:22:04,310 --> 00:22:01,919
technological relics of other

605
00:22:06,950 --> 00:22:04,320
civilizations and it's not being born

606
00:22:08,390 --> 00:22:06,960
because nobody puts funds to the search

607
00:22:10,070 --> 00:22:08,400
and then everyone says there is no

608
00:22:12,230 --> 00:22:10,080
extraordinary evidence therefore we

609
00:22:14,070 --> 00:22:12,240
shouldn't put any funds to the search

610
00:22:15,909 --> 00:22:14,080
which is a self-fulfilling prophecy i

611
00:22:19,110 --> 00:22:15,919
was asked in a forum

612
00:22:22,070 --> 00:22:19,120
how long can you know our civilization

613
00:22:23,750 --> 00:22:22,080

remain ignorant about the existence of

614

00:22:27,110 --> 00:22:23,760

others out there

615

00:22:28,950 --> 00:22:27,120

and my answer was forever you know

616

00:22:30,950 --> 00:22:28,960

if we decide not to look through our

617

00:22:31,590 --> 00:22:30,960

windows and claim that we have no

618

00:22:33,110 --> 00:22:31,600

neighbors

619

00:22:34,870 --> 00:22:33,120

and that we are the smartest in the

620

00:22:37,510 --> 00:22:34,880

universe

621

00:22:39,909 --> 00:22:37,520

we will not find the neighbors but that

622

00:22:41,669 --> 00:22:39,919

doesn't mean that they are not there

623

00:22:44,070 --> 00:22:41,679

they will not go away just because we

624

00:22:45,830 --> 00:22:44,080

are not looking through our windows

625

00:22:47,350 --> 00:22:45,840

avi i want to talk about those windows

626

00:22:48,310 --> 00:22:47,360

and what we're looking at now as a

627

00:22:50,310 --> 00:22:48,320

complete layman

628

00:22:51,750 --> 00:22:50,320

to astronomy and astrophysics and

629

00:22:53,510 --> 00:22:51,760

everything that entails

630

00:22:54,950 --> 00:22:53,520

when i think telescope i think of

631

00:22:56,070 --> 00:22:54,960

looking up at the sky and looking at the

632

00:22:57,909 --> 00:22:56,080

stars

633

00:22:59,750 --> 00:22:57,919

these telescopes you're looking at

634

00:23:01,110 --> 00:22:59,760

buying adding to your bag and checking

635

00:23:02,630 --> 00:23:01,120

out hopefully

636

00:23:05,110 --> 00:23:02,640

are they going to be able to see an

637

00:23:07,270 --> 00:23:05,120

object for example like omamura

638

00:23:08,549 --> 00:23:07,280

would they be able to see that with any

639

00:23:10,950 --> 00:23:08,559

degree of clarity

640

00:23:12,070 --> 00:23:10,960

or is that too far away and to the

641

00:23:14,549 --> 00:23:12,080

extreme

642

00:23:15,430 --> 00:23:14,559

how close up could we see objects for

643

00:23:17,830 --> 00:23:15,440

example

644

00:23:20,390 --> 00:23:17,840

if one of your telescopes was placed in

645

00:23:22,950 --> 00:23:20,400

or around the catalina islands area

646

00:23:25,350 --> 00:23:22,960

and there happened to be some uh

647

00:23:25,830 --> 00:23:25,360

movement or some you know activity going

648

00:23:28,470 --> 00:23:25,840

on

649

00:23:30,070 --> 00:23:28,480

involving uaps could you see those up

650

00:23:33,110 --> 00:23:30,080

close as well

651
00:23:34,470 --> 00:23:33,120
yeah so what we can see with telescopes

652
00:23:37,669 --> 00:23:34,480
on the ground

653
00:23:38,950 --> 00:23:37,679
uh are only objects that are within the

654
00:23:41,990 --> 00:23:38,960
earth atmosphere

655
00:23:43,909 --> 00:23:42,000
we can resolve them only those uh

656
00:23:45,990 --> 00:23:43,919
an object like omoamoa which is roughly

657
00:23:47,669 --> 00:23:46,000
the size of a football field

658
00:23:49,269 --> 00:23:47,679
at a distance that is a fraction of the

659
00:23:51,350 --> 00:23:49,279
distance to the sun

660
00:23:54,230 --> 00:23:51,360
cannot be resolved with any teles even

661
00:23:57,110 --> 00:23:54,240
the biggest telescopes we have on earth

662
00:23:58,630 --> 00:23:57,120
so what we need to do there is when we

663
00:24:00,549 --> 00:23:58,640

identify

664

00:24:03,269 --> 00:24:00,559

an interstellar object an object that

665

00:24:05,350 --> 00:24:03,279

came from outside the solar system

666

00:24:06,870 --> 00:24:05,360

that looks weird in the sense that it

667

00:24:10,870 --> 00:24:06,880

doesn't look like a comet

668

00:24:12,710 --> 00:24:10,880

or an asteroid the way um was

669

00:24:13,909 --> 00:24:12,720

because there was no cometary tail and

670

00:24:16,070 --> 00:24:13,919

it was pushed

671

00:24:17,110 --> 00:24:16,080

away from the sun something that looks

672

00:24:19,590 --> 00:24:17,120

weird

673

00:24:20,710 --> 00:24:19,600

and if we see it a year in advance

674

00:24:23,350 --> 00:24:20,720

before it approaches

675

00:24:24,390 --> 00:24:23,360

us we can send the spacecraft equipped

676
00:24:26,950 --> 00:24:24,400
with the camera

677
00:24:29,029 --> 00:24:26,960
that will intercept its trajectory and

678
00:24:33,350 --> 00:24:29,039
take a close-up photograph

679
00:24:35,669 --> 00:24:33,360
okay and the osiris-rex is a mission

680
00:24:36,789 --> 00:24:35,679
that they aimed to get to the asteroid

681
00:24:38,630 --> 00:24:36,799
benue

682
00:24:39,990 --> 00:24:38,640
and it landed on it and it took a

683
00:24:41,430 --> 00:24:40,000
close-up photograph and

684
00:24:43,190 --> 00:24:41,440
if you look at the photograph it's clear

685
00:24:46,310 --> 00:24:43,200
that this is a rock

686
00:24:50,870 --> 00:24:46,320
and it actually took a sample from bennu

687
00:24:55,830 --> 00:24:50,880
that it will bring back to earth in 2023

688
00:24:57,430 --> 00:24:55,840

so here is an example of a space mission

689

00:24:59,590 --> 00:24:57,440

not only taking a photograph but

690

00:25:02,549 --> 00:24:59,600

actually landing on an object

691

00:25:04,230 --> 00:25:02,559

so just imagine doing the same with an

692

00:25:06,470 --> 00:25:04,240

artificial object

693

00:25:07,669 --> 00:25:06,480

we could import the technology back to

694

00:25:09,750 --> 00:25:07,679

earth

695

00:25:11,510 --> 00:25:09,760

so that's what we need to do in space

696

00:25:13,350 --> 00:25:11,520

for intestinal objects

697

00:25:16,070 --> 00:25:13,360

we need to intercept their trajectory

698

00:25:17,510 --> 00:25:16,080

and the vera rubin observatory will come

699

00:25:20,310 --> 00:25:17,520

online in two years

700

00:25:21,669 --> 00:25:20,320

uh will have much more sensitivity than

701
00:25:24,390 --> 00:25:21,679
the pan stars

702
00:25:25,830 --> 00:25:24,400
observatory in hawaii that detected the

703
00:25:28,870 --> 00:25:25,840
umuamua

704
00:25:32,070 --> 00:25:28,880
and then with vera rubin we might get

705
00:25:33,990 --> 00:25:32,080
perhaps an object like that every month

706
00:25:36,390 --> 00:25:34,000
so there would be many opportunities to

707
00:25:39,110 --> 00:25:36,400
follow up and

708
00:25:39,750 --> 00:25:39,120
part of the galileo project is to

709
00:25:43,029 --> 00:25:39,760
develop

710
00:25:44,630 --> 00:25:43,039
software that will be used um on the

711
00:25:45,830 --> 00:25:44,640
data coming from the vera rubin

712
00:25:48,310 --> 00:25:45,840
observatory

713
00:25:49,750 --> 00:25:48,320

such that we can identify those

714

00:25:53,190 --> 00:25:49,760

interstellar objects that look

715

00:25:54,149 --> 00:25:53,200

