



www.ck12.org



1  
00:00:06,940 --> 00:00:15,740

[Music]

2  
00:00:21,480 --> 00:00:17,040

right

3  
00:00:24,730 --> 00:00:21,490

good evening everybody hello welcome to

4  
00:00:26,060 --> 00:00:24,740

hello welcome to likely to have some fun

5  
00:00:28,710 --> 00:00:26,070

[Music]

6  
00:00:31,430 --> 00:00:28,720

before we start our dispatch and sky

7  
00:00:33,780 --> 00:00:31,440

watch 2 will be one in July we're just

8  
00:00:35,150 --> 00:00:33,790

discussing where it's going to be at 1 1

9  
00:00:37,530 --> 00:00:35,160

the details will be on the website

10  
00:00:39,860 --> 00:00:37,540

subject where they're obviously there to

11  
00:00:42,590 --> 00:00:39,870

give a couple of ideas in mind right so

12  
00:00:45,990 --> 00:00:42,600

August yes sorry August

13  
00:00:48,120 --> 00:00:46,000

it's been a long month though they don't

14

00:00:51,630 --> 00:00:48,130

want to mentioned you may notice a man

15

00:01:06,480 --> 00:00:51,640

has got his brand noodle soup on shirt

16

00:01:13,380 --> 00:01:06,490

on his polo shirt he was one of those

17

00:01:16,740 --> 00:01:13,390

high heels of but probably in black or

18

00:01:18,000 --> 00:01:16,750

white they do small medium large

19

00:01:20,430 --> 00:01:18,010

extra-large

20

00:01:24,570 --> 00:01:20,440

they won't go 10 quid a piece which

21

00:01:26,520 --> 00:01:24,580

isn't too bad cm in the break and put an

22

00:01:41,749 --> 00:01:26,530

order in and pay for it this month and

23

00:01:46,100 --> 00:01:43,859

anyway so let's have the pleasure to

24

00:01:49,620 --> 00:01:46,110

introduce to you our guest speaker

25

00:01:52,020 --> 00:01:49,630

leave-in that's mr. Penniman Jones no

26

00:01:56,940 --> 00:01:52,030

beds visited us on I think three

27

00:01:58,980 --> 00:01:56,950

separate previous occasions a little bit

28

00:02:02,039 --> 00:01:58,990

about Ben Ben was born in Aberystwyth

29

00:02:04,260 --> 00:02:02,049

Aberystwyth and he was brought up in the

30

00:02:06,030 --> 00:02:04,270

lambda terrarium before mama dogs but

31

00:02:09,509 --> 00:02:06,040

we're up to about seven years ago he

32

00:02:12,630 --> 00:02:09,519

spent 22 well-respected years employed

33

00:02:16,620 --> 00:02:12,640

as a hospital porter a John Rankin

34

00:02:18,870 --> 00:02:16,630

in Oxfordshire a pen became interested

35

00:02:22,710 --> 00:02:18,880

in UFOs and various other conspiracy

36

00:02:25,080 --> 00:02:22,720

theories in the late 1990s he studies

37

00:02:27,720 --> 00:02:25,090

website blog which is hospital Porter's

38

00:02:30,780 --> 00:02:27,730

against the New World Order in 2006 and

39

00:02:32,580 --> 00:02:30,790

there's many many visitors every day he

40

00:02:33,990 --> 00:02:32,590

rarely attends and it was thoughts and

41

00:02:37,500 --> 00:02:34,000

discussion was all over Britain on a

42

00:02:39,600 --> 00:02:37,510

wide range of subjects for instance now

43

00:02:43,230 --> 00:02:39,610

Ben's first visit to us he discussed

44

00:02:45,750 --> 00:02:43,240

energy politics and UFOs and on a second

45

00:02:47,640 --> 00:02:45,760

it was the history Rex of politics and

46

00:02:52,830 --> 00:02:47,650

his third he discusses not to mention

47

00:02:55,199 --> 00:02:52,840

Roswell our stop received in is entitled

48

00:02:57,030 --> 00:02:55,209

SETI and UFOs

49

00:02:58,860 --> 00:02:57,040

now SETI for those of you who don't know

50

00:03:01,260 --> 00:02:58,870

I probably teacher my granny to

51  
00:03:03,780 --> 00:03:01,270  
Southgate sure that is the search for

52  
00:03:06,090 --> 00:03:03,790  
essence restive intelligence and the

53  
00:03:08,340 --> 00:03:06,100  
SETI Institute was was the research

54  
00:03:11,100 --> 00:03:08,350  
organization whose mission is to explore

55  
00:03:13,680 --> 00:03:11,110  
understand explain the origin and nature

56  
00:03:15,600 --> 00:03:13,690  
of life in the universe and applying

57  
00:03:19,830 --> 00:03:15,610  
that knowledge for the benefit of future

58  
00:03:22,050 --> 00:03:19,840  
generations no basically consists of

59  
00:03:25,050 --> 00:03:22,060  
three primary centers who got the Carl

60  
00:03:28,920 --> 00:03:25,060  
Sagan Center might look alive he's dead

61  
00:03:31,350 --> 00:03:28,930  
now at all torture and that studies life

62  
00:03:33,690 --> 00:03:31,360  
in the universe you've got the center of

63  
00:03:36,720 --> 00:03:33,700

Education which studies astronomy and

64

00:03:40,650 --> 00:03:36,730

space science and lastly the center for

65

00:03:44,820 --> 00:03:40,660

public outreach which produces radio

66

00:03:46,590 --> 00:03:44,830

shows and said he talks anyway I'm sure

67

00:03:48,210 --> 00:03:46,600

as always the case pet store this

68

00:03:50,820 --> 00:03:48,220

evening will be extremely interesting

69

00:03:53,490 --> 00:03:50,830

and one don't promote a lot of further

70

00:03:55,110 --> 00:03:53,500

discussion after the second half now as

71

00:03:55,890 --> 00:03:55,120

always he's traveled a good distance to

72

00:03:57,930 --> 00:03:55,900

be with us today

73

00:04:04,980 --> 00:03:57,940

so then further good please give a warm

74

00:04:09,130 --> 00:04:06,760

hello everyone

75

00:04:12,820 --> 00:04:09,140

thanks very much for coming out on this

76

00:04:14,530 --> 00:04:12,830

song showering wet chilly evening I

77

00:04:16,920 --> 00:04:14,540

appreciate you being here this evening

78

00:04:19,210 --> 00:04:16,930

all of you thank you very much

79

00:04:21,280 --> 00:04:19,220

video a few times it's really nice to be

80

00:04:24,310 --> 00:04:21,290

back and I want to thank Mike Steve

81

00:04:25,890 --> 00:04:24,320

Evelyn and everyone else has Sudan for

82

00:04:28,690 --> 00:04:25,900

inviting me back for a fourth time

83

00:04:31,360 --> 00:04:28,700

that's really quite something four times

84

00:04:33,730 --> 00:04:31,370

the United State one one two's company

85

00:04:35,680 --> 00:04:33,740

three's ground falls and audience so

86

00:04:37,840 --> 00:04:35,690

you'll see you learn what they do which

87

00:04:39,550 --> 00:04:37,850

is really really great so it's all about

88

00:04:41,170 --> 00:04:39,560

something completely different to what

89

00:04:44,230 --> 00:04:41,180

I've talked about before I like to give

90

00:04:47,650 --> 00:04:44,240

everyone a bit of variety when it comes

91

00:04:49,650 --> 00:04:47,660

to my letter this is a setting and human

92

00:04:52,270 --> 00:04:49,660

at first as you just heard from Steve

93

00:04:56,800 --> 00:04:52,280

SETI is the search for extraterrestrial

94

00:04:59,170 --> 00:04:56,810

intelligence so that's basically it said

95

00:05:01,300 --> 00:04:59,180

well I'll be explaining this evening but

96

00:05:02,260 --> 00:05:01,310

firstly if we begin I wouldn't play nor

97

00:05:04,120 --> 00:05:02,270

game with you

98

00:05:06,430 --> 00:05:04,130

and those of you who've seen the

99

00:05:08,200 --> 00:05:06,440

recordings or the live shows of this

100

00:05:10,600 --> 00:05:08,210

presentation I've done before don't

101  
00:05:13,900 --> 00:05:10,610  
spoil it for those who haven't but there

102  
00:05:15,700 --> 00:05:13,910  
is a little coded message in this image

103  
00:05:17,260 --> 00:05:15,710  
you see in front of you

104  
00:05:20,230 --> 00:05:17,270  
its enormous of the panel picture of

105  
00:05:21,969 --> 00:05:20,240  
Nick Pope space but there is a hidden

106  
00:05:25,750 --> 00:05:21,979  
message in SPF see if you can spot it

107  
00:05:31,480 --> 00:05:25,760  
and I'll reveal later on what it is but

108  
00:05:33,610 --> 00:05:31,490  
basically it's a it's awesome in essence

109  
00:05:37,480 --> 00:05:33,620  
for the entire theme of this talk and

110  
00:05:41,730 --> 00:05:37,490  
that's like these might they start of

111  
00:05:46,600 --> 00:05:41,740  
the basic factor we are not alone that

112  
00:05:50,190 --> 00:05:46,610  
sentence is in cliché but it's true now

113  
00:05:53,140 --> 00:05:50,200

what am I even without is it

114

00:05:55,120 --> 00:05:53,150

statistically impossible it is

115

00:05:57,550 --> 00:05:55,130

physically possible that we are alone in

116

00:06:00,760 --> 00:05:57,560

this universe but statistically is

117

00:06:01,770 --> 00:06:00,770

beyond common sense statistically it's

118

00:06:03,330 --> 00:06:01,780

like claiming

119

00:06:05,930 --> 00:06:03,340

it's common sense to say you can win the

120

00:06:08,670 --> 00:06:05,940

national lottery ten weeks in a row

121

00:06:12,480 --> 00:06:08,680

why do you show you what I mean Mike

122

00:06:14,430 --> 00:06:12,490

there's a first video please this is

123

00:06:16,350 --> 00:06:14,440

just an illustration of how big the

124

00:06:18,740 --> 00:06:16,360

universe is you see here is a vanilla

125

00:06:22,050 --> 00:06:18,750

layer the tallest mountains in the world

126

00:06:25,980 --> 00:06:22,060

it is so much of the it comes out to be

127

00:06:28,230 --> 00:06:25,990

conceit of bed and whole planet earth we

128

00:06:32,100 --> 00:06:28,240

live on the planet Earth on one it seems

129

00:06:36,780 --> 00:06:32,110

like a big place this is amazing vision

130

00:06:40,020 --> 00:06:36,790

of this's its it seems nothing to

131

00:06:42,990 --> 00:06:40,030

explain the inexplicable is the universe

132

00:06:46,110 --> 00:06:43,000

is bigger but then we can possibly

133

00:06:49,590 --> 00:06:46,120

imagine not just that we do imagine that

134

00:06:53,750 --> 00:06:49,600

we can imagine and as JBS Haldane says

135

00:06:56,670 --> 00:06:53,760

it's stranger that we can imagine -

136

00:07:00,540 --> 00:06:56,680

that's that probably doctors Carl Sagan

137

00:07:03,030 --> 00:07:00,550

call it if you fly across on a play it

138

00:07:05,640 --> 00:07:03,040

seems like a long way to take a ship it

139

00:07:09,030 --> 00:07:05,650

seems even London these are the

140

00:07:10,980 --> 00:07:09,040

artificial satellites that have been put

141

00:07:12,630 --> 00:07:10,990

up there there may be more and although

142

00:07:15,570 --> 00:07:12,640

there was a secret space program this

143

00:07:17,730 --> 00:07:15,580

evening but just assume for argument's

144

00:07:28,150 --> 00:07:17,740

sake that there's no secret space

145

00:07:33,940 --> 00:07:31,510

and now we are all winter the Sun

146

00:07:39,530 --> 00:07:33,950

anybody here believe the earth is flat

147

00:07:41,150 --> 00:07:39,540

I'm at the wrong meeting at the moon now

148

00:07:42,980 --> 00:07:41,160

soon when you get out to the moon the

149

00:07:44,800 --> 00:07:42,990

earth is already really really small the

150

00:07:47,120 --> 00:07:44,810

moving is called a million miles away

151  
00:07:48,710 --> 00:07:47,130  
but he gets up to the point view to see

152  
00:07:50,570 --> 00:07:48,720  
the whole solar system all the planets

153  
00:07:54,110 --> 00:07:50,580  
orbiting the stars the earth and moment

154  