weird and then design a space mission

716

00:25:56,390 --> 00:25:54,159

that will

717

00:25:57,990 --> 00:25:56,400

take a close-up photograph of them so we

718

00:25:58,789 --> 00:25:58,000

are definitely interested in every

719

00:26:02,710 --> 00:25:58,799

object

720

00:26:04,710 --> 00:26:02,720

coming close to earth that looks unusual

721

00:26:05,909 --> 00:26:04,720

and we want to get a high resolution

722

00:26:09,029 --> 00:26:05,919

image of it

723

00:26:11,190 --> 00:26:09,039

and of course as you said as you hinted

724

00:26:12,390 --> 00:26:11,200

the way to look at objects in our

725

00:26:14,950 --> 00:26:12,400

atmosphere

726
00:26:15,590 --> 00:26:14,960
is to use telescopes on the ground but

727
00:26:17,510 --> 00:26:15,600
for

728
00:26:19,590 --> 00:26:17,520
objects that are far away we need to

729
00:26:22,310 --> 00:26:19,600
send the spacecraft

730
00:26:24,630 --> 00:26:22,320
to get a good image of them one such

731
00:26:25,909 --> 00:26:24,640
group that you have um started a

732
00:26:28,950 --> 00:26:25,919
relationship with would be

733
00:26:31,430 --> 00:26:28,960
uapx which is gary voorhees uh

734
00:26:33,029 --> 00:26:31,440
kevin day and others how does how do

735
00:26:34,470 --> 00:26:33,039
those relationships come about and what

736
00:26:35,750 --> 00:26:34,480
are your plans to work with them going

737
00:26:38,149 --> 00:26:35,760
forward

738
00:26:40,310 --> 00:26:38,159

right so there are various organizations

739

00:26:43,190 --> 00:26:40,320

that existed in the past

740

00:26:44,870 --> 00:26:43,200

and i should clarify that the galileo

741

00:26:46,630 --> 00:26:44,880

project is different

742

00:26:48,549 --> 00:26:46,640

because it's the first time that you

743

00:26:51,590 --> 00:26:48,559

have a group

744

00:26:55,269 --> 00:26:51,600

of just scientists

745

00:26:57,430 --> 00:26:55,279

astronomers mostly coming together

746

00:26:59,110 --> 00:26:57,440

and designing a set of instruments that

747

00:27:01,590 --> 00:26:59,120

they will build

748

00:27:02,630 --> 00:27:01,600

and they will put in place and they will

749

00:27:05,990 --> 00:27:02,640

test

750

00:27:10,310 --> 00:27:06,000

and they will do the data assembly

751
00:27:14,710 --> 00:27:10,320
and analysis just like in a scientific

752
00:27:17,110 --> 00:27:14,720
experiment now all past groups that

753
00:27:18,549 --> 00:27:17,120
involve for example i mean one that you

754
00:27:20,870 --> 00:27:18,559
mentioned uapx but

755
00:27:21,909 --> 00:27:20,880
there are others all of them were

756
00:27:24,470 --> 00:27:21,919
partnering

757
00:27:25,269 --> 00:27:24,480
with scientists they were composed let's

758
00:27:27,430 --> 00:27:25,279
say of

759
00:27:29,430 --> 00:27:27,440
military personnel that witnessed some

760
00:27:31,669 --> 00:27:29,440
uap or

761
00:27:32,870 --> 00:27:31,679
they want to engage the public you know

762
00:27:36,149 --> 00:27:32,880
there is

763
00:27:37,190 --> 00:27:36,159

another one called sky hub that wants to

764

00:27:41,430 --> 00:27:37,200

distribute

765

00:27:44,710 --> 00:27:41,440

instruments in people's backyard

766

00:27:46,630 --> 00:27:44,720

i don't we don't want to do that because

767

00:27:48,310 --> 00:27:46,640

we want to well first of all we don't

768

00:27:49,830 --> 00:27:48,320

have enough instruments to distribute we

769

00:27:51,350 --> 00:27:49,840

want to have full control over the

770

00:27:53,110 --> 00:27:51,360

instruments it's not a matter of the

771

00:27:54,310 --> 00:27:53,120

public doing whatever they want in the

772

00:27:55,750 --> 00:27:54,320

backyard

773

00:27:57,990 --> 00:27:55,760

it you know that's the way you do

774

00:27:59,830 --> 00:27:58,000

science you have to have

775

00:28:01,190 --> 00:27:59,840

a con you have to design your

776

00:28:03,430 --> 00:28:01,200

experimental setup

777

00:28:05,029 --> 00:28:03,440

and then have full control over it and

778

00:28:07,830 --> 00:28:05,039

collect the data yourself

779

00:28:08,230 --> 00:28:07,840

the scientists should do it so we are

780

00:28:11,029 --> 00:28:08,240

not

781

00:28:11,750 --> 00:28:11,039

partnering with scientists we are the

782

00:28:14,630 --> 00:28:11,760

scientists

783

00:28:16,870 --> 00:28:14,640

doing it so we don't need to go to other

784

00:28:20,230 --> 00:28:16,880

scientists and ask to partner with them

785

00:28:22,630 --> 00:28:20,240

like uapx is doing uapx is partnering

786

00:28:23,990 --> 00:28:22,640

we don't partner we are the scientists

787

00:28:26,470 --> 00:28:24,000

we are doing it

788

00:28:27,430 --> 00:28:26,480

then with the public of course if we

789

00:28:29,830 --> 00:28:27,440

have data

790

00:28:31,750 --> 00:28:29,840

the public is welcome to analyze the

791

00:28:33,830 --> 00:28:31,760

data that we will make public

792

00:28:35,590 --> 00:28:33,840

you know we we can allow other people to

793

00:28:36,710 --> 00:28:35,600

look at the data and look for things we

794

00:28:40,070 --> 00:28:36,720

haven't noticed

795

00:28:41,269 --> 00:28:40,080

that's perfectly fine but we will

796

00:28:43,110 --> 00:28:41,279

collect the data

797

00:28:44,950 --> 00:28:43,120

because it's a scientific experiment

798

00:28:47,350 --> 00:28:44,960

just like you don't let the public get

799

00:28:49,190 --> 00:28:47,360

into your laboratory you know if you

800

00:28:51,669 --> 00:28:49,200

have a laboratory doing an experiment

801
00:28:53,430 --> 00:28:51,679
scientific experiment you don't just

802
00:28:55,269 --> 00:28:53,440
open the door and say anyone from the

803
00:28:56,310 --> 00:28:55,279
street come in and do whatever you want

804
00:28:59,269 --> 00:28:56,320
with the instruments

805
00:28:59,750 --> 00:28:59,279
that will not allow you to monitor

806
00:29:02,070 --> 00:28:59,760
what's

807
00:29:03,350 --> 00:29:02,080
happening with your instrument you don't

808
00:29:05,190 --> 00:29:03,360
ask people to come with their cell

809
00:29:07,430 --> 00:29:05,200
phones and look at your instruments

810
00:29:08,470 --> 00:29:07,440
and do you know and put their cell

811
00:29:10,789 --> 00:29:08,480
phones on your ins

812
00:29:12,950 --> 00:29:10,799
like this is not the way science is done

813
00:29:13,510 --> 00:29:12,960

so this is the first time the galileo

814

00:29:16,470 --> 00:29:13,520

project

815

00:29:17,909 --> 00:29:16,480

by which professional scientists are

816

00:29:22,310 --> 00:29:17,919

taking

817

00:29:24,630 --> 00:29:22,320

the role of leading the way

818

00:29:26,950 --> 00:29:24,640

okay and that has to be made clear

819

00:29:30,789 --> 00:29:26,960

because it implies two things

820

00:29:34,070 --> 00:29:30,799

one that the project will do

821

00:29:35,430 --> 00:29:34,080

the data assembly uh you know the data

822

00:29:38,950 --> 00:29:35,440

collection

823

00:29:40,310 --> 00:29:38,960

and do a scientific analysis of the data

824

00:29:43,510 --> 00:29:40,320

and the data will be based on

825

00:29:46,549 --> 00:29:43,520

instruments that the project team

826

00:29:49,029 --> 00:29:46,559

designs and puts in place

827

00:29:49,830 --> 00:29:49,039

and the second is there is a lot of

828

00:29:51,750 --> 00:29:49,840

discussion

829

00:29:53,669 --> 00:29:51,760

out there by people that are not

830

00:29:54,630 --> 00:29:53,679

scientists well maybe there are

831

00:29:57,830 --> 00:29:54,640

wormholes

832

00:29:59,190 --> 00:29:57,840

maybe there are space-time engines all

833

00:30:03,590 --> 00:29:59,200

kinds of

834

00:30:07,029 --> 00:30:03,600

ideas that have no foundation

835

00:30:09,190 --> 00:30:07,039

in modern science and i should remind

836

00:30:10,310 --> 00:30:09,200

everyone that physics the standard model

837

00:30:12,950 --> 00:30:10,320

of physics

838

00:30:15,269 --> 00:30:12,960

is tested over and over again in

839

00:30:17,669 --> 00:30:15,279

numerous experiments

840

00:30:19,590 --> 00:30:17,679

it's not something that you can just

841

00:30:21,029 --> 00:30:19,600

have a glass of wine and say oh well

842

00:30:24,230 --> 00:30:21,039

maybe there is a wormhole

843

00:30:27,510 --> 00:30:24,240

doing this and that you can't do that

844

00:30:29,750 --> 00:30:27,520

because we know what physics is about

845

00:30:31,510 --> 00:30:29,760

you know just look at the textbooks you

846

00:30:32,710 --> 00:30:31,520

know there are laws of physics that are

847

00:30:34,710 --> 00:30:32,720

refined

848

00:30:36,310 --> 00:30:34,720

and very well tested and if there is a

849

00:30:39,430 --> 00:30:36,320

tiny deviation

850

00:30:40,710 --> 00:30:39,440

for example if the magnetic moment of

851
00:30:43,110 --> 00:30:40,720
the muon

852
00:30:43,830 --> 00:30:43,120
which is a particle that doesn't really

853
00:30:45,909 --> 00:30:43,840
affect

854
00:30:48,950 --> 00:30:45,919
anything in our daily life if that

855
00:30:51,750 --> 00:30:48,960
magnetic moment deviates by a little bit

856
00:30:53,110 --> 00:30:51,760
from what very complicated theoretical

857
00:30:55,750 --> 00:30:53,120
calculations

858
00:30:56,950 --> 00:30:55,760
on computers are predicting with

859
00:30:59,669 --> 00:30:56,960
uncertainties

860
00:31:00,470 --> 00:30:59,679
so it's even the deviation is even not

861
00:31:02,470 --> 00:31:00,480
obvious

862
00:31:04,310 --> 00:31:02,480
because the uncertainties are comparable

863
00:31:05,350 --> 00:31:04,320

to the deviation that was measured in

864

00:31:07,990 --> 00:31:05,360

fermilab in some

865

00:31:09,350 --> 00:31:08,000

laboratory even that by itself gets the

866

00:31:11,509 --> 00:31:09,360

headlines

867

00:31:12,950 --> 00:31:11,519

and could be worth a nobel prize okay

868

00:31:15,350 --> 00:31:12,960

just to give you a sense

869

00:31:16,470 --> 00:31:15,360

so then someone's saying oh maybe it's a

870

00:31:18,310 --> 00:31:16,480

wormhole of time

871

00:31:19,909 --> 00:31:18,320

you know space-time engine that is

872

00:31:20,789 --> 00:31:19,919

completely irresponsible you can't do

873

00:31:26,630 --> 00:31:20,799

that

874

00:31:28,070 --> 00:31:26,640

then our understanding of the universe

875

00:31:30,630 --> 00:31:28,080

could have been modified you know

876

00:31:31,750 --> 00:31:30,640

if you know something like that you will

877

00:31:35,509 --> 00:31:31,760

get the nobel prize

878

00:31:37,830 --> 00:31:35,519

over and over and over and over again

879

00:31:39,190 --> 00:31:37,840

okay so you can't just say it lightly i

880

00:31:40,389 --> 00:31:39,200

mean of course you can say it

881

00:31:42,870 --> 00:31:40,399

just like you can say that you are

882

00:31:44,389 --> 00:31:42,880

napoleon you know many people could say

883

00:31:46,149 --> 00:31:44,399

that they are napoleon

884

00:31:47,590 --> 00:31:46,159

they can say whatever they want the

885

00:31:48,549 --> 00:31:47,600

question is whether there is evidence

886

00:31:50,710 --> 00:31:48,559

for that

887

00:31:53,430 --> 00:31:50,720

and the galileo project of course will

888

00:31:55,830 --> 00:31:53,440

assemble data and we will use

889

00:31:58,630 --> 00:31:55,840

the tools of science what we know about

890

00:32:02,149 --> 00:31:58,640

physics to explain what we see

891

00:32:04,070 --> 00:32:02,159

if we fail if it looks like the laws of

892

00:32:07,430 --> 00:32:04,080

physics cannot account

893

00:32:08,870 --> 00:32:07,440

for the very detailed information that

894

00:32:12,389 --> 00:32:08,880

we assemble

895

00:32:14,789 --> 00:32:12,399

then maybe there would be room to

896

00:32:15,430 --> 00:32:14,799

consider the possibility that something

897

00:32:18,710 --> 00:32:15,440

else is

898

00:32:21,269 --> 00:32:18,720

uh at work but we

899

00:32:22,549 --> 00:32:21,279

we are not there you know and you can't

900

00:32:24,389 --> 00:32:22,559

you can't just say oh

901
00:32:27,190 --> 00:32:24,399
let's break the laws of physics just in

902
00:32:29,350 --> 00:32:27,200
order to explain some fuzzy images

903
00:32:31,590 --> 00:32:29,360
well hopefully down the line you do get

904
00:32:32,149 --> 00:32:31,600
those nobel prizes over and over again

905
00:32:33,830 --> 00:32:32,159
for

906
00:32:34,789 --> 00:32:33,840
finding things that you cannot explain

907
00:32:36,549 --> 00:32:34,799
that you're finding with these

908
00:32:37,669 --> 00:32:36,559
telescopes and they pay themselves back

909
00:32:39,830 --> 00:32:37,679
over and over

910
00:32:41,830 --> 00:32:39,840
but i should say that would be of much

911
00:32:43,590 --> 00:32:41,840
more significance because it would mean

912
00:32:45,750 --> 00:32:43,600
that we don't understand the universe

913
00:32:47,029 --> 00:32:45,760

not just that there is a smarter kid on

914

00:32:48,389 --> 00:32:47,039

the block that

915

00:32:50,789 --> 00:32:48,399

something in our fundamental

916

00:32:54,389 --> 00:32:50,799

understanding of the universe at large

917

00:32:56,070 --> 00:32:54,399

was you know missing

918

00:32:58,230 --> 00:32:56,080

i always like to think and this is an

919

00:33:00,549 --> 00:32:58,240

extreme layman's terms that

920

00:33:01,750 --> 00:33:00,559

one day we're going to understand that

921

00:33:03,990 --> 00:33:01,760

we do understand it

922

00:33:04,950 --> 00:33:04,000

but it's very very basic even our

923

00:33:07,190 --> 00:33:04,960

highest level

924

00:33:08,950 --> 00:33:07,200

scientists and mathematicians we find

925

00:33:09,990 --> 00:33:08,960

another civilization you know one of

926

00:33:12,470 --> 00:33:10,000

your telescopes picks

927

00:33:14,470 --> 00:33:12,480

up something that we go ah we were kind

928

00:33:16,310 --> 00:33:14,480

of on the right lines but here's more to

929

00:33:17,990 --> 00:33:16,320

it and that would be my hope

930

00:33:19,830 --> 00:33:18,000

and i'm sure as a scientist like you've

931

00:33:21,909 --> 00:33:19,840

talked about as well that would be

932

00:33:23,269 --> 00:33:21,919

your hope you want to find out new and

933

00:33:24,870 --> 00:33:23,279

you want to uncover

934

00:33:26,710 --> 00:33:24,880

things you can explore and that's the

935

00:33:29,590 --> 00:33:26,720

whole the whole purpose of science isn't

936

00:33:31,269 --> 00:33:29,600

it to that new exploration

937

00:33:33,029 --> 00:33:31,279

evidence you see that's my point my

938

00:33:35,750 --> 00:33:33,039