00:07:55,330 --> 00:07:54,120  
itself as a two-body systems almost too

155  
00:07:58,370 --> 00:07:55,340  
small to see

156  
00:08:00,740 --> 00:07:58,380  
there ain't major planets and countless

157  
00:08:03,170 --> 00:08:00,750  
minor ones we still don't know how big

158  
00:08:07,700 --> 00:08:03,180  
the solar system it but look the solar

159  
00:08:10,760 --> 00:08:07,710  
system itself shrinks to a tiny point of

160  
00:08:13,490 --> 00:08:10,770  
light when you get out to the point

161  
00:08:16,220 --> 00:08:13,500  
where you can see all the stars notice

162  
00:08:18,260 --> 00:08:16,230  
DC they're thinking and the Sun is just

163  
00:08:22,970 --> 00:08:18,270

another star I mean it's a it's

164

00:08:24,320 --> 00:08:22,980

literally an average star much like any

165

00:08:25,760 --> 00:08:24,330

others and if you were going through the

166

00:08:27,980 --> 00:08:25,770

universe you may even miss hits actually

167

00:08:30,380 --> 00:08:27,990

that ball that's how far our radio

168

00:08:33,560 --> 00:08:30,390

transmissions have gone that blue

169

00:08:37,250 --> 00:08:33,570

surprise sphere of the broadcasting right

170

00:08:39,670 --> 00:08:37,260

here there are a hundred million stars

171

00:08:42,260 --> 00:08:39,680

of the Milky Way galaxy where we live

172

00:08:42,860 --> 00:08:42,270

but there are so many galaxies now

173

00:08:45,050 --> 00:08:42,870

Indonesia

174

00:08:46,400 --> 00:08:45,060

Donald empowering is ten times the

175

00:08:49,790 --> 00:08:46,410

number they thought they were galaxies

176

00:08:52,420 --> 00:08:49,800

in the observable universe and the

177

00:08:55,640 --> 00:08:52,430

galaxies of stars appear like stars and

178

00:08:57,620 --> 00:08:55,650

the universe itself and it's just like a

179

00:09:06,800 --> 00:08:57,630

haze of galaxies and each galaxies

180

00:09:11,900 --> 00:09:06,810

billions of stars the universe the whole

181

00:09:13,580 --> 00:09:11,910

visible University a sphere of space 49

182

00:09:16,040 --> 00:09:13,590

billion light-years across

183

00:09:18,260 --> 00:09:16,050

but even that is not in our universe is

184

00:09:19,970 --> 00:09:18,270

what we can see as the little must be

185

00:09:24,260 --> 00:09:19,980

Ondi it may well be infinite it probably

186

00:09:25,880 --> 00:09:24,270

is and it's that's the cosmic horizon

187

00:09:27,750 --> 00:09:25,890

with the expansion of space because the

188

00:09:30,550 --> 00:09:27,760

49 billion light years but

189

00:09:31,960 --> 00:09:30,560

there's also parallel universes and then

190

00:09:35,800 --> 00:09:31,970

maybe we'll be need for a number of them

191

00:09:37,660 --> 00:09:35,810

so what if anyone says to you oh man

192

00:09:41,020 --> 00:09:37,670

what alone in the universe is just us

193

00:09:44,050 --> 00:09:41,030

this big waste of space you can show

194

00:09:46,060 --> 00:09:44,060

them this show them this you can realize

195

00:09:50,110 --> 00:09:46,070

how ridiculous that is next one please

196

00:09:53,380 --> 00:09:50,120

point my purse assessing the search for

197

00:09:57,640 --> 00:09:53,390

the exit the search for extraterrestrial

198

00:09:59,920 --> 00:09:57,650

intelligence SETI not to be completely

199

00:10:02,590 --> 00:09:59,930

fused with see setting that survey or

200

00:10:04,900 --> 00:10:02,600

thing set up by dr. Steven Greer the

201  
00:10:06,700 --> 00:10:04,910  
setting is not so much as a single

202  
00:10:08,920 --> 00:10:06,710  
organization or a single scientific

203  
00:10:10,930 --> 00:10:08,930  
project it's a movement of people it's a

204  
00:10:12,100 --> 00:10:10,940  
movement a scientific movement involving

205  
00:10:14,950 --> 00:10:12,110  
lots of different individuals and

206  
00:10:18,190 --> 00:10:14,960  
organizations but it is actually the

207  
00:10:20,470 --> 00:10:18,200  
quest to find other intelligences

208  
00:10:25,210 --> 00:10:20,480  
non-human intelligences in the universe

209  
00:10:29,410 --> 00:10:25,220  
and I believe those it's likelihood of

210  
00:10:31,030 --> 00:10:29,420  
success is 100% it is certain there is

211  
00:10:32,680 --> 00:10:31,040  
expecting to find success

212  
00:10:34,360 --> 00:10:32,690  
it's a certain thing to achieve their

213  
00:10:41,650 --> 00:10:34,370

goal the question is when it's only a

214

00:10:42,610 --> 00:10:41,660

matter of time it's when not if now this

215

00:10:44,080 --> 00:10:42,620

is there's a little bit of a conundrum

216

00:10:46,750 --> 00:10:44,090

when it comes to setting and are we

217

00:10:51,340 --> 00:10:46,760

going to support details later but the

218

00:10:52,900 --> 00:10:51,350

methods used by setting well despite

219

00:10:55,870 --> 00:10:52,910

methods more and more detail but that

220

00:10:58,750 --> 00:10:55,880

premise is the universe is teeming with

221

00:11:01,150 --> 00:10:58,760

one I'll explain a little more how they

222

00:11:02,500 --> 00:11:01,160

calculate the number of aliens there are

223

00:11:05,020 --> 00:11:02,510

in the universe how many there are

224

00:11:06,190 --> 00:11:05,030

there's a huge number that agree with me

225

00:11:08,530 --> 00:11:06,200

about what I just showed you in that

226

00:11:12,820 --> 00:11:08,540

film the universe is huge it's complex

227

00:11:16,720 --> 00:11:12,830

and so it must be there must be billions

228

00:11:18,330 --> 00:11:16,730

of aliens out there now this is the

229

00:11:20,890 --> 00:11:18,340

problem we have right because only

230

00:11:22,450 --> 00:11:20,900

ufologists most people in this room are

231

00:11:27,190 --> 00:11:22,460

sure you follow gists and we're

232

00:11:28,810 --> 00:11:27,200

interested in UFOs now the setting that

233

00:11:31,780 --> 00:11:28,820

the people involved in setting have a

234

00:11:33,010 --> 00:11:31,790

very low opinion of us and it's a very

235

00:11:34,450 --> 00:11:33,020

very strange thing it seems to be

236

00:11:35,280 --> 00:11:34,460

virtually one-sided I mean not

237

00:11:36,930 --> 00:11:35,290

completely owned

238

00:11:38,999 --> 00:11:36,940

there are several people in the UFO

239

00:11:41,129 --> 00:11:39,009

Exopolitics world who now are highly

240

00:11:45,420 --> 00:11:41,139

critical of setting I'll be I'll be

241

00:11:48,210 --> 00:11:45,430

discussing their points another one most

242

00:11:51,540 --> 00:11:48,220

of the most of the scorn and disdain and

243

00:11:54,329 --> 00:11:51,550

hostility is one one the people in SETI

244

00:11:57,840 --> 00:11:54,339

without exception have a very low

245

00:11:59,850 --> 00:11:57,850

opinion of ufology I'm talking like our

246

00:12:02,340 --> 00:11:59,860

saviors that's just like Jill tarter Ken

247

00:12:03,629 --> 00:12:02,350

cloud all the big names of your father's

248

00:12:06,449 --> 00:12:03,639

got about to Frank Drake

249

00:12:07,259 --> 00:12:06,459

they say they look at your thoroughly

250

00:12:11,579 --> 00:12:07,269

scrub their shells

251  
00:12:15,389 --> 00:12:11,589  
no no evidence it's nonsense there I

252  
00:12:18,660 --> 00:12:15,399  
think there is some bad logic there some

253  
00:12:21,809 --> 00:12:18,670  
very bad logic and it's this needs to be

254  
00:12:25,079 --> 00:12:21,819  
addressed they are saying that the

255  
00:12:27,090 --> 00:12:25,089  
universe is teeming with life but on no

256  
00:12:29,189 --> 00:12:27,100  
account of our life ever come visit us

257  
00:12:30,870 --> 00:12:29,199  
now what you see before you there it

258  
00:12:33,540 --> 00:12:30,880  
looks like some kind of new shuttlecock

259  
00:12:36,780 --> 00:12:33,550  
the game of badminton it's actually a

260  
00:12:40,199 --> 00:12:36,790  
plan for a spacecraft 400 meters in

261  
00:12:41,550 --> 00:12:40,209  
length this is a spacecraft designed to

262  
00:12:44,250 --> 00:12:41,560  
travel to the stars

263  
00:12:45,509 --> 00:12:44,260

it's called project Daedalus it's

264

00:12:49,050 --> 00:12:45,519

designed by the British interplanetary

265

00:12:51,480 --> 00:12:49,060

society society in the 1960s over 50

266

00:12:53,460 --> 00:12:51,490

years ago these were designed it's

267

00:12:57,750 --> 00:12:53,470

intended to reach the nearest star Alpha

268

00:12:59,220 --> 00:12:57,760

Centauri and it's can accelerate to 10

269

00:13:01,439 --> 00:12:59,230

percent of the speed of light should

270

00:13:04,710 --> 00:13:01,449

make it the fastest spacecraft we were

271

00:13:06,840 --> 00:13:04,720

built it's it is something that could be

272

00:13:09,180 --> 00:13:06,850

built today it could be built with the

273

00:13:10,949 --> 00:13:09,190

technology of time that it was created

274

00:13:15,540 --> 00:13:10,959

its power basically by nuclear

275

00:13:17,670 --> 00:13:15,550

explosions very very simple you

276

00:13:19,949 --> 00:13:17,680

basically have only the only designs how

277

00:13:22,620 --> 00:13:19,959

quite efficient bombs or hydrogen bombs

278

00:13:28,889 --> 00:13:22,630

the later designs have liked hydrogen

279

00:13:33,870 --> 00:13:28,899

fusion to power it it is existing

280

00:13:37,889 --> 00:13:33,880

technology if the resources have been

281

00:13:40,410 --> 00:13:37,899

put into creating this structure when it

282

00:13:43,110 --> 00:13:40,420

was first designed it couldn't reach the

283

00:13:47,949 --> 00:13:43,120

nearest star than 50 years by now it

284

00:13:50,180 --> 00:13:47,959

will go there so we can ourselves

285

00:13:51,920 --> 00:13:50,190

forget the secret space program like I

286

00:13:55,210 --> 00:13:51,930

said that we ourselves house humans even

287

00:13:58,340 --> 00:13:55,220

in the public arena of space exploration

288

00:14:00,110 --> 00:13:58,350

I've taken the first test was traveling

289

00:14:02,509 --> 00:14:00,120

to the stars the universe is teeming

290

00:14:04,999 --> 00:14:02,519

with life there's aliens are all all on

291

00:14:08,389 --> 00:14:05,009

the planets orbiting the stars and we're

292

00:14:09,889 --> 00:14:08,399

at a point that we can go visit them we

293

00:14:14,590 --> 00:14:09,899

could be the UFOs flying around the

294

00:14:17,780 --> 00:14:14,600

skies the city permits also state that

295

00:14:20,329 --> 00:14:17,790

aliens and other worlds may very well

296

00:14:24,559 --> 00:14:20,339

have a much higher them of technology

297

00:14:26,319 --> 00:14:24,569

than we do yet on no account they ever

298

00:14:29,569 --> 00:14:26,329

come and visit us

299

00:14:32,360 --> 00:14:29,579

they say UFOs nonsense is rubbish no

300

00:14:34,490 --> 00:14:32,370

evidence completely wasted it's a waste

301  
00:14:36,019 --> 00:14:34,500  
of time studying it so even though

302  
00:14:36,499 --> 00:14:36,029  
they're faster than us are there

303  
00:14:39,139 --> 00:14:36,509  
everywhere

304  
00:14:41,420 --> 00:14:39,149  
and we are getting the past we to go

305  
00:14:43,129 --> 00:14:41,430  