fundamental point is

939

00:33:38,230 --> 00:33:35,760

we need better evidence we before we

940

00:33:40,950 --> 00:33:38,240

jump into those conclusions about

941

00:33:42,389 --> 00:33:40,960

modifications of physics absolutely now

942

00:33:43,990 --> 00:33:42,399

listen we had a lot of listener

943

00:33:45,750 --> 00:33:44,000

questions and in the time we've got left

944

00:33:47,669 --> 00:33:45,760

i want to get to some of those

945

00:33:49,269 --> 00:33:47,679

quite a few of them ave were based

946

00:33:51,350 --> 00:33:49,279

around one point

947

00:33:52,710 --> 00:33:51,360

and katie and barry both sent in

948

00:33:54,630 --> 00:33:52,720

questions very similar

949

00:33:56,870 --> 00:33:54,640

they want to know how you are planning

950

00:33:59,750 --> 00:33:56,880

on looking at specific areas

951
00:34:00,070 --> 00:33:59,760
in our atmosphere uh such as hot spots

952
00:34:02,950 --> 00:34:00,080
like

953
00:34:03,909 --> 00:34:02,960
guadalupe catalina islands high magnetic

954
00:34:05,909 --> 00:34:03,919
fields

955
00:34:07,029 --> 00:34:05,919
how are you going to pick and choose

956
00:34:09,270 --> 00:34:07,039
where you point these

957
00:34:11,190 --> 00:34:09,280
initial telescopes right that's an

958
00:34:12,950 --> 00:34:11,200
excellent question we are discussing it

959
00:34:13,669 --> 00:34:12,960
and of course the more telescopes we

960
00:34:16,389 --> 00:34:13,679
have

961
00:34:17,750 --> 00:34:16,399
the better we can sample many different

962
00:34:21,510 --> 00:34:17,760
locations

963
00:34:23,349 --> 00:34:21,520

in terms of visibility

964

00:34:25,589 --> 00:34:23,359

are mountain tops that's why

965

00:34:28,310 --> 00:34:25,599

astronomical observatories are

966

00:34:29,750 --> 00:34:28,320

on mountain tops because the atmosphere

967

00:34:33,030 --> 00:34:29,760

is more dilute

968

00:34:35,109 --> 00:34:33,040

and blurring of images is less severe

969

00:34:36,950 --> 00:34:35,119

so you can see a large distance into the

970

00:34:40,310 --> 00:34:36,960

horizon and

971

00:34:42,710 --> 00:34:40,320

but it doesn't mean that that's the only

972

00:34:43,990 --> 00:34:42,720

type of locations that that we want to

973

00:34:46,790 --> 00:34:44,000

be at and

974

00:34:48,710 --> 00:34:46,800

um it all depends on how much funding we

975

00:34:49,510 --> 00:34:48,720

have as to how many telescopes we will

976
00:34:51,990 --> 00:34:49,520
have

977
00:34:55,190 --> 00:34:52,000
and how many locations we can sample but

978
00:34:56,869 --> 00:34:55,200
this is a very important question

979
00:34:58,950 --> 00:34:56,879
when you're coming at this from such a

980
00:35:01,990 --> 00:34:58,960
pure scientific point of view

981
00:35:04,390 --> 00:35:02,000
is there going to be any weight or

982
00:35:05,030 --> 00:35:04,400
gravitas given to again i'll use the

983
00:35:07,910 --> 00:35:05,040
area of

984
00:35:09,030 --> 00:35:07,920
catalina off the coast of california

985
00:35:11,030 --> 00:35:09,040
where there have been

986
00:35:12,870 --> 00:35:11,040
numerous reported incidents i know

987
00:35:14,230 --> 00:35:12,880
there's a heavy military presence in

988
00:35:16,230 --> 00:35:14,240

those areas too

989

00:35:18,230 --> 00:35:16,240

but would that be something that would

990

00:35:19,190 --> 00:35:18,240

sway you towards looking at one of those

991

00:35:21,109 --> 00:35:19,200

areas

992

00:35:22,550 --> 00:35:21,119

yeah so the fundamental question there

993

00:35:24,550 --> 00:35:22,560

is uh

994

00:35:26,390 --> 00:35:24,560

are there more reports coming from such

995

00:35:29,670 --> 00:35:26,400

areas just because

996

00:35:31,829 --> 00:35:29,680

they're being patrolled more often uh

997

00:35:33,109 --> 00:35:31,839

you know the military patrols its own

998

00:35:35,829 --> 00:35:33,119

facilities

999

00:35:37,190 --> 00:35:35,839

um and then the only way to find out is

1000

00:35:40,150 --> 00:35:37,200

to have telescopes

1001
00:35:40,630 --> 00:35:40,160
in many different locations and indeed

1002
00:35:42,630 --> 00:35:40,640
sample

1003
00:35:44,310 --> 00:35:42,640
also the location that you mentioned we

1004
00:35:47,190 --> 00:35:44,320
don't want to interfere

1005
00:35:48,870 --> 00:35:47,200
with any military activity so uh there

1006
00:35:51,109 --> 00:35:48,880
will be some limitations of

1007
00:35:53,109 --> 00:35:51,119
you know some areas where we cannot

1008
00:35:56,710 --> 00:35:53,119
really monitor the sky and

1009
00:35:58,870 --> 00:35:56,720
but we will do whatever is allowed

1010
00:35:59,750 --> 00:35:58,880
back here had a question for you he is

1011
00:36:02,390 --> 00:35:59,760
curious

1012
00:36:03,829 --> 00:36:02,400
as to your opinion avi on if the stigma

1013
00:36:06,390 --> 00:36:03,839

regarding ufos

1014

00:36:08,310 --> 00:36:06,400

has changed at all within your community

1015

00:36:10,150 --> 00:36:08,320

given the increased media attention

1016

00:36:12,069 --> 00:36:10,160

credible testimony but also the

1017

00:36:14,069 --> 00:36:12,079

announcement of the project how has that

1018

00:36:17,109 --> 00:36:14,079

been in the last week or so

1019

00:36:19,030 --> 00:36:17,119

in the last week um i think people are

1020

00:36:21,829 --> 00:36:19,040

looking for new excuses of why to

1021

00:36:27,109 --> 00:36:21,839

dismiss it still

1022

00:36:30,230 --> 00:36:27,119

so you know i heard statements like

1023

00:36:33,270 --> 00:36:30,240

the rich are getting richer uh

1024

00:36:33,750 --> 00:36:33,280

i'm not rich you know and i didn't have

1025

00:36:38,230 --> 00:36:33,760

those

1026
00:36:39,030 --> 00:36:38,240
getting richer because i had funds

1027
00:36:42,390 --> 00:36:39,040
before

1028
00:36:43,270 --> 00:36:42,400
it's because the public agrees with the

1029
00:36:46,550 --> 00:36:43,280
vision

1030
00:36:48,069 --> 00:36:46,560
of collecting evidence on objects we

1031
00:36:50,069 --> 00:36:48,079
don't understand

1032
00:36:51,190 --> 00:36:50,079
you know it reminds me of the exchange i

1033
00:36:54,630 --> 00:36:51,200
had with my

1034
00:36:57,589 --> 00:36:54,640
publicist in the uk so when the book

1035
00:36:59,270 --> 00:36:57,599
became a bestseller um the publicist

1036
00:37:02,470 --> 00:36:59,280
said

1037
00:37:04,790 --> 00:37:02,480
great job avi you are make you know

1038
00:37:06,390 --> 00:37:04,800

you're doing great interviews and

1039

00:37:09,589 --> 00:37:06,400

it looks like the book is selling very

1040

00:37:12,230 --> 00:37:09,599

well so i corrected him i said

1041

00:37:13,829 --> 00:37:12,240

my purpose is not to sell the book you

1042

00:37:15,589 --> 00:37:13,839

have to unders i mean of course you're a

1043

00:37:18,550 --> 00:37:15,599

publicist you wanted to sell but

1044

00:37:19,510 --> 00:37:18,560

that's not my purpose i want to convey a

1045

00:37:22,390 --> 00:37:19,520

message

1046

00:37:23,990 --> 00:37:22,400

and if the public would not agree with

1047

00:37:25,829 --> 00:37:24,000

my message

1048

00:37:28,630 --> 00:37:25,839

i wouldn't change the message the book

1049

00:37:31,030 --> 00:37:28,640

would not sell you would not be happy

1050

00:37:31,910 --> 00:37:31,040

but i will not change my message just to

1051
00:37:35,670 --> 00:37:31,920
make

1052
00:37:37,349 --> 00:37:35,680
you happy and so he said sorry i didn't

1053
00:37:39,750 --> 00:37:37,359
really mean that

1054
00:37:41,030 --> 00:37:39,760
but it's exactly that misconception that

1055
00:37:43,829 --> 00:37:41,040
a lot of people

1056
00:37:45,430 --> 00:37:43,839
think that the resonance between my

1057
00:37:49,270 --> 00:37:45,440
message and the public

1058
00:37:50,550 --> 00:37:49,280
is tailored so that i will get the

1059
00:37:53,270 --> 00:37:50,560
benefit

1060
00:37:54,630 --> 00:37:53,280
that's not at all the point in fact it's

1061
00:37:57,510 --> 00:37:54,640
exactly the opposite that

1062
00:37:59,430 --> 00:37:57,520
the public supports that vision and

1063
00:38:00,150 --> 00:37:59,440

that's why i'm advocating for it because

1064

00:38:02,390 --> 00:38:00,160

i think

1065

00:38:04,150 --> 00:38:02,400

the public supports science and

1066

00:38:05,349 --> 00:38:04,160

therefore science should attend to the

1067

00:38:08,230 --> 00:38:05,359

public's interest

1068

00:38:09,349 --> 00:38:08,240

that's what i'm doing now i'm gonna uh

1069

00:38:11,589 --> 00:38:09,359

read another question

1070

00:38:13,270 --> 00:38:11,599

uh from e-wood and he talks about

1071

00:38:15,670 --> 00:38:13,280

another member of the public

1072

00:38:17,589 --> 00:38:15,680

mick west you may have heard of him um

1073

00:38:18,150 --> 00:38:17,599

he recently put out a tweet after the

1074

00:38:20,950 --> 00:38:18,160

announcement

1075

00:38:23,030 --> 00:38:20,960

of the project about good uap data

1076
00:38:23,829 --> 00:38:23,040
needing to have at least three points of

1077
00:38:25,750 --> 00:38:23,839
vantage

1078
00:38:27,670 --> 00:38:25,760
with a known distance between the camera

1079
00:38:29,270 --> 00:38:27,680
sensors to a good possibility of

1080
00:38:30,950 --> 00:38:29,280
triangulation

1081
00:38:33,430 --> 00:38:30,960
are you considering all that in your

1082
00:38:36,310 --> 00:38:33,440
approach and while we're on the subject

1083
00:38:38,069 --> 00:38:36,320
would you consider having a a pseudo

1084
00:38:40,630 --> 00:38:38,079
debunker like mick west

1085
00:38:41,829 --> 00:38:40,640
give advice on the data itself well

1086
00:38:45,030 --> 00:38:41,839
first i should say i

1087
00:38:46,710 --> 00:38:45,040
participated in the podcast with him

1088
00:38:48,870 --> 00:38:46,720

actually that podcast was coordinated

1089

00:38:50,630 --> 00:38:48,880

without telling me that he will be on it

1090

00:38:52,310 --> 00:38:50,640

i'm not sure why but suddenly he

1091

00:38:54,390 --> 00:38:52,320

appeared out of the blue

1092

00:38:55,589 --> 00:38:54,400

and i had a discussion he seemed quite

1093

00:38:58,550 --> 00:38:55,599

reasonable but

1094

00:38:59,109 --> 00:38:58,560

the point is he's not a scientist i want

1095

00:39:02,069 --> 00:38:59,119

the team

1096

00:39:02,790 --> 00:39:02,079

to be of scientist now of course he gets

1097

00:39:05,349 --> 00:39:02,800

a lot of

1098

00:39:06,870 --> 00:39:05,359

attention because he debunks and a lot

1099

00:39:08,790 --> 00:39:06,880

of people want these things to be

1100

00:39:10,870 --> 00:39:08,800

debunked

1101
00:39:12,069 --> 00:39:10,880
we don't have that agenda of debunking

1102
00:39:14,230 --> 00:39:12,079
or not debunking

1103
00:39:16,069 --> 00:39:14,240
we we just want to get to let the

1104
00:39:19,670 --> 00:39:16,079
evidence guide us

1105
00:39:20,550 --> 00:39:19,680
and you know i told my team the galileo

1106
00:39:23,430 --> 00:39:20,560
team

1107
00:39:24,950 --> 00:39:23,440
keep your eyes on the ball not on the

1108
00:39:29,109 --> 00:39:24,960
audience

1109
00:39:31,589 --> 00:39:29,119
and i think mick if you if you

1110
00:39:34,310 --> 00:39:31,599
wanted to to define him you would say he

1111
00:39:36,790 --> 00:39:34,320
keeps his eyes on the on his audience

1112
00:39:38,310 --> 00:39:36,800
you know and now what do i mean by keep

1113
00:39:39,589 --> 00:39:38,320

your eyes on the ball that if you play

1114

00:39:42,630 --> 00:39:39,599

basketball

1115

00:39:43,109 --> 00:39:42,640

you want your team members to be the

1116

00:39:47,349 --> 00:39:43,119

best

1117

00:39:49,430 --> 00:39:47,359

possible way

1118

00:39:50,950 --> 00:39:49,440

you don't want your team member to be

1119

00:39:51,750 --> 00:39:50,960

someone looking at the audience and

1120

00:39:54,230 --> 00:39:51,760

making the whole

1121

00:39:56,390 --> 00:39:54,240

audience cheer that's not the purpose of

1122

00:39:58,550 --> 00:39:56,400

the of the game

1123

00:40:01,109 --> 00:39:58,560

so if i'm selecting members of my

1124

00:40:04,150 --> 00:40:01,119

research team

1125

00:40:07,270 --> 00:40:04,160

i will not select a cheerleader

1126

00:40:09,990 --> 00:40:07,280

i will select the best basketball player

1127

00:40:12,710 --> 00:40:10,000

that i can think of

1128

00:40:14,630 --> 00:40:12,720

to be in the team and so that's why i

1129

00:40:17,349 --> 00:40:14,640

selected scientists

1130

00:40:17,990 --> 00:40:17,359

and so asking me whether i would like to

1131

00:40:20,150 --> 00:40:18,000

make

1132

00:40:22,309 --> 00:40:20,160

the crowd cheer by selecting mick west

1133

00:40:24,470 --> 00:40:22,319

that debunks until we show him

1134

00:40:27,190 --> 00:40:24,480

that's not really my purpose my purpose

1135

00:40:33,030 --> 00:40:27,200

is to get the ball

1136

00:40:36,470 --> 00:40:35,589

getting the best possible evidence which

1137

00:40:40,390 --> 00:40:36,480

means getting

1138

00:40:48,069 --> 00:40:40,400

the best scientists

1139

00:40:53,990 --> 00:40:52,710

so i just wanted to kind of ask um

1140

00:40:56,870 --> 00:40:54,000

there's going to be people listening to

1141

00:40:58,230 --> 00:40:56,880

this who are inspired by you kind of

1142

00:40:59,430 --> 00:40:58,240

skating to where the puck's going to be

1143

00:41:00,870 --> 00:40:59,440

or where the ball is going to be to

1144

00:41:03,750 --> 00:41:00,880

stick with your analogy

1145

00:41:04,790 --> 00:41:03,760

um and i just wanted to know what those

1146

00:41:07,030 --> 00:41:04,800

people could do

1147

00:41:08,790 --> 00:41:07,040

to end up working with you or on

1148

00:41:10,550 --> 00:41:08,800

something like project galileo or

1149

00:41:13,270 --> 00:41:10,560

project galileo itself you know

1150

00:41:13,750 --> 00:41:13,280

andy's just had a new baby and i think

1151

00:41:17,910 --> 00:41:13,760

maybe

1152

00:41:20,069 --> 00:41:17,920

colleague of yours

1153

00:41:22,390 --> 00:41:20,079

right so there are various ways to

1154

00:41:23,990 --> 00:41:22,400

support the project one is of course

1155

00:41:26,550 --> 00:41:24,000

uh financially we are trying to

1156

00:41:28,790 --> 00:41:26,560

establish a mechanism for crowdfunding

1157

00:41:30,390 --> 00:41:28,800

uh but if anyone is interested in

1158

00:41:32,550 --> 00:41:30,400

contributing more than fifty

1159

00:41:34,069 --> 00:41:32,560

thousand dollars that there is a channel

1160

00:41:36,150 --> 00:41:34,079

already

1161

00:41:37,990 --> 00:41:36,160