visit them if any evidence comes to

306  
00:14:45,590 --> 00:14:43,139  
light indicates they might have already

307  
00:14:49,519 --> 00:14:45,600  
got here because the dismissive shrug

308  
00:14:52,550 --> 00:14:49,529  
and a chuckle that is the bad logic I'm

309  
00:14:55,999 --> 00:14:52,560  
talking about was setting next slide

310  
00:14:57,949 --> 00:14:56,009  
please mind now witness says he come

311  
00:14:59,960 --> 00:14:57,959  
from well it can really be traced back

312  
00:15:01,670 --> 00:14:59,970  
to this man this is the godfather of

313  
00:15:05,030 --> 00:15:01,680

ufology there that his name is Frank

314

00:15:07,730 --> 00:15:05,040

Drake and this here is the Howard takes

315

00:15:09,230 --> 00:15:07,740

all radio Observatory the Green Bank so

316

00:15:12,910 --> 00:15:09,240

that the riveters for the Green Bank

317

00:15:15,889 --> 00:15:12,920

radio Observatory in West Virginia USA

318

00:15:17,960 --> 00:15:15,899

now in 1960 he began something called

319

00:15:20,840 --> 00:15:17,970

Project Ozma he pointed this very

320

00:15:24,319 --> 00:15:20,850

telescope at two stars our Shetty and

321

00:15:27,079 --> 00:15:24,329

Epsilon Eridani they're nearby stars and

322

00:15:28,400 --> 00:15:27,089

they're very similar to our Sun so he

323

00:15:30,019 --> 00:15:28,410

thought they were good candidates for a

324

00:15:34,840 --> 00:15:30,029

SETI study he thought was possible there

325

00:15:37,490 --> 00:15:34,850

might be there's like to be life of

326

00:15:40,220 --> 00:15:37,500

others like time a lot of times

327

00:15:41,600 --> 00:15:40,230

earth-like life on that particular

328

00:15:44,960 --> 00:15:41,610

starts likely to be planets because it's

329

00:15:46,610 --> 00:15:44,970

another star and so he ran across cosmic

330

00:15:47,420 --> 00:15:46,620

Hawaii to pick up what he thought was a

331

00:15:48,740 --> 00:15:47,430

signal from

332

00:15:52,460 --> 00:15:48,750

start to turn down as from an aircraft

333

00:15:54,230 --> 00:15:52,470

flying overhead this is a common problem

334

00:15:56,930 --> 00:15:54,240

with setting which other to go into in

335

00:15:58,310 --> 00:15:56,940

more detail in a minute but so he ran

336

00:15:59,960 --> 00:15:58,320

that for a few months maybe couldn't

337

00:16:00,440 --> 00:15:59,970

find any signals coming from those two

338

00:16:05,150 --> 00:16:00,450

stars

339

00:16:07,790 --> 00:16:05,160

next slide please Mike so we did what so

340

00:16:10,400 --> 00:16:07,800

Frank right there did following year 961

341

00:16:13,370 --> 00:16:10,410

he got together a group of 12 scientists

342

00:16:15,670 --> 00:16:13,380

of the best people in their field he

343

00:16:18,620 --> 00:16:15,680

says put a coin he said I want the best

344

00:16:21,650 --> 00:16:18,630

scientists in every branch of science to

345

00:16:23,690 --> 00:16:21,660

come and meet with me and discuss the

346

00:16:27,530 --> 00:16:23,700

possibility of finding a life out there

347

00:16:29,780 --> 00:16:27,540

in the universe and so he did he

348

00:16:32,330 --> 00:16:29,790

assembled um in a green pants Green Bank

349

00:16:33,800 --> 00:16:32,340

radio Observatory and he even thought

350

00:16:36,680 --> 00:16:33,810

the old because he called the order of

351  
00:16:39,710 --> 00:16:36,690  
the dolphin so strange name other than a

352  
00:16:42,530 --> 00:16:39,720  
thing or mask to prance around naked on

353  
00:16:44,090 --> 00:16:42,540  
Atlantis well you know they just sat

354  
00:16:46,700 --> 00:16:44,100  
around for a couple of weeks talking

355  
00:16:48,290 --> 00:16:46,710  
aliens and their possibilities and that

356  
00:16:51,160 --> 00:16:48,300  
the people in our them were not like

357  
00:16:54,200 --> 00:16:51,170  
people who were the famous mathematician

358  
00:16:56,030 --> 00:16:54,210  
John literally the famous biologist who

359  
00:16:57,650 --> 00:16:56,040  
studies animal intelligence chimpanzees

360  
00:17:01,610 --> 00:16:57,660  
dolphins and other intelligence like

361  
00:17:03,350 --> 00:17:01,620  
that and he he got these people together

362  
00:17:04,610 --> 00:17:03,360  
one of the people India one of the

363  
00:17:08,120 --> 00:17:04,620

dolphin was he kind of a strong ethical

364

00:17:10,610 --> 00:17:08,130

Carl Sagan remember that name because he

365

00:17:12,620 --> 00:17:10,620

doesn't look like Steve he's famous for

366

00:17:14,210 --> 00:17:12,630

other reasons as well and his name comes

367

00:17:17,420 --> 00:17:14,220

up a lot in this story I'll come back to

368

00:17:19,160 --> 00:17:17,430

him after a couple of weeks of moaning

369

00:17:20,990 --> 00:17:19,170

and uttering and fashion ideas around

370

00:17:23,350 --> 00:17:21,000

they came up with this what's become

371

00:17:26,199 --> 00:17:23,360

known as the Drake Equation are this is

372

00:17:28,760 --> 00:17:26,209

performing upon which you calculate how

373

00:17:30,350 --> 00:17:28,770

many aliens are out there in the

374

00:17:32,300 --> 00:17:30,360

universe and the first thing they have

375

00:17:34,220 --> 00:17:32,310

to do they have to confine their they

376

00:17:37,010 --> 00:17:34,230

have to narrow it down to our galaxy

377

00:17:39,740 --> 00:17:37,020

alone because well you see all the

378

00:17:41,360 --> 00:17:39,750

galaxies I've shown you in once you

379

00:17:43,310 --> 00:17:41,370

start going to beyond our galaxy you get

380

00:17:45,390 --> 00:17:43,320

such huge numbers that it's there's no

381

00:17:48,300 --> 00:17:45,400

real point so now in terms of milk

382

00:17:53,100 --> 00:17:48,310

around home dancing 90,000 line goes

383

00:17:54,870 --> 00:17:53,110

across a hundred billion stars and they

384

00:17:55,980 --> 00:17:54,880

decided just to investigate those and

385

00:17:59,240 --> 00:17:55,990

they came up with this the famous

386

00:18:02,870 --> 00:17:59,250

drunken equation and it runs like this

387

00:18:04,950 --> 00:18:02,880

is the number of contact above alien

388

00:18:08,310 --> 00:18:04,960

civilizations in the Milky Way cavity

389

00:18:10,590 --> 00:18:08,320

and it is n is our star now is the rate

390

00:18:12,690 --> 00:18:10,600

of stellar formation that is when stars

391

00:18:15,570 --> 00:18:12,700

form out of the intergalactic dust that

392

00:18:17,130 --> 00:18:15,580

matter which is how I start our Sun

393

00:18:19,470 --> 00:18:17,140

fault that's the rate of staff almost

394

00:18:23,220 --> 00:18:19,480

how many stars fall how good do they

395

00:18:26,480 --> 00:18:23,230

fall how many are there it's our star x

396

00:18:29,400 --> 00:18:26,490

SP SP is the number of those stars which

397

00:18:31,350 --> 00:18:29,410

develops a solar system makes planets

398

00:18:33,930 --> 00:18:31,360

orbiting them at the way others orbits

399

00:18:37,920 --> 00:18:33,940

the Sun so easily start develops its own

400

00:18:40,830 --> 00:18:37,930

solar system now in 1961 no one had any

401  
00:18:44,460 --> 00:18:40,840  
idea how many that was today we know

402  
00:18:47,040 --> 00:18:44,470  
that it's about 70% so that p is of our

403  
00:18:49,830 --> 00:18:47,050  
Soviet and 70% of all stars appear to

404  
00:18:51,810 --> 00:18:49,840  
have some kind of planetary system there

405  
00:18:56,010 --> 00:18:51,820  
are little solar system that we can

406  
00:18:57,780 --> 00:18:56,020  
detect so as a high number so would be

407  
00:19:03,600 --> 00:18:57,790  
right we've sort of you know a lot more

408  
00:19:06,240 --> 00:19:03,610  
neither we did not then FP FP x n e n is

409  
00:19:08,130 --> 00:19:06,250  
the number of those planets and planets

410  
00:19:11,460 --> 00:19:08,140  
on those systems that developed the

411  
00:19:14,910 --> 00:19:11,470  
conditions for life that is liquid water

412  
00:19:16,680 --> 00:19:14,920  
a reasonable temperature this sort of

413  
00:19:20,850 --> 00:19:16,690

things you get over so we can basically

414

00:19:24,480 --> 00:19:20,860

have life as we know it yet and anytime

415

00:19:26,190 --> 00:19:24,490

f c/f C is the fraction of those planets

416

00:19:27,960 --> 00:19:26,200

with that were those conditions to

417

00:19:31,170 --> 00:19:27,970

actually do develop life so life

418

00:19:33,720 --> 00:19:31,180

actually open ears on them now this is

419

00:19:36,690 --> 00:19:33,730

crazy because and again we didn't know

420

00:19:40,010 --> 00:19:36,700

what n he was until what reason he now

421

00:19:45,240 --> 00:19:40,020

we know that n he is about 17% 1/7

422

00:19:47,190 --> 00:19:45,250

so what he's 17% of stars have Y times

423

00:19:48,960 --> 00:19:47,200

detected that is those are in the

424

00:19:54,150 --> 00:19:48,970

Goldilocks zone this is called not too

425

00:19:56,610 --> 00:19:54,160

hot not too cold f ee times fi at eyes

426  
00:20:00,540 --> 00:19:56,620  
they deduct amount of that kind of mind

427  
00:20:02,400 --> 00:20:00,550  
which develops the intelligence with you

428  
00:20:04,710 --> 00:20:02,410  
develops a brain or something similar to

429  
00:20:07,100 --> 00:20:04,720  
a brain whatever it might think with

430  
00:20:09,300 --> 00:20:07,110  
that allows them to become aware and

431  
00:20:12,960 --> 00:20:09,310  
insanely humans are that many other

432  
00:20:15,510 --> 00:20:12,970  
animals are now seen as that is the

433  
00:20:18,350 --> 00:20:15,520  
proportion of an intelligent life that

434  
00:20:20,670 --> 00:20:18,360  
learns how to manage and control

435  
00:20:25,380 --> 00:20:20,680  
electromagnetic radiations therefore

436  
00:20:27,930 --> 00:20:25,390  
making doing an ability to speak to

437  
00:20:31,470 --> 00:20:27,940  
communicate using radio waves

438  
00:20:32,970 --> 00:20:31,480

now FC until about sir till about just

439

00:20:34,950 --> 00:20:32,980

over 100 years ago humans weren't

440

00:20:37,170 --> 00:20:34,960

considered that seats we haven't got the

441

00:20:40,170 --> 00:20:37,180

patrol electromagnetic radiation and now

442

00:20:42,510 --> 00:20:40,180

we do so we're in the FC category and L

443

00:20:44,880 --> 00:20:42,520

is the length of time those

444

00:20:47,400 --> 00:20:44,890

civilizations exist before they even

445

00:20:49,860 --> 00:20:47,410

Tommy Howell or their star turns into a

446

00:20:51,780 --> 00:20:49,870

supernova or black hole or they kill

447

00:20:53,580 --> 00:20:51,790

each other in warfare or all kinds of

448

00:20:58,140 --> 00:20:53,590

things that limit the amount of time

449

00:21:01,680 --> 00:20:58,150

that does that kind of creature can

450

00:21:03,000 --> 00:21:01,690

exist when you can tell why don't you

451  
00:21:05,370 --> 00:21:03,010  
know all that you calculate all now you

452  
00:21:06,750 --> 00:21:05,380  
have the number of civilizations of the

453  
00:21:09,480 --> 00:21:06,760  
galaxy that's the trade equations

454  
00:21:11,370 --> 00:21:09,490  
however I think this should be an extra