in existence for that and they just need

1162

00:41:41,190 --> 00:41:38,000

to contact me by email

1163

00:41:42,470 --> 00:41:41,200

but separate from that there is the help

1164

00:41:46,230 --> 00:41:42,480

in terms of

1165

00:41:49,430 --> 00:41:46,240

support you know

1166

00:41:49,990 --> 00:41:49,440

on in terms of public outreach in terms

1167

00:41:53,109 --> 00:41:50,000

of

1168

00:41:55,190 --> 00:41:53,119

uh communicating on social media because

1169

00:41:58,630 --> 00:41:55,200

you know we just can't do everything

1170

00:41:59,030 --> 00:41:58,640

and then i would say that anyone that

1171

00:42:01,829 --> 00:41:59,040

feels

1172

00:42:02,550 --> 00:42:01,839

enthusiastic about the project who

1173

00:42:06,069 --> 00:42:02,560

either write

1174

00:42:09,109 --> 00:42:06,079

me or send an email to the project

1175

00:42:10,950 --> 00:42:09,119

there is a link on the project website

1176

00:42:12,230 --> 00:42:10,960

the galileo project at the harvard

1177

00:42:15,270 --> 00:42:12,240

university and

1178

00:42:18,230 --> 00:42:15,280

um and and that will

1179

00:42:19,510 --> 00:42:18,240

you know establish the path for father

1180

00:42:21,270 --> 00:42:19,520

communications and

1181

00:42:23,190 --> 00:42:21,280

you know i can address the question of

1182

00:42:25,190 --> 00:42:23,200

what's best depending on the person that

1183

00:42:27,270 --> 00:42:25,200

approaches us

1184

00:42:29,750 --> 00:42:27,280

i'd like to follow up avi stephen had a

1185

00:42:29,990 --> 00:42:29,760

question about if uncontroversial proof

1186

00:42:32,069 --> 00:42:30,000

is

1187

00:42:33,990 --> 00:42:32,079

found will the galileo project

1188

00:42:37,270 --> 00:42:34,000

potentially try to communicate

1189

00:42:37,750 --> 00:42:37,280

with any uaps that's a very good

1190

00:42:43,589 --> 00:42:37,760

question

1191

00:42:45,829 --> 00:42:43,599

haven't yet decided on but

1192

00:42:46,710 --> 00:42:45,839

i wrote a scientific american essay that

1193

00:42:50,309 --> 00:42:46,720

was not yet

1194

00:42:53,510 --> 00:42:50,319

posted on this question of how to

1195

00:42:55,510 --> 00:42:53,520

respond and what to do and of course

1196

00:42:57,190 --> 00:42:55,520

in my view the first thing to do is

1197

00:42:59,750 --> 00:42:57,200

passively detect

1198

00:43:01,190 --> 00:42:59,760

what the uap is doing what that object

1199

00:43:04,069 --> 00:43:01,200

is doing

1200

00:43:04,470 --> 00:43:04,079

what kind of information is it seeking

1201

00:43:06,710 --> 00:43:04,480

and

1202

00:43:08,230 --> 00:43:06,720

that could give us a hint as to what the

1203

00:43:09,990 --> 00:43:08,240

intent of this uap

1204

00:43:11,589 --> 00:43:10,000

is you know if it's indeed from an

1205

00:43:14,870 --> 00:43:11,599

extraterrestrial origin what

1206

00:43:17,670 --> 00:43:14,880

kind of information is it trying to get

1207

00:43:20,309 --> 00:43:17,680

and then of course you can monitor how

1208

00:43:23,109 --> 00:43:20,319

this object responds to what we do

1209

00:43:25,030 --> 00:43:23,119

unrelated to the object like if we do

1210

00:43:27,030 --> 00:43:25,040

some activity the object responds in

1211

00:43:29,270 --> 00:43:27,040

some way

1212

00:43:30,390 --> 00:43:29,280

and finally you might want to engage

1213

00:43:33,670 --> 00:43:30,400

with it but

1214

00:43:35,430 --> 00:43:33,680

that's i think the last step because

1215

00:43:37,030 --> 00:43:35,440

you don't want to get into a situation

1216

00:43:40,470 --> 00:43:37,040

of a confrontation without

1217

00:43:40,950 --> 00:43:40,480

a good reason okay and it may well be

1218

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

that the

1219

00:43:45,510 --> 00:43:43,599

intentions are all good but it's not

1220

00:43:47,589 --> 00:43:45,520

clear it could be a trojan horse

1221

00:43:49,990 --> 00:43:47,599

something that looks innocent that

1222

00:43:51,670 --> 00:43:50,000

serves a a different purpose and

1223

00:43:53,190 --> 00:43:51,680

you know the only way to find out the

1224

00:43:56,309 --> 00:43:53,200

intent

1225

00:43:58,309 --> 00:43:56,319

would be to use our own computer systems

1226

00:43:59,510 --> 00:43:58,319

ai that will help us interpret the

1227

00:44:02,150 --> 00:43:59,520

intent sort of like

1228

00:44:03,910 --> 00:44:02,160

relying on our kids to tell us what the

1229

00:44:05,270 --> 00:44:03,920

meaning of content that we find in the

1230

00:44:06,870 --> 00:44:05,280

on the internet you know because they're

1231

00:44:09,670 --> 00:44:06,880

more computer savvy

1232

00:44:12,230 --> 00:44:09,680

so we rely on our computer systems to

1233

00:44:15,829 --> 00:44:12,240

figure out their computer systems

1234

00:44:16,950 --> 00:44:15,839

um it will be a race of ai systems so to

1235

00:44:19,990 --> 00:44:16,960

speak

1236

00:44:21,349 --> 00:44:20,000

um i i look forward to that if it

1237

00:44:23,030 --> 00:44:21,359

happens you know it would be really

1238

00:44:25,430 --> 00:44:23,040

challenging and exciting to see if

1239

00:44:26,550 --> 00:44:25,440

our ai systems can figure out their ai

1240

00:44:28,950 --> 00:44:26,560

systems

1241

00:44:31,510 --> 00:44:28,960

but for now we are not there yet we we

1242

00:44:34,790 --> 00:44:31,520

still have to see if we find something

1243

00:44:36,230 --> 00:44:34,800

you know like an extraterrestrial object

1244

00:44:38,150 --> 00:44:36,240

yeah i'm sure it would be a very nice

1245

00:44:39,990 --> 00:44:38,160

problem to come across and

1246

00:44:41,430 --> 00:44:40,000

to follow up on that another question

1247

00:44:43,990 --> 00:44:41,440

from ebenezer

1248

00:44:45,270 --> 00:44:44,000

if you did manage to come across what

1249

00:44:47,109 --> 00:44:45,280

what would essentially be

1250

00:44:48,710 --> 00:44:47,119

potential evidence or proof of

1251
00:44:51,230 --> 00:44:48,720
extraterrestrial life

1252
00:44:52,390 --> 00:44:51,240
whether that is living or one of these

1253
00:44:54,069 --> 00:44:52,400
extraterrestrial

1254
00:44:55,510 --> 00:44:54,079
technological relics you could

1255
00:44:57,349 --> 00:44:55,520
potentially pick up

1256
00:44:59,670 --> 00:44:57,359
what would the process be as a private

1257
00:45:01,990 --> 00:44:59,680
organization to get that information out

1258
00:45:03,670 --> 00:45:02,000
because surely if if you are there and

1259
00:45:05,589 --> 00:45:03,680
you know whichever room it may be

1260
00:45:06,710 --> 00:45:05,599
and you you find out you could tweet

1261
00:45:09,109 --> 00:45:06,720
that straight away

1262
00:45:11,430 --> 00:45:09,119
you could be on your facebook but i

1263
00:45:13,349 --> 00:45:11,440

imagine there are other organizations

1264

00:45:14,710 --> 00:45:13,359

and government that would want to know

1265

00:45:16,069 --> 00:45:14,720

first is that something that would have

1266

00:45:17,910 --> 00:45:16,079

to come into your thinking

1267

00:45:19,750 --> 00:45:17,920

well i think it's just like any other

1268

00:45:21,990 --> 00:45:19,760

scientific discovery right

1269

00:45:23,589 --> 00:45:22,000

you can ask what's the protocol uh it

1270