455  
00:21:13,770 --> 00:21:11,380  
factor to this equation the Drake and

456  
00:21:16,830 --> 00:21:13,780  
his team that includes about his FM I've

457  
00:21:18,510 --> 00:21:16,840  
explained what FM is later but what

458  
00:21:21,660 --> 00:21:18,520  
citrate discovered was that the

459  
00:21:24,030 --> 00:21:21,670  
estimated there were 10,000 of these

460  
00:21:27,000 --> 00:21:24,040  
types of planets with these kinds of

461  
00:21:28,710 --> 00:21:27,010  
creatures on in the bed of my County and

462  
00:21:30,150 --> 00:21:28,720  
he says if you feel if you're more

463  
00:21:32,640 --> 00:21:30,160

broad-minded he he said some people

464

00:21:34,740 --> 00:21:32,650

wanted it as high as 80,000 and even

465

00:21:37,950 --> 00:21:34,750

though the most promotable conservative

466

00:21:40,470 --> 00:21:37,960

Katie there's a lot of a example there

467

00:21:41,850 --> 00:21:40,480

are lawful or aliens that was the

468

00:21:45,900 --> 00:21:41,860

conclusion of the order of the dolphin

469

00:21:47,970 --> 00:21:45,910

next slide please mine now this is a

470

00:21:49,260 --> 00:21:47,980

stunning Miller he and his colleague

471

00:21:51,050 --> 00:21:49,270

Harold Urey did a very interesting

472

00:21:53,430 --> 00:21:51,060

experiment

473

00:21:56,580 --> 00:21:53,440

the only other frights the miracle of

474

00:21:59,700 --> 00:21:56,590

life life is actually not a miracle life

475

00:22:01,410 --> 00:21:59,710

is very fun well understood now and in

476

00:22:03,780 --> 00:22:01,420

fact he seems to get is an emergent

477

00:22:06,150 --> 00:22:03,790

property of the universe basically

478

00:22:08,610 --> 00:22:06,160

whenever it can appear it does appear

479

00:22:09,870 --> 00:22:08,620

and these guys I think because most of

480

00:22:11,730 --> 00:22:09,880

proven in what they did was they did a

481

00:22:15,180 --> 00:22:11,740

chemistry experiment and next slide

482

00:22:17,310 --> 00:22:15,190

please mind this is a model of their

483

00:22:20,400 --> 00:22:17,320

experimental dialogue Nevada completely

484

00:22:22,290 --> 00:22:20,410

closed airtight system here which shall

485

00:22:27,990 --> 00:22:22,300

be filled with several substances in

486

00:22:29,430 --> 00:22:28,000

water ammonia methane and cut other

487

00:22:32,010 --> 00:22:29,440

color other things which they put

488

00:22:33,660 --> 00:22:32,020

together and hydrogen the hydrogen I

489

00:22:35,340 --> 00:22:33,670

mean what these things together in this

490

00:22:38,820 --> 00:22:35,350

system here they heated it up with our

491

00:22:40,710 --> 00:22:38,830

Bunsen burner there and they began

492

00:22:43,290 --> 00:22:40,720

circulating in the form of steam and

493

00:22:44,730 --> 00:22:43,300

this mixture now the other chamber on

494

00:22:48,510 --> 00:22:44,740

the left that contains an electric spark

495

00:22:49,650 --> 00:22:48,520

like a seat pad zone is for artificial

496

00:22:51,780 --> 00:22:49,660

lightning because it's often thought

497

00:22:53,630 --> 00:22:51,790

that lightning played a very important

498

00:22:55,860 --> 00:22:53,640

role in the formation of life on earth

499

00:22:57,000 --> 00:22:55,870

but what they wanted to see was they

500

00:22:59,790 --> 00:22:57,010

wanted to see what happened because this

501

00:23:02,040 --> 00:22:59,800

essentially is a model of the

502

00:23:03,720 --> 00:23:02,050

environment on earth before life began

503

00:23:06,500 --> 00:23:03,730

then we're gonna see what would happen

504

00:23:08,790 --> 00:23:06,510

if they if they run it around again

505

00:23:11,460 --> 00:23:08,800

would to save you heaven but we get lies

506

00:23:13,290 --> 00:23:11,470

again it turns out he also does seem to

507

00:23:15,600 --> 00:23:13,300

be yes no they didn't right so they

508

00:23:17,310 --> 00:23:15,610

started in 1952 and they ran for a few

509

00:23:20,160 --> 00:23:17,320

years they've been really longer but

510

00:23:22,980 --> 00:23:20,170

they basically couldn't but by the end

511

00:23:24,900 --> 00:23:22,990

of the experiment they found all my just

512

00:23:28,170 --> 00:23:24,910

ratings are based on carbohydrates have

513

00:23:29,520 --> 00:23:28,180

formed amino acids which are known as

514

00:23:32,100 --> 00:23:29,530

the building blocks of life these are

515

00:23:34,620 --> 00:23:32,110

they these four proteins and then we hit

516

00:23:37,490 --> 00:23:34,630

some more complex organisms that or more

517

00:23:41,310 --> 00:23:37,500

complex formations of chemicals and

518

00:23:45,190 --> 00:23:41,320

molecules that might resemble tea

519

00:23:47,799 --> 00:23:45,200

so does the point is that life does not

520

00:23:50,430 --> 00:23:47,809

return recreated almost effortlessly

521

00:23:52,840 --> 00:23:50,440

now that the simplest approach scissors

522

00:23:53,470 --> 00:23:52,850

and when it's once is trained it never

523

00:23:56,380 --> 00:23:53,480

lets go

524

00:23:59,140 --> 00:23:56,390

once you have life once might have

525

00:24:02,650 --> 00:23:59,150

motive it evolved it it develops it

526

00:24:04,210 --> 00:24:02,660

mutates it once you never stir always

527

00:24:06,669 --> 00:24:04,220

adapts to its surrounding whatever you

528

00:24:08,710 --> 00:24:06,679

thrown it it continues he conceives to a

529

00:24:11,710 --> 00:24:08,720

warrant out there's there's noise on the

530

00:24:13,419 --> 00:24:11,720

bottom of the oceans there's noise in

531

00:24:15,640 --> 00:24:13,429

the volcanic vents where it's like

532

00:24:18,460 --> 00:24:15,650

fairly hot water boiling water comes out

533

00:24:20,950 --> 00:24:18,470

of the earth there's life there there's

534

00:24:24,549 --> 00:24:20,960

much fun in the coal mines a mile

535

00:24:29,530 --> 00:24:24,559

underground it's what you take number

536

00:24:32,110 --> 00:24:29,540

let's go so that's it that means that we

537

00:24:33,669 --> 00:24:32,120

shouldn't see if we find life in places

538

00:24:35,410 --> 00:24:33,679

in the universe we should expect to see

539

00:24:36,160 --> 00:24:35,420

it it wouldn't be surely a safaris that

540

00:24:38,049 --> 00:24:36,170

we find it

541

00:24:40,419 --> 00:24:38,059

what's wrong professor Chandra

542

00:24:43,780 --> 00:24:40,429

Wickramasinghe Fred Hoyle who's a famous

543

00:24:46,270 --> 00:24:43,790

physicist they came up with the the idea

544

00:24:47,020 --> 00:24:46,280

of panspermia this is the Fermi seeds

545

00:24:51,520 --> 00:24:47,030

everywhere

546

00:24:54,070 --> 00:24:51,530

and I saw a lecture by professor Chandra

547

00:24:55,570 --> 00:24:54,080

it was very interesting he talked about

548

00:24:59,650 --> 00:24:55,580

the evidence for this the others that in

549

00:25:04,299 --> 00:24:59,660

fact space itself is full of life it's

550

00:25:06,070 --> 00:25:04,309

not this dead cold empty vacuum it is

551  
00:25:08,140 --> 00:25:06,080  
full quite it's like a rain forest up

552  
00:25:09,970 --> 00:25:08,150  
there and where it where we go to space

553  
00:25:12,130 --> 00:25:09,980  
the life actually lands on the planet

554  
00:25:14,320 --> 00:25:12,140  
and it sprouts there it's almost like

555  
00:25:14,890 --> 00:25:14,330  
it's almost like seeds blowing in the

556  
00:25:18,700 --> 00:25:14,900  
wind

557  
00:25:21,070 --> 00:25:18,710  
next slide please wine it's just nice

558  
00:25:25,630 --> 00:25:21,080  
Carl Sagan did you know extinct

559  
00:25:27,130 --> 00:25:25,640  
he doesn't really isn't something I can

560  
00:25:29,080 --> 00:25:27,140  
say there's a very very important figure

561  
00:25:31,240 --> 00:25:29,090  
in this story

562  
00:25:33,549 --> 00:25:31,250  
easy he's one of the great popularizers

563  
00:25:36,280 --> 00:25:33,559

of this particular concept and what's

564

00:25:40,299 --> 00:25:36,290

more he he kind of kept two sets of

565

00:25:41,950 --> 00:25:40,309

books that's why what I mean in 1966

566

00:25:43,900 --> 00:25:41,960

I'll save another book called life of

567

00:25:44,630 --> 00:25:43,910

the universe of galvanized the public

568

00:25:46,340 --> 00:25:44,640

demands

569

00:25:47,570 --> 00:25:46,350

it popularized the idea of Seti it's

570

00:25:49,340 --> 00:25:47,580

just a few years after the order of the

571

00:25:51,590 --> 00:25:49,350

Dolphins he was one of the members of

572

00:25:54,650 --> 00:25:51,600

the committee selected by Professor

573

00:25:55,340 --> 00:25:54,660

Frank Drake to work out the Drake

574

00:25:57,500 --> 00:25:55,350

Equation

575

00:25:58,910 --> 00:25:57,510

and in this book really took the world

576

00:26:00,890 --> 00:25:58,920

by storm he became a kind of pop

577

00:26:02,570 --> 00:26:00,900

scientist I mean this there's lots of

578

00:26:05,060 --> 00:26:02,580

pop scientists nowadays some are better

579

00:26:07,670 --> 00:26:05,070

than others you know people like Dave

580

00:26:12,410 --> 00:26:07,680

that Sandra Richard Dawkins Professor

581

00:26:14,750 --> 00:26:12,420

Brian Cox but it's going this guy you so

582

00:26:18,440 --> 00:26:14,760

what since to my this guy is he made

583

00:26:20,330 --> 00:26:18,450

some statements about UFOs which I think

584

00:26:23,600 --> 00:26:20,340

they're suspicious and I'll come on a

585

00:26:25,340 --> 00:26:23,610

minute next slide please Mike not there

586

00:26:28,160 --> 00:26:25,350

yet no so I'll just run around the order

587

00:26:30,440 --> 00:26:28,170

of these things done this is a film

588

00:26:32,300 --> 00:26:30,450

called contact now this is Carson about

589

00:26:34,760 --> 00:26:32,310

several non-fiction books demon-haunted

590

00:26:36,530 --> 00:26:34,770

world be heroic one worth of fictions

591

00:26:38,390 --> 00:26:36,540

she's actually very good and I've not

592

00:26:41,900 --> 00:26:38,400

read the book but I've watched a film

593

00:26:43,790 --> 00:26:41,910

this is a he wrote the book in 1987

594

00:26:46,610 --> 00:26:43,800

called contacts and was made into a film

595

00:26:49,370 --> 00:26:46,620

by Robert Zemeckis produced by E and

596

00:26:53,480 --> 00:26:49,380

Carl Sagan's wife widow because he died

597

00:26:54,740 --> 00:26:53,490

by then and Dryden and he starts early

598

00:26:56,540 --> 00:26:54,750

Foster and after McConaughey and I

599

00:26:59,270 --> 00:26:56,550

Joanie foster there is an astronomer

600

00:27:03,710 --> 00:26:59,280

called an Ellie Arway now she is they

601  
00:27:05,090 --> 00:27:03,720  
SETI component and she it's the fastest

602  
00:27:07,430 --> 00:27:05,100  
represent setting because in the film

603  
00:27:09,710 --> 00:27:07,440  
you got me do you see this film it's yes

604  
00:27:11,690 --> 00:27:09,720  
it's quite a well-known film in the film

605  
00:27:15,860 --> 00:27:11,700  
she's portrayed as a kind of Maverick

606  
00:27:17,390 --> 00:27:15,870  
another who's obsessed with an idea or a