00:45:25,270 --> 00:45:23,599

depends on the implications right it

1271

00:45:29,190 --> 00:45:25,280

depends on the context

1272

00:45:32,230 --> 00:45:29,200

um very often scientists

1273

00:45:34,390 --> 00:45:32,240

find something and decide about a press

1274

00:45:36,630 --> 00:45:34,400

conference and present it

1275

00:45:38,630 --> 00:45:36,640

i obviously what you would like is for

1276

00:45:40,630 --> 00:45:38,640

me to bring the piece of equipment

1277

00:45:42,470 --> 00:45:40,640

and show it to you right that's what

1278

00:45:44,470 --> 00:45:42,480

yeah but um

1279

00:45:47,030 --> 00:45:44,480

uh it really depends on what we find you

1280

00:45:49,190 --> 00:45:47,040

know it's like a fishing expedition we

1281

00:45:51,510 --> 00:45:49,200

send the hook and we don't know what the

1282

00:45:54,630 --> 00:45:51,520

what kind of fish we will catch

1283

00:45:56,470 --> 00:45:54,640

and depending on the fish uh you know

1284

00:45:58,870 --> 00:45:56,480

i will give you different different

1285

00:46:01,270 --> 00:45:58,880

answers and if the fish seems to be

1286

00:46:03,990 --> 00:46:01,280

extremely exotic

1287

00:46:05,829 --> 00:46:04,000

you know and and looks very colorful and

1288

00:46:09,030 --> 00:46:05,839

behaves in ways that are

1289

00:46:10,470 --> 00:46:09,040

really amazing it may have to involve

1290

00:46:12,710 --> 00:46:10,480

the government i don't know

1291

00:46:14,230 --> 00:46:12,720

but otherwise you know my natural

1292

00:46:15,670 --> 00:46:14,240

tendency is to say

1293

00:46:17,589 --> 00:46:15,680

you know we're doing a scientific

1294

00:46:19,589 --> 00:46:17,599

experiment we're collecting the data in

1295

00:46:22,150 --> 00:46:19,599

an open fashion

1296

00:46:23,030 --> 00:46:22,160

doing an analysis that is transparent

1297

00:46:25,430 --> 00:46:23,040

you know we'll just

1298

00:46:26,870 --> 00:46:25,440

share it i mean i don't it's not about

1299

00:46:29,109 --> 00:46:26,880

us you see that's the thing

1300

00:46:30,630 --> 00:46:29,119

people very often attack me personally

1301

00:46:32,630 --> 00:46:30,640

it's not about me

1302

00:46:35,190 --> 00:46:32,640

it's about the future of humanity if we

1303

00:46:37,190 --> 00:46:35,200

have found evidence like that

1304

00:46:39,829 --> 00:46:37,200

it will change the course of history it

1305

00:46:42,550 --> 00:46:39,839

will have a huge impact on society

1306

00:46:43,990 --> 00:46:42,560

so the conclusion from that is first we

1307

00:46:45,510 --> 00:46:44,000

should never abandon

1308

00:46:48,150 --> 00:46:45,520

this search because it has huge

1309

00:46:48,710 --> 00:46:48,160

implications in my book extraterrestrial

1310

00:46:51,750 --> 00:46:48,720

i call it

1311

00:46:52,790 --> 00:46:51,760

omoamwa's wager so if a muammar turns

1312

00:46:55,030 --> 00:46:52,800

out to be

1313

00:46:56,950 --> 00:46:55,040

of artificial origin you know that has

1314

00:46:58,069 --> 00:46:56,960

huge implications we can't ignore that

1315

00:46:59,670 --> 00:46:58,079

possibility

1316

00:47:01,990 --> 00:46:59,680

so that's the first thing we should do

1317

00:47:02,950 --> 00:47:02,000

the search and of course the second

1318

00:47:05,750 --> 00:47:02,960

thing is

1319

00:47:06,309 --> 00:47:05,760

you know that it's not about us because

1320

00:47:09,829 --> 00:47:06,319

it will

1321

00:47:10,230 --> 00:47:09,839

have a huge impact on on everyone uh

1322

00:47:13,910 --> 00:47:10,240

it's

1323

00:47:15,750 --> 00:47:13,920

you know it it will change the way we

1324

00:47:16,309 --> 00:47:15,760

perceive our place in the universe it

1325

00:47:17,750 --> 00:47:16,319

will

1326

00:47:20,230 --> 00:47:17,760

change the way we interact with each

1327

00:47:22,630 --> 00:47:20,240

other you know a lot of human history

1328

00:47:23,510 --> 00:47:22,640

is shaped by people trying to feel

1329

00:47:25,589 --> 00:47:23,520

superior

1330

00:47:27,670 --> 00:47:25,599

relative to other people there was even

1331

00:47:29,270 --> 00:47:27,680

a war called the second world war which

1332

00:47:32,390 --> 00:47:29,280

was initiated by

1333

00:47:34,230 --> 00:47:32,400

racist agenda by the nazi party

1334

00:47:35,589 --> 00:47:34,240

that they are superior relative to other

1335

00:47:37,030 --> 00:47:35,599

human beings

1336

00:47:39,270 --> 00:47:37,040

but if you think about another

1337

00:47:40,870 --> 00:47:39,280

civilization being far more advanced

1338

00:47:43,349 --> 00:47:40,880

than we are

1339

00:47:45,190 --> 00:47:43,359

then all of this is ridiculous you know

1340

00:47:47,589 --> 00:47:45,200

how can you feel superior relative

1341

00:47:49,589 --> 00:47:47,599

to another member of the human species

1342

00:47:52,150 --> 00:47:49,599

just based on the color of their skin

1343

00:47:53,670 --> 00:47:52,160

or the or the ethnic origin if there is

1344

00:47:55,670 --> 00:47:53,680

something out there that is

1345

00:47:57,750 --> 00:47:55,680

far more superior than you are the first

1346

00:47:59,829 --> 00:47:57,760

thing it teaches you is modesty

1347

00:48:01,349 --> 00:47:59,839

and second thing it teaches you is that

1348

00:48:05,109 --> 00:48:01,359

all of your previous concerns

1349

00:48:06,870 --> 00:48:05,119

are completely irrelevant you know yeah

1350

00:48:08,390 --> 00:48:06,880

and that that leads me over just before

1351

00:48:11,430 --> 00:48:08,400

we wrap up i want to ask you

1352

00:48:13,510 --> 00:48:11,440

um this organization the project the

1353

00:48:14,950 --> 00:48:13,520

galileo project do you see it as an

1354

00:48:16,790 --> 00:48:14,960

american effort

1355

00:48:18,790 --> 00:48:16,800

given your location and the people

1356

00:48:19,190 --> 00:48:18,800

involved or do you want to get people

1357

00:48:20,710 --> 00:48:19,200

from

1358

00:48:22,470 --> 00:48:20,720

all around the world the scientific

1359

00:48:24,549 --> 00:48:22,480

community involved

1360

00:48:26,230 --> 00:48:24,559

all over the world i think it's a

1361

00:48:29,589 --> 00:48:26,240

project of humanity

1362

00:48:31,030 --> 00:48:29,599

you know and the idea i was asked once

1363

00:48:32,870 --> 00:48:31,040

how do i define

1364

00:48:35,030 --> 00:48:32,880

an intelligent culture intelligent

1365

00:48:36,790 --> 00:48:35,040

civilization my definition is

1366

00:48:38,150 --> 00:48:36,800

a culture that follows the guiding

1367

00:48:41,270 --> 00:48:38,160

principles of science

1368

00:48:44,150 --> 00:48:41,280

meaning cooperation and sharing of

1369

00:48:44,710 --> 00:48:44,160

evidence-based knowledge and you know

1370

00:48:46,630 --> 00:48:44,720

there are two

1371

00:48:47,990 --> 00:48:46,640

elements to it one is cooperation and

1372

00:48:51,589 --> 00:48:48,000

sharing and the

1373

00:48:53,109 --> 00:48:51,599

second is evidence-based and

1374

00:48:55,430 --> 00:48:53,119

of course what we are trying to do in

1375

00:48:57,829 --> 00:48:55,440

the galileo project is evidence-based

1376
00:48:58,790 --> 00:48:57,839
and what you asked about is cooperation

1377
00:49:00,790 --> 00:48:58,800
and i say

1378