607  
00:27:19,550 --> 00:27:17,400  
field of research that is regarded by

608  
00:27:22,010 --> 00:27:19,560  
most scientists are silly promote

609  
00:27:23,330 --> 00:27:22,020  
frivolous as one scientists one of one

610  
00:27:25,730 --> 00:27:23,340  
of them Peter says to earth your

611  
00:27:28,610 --> 00:27:25,740  
choreography force began if you keep you

612  
00:27:31,670 --> 00:27:28,620  
persist with this nonsense but truth

613  
00:27:33,860 --> 00:27:31,680

Mary SETI is not fringe and crazy and on

614

00:27:35,750 --> 00:27:33,870

its ufology like that for these people

615

00:27:37,700 --> 00:27:35,760

but it's very friendly it's very very

616

00:27:38,900 --> 00:27:37,710

well accepted settings very

617

00:27:40,700 --> 00:27:38,910

very seriously by the scientific

618

00:27:43,280 --> 00:27:40,710

community it receives a lot of funding

619

00:27:45,140 --> 00:27:43,290

from state and private donors so these

620

00:27:47,540 --> 00:27:45,150

back was a misrepresentation of the SETI

621

00:27:50,420 --> 00:27:47,550

movement in the film park that's a very

622

00:27:51,860 --> 00:27:50,430

good film she spits up signal from

623

00:27:53,930 --> 00:27:51,870

another world what happens after that is

624

00:27:55,460 --> 00:27:53,940

very very interesting the way the effect

625

00:27:57,890 --> 00:27:55,470

it has on the world of things like that

626

00:28:01,310 --> 00:27:57,900

so do watch this if you can next slide

627

00:28:03,680 --> 00:28:01,320

please one now this is one of the tools

628

00:28:05,540 --> 00:28:03,690

used by setting as I said it's very very

629

00:28:07,720 --> 00:28:05,550

very stream and this is because each

630

00:28:10,700 --> 00:28:07,730

Anstey Very Large Array New Mexico USA

631

00:28:13,430 --> 00:28:10,710

there are 27 of these huge antennas at

632

00:28:15,230 --> 00:28:13,440

83 feet high every single one and you

633

00:28:17,600 --> 00:28:15,240

actually saw it on the slide before for

634

00:28:20,030 --> 00:28:17,610

because the slide of four was the poster

635

00:28:21,470 --> 00:28:20,040

for the film which a photograph there

636

00:28:23,210 --> 00:28:21,480

that some of the film is set there

637

00:28:26,180 --> 00:28:23,220

actually because the counter actually

638

00:28:28,940 --> 00:28:26,190

uses those telescopes to in her quests

639

00:28:31,610 --> 00:28:28,950

firing them to find aliens and the fact

640

00:28:34,940 --> 00:28:31,620

that she's gonna be shut down and kicked

641

00:28:36,290 --> 00:28:34,950

out before just then she finds so that

642

00:28:37,460 --> 00:28:36,300

is one of the tools they use now this is

643

00:28:39,440 --> 00:28:37,470

extreme but this could think about

644

00:28:44,480 --> 00:28:39,450

mobile phone signal on Jupiter is very

645

00:28:46,880 --> 00:28:44,490

sensitive next likely the point now

646

00:28:49,190 --> 00:28:46,890

people say all of us as human successes

647

00:28:51,950 --> 00:28:49,200

guarantees SETI or wills of sedum

648

00:28:54,830 --> 00:28:51,960

detective an aerial signal is quite

649

00:28:57,530 --> 00:28:54,840

likely the awardee has only the signal

650

00:28:59,450 --> 00:28:57,540

has already been detected it's been

651

00:29:01,190 --> 00:28:59,460

picked up all the thing is it's sitting

652

00:29:02,900 --> 00:29:01,200

around or some magnetic disk and so

653

00:29:04,880 --> 00:29:02,910

elaborate or some database like this

654

00:29:08,360 --> 00:29:04,890

this is one of the databases the setting

655

00:29:09,790 --> 00:29:08,370

uses this huge computer console Bank use

656

00:29:12,320 --> 00:29:09,800

computer memory bank

657

00:29:14,180 --> 00:29:12,330

process processors and hard drives and

658

00:29:15,470 --> 00:29:14,190

things like that in there now I believe

659

00:29:16,790 --> 00:29:15,480

it's already on there it's waiting for

660

00:29:20,150 --> 00:29:16,800

it to be processed because there's a

661

00:29:22,130 --> 00:29:20,160

huge massive amount of data that has to

662

00:29:24,380 --> 00:29:22,140

be worth for a huge amount of data

663

00:29:25,910 --> 00:29:24,390

because you're talking about the highest

664

00:29:27,770 --> 00:29:25,920

so have still Saphira

665

00:29:30,680 --> 00:29:27,780

signals coming on everybody claims that

666

00:29:32,360 --> 00:29:30,690

we can see every amplitude picked up by

667

00:29:34,730 --> 00:29:32,370

these ratings network of radio to us

668

00:29:35,609 --> 00:29:34,740

goes around the world like a comedy grq

669

00:29:38,039 --> 00:29:35,619

very

670

00:29:39,629 --> 00:29:38,049

on these others and I'm hearing and

671

00:29:43,200 --> 00:29:39,639

being put on these destiny processes a

672

00:29:44,820 --> 00:29:43,210

huge task and what it's all a listing

673

00:29:46,049 --> 00:29:44,830

for whispering a hurricane but it's

674

00:29:47,489 --> 00:29:46,059

actually worse than that it's not too

675

00:29:49,109 --> 00:29:47,499

soon listening for a whisper in a

676

00:29:51,570 --> 00:29:49,119

hurricane while you're standing in a

677

00:29:54,029 --> 00:29:51,580

rock concert venue because the earth

678

00:29:56,489 --> 00:29:54,039

itself is a huge emitter electromagnetic

679

00:29:59,100 --> 00:29:56,499

noise indeed that's a problem that comes

680

00:30:01,229 --> 00:29:59,110

up again and again and again twenty

681

00:30:02,970 --> 00:30:01,239

awesomer Frank Drake picked up a signal

682

00:30:06,330 --> 00:30:02,980

from a passing aircraft he thought it

683

00:30:08,519 --> 00:30:06,340

was coming from a star so you had a

684

00:30:11,220 --> 00:30:08,529

computer system and filter parents the

685

00:30:13,320 --> 00:30:11,230

noise that earth is making that if it's

686

00:30:14,849 --> 00:30:13,330

all run out of concern so no one was

687

00:30:16,049 --> 00:30:14,859

coming what it's listening to super

688

00:30:17,999 --> 00:30:16,059

father feel that's extraordinarily

689

00:30:20,940 --> 00:30:18,009

difficult and he covered to talk about

690

00:30:21,830 --> 00:30:20,950

us for a minute who fell foul of that

691

00:30:24,690 --> 00:30:21,840

very thing

692

00:30:25,289 --> 00:30:24,700

so which is waiting now for it will be

693

00:30:27,840 --> 00:30:25,299

processed

694

00:30:30,029 --> 00:30:27,850

next slide please might but you could

695

00:30:32,369 --> 00:30:30,039

have a PC that says you come up with is

696

00:30:34,499 --> 00:30:32,379

amazing a difficult SETI at home then

697

00:30:36,810 --> 00:30:34,509

what you do is you basically it's join

698

00:30:39,060 --> 00:30:36,820

the processing team or using your own

699

00:30:40,889 --> 00:30:39,070

computer when you look appeals on down

700

00:30:43,200 --> 00:30:40,899

time anybody normally playing a screen

701  
00:30:45,119 --> 00:30:43,210  
surfer something like that well you can

702  
00:30:47,460 --> 00:30:45,129  
do is you can run the SETI our kind of

703  
00:30:49,710 --> 00:30:47,470  
application a central block of encrypted

704  
00:30:51,419 --> 00:30:49,720  
radio Daily Show computer then processes

705  
00:30:52,739 --> 00:30:51,429  
and sends it back to setting

706  
00:30:55,080 --> 00:30:52,749  
in doing so they hope to clear the

707  
00:30:56,970 --> 00:30:55,090  
backlog I hope to clear the backlog of

708  
00:30:58,680 --> 00:30:56,980  
what's all this stuff that they've

709  
00:31:02,729 --> 00:30:58,690  
actually gathered next slide please

710  
00:31:05,249 --> 00:31:02,739  
point now I mentioned before there are a

711  
00:31:06,570 --> 00:31:05,259  
large number of planets well you already

712  
00:31:12,090 --> 00:31:06,580  
know exists and there are a huge number

713  
00:31:13,590 --> 00:31:12,100

that I'm taking a break soon but there

714

00:31:16,259 --> 00:31:13,600

are issues not these planets these are

715

00:31:18,060 --> 00:31:16,269

just a handful of them then these

716

00:31:19,739 --> 00:31:18,070

exoplanets they all over the Sun they

717

00:31:20,460 --> 00:31:19,749

all about the stars and you see they're

718

00:31:23,519 --> 00:31:20,470

quite big

719

00:31:25,590 --> 00:31:23,529

there's the in Earth's down which one of

720

00:31:27,840 --> 00:31:25,600

these has the aliens on it could be all

721

00:31:29,340 --> 00:31:27,850

of them or it could be done but no one

722

00:31:31,080 --> 00:31:29,350

can say they're not there and these all

723

00:31:33,570 --> 00:31:31,090

are potentially habitable according to

724

00:31:35,879 --> 00:31:33,580

the what we discussed discovered we know

725

00:31:37,039 --> 00:31:35,889

what roughly their size we know where

726

00:31:38,389 --> 00:31:37,049

they are we

727

00:31:41,180 --> 00:31:38,399

temperatures because we know how close

728

00:31:42,440 --> 00:31:41,190

they are to their homes star or so

729

00:31:44,629 --> 00:31:42,450

therefore know that they want you to

730

00:31:46,039 --> 00:31:44,639

have conditional Semites on earth and

731

00:31:49,180 --> 00:31:46,049

they have certain chemicals on them

732

00:31:51,259 --> 00:31:49,190

because you see that chemicals the

733

00:31:53,600 --> 00:31:51,269

spectrographic analysis just know like

734

00:31:55,820 --> 00:31:53,610

they that goes past that i like they

735

00:31:57,109 --> 00:31:55,830

reflect something what kind of chemicals

736

00:32:02,210 --> 00:31:57,119

they might have on them next slide

737

00:32:03,889 --> 00:32:02,220

please mine but better false alarms we

738

00:32:05,389 --> 00:32:03,899

didn't get a few false alarms now and

739

00:32:06,950 --> 00:32:05,399

again and we're going to go through

740

00:32:08,690 --> 00:32:06,960

something now some of them may be false

741

00:32:10,070 --> 00:32:08,700

alarms and some of them might not be and

742

00:32:13,220 --> 00:32:10,080

this time with more which definitely is

743

00:32:15,830 --> 00:32:13,230

this is soon Jocelyn Bell Burnell who is

744

00:32:18,919 --> 00:32:15,840

astronomers in the other university and

745

00:32:21,649 --> 00:32:18,929

in 1967 she would look in the Jodrell

746

00:32:23,419 --> 00:32:21,659

Bank radio telescope and that's in

747

00:32:25,669 --> 00:32:23,429

Cheshire one that it's one most powerful

748

00:32:27,889 --> 00:32:25,679

scientific as far as Lanza instruments

749

00:32:30,830 --> 00:32:27,899

of the world and it picked up a signal

750

00:32:34,220 --> 00:32:30,840

she called LG and little green men she

751  
00:32:35,960 --> 00:32:34,230  
seriously thought there might be ancient

752  
00:32:38,869 --> 00:32:35,970  
another star and she says so quite a lot

753  
00:32:40,009 --> 00:32:38,879  
to me next one T's point this is what

754  
00:32:43,879 --> 00:32:40,019  
she actually picked up it's called the

755  
00:32:47,169 --> 00:32:43,889  
pulsar which is a it's a rotating

756  
00:32:49,519 --> 00:32:47,179  
neutron star a dense star which is

757  
00:32:52,249 --> 00:32:49,529  
rotating and given off as a lighthouse

758  
00:32:54,440 --> 00:32:52,259  
beam and if the earth isn't that beaming

759  
00:32:56,450 --> 00:32:54,450  
takes up what looks like a pulsating ISM

760  
00:32:58,039 --> 00:32:56,460  
signal it's so regular that she thought

761  
00:33:02,570 --> 00:32:58,049  
it was coming he has been telling gently

762  
00:33:04,700 --> 00:33:02,580  
generated so that's what so so she made

763  
00:33:06,409 --> 00:33:04,710

a mistake but she took it seriously

764

00:33:10,789 --> 00:33:06,419

people took it is silly enough she knew

765

00:33:12,080 --> 00:33:10,799

that she could say that only and without

766

00:33:13,789 --> 00:33:12,090

losing a job now if you start talking

767

00:33:15,919 --> 00:33:13,799

about the UFO she'd be kicked out the

768

00:33:17,239 --> 00:33:15,929

door but you can't or a setting that's

769

00:33:18,259 --> 00:33:17,249

actually find a stronger tighter

770

00:33:22,909 --> 00:33:18,269

seriously

771

00:33:26,899 --> 00:33:22,919

his wife and 10 years later on the 14th

772

00:33:29,089 --> 00:33:26,909

of August 1977 a song called the Mary

773

00:33:32,449 --> 00:33:29,099

Ellen are picked up what's become known

774

00:33:34,039 --> 00:33:32,459

as the WoW signal now this these numbers

775

00:33:35,989 --> 00:33:34,049

won't mean much to you miss your family

776

00:33:38,769 --> 00:33:35,999

of radio astronomy this is a computer

777

00:33:41,299 --> 00:33:38,779

printout from the radio Observatory and

778

00:33:42,739 --> 00:33:41,309

was so impressed with his thought he

779

00:33:46,009 --> 00:33:42,749

discovered the hero brings around

780

00:33:47,209 --> 00:33:46,019

interesting bits and for wow there well

781

00:33:49,639 --> 00:33:47,219

he done in the constellation of

782

00:33:52,339 --> 00:33:49,649

Sagittarius when he picked up was what

783

00:33:56,089 --> 00:33:52,349

seemed to be an intelligently organized

784

00:33:58,819 --> 00:33:56,099

soon as there have been repeated no one

785

00:34:00,649 --> 00:33:58,829

knows exactly what it was but it was it

786

00:34:02,889 --> 00:34:00,659

could be and it's lucky to be something

787

00:34:06,129 --> 00:34:02,899

sick telepaths that's why he wrote one

788

00:34:09,200 --> 00:34:06,139

and what's interesting about this is

789

00:34:10,669 --> 00:34:09,210

it's on the hydrogen channel now the -

790

00:34:12,260 --> 00:34:10,679

channel is something a friend Ryan came

791

00:34:17,210 --> 00:34:12,270

up with at the meeting of the author of

792

00:34:18,799 --> 00:34:17,220

the dolphin he said Oh what do we want

793

00:34:20,149 --> 00:34:18,809

to communicate these onions we don't

794

00:34:22,519 --> 00:34:20,159

speak the same language we don't know

795

00:34:23,779 --> 00:34:22,529

what they're gonna say we have Nikita to

796

00:34:25,819 --> 00:34:23,789

know in advance what they're going to

797

00:34:28,480 --> 00:34:25,829

say on the words of this and what so

798

00:34:31,159 --> 00:34:28,490

what frequency or what wavelength of

799

00:34:34,460 --> 00:34:31,169

radio and electromagnetic radiation do

800

00:34:37,940 --> 00:34:34,470

we listen to and he decided to use a

801  
00:34:39,319 --> 00:34:37,950  
deeper intimacy of hydrogen the simplest

802  
00:34:41,869 --> 00:34:39,329  
the most abundant of an element of the

803  
00:34:43,190 --> 00:34:41,879  
universe and its lowest energy level and

804  
00:34:44,359 --> 00:34:43,200  
he said if you're gonna meet someone you

805  
00:34:45,769 --> 00:34:44,369  
let them out to meet someone you don't

806  
00:34:47,210 --> 00:34:45,779  
know you're on Maidan arrangements

807  
00:34:49,279 --> 00:34:47,220  
before I don't have to guess where

808  
00:34:51,589 --> 00:34:49,289  
they're likely to be this is what we're

809  
00:34:53,690 --> 00:34:51,599  
doing so it shows the hydrogen channel

810  
00:34:56,329 --> 00:34:53,700  
as the most worried place that aliens

811  
00:34:58,940 --> 00:34:56,339  
would communicate I think that's that's

812  
00:35:00,140 --> 00:34:58,950  
a mistake because for the reasons I've

813  
00:35:02,510 --> 00:35:00,150

come to know exactly you can't

814

00:35:04,400 --> 00:35:02,520

anticipate that that's it - it's

815

00:35:06,799 --> 00:35:04,410

humorous to actually assume that and

816

00:35:08,779 --> 00:35:06,809

I'll come to that later but this was on

817

00:35:12,640 --> 00:35:08,789

the hydrogen channel which is one of the

818

00:35:15,349 --> 00:35:12,650

reasons it was so interesting next one

819

00:35:18,230 --> 00:35:15,359

this is the Lauren reverse discovered by

820

00:35:20,569 --> 00:35:18,240

team there - I don't more ominous strong

821

00:35:22,279 --> 00:35:20,579

by the University of West Virginia you

822

00:35:24,030 --> 00:35:22,289

see they're very organized train lying

823

00:35:26,100 --> 00:35:24,040

there as soon as the

824

00:35:28,530 --> 00:35:26,110

going to burst of energy to suddenly

825

00:35:30,390 --> 00:35:28,540

appear that it lasted for southern at a

826

00:35:31,680 --> 00:35:30,400

time they finally find it very

827

00:35:34,530 --> 00:35:31,690

interesting it can appear to be

828

00:35:37,230 --> 00:35:34,540

something it didn't fit with any natural

829

00:35:38,310 --> 00:35:37,240

process we know of in the universe and

830

00:35:41,370 --> 00:35:38,320

so you thought you took a great interest

831

00:35:43,980 --> 00:35:41,380

in this now before she turned out that

832

00:35:46,590 --> 00:35:43,990

it's probably it's probably caused by

833

00:35:49,230 --> 00:35:46,600

the microwave oven in the observatory or

834

00:35:50,910 --> 00:35:49,240

kitchen now actually see this is a

835

00:35:52,710 --> 00:35:50,920

problem that happens and they they I

836

00:35:54,810 --> 00:35:52,720

wasn't trying to illuminate that but it's

837

00:35:56,130 --> 00:35:54,820

a bit embarrassing that's what it does

838

00:35:58,170 --> 00:35:56,140

happen that's what mean about with being

839

00:36:00,210 --> 00:35:58,180

a rock concert venue the rest of the

840

00:36:01,440 --> 00:36:00,220

world of the the Laurel Percy just one

841

00:36:03,690 --> 00:36:01,450

example these kind of things

842

00:36:04,650 --> 00:36:03,700

and what's more not all of them can be

843

00:36:08,820 --> 00:36:04,660

explained so easily

844

00:36:11,400 --> 00:36:08,830

next slide please morning now this is

845

00:36:12,900 --> 00:36:11,410

the Kepler Brahe Kepler space

846

00:36:15,180 --> 00:36:12,910

observatory it's probably very

847

00:36:18,840 --> 00:36:15,190

interesting very powerful tool for

848

00:36:20,160 --> 00:36:18,850

astronomers to use it is in space it's

849

00:36:22,770 --> 00:36:20,170

actually it's actually flying in space

850

00:36:24,240 --> 00:36:22,780

it's orbiting a sun-like rate distance

851  
00:36:26,250 --> 00:36:24,250  
from the earth it's good old-fashioned

852  
00:36:29,160 --> 00:36:26,260  
optical Astronomy now not radio stronger

853  
00:36:31,050 --> 00:36:29,170  
this is looking for light and it's like

854  
00:36:32,850 --> 00:36:31,060  
a big telescope in space you can see

855  
00:36:34,170 --> 00:36:32,860  
much further than any telescope on other

856  
00:36:36,420 --> 00:36:34,180  
planets and have to stare from the

857  
00:36:39,330 --> 00:36:36,430  
atmosphere was once pollution always

858  
00:36:41,040 --> 00:36:39,340  
interference so the Kepler space

859  
00:36:49,650 --> 00:36:41,050  
observatory frequent way of possibly

860  
00:36:51,870 --> 00:36:49,660  
finding aliens and mainly occurs as a

861  
00:36:54,150 --> 00:36:51,880  
few years have picked up it picked up a

862  
00:36:56,370 --> 00:36:54,160  
star it came across a star that are

863  
00:37:01,920 --> 00:36:56,380

twelve thousand light-years away from us

864

00:37:04,710 --> 00:37:01,930

is called kic 846 285 - it's a catchy

865

00:37:06,720 --> 00:37:04,720

little name but it's been recently has

866

00:37:08,400 --> 00:37:06,730

been nicknamed having stopped after tap

867

00:37:09,930 --> 00:37:08,410

dr. Townsend Boyajian who's the leader

868

00:37:11,640 --> 00:37:09,940

of his from astronomical team that

869

00:37:14,310 --> 00:37:11,650

discovered it I wrote a paper about it

870

00:37:18,810 --> 00:37:14,320

now Abby's not very unusual because how

871

00:37:20,700 --> 00:37:18,820

stars do we detect planets around a star

872

00:37:22,980 --> 00:37:20,710

if you wait for changes in the

873

00:37:25,950 --> 00:37:22,990

brightness of the stars and some object

874

00:37:28,980 --> 00:37:25,960

comes between it and you you're-you're

875

00:37:29,640 --> 00:37:28,990

goes it's so much eclipse it's causing

876

00:37:32,539 --> 00:37:29,650

occlusion or

877

00:37:36,329 --> 00:37:32,549

transit just like a little mini clips

878

00:37:38,519 --> 00:37:36,339

now if you get a decrease in brightness

879

00:37:39,720 --> 00:37:38,529

of a certain amount for a certain rate

880

00:37:41,039 --> 00:37:39,730

in regular periods you know it's

881

00:37:43,170 --> 00:37:41,049

something orbiting that star in a

882

00:37:48,359 --> 00:37:43,180

regular period by the Earth orbits our

883

00:37:49,859 --> 00:37:48,369

Sun every 365 days now what happened

884

00:37:51,299 --> 00:37:49,869

with tabi stars oh it's very very

885

00:37:54,029 --> 00:37:51,309

different you get like a very very teeth

886

00:37:57,260 --> 00:37:54,039

to crash the Brody prism at the deep

887

00:37:59,220 --> 00:37:57,270

decreasing brightness but it's irregular

888

00:38:00,930 --> 00:37:59,230

and it's something that these she

889

00:38:02,220 --> 00:38:00,940

expected to find on all the stars I

890

00:38:03,960 --> 00:38:02,230

someone you must started to have like

891

00:38:06,000 --> 00:38:03,970

get dust and gas around I haven't formed

892

00:38:10,650 --> 00:38:06,010

into planets she couldn't tell this what

893

00:38:12,569 --> 00:38:10,660

she said it might be used to have a

894

00:38:14,430 --> 00:38:12,579

comments or something like that but she

895

00:38:17,400 --> 00:38:14,440

did a TED talk about it I think you see

896

00:38:19,559 --> 00:38:17,410

on YouTube some corn our TED talk and

897

00:38:23,190 --> 00:38:19,569

she says very very clearly she says oh

898

00:38:24,059 --> 00:38:23,200

one one thing we must never do is think

899

00:38:26,190 --> 00:38:24,069

that it's aliens

900

00:38:28,289 --> 00:38:26,200

we must leave that possibility for the

901  
00:38:29,940 --> 00:38:28,299  
last because we must explore every other

902  
00:38:31,710 --> 00:38:29,950  
possibility of aliens I know what she's

903  
00:38:34,049 --> 00:38:31,720  
trying to do it's pretty clear she tried

904  
00:38:37,500 --> 00:38:34,059  
to distance herself from illumine easily

905  
00:38:39,289 --> 00:38:37,510  
to us but maybe she can't next slide

906  
00:38:41,970 --> 00:38:39,299  
please

907  
00:38:45,420 --> 00:38:41,980  
this is an illustration of a Dyson

908  
00:38:47,160 --> 00:38:45,430  
Sphere or Dyson swarm and this mrs.