00:49:02,870 --> 00:49:00,800
definitely because that's the guiding

1379
00:49:03,910 --> 00:49:02,880
principle of science we want everyone to

1380
00:49:06,870 --> 00:49:03,920
be involved

1381
00:49:07,510 --> 00:49:06,880
irrespective of where they are of course

1382
00:49:10,790 --> 00:49:07,520
unless

1383
00:49:12,950 --> 00:49:10,800
this uap belongs to some foreign country

1384
00:49:17,109 --> 00:49:12,960
you know that country might not want us

1385
00:49:18,630 --> 00:49:17,119
to reveal that just before i ask my

1386
00:49:21,829 --> 00:49:18,640
final question avi

1387
00:49:24,549 --> 00:49:21,839
dan has got one for you so this is on

1388
00:49:26,390 --> 00:49:24,559

on a bit of a lighter note um i love

1389

00:49:27,829 --> 00:49:26,400

going outside and looking at the stars

1390

00:49:28,790 --> 00:49:27,839

at night and sometimes listening to

1391

00:49:29,990 --> 00:49:28,800

music

1392

00:49:31,510 --> 00:49:30,000

and i wondered if there was this

1393

00:49:32,790 --> 00:49:31,520

particular piece of music that you'd

1394

00:49:36,309 --> 00:49:32,800

like to listen to

1395

00:49:36,870 --> 00:49:36,319

when you do the same well i enjoy very

1396

00:49:40,950 --> 00:49:36,880

much

1397

00:49:44,710 --> 00:49:40,960

classical music especially

1398

00:49:45,750 --> 00:49:44,720

bach and mozart and but i also enjoy

1399

00:49:47,990 --> 00:49:45,760

very much

1400

00:49:49,430 --> 00:49:48,000

the the latest music you know like the

1401

00:49:52,950 --> 00:49:49,440

most modern that

1402

00:49:55,670 --> 00:49:52,960

my daughters like and then um

1403

00:49:57,510 --> 00:49:55,680

in fact uh just a few weeks ago i was

1404

00:50:00,710 --> 00:49:57,520

interviewed by

1405

00:50:01,349 --> 00:50:00,720

22 years old the pop singer named king

1406

00:50:03,750 --> 00:50:01,359

princess

1407

00:50:05,910 --> 00:50:03,760

and we pretty much agreed on everything

1408

00:50:06,630 --> 00:50:05,920

uh i checked her out she wanted to speak

1409

00:50:08,549 --> 00:50:06,640

with me

1410

00:50:11,030 --> 00:50:08,559

the claim was that i'm her favorite

1411

00:50:12,309 --> 00:50:11,040

scientist so i said okay and i checked

1412

00:50:14,710 --> 00:50:12,319

her out and

1413

00:50:17,030 --> 00:50:14,720

you know i liked her songs very much and

1414

00:50:19,510 --> 00:50:17,040

we discussed extraterrestrials and

1415

00:50:20,710 --> 00:50:19,520

you know i pretty much feel the same as

1416

00:50:23,349 --> 00:50:20,720

when i was a kid

1417

00:50:25,750 --> 00:50:23,359

you know that i i haven't changed much

1418

00:50:26,150 --> 00:50:25,760

if you ask people that knew me back then

1419

00:50:29,190 --> 00:50:26,160

uh

1420

00:50:31,430 --> 00:50:29,200

and i find the science to be

1421

00:50:33,430 --> 00:50:31,440

uh a privilege to maintain your

1422

00:50:35,430 --> 00:50:33,440

childhood curiosity

1423

00:50:37,270 --> 00:50:35,440

and basically behave like a kid let's

1424

00:50:39,109 --> 00:50:37,280

let's not pretend we know more than we

1425

00:50:40,950 --> 00:50:39,119

actually know

1426

00:50:43,670 --> 00:50:40,960

you know and and let's figure it out

1427

00:50:46,150 --> 00:50:43,680

ourselves you know collecting new data

1428

00:50:48,150 --> 00:50:46,160

finding what the reality teaches us and

1429

00:50:50,870 --> 00:50:48,160

we might get bruised you know we might

1430

00:50:51,990 --> 00:50:50,880

have the wrong ideas sometimes but we

1431

00:50:54,069 --> 00:50:52,000

should be modest

1432

00:50:56,069 --> 00:50:54,079

it's not about us i'm not aiming to get

1433

00:50:58,549 --> 00:50:56,079

any prize not getting to get

1434

00:50:59,510 --> 00:50:58,559

more revenues on my book it's really

1435

00:51:03,190 --> 00:50:59,520

about

1436

00:51:05,589 --> 00:51:03,200

finding what reality is and avi

1437

00:51:07,430 --> 00:51:05,599

final question before you go when

1438

00:51:09,510 --> 00:51:07,440

realistically with the setup you have

1439

00:51:12,069 --> 00:51:09,520

with the funding you have currently

1440

00:51:13,430 --> 00:51:12,079

when do you have a gut feeling and i'm

1441

00:51:15,990 --> 00:51:13,440

asking a scientist this

1442

00:51:17,990 --> 00:51:16,000

that you could initially have some sort

1443

00:51:18,870 --> 00:51:18,000

of results do you put a time limit on

1444

00:51:22,710 --> 00:51:18,880

that

1445

00:51:24,790 --> 00:51:22,720

start having some useful data

1446

00:51:27,030 --> 00:51:24,800

and it really depends on how quickly we

1447

00:51:30,790 --> 00:51:27,040

buy the instruments probably within

1448

00:51:33,430 --> 00:51:30,800

uh weeks or months from now

1449

00:51:36,069 --> 00:51:33,440

and then we will have to test them and

1450

00:51:38,790 --> 00:51:36,079

then eventually place them

1451
00:51:39,750 --> 00:51:38,800
but i i think it's a matter of a year

1452
00:51:41,270 --> 00:51:39,760
before we will

1453
00:51:42,790 --> 00:51:41,280
get to the point where we can start

1454
00:51:47,430 --> 00:51:42,800
assembling data and

1455
00:51:49,190 --> 00:51:47,440
uh we might get some interesting data in

1456
00:51:51,190 --> 00:51:49,200
avi it's been wonderful having you on

1457
00:51:52,870 --> 00:51:51,200
the podcast again and i look forward to

1458
00:51:54,790 --> 00:51:52,880
the galileo project producing some

1459
00:51:56,390 --> 00:51:54,800
results to excite everyone

1460
00:51:59,270 --> 00:51:56,400
and look forward to future updates from

1461
00:52:01,349 --> 00:51:59,280
you thank you so much

1462
00:52:03,030 --> 00:52:01,359
that is all for this week's show thank

1463
00:52:04,870 --> 00:52:03,040

you very much for listening

1464

00:52:07,030 --> 00:52:04,880

please remember to leave the podcast

1465

00:52:09,750 --> 00:52:07,040

review on your chosen platform

1466

00:52:11,750 --> 00:52:09,760

you can like retweet and subscribe that

1467

00:52:13,190 --> 00:52:11,760

would all be very much appreciated

1468

00:52:15,190 --> 00:52:13,200

the shows are being uploaded onto

1469

00:52:17,190 --> 00:52:15,200

youtube as we speak more and more

1470

00:52:19,510 --> 00:52:17,200

you can sign up at [patreon.com](https://www.patreon.com) forward

1471

00:52:21,750 --> 00:52:19,520

slash that ufo podcast to access

1472

00:52:24,069 --> 00:52:21,760

shows ad free as well please get in

1473

00:52:25,510 --> 00:52:24,079

touch on twitter facebook instagram that

1474

00:52:29,349 --> 00:52:25,520

ufo podcast

1475

00:52:31,510 --> 00:52:29,359

of course on twitter it's at ufo uap a.m

1476
00:52:58,829 --> 00:52:31,520
and again folks as always keep looking

1477
00:53:10,630 --> 00:53:01,650
is

1478
00:53:25,910 --> 00:53:12,069
i can't imagine how it could have been

1479
00:53:25,920 --> 00:53:40,720
i jump back nearly

1480
00:54:09,990 --> 00:53:49,960
[Music]

1481
00:54:26,480 --> 00:54:10,000
is

1482
00:54:26,490 --> 00:54:36,829
[Music]

1483
00:54:36,839 --> 00:54:40,150
is

1484
00:54:48,870 --> 00:54:42,640
it wasn't a tic tac and not quite a

1485
00:54:53,130 --> 00:54:50,829
[Music]

1486
00:55:02,710 --> 00:54:53,140
saucer

1487
00:55:32,829 --> 00:55:07,670
it's very clear

1488
00:55:32,839 --> 00:55:37,900

yes