909  
00:38:49,650 --> 00:38:47,170  
Hunnicutt came at the guy called Freeman

910  
00:38:51,210 --> 00:38:49,660  
Dyson he said but if he wanted to see

911  
00:38:52,710 --> 00:38:51,220  
signs of intelligent life out there in

912  
00:38:57,990 --> 00:38:52,720  
the universe we should look for various

913  
00:38:59,099 --> 00:38:58,000

stars look at them and just see it's

914

00:39:01,680 --> 00:38:59,109

possible that some of them might have

915

00:39:04,349 --> 00:39:01,690

signs of constructions around them it's

916

00:39:07,140 --> 00:39:04,359

based eat hypothesize of the very very

917

00:39:08,950 --> 00:39:07,150

turns in a super race to another planet

918

00:39:11,530 --> 00:39:08,960

another universe galaxies

919

00:39:14,170 --> 00:39:11,540

and the star will be able to build

920

00:39:17,890 --> 00:39:14,180

gigantic mega structures in space which

921

00:39:18,910 --> 00:39:17,900

it was before putting the stars I read a

922

00:39:20,859 --> 00:39:18,920

book called Ringworld

923

00:39:23,049 --> 00:39:20,869

and have you read that it's a science

924

00:39:25,329 --> 00:39:23,059

fiction novel which expose this very

925

00:39:27,609 --> 00:39:25,339

very thing now

926

00:39:30,430 --> 00:39:27,619

these would be used before solar panels

927

00:39:32,470 --> 00:39:30,440

or maybe Ansem habitats for our space

928

00:39:33,880 --> 00:39:32,480

stations as habitats but for the

929

00:39:35,620 --> 00:39:33,890

population for the creatures who live in

930

00:39:37,990 --> 00:39:35,630

themselves or for some other purpose but

931

00:39:39,339 --> 00:39:38,000

he said it will be a silent very very

932

00:39:42,430 --> 00:39:39,349

high level that tells us what's known as

933

00:39:44,730 --> 00:39:42,440

a time for civilization or time to fire

934

00:39:49,359 --> 00:39:44,740

I don't know which one it is their own

935

00:39:52,180 --> 00:39:49,369

thing is the structure that these the

936

00:39:55,809 --> 00:39:52,190

signature does tabbies Thurman has

937

00:39:57,190 --> 00:39:55,819

revealed is exactly what we would expect

938

00:40:01,329 --> 00:39:57,200

what Freeman Dyson

939

00:40:05,740 --> 00:40:01,339

told us to expect if there was a Dyson

940

00:40:07,720 --> 00:40:05,750

Sphere around it so it has to have the

941

00:40:10,270 --> 00:40:07,730

Brioni than a team actually discovered

942

00:40:12,220 --> 00:40:10,280

the first Dyson Sphere now under these

943

00:40:13,930 --> 00:40:12,230

personality and settings that she was

944

00:40:15,430 --> 00:40:13,940

actually scanned dstyle they can't pick

945

00:40:18,299 --> 00:40:15,440

up any signals but they read other per

946

00:40:20,890 --> 00:40:18,309

degree scan the point the matter is that

947

00:40:23,289 --> 00:40:20,900

it may turn out this is exactly what

948

00:40:26,680 --> 00:40:23,299

we're seeing now from next one please

949

00:40:28,539 --> 00:40:26,690

one you want to see tabby star that's

950

00:40:30,730 --> 00:40:28,549

where it is it's just there on the crux

951  
00:40:32,440 --> 00:40:30,740  
of Cygnus and Lyra twelve thousand

952  
00:40:34,359 --> 00:40:32,450  
light-years away to see if we were a

953  
00:40:36,960 --> 00:40:34,369  
small telescope or binoculars if you

954  
00:40:39,609 --> 00:40:36,970  
know where to look next like we've might

955  
00:40:41,980 --> 00:40:39,619  
this is the Mars meteor now this is when

956  
00:40:44,109 --> 00:40:41,990  
we come back to panspermia there's a lot

957  
00:40:46,589 --> 00:40:44,119  
of rock that came from Mars have landed

958  
00:40:49,240 --> 00:40:46,599  
on earth but it shows signs of having

959  
00:40:51,220 --> 00:40:49,250  
fossilized single-cell life on it this

960  
00:40:52,539 --> 00:40:51,230  
this was a big fuss was made about this

961  
00:40:54,579 --> 00:40:52,549  
is all over the news

962  
00:40:57,579 --> 00:40:54,589  
it could be the light came from Mars

963  
00:40:59,530 --> 00:40:57,589

well you know I'm suspecting the NASA

964

00:41:01,330 --> 00:40:59,540

and the other Space Agency

965

00:41:02,290 --> 00:41:01,340

no there's life on Mars they know

966

00:41:04,360 --> 00:41:02,300

there's probably quite sophisticated

967

00:41:07,660 --> 00:41:04,370

life on Mars they're not saying anything

968

00:41:11,440 --> 00:41:07,670

next slide please Mike now this here is

969

00:41:13,750 --> 00:41:11,450

Enceladus which is other this is a it's

970

00:41:14,860 --> 00:41:13,760

a it's a moon orbiting Saturn now that

971

00:41:17,250 --> 00:41:14,870

was funny thing is could the Cassini

972

00:41:19,600 --> 00:41:17,260

probe before it crashed into certain

973

00:41:21,760 --> 00:41:19,610

discovered something amazing is water

974

00:41:24,190 --> 00:41:21,770

underneath that there's actually liquid

975

00:41:25,990 --> 00:41:24,200

water even though this is millions of

976  
00:41:28,630 --> 00:41:26,000  
miles away from the Sun but people only

977  
00:41:30,250 --> 00:41:28,640  
expect to see my son rock this may be

978  
00:41:32,380 --> 00:41:30,260  
football carrying action or something

979  
00:41:34,030 --> 00:41:32,390  
else studies keeping we put water

980  
00:41:36,580 --> 00:41:34,040  
underneath this icy surface like a

981  
00:41:38,350 --> 00:41:36,590  
frozen pond a life could be under there

982  
00:41:39,880 --> 00:41:38,360  
which means the Goldilocks zone could be

983  
00:41:43,330 --> 00:41:39,890  
a lot bigger than we thought at first

984  
00:41:45,370 --> 00:41:43,340  
next slide please Mike Ronnie now

985  
00:41:48,870 --> 00:41:45,380  
there's one little problem you may have

986  
00:41:52,620 --> 00:41:48,880  
spotted what is the what is the big

987  
00:41:55,000 --> 00:41:52,630  
mistake or problem that SETI is making

988  
00:41:58,650 --> 00:41:55,010

apart from the UFO issue she was under

989

00:42:01,390 --> 00:41:58,660

the country well this is listening

990

00:42:03,190 --> 00:42:01,400

they're doing nothing personal and all

991

00:42:05,710 --> 00:42:03,200

these tasks are pointless kind and

992

00:42:08,230 --> 00:42:05,720

they're listening listening for signals

993

00:42:09,730 --> 00:42:08,240

from other planet wouldn't it be ironic

994

00:42:11,460 --> 00:42:09,740

wouldn't you be all for irony if the

995

00:42:14,890 --> 00:42:11,470

aliens doing exactly the same thing

996

00:42:16,960 --> 00:42:14,900

they're just sitting there listening so

997

00:42:19,210 --> 00:42:16,970

then it's like we both want the phone

998

00:42:21,780 --> 00:42:19,220

with both sit there don't say a word

999

00:42:24,670 --> 00:42:21,790

waiting for the others would speak first

1000

00:42:27,370 --> 00:42:24,680

so in November of 1974 the SETI

1001  
00:42:29,320 --> 00:42:27,380  
Institute assigned her to say hello and

1002  
00:42:30,900 --> 00:42:29,330  
this is what they did they sent this

1003  
00:42:34,360 --> 00:42:30,910  
signal from the Arecibo radio

1004  
00:42:35,830 --> 00:42:34,370  
Observatory this is a binary code and

1005  
00:42:37,030 --> 00:42:35,840  
this is design decision trying to be

1006  
00:42:39,970 --> 00:42:37,040  
picked up by aliens was actually

1007  
00:42:43,270 --> 00:42:39,980  
transmitted towards the very small

1008  
00:42:45,010 --> 00:42:43,280  
galaxy called m13 it's a it's a mini

1009  
00:42:47,500 --> 00:42:45,020  
galaxy to always the milky milky way

1010  
00:42:49,200 --> 00:42:47,510  
over a hundred thousand stars in it and

1011  
00:42:54,370 --> 00:42:49,210  
this was transmitted directly towards

1012  
00:42:56,500 --> 00:42:54,380  
m13 probably seven thirty to 25,000

1013  
00:42:59,350 --> 00:42:56,510

light-years away which means that's how

1014

00:43:00,790 --> 00:42:59,360

long we can take the signal together if

1015

00:43:02,920 --> 00:43:00,800

the alien is a site or a project right

1016

00:43:04,500 --> 00:43:02,930

away it's going to take another 25

1017

00:43:09,540 --> 00:43:04,510

to get back so it's gonna take some

1018

00:43:15,190 --> 00:43:11,620

well you know how it comes about the man

1019

00:43:17,290 --> 00:43:15,200

in but this is the signal of scented

1020

00:43:18,490 --> 00:43:17,300

binary code don't begin we have to

1021

00:43:19,720 --> 00:43:18,500

assume the aliens will be able to

1022

00:43:21,549 --> 00:43:19,730

understand this they've made as

1023

00:43:24,040 --> 00:43:21,559

comprehensive as possible and made a lot

1024

00:43:27,400 --> 00:43:24,050

of assumptions about the aliens train of

1025

00:43:29,349 --> 00:43:27,410

thought or you have the top here is the

1026

00:43:31,120 --> 00:43:29,359

key to the binary code system to the

1027

00:43:32,740 --> 00:43:31,130

white people atop the purple and green

1028

00:43:35,170 --> 00:43:32,750

bits and the blue bits in the middle of

1029

00:43:38,829 --> 00:43:35,180

the white bit vertical that's the DNA

1030

00:43:41,650 --> 00:43:38,839

molecule in the diagram and in their

1031

00:43:43,120 --> 00:43:41,660

data is printed out in binary code now

1032

00:43:44,770 --> 00:43:43,130

these are the interesting value see

1033

00:43:48,730 --> 00:43:44,780

they're distinct human figure a simple

1034

00:43:51,940 --> 00:43:48,740

human figure in red and also Lester that

1035

00:43:53,920 --> 00:43:51,950

is a gauge of how big we are and so the

1036

00:43:56,260 --> 00:43:53,930

light is a box place how many of us

1037

00:43:58,120 --> 00:43:56,270

there are but know that you see a simple

1038

00:44:00,190 --> 00:43:58,130

diagram of the solar system is the Sun

1039

00:44:02,020 --> 00:44:00,200

and there's the planets there then the

1040

00:44:03,970 --> 00:44:02,030

further off to the Sun is raised above

1041

00:44:05,829 --> 00:44:03,980

the others that is the earth and that's

1042

00:44:08,589 --> 00:44:05,839

Italian going to pick it up where we

1043

00:44:10,240 --> 00:44:08,599

come from within our solar system at the

1044

00:44:14,260 --> 00:44:10,250

bottom there's a bottle of the RC broke

1045

00:44:16,240 --> 00:44:14,270

radio Observatory so that was all done

1046

00:44:17,680 --> 00:44:16,250

mate they can use this big huge town you

1047

00:44:20,230 --> 00:44:17,690

may have seen it appears in the contact

1048

00:44:22,960 --> 00:44:20,240

movie this huge bowl shape this in

1049

00:44:25,870 --> 00:44:22,970

Puerto Rico you're the US Trust

1050

00:44:27,539 --> 00:44:25,880

Territory and they send this it took

1051  
00:44:29,890 --> 00:44:27,549  
about three minutes to transit Mendte

1052  
00:44:32,049 --> 00:44:29,900  
well I've got the way a long time like I

1053  
00:44:33,430 --> 00:44:32,059  
said but there's quite a tip it's quite

1054  
00:44:36,010 --> 00:44:33,440  
a tense moment Frank Drake you know

1055  
00:44:37,859 --> 00:44:36,020  
there's a lot of people cheering and

1056  
00:44:42,549 --> 00:44:37,869  
clapping when it was done

1057  
00:44:45,220 --> 00:44:42,559  
next slide please mind you that's at

1058  
00:44:49,150 --> 00:44:45,230  
7:13 lovely place that looks beautiful

1059  
00:44:55,420 --> 00:44:49,160  
little spot but is there anyone there to

1060  
00:44:57,760 --> 00:44:55,430  
hear us next slide please Mike now says

1061  
00:44:59,200 --> 00:44:57,770  
he's very well funded as though if you

1062  
00:45:00,339 --> 00:44:59,210  
watch the film contract like I said it's

1063  
00:45:01,870 --> 00:45:00,349

a mystery

1064

00:45:06,809 --> 00:45:01,880

because the character Ellie Arroway

1065

00:45:10,930 --> 00:45:06,819

she's dismissed this dedicated solo

1066

00:45:12,460 --> 00:45:10,940

loner who is committed to setting when

1067

00:45:15,039 --> 00:45:12,470

everyone else is laughing at her it's

1068

00:45:16,690 --> 00:45:15,049

just a struggle to get funding this in

1069

00:45:19,569 --> 00:45:16,700

actual fact says he's very well funded

1070

00:45:20,920 --> 00:45:19,579

state and from private individuals and

1071

00:45:23,200 --> 00:45:20,930

we studied the breakthrough lists and

1072

00:45:25,839 --> 00:45:23,210

programs because and it's and it was

1073

00:45:27,249 --> 00:45:25,849

organized unfunded faithful by the bald

1074

00:45:29,979 --> 00:45:27,259

guy but the back there

1075

00:45:31,239 --> 00:45:29,989

Yuri Milner he's a Russian oligarch it

1076

00:45:33,190 --> 00:45:31,249

was given billions of billions of

1077

00:45:36,759 --> 00:45:33,200

dollars its new SETI program called

1078

00:45:38,979 --> 00:45:36,769

breakthrough listen and it's basically

1079

00:45:40,900 --> 00:45:38,989

this is this is why I think it's very

1080

00:45:42,190 --> 00:45:40,910

likely we're gonna see some success at

1081

00:45:43,749 --> 00:45:42,200

some point because this they don't have

1082

00:45:45,160 --> 00:45:43,759

to worry about money anymore because

1083

00:45:46,989 --> 00:45:45,170

it's been very very well funded

1084

00:45:49,479 --> 00:45:46,999

it's be very well very well publicized

1085

00:45:51,579 --> 00:45:49,489

as well by various people including Ziva

1086

00:45:53,799 --> 00:45:51,589

see professor Stephen Hawking now whose

1087

00:45:55,180 --> 00:45:53,809

recently passed away or made us one of

1088

00:45:57,279 --> 00:45:55,190

these doubles but have you saw a rich

1089

00:45:59,969 --> 00:45:57,289

planet over at that but whoever he is

1090

00:46:02,440 --> 00:45:59,979

he's supporting this Richard Branson and

1091

00:46:05,349 --> 00:46:02,450

other people are supporting this it's

1092

00:46:07,400 --> 00:46:05,359

very very well it's a really amazing

1093

00:46:08,969 --> 00:46:07,410

thing I don't think it's any problems

1094

00:46:10,900 --> 00:46:08,979

[Music]

1095

00:46:16,469 --> 00:46:10,910

we'll see where it goes

1096

00:46:19,209 --> 00:46:16,479

looks like these mind notice they

1097

00:46:20,829 --> 00:46:19,219

understood us quite this briefly

1098

00:46:22,299 --> 00:46:20,839

business there's a couple of things so

1099

00:46:24,969 --> 00:46:22,309

we'll take a little break then we'll

1100

00:46:26,410 --> 00:46:24,979

carry on with it but basically these

1101

00:46:28,359 --> 00:46:26,420

days look there's several deep-space

1102

00:46:30,160 --> 00:46:28,369

probes that we've sent out into the

1103

00:46:31,479 --> 00:46:30,170

universe and some of the reporting that

1104

00:46:34,630 --> 00:46:31,489

the solar system particularly the

1105

00:46:37,239 --> 00:46:34,640

Pioneer and Voyager probes and this was

1106

00:46:39,489 --> 00:46:37,249

attached to the Voyager probe you saw

1107

00:46:42,579 --> 00:46:39,499

the most distant once and you actually

1108

00:46:46,180 --> 00:46:42,589

have here and there's actually a record

1109

00:46:48,099 --> 00:46:46,190

it's like a record like a golden disc

1110

00:46:48,520 --> 00:46:48,109

it's a record made of gold just on the

1111

00:46:51,250 --> 00:46:48,530

old

1112

00:46:52,510 --> 00:46:51,260

- haven't done any one younger anyone

1113

00:46:52,990 --> 00:46:52,520

younger than me what no I'm talking

1114

00:46:57,130 --> 00:46:53,000

about

1115

00:46:57,910 --> 00:46:57,140

you remember records is it say anyone

1116

00:46:59,800 --> 00:46:57,920

younger than me

1117

00:47:03,520 --> 00:46:59,810

can you imagine iTunes or the black

1118

00:47:06,490 --> 00:47:03,530

plastic to the point that's a record got

1119

00:47:08,380 --> 00:47:06,500

kids that's what they exactly the best

1120

00:47:10,990 --> 00:47:08,390

the most secure we're doing so they

1121

00:47:12,760 --> 00:47:11,000

record it almost sounds from Talia

1122

00:47:14,650 --> 00:47:12,770

including people say hello in 50

1123

00:47:16,960 --> 00:47:14,660

different languages messages from the

1124

00:47:19,930 --> 00:47:16,970

Director General of the United Nations

1125

00:47:22,300 --> 00:47:19,940

from the US president the Soviet premier

1126  
00:47:24,940 --> 00:47:22,310  
people like that British Prime Minister

1127  
00:47:27,250 --> 00:47:24,950  
just saying oh those are the aliens lots

1128  
00:47:29,860 --> 00:47:27,260  
of sounds as well there's also this

1129  
00:47:31,900 --> 00:47:29,870  
disappear the cover which is put on

1130  
00:47:33,670 --> 00:47:31,910  
that's instructions in binary code

1131  
00:47:37,330 --> 00:47:33,680  
including the key to binary codes right

1132  
00:47:41,230 --> 00:47:37,340  
with the Arecibo message which is son

1133  
00:47:42,940 --> 00:47:41,240  
intended to instruct the aliens how to

1134  
00:47:45,580 --> 00:47:42,950  
build a record player to play on a

1135  
00:47:48,430 --> 00:47:45,590  
gramophone and it can hopefully if they

1136  
00:47:50,470 --> 00:47:48,440  
understand it and can't say they

1137  
00:47:52,240 --> 00:47:50,480  
designed this and Carl Sagan actually

1138  
00:47:54,460 --> 00:47:52,250

designed the Arecibo message as well

1139

00:48:00,340 --> 00:47:54,470

and these names have come up again but

1140

00:48:01,920 --> 00:48:00,350

it's open till now so we'll come back to

1141

00:48:04,480 --> 00:48:01,930

this subject very soon in the meantime

1142

00:48:05,860 --> 00:48:04,490

it's some books for sale there of those

1143

00:48:06,820 --> 00:48:05,870

are the books of the Roswell trilogy

1144

00:48:09,520 --> 00:48:06,830

that I've written which are all about

1145

00:48:12,610 --> 00:48:09,530

UFO crash retrievals now 51 things like

1146

00:48:14,290 --> 00:48:12,620

that in fictional form do let me know if

1147

00:48:15,550 --> 00:48:14,300

you want a copy you may put the other

1148

00:48:17,980 --> 00:48:15,560

copies it's a new one that's come out

1149

00:48:28,540 --> 00:48:17,990

since our last beam so thank you very

1150

00:48:58,440 --> 00:48:39,730

[Music]

1151

00:48:58,450 --> 00:49:02,380

yes

1152

00:49:02,390 --> 00:49:06,670

strengthen ideal flow description

1153

00:49:06,680 --> 00:49:10,180

it's not with

1154

00:49:10,190 --> 00:49:23,500

actually

1155

00:50:31,080 --> 00:49:41,160

[Music]

1156

00:50:37,600 --> 00:50:34,000

we talked about the need to communicate

1157

00:50:40,150 --> 00:50:37,610

with aliens and there was a fundamental

1158

00:50:41,530 --> 00:50:40,160

difficulty when it comes to dealing with

1159

00:50:42,910 --> 00:50:41,540

aliens and I think that difficulties

1160

00:50:46,960 --> 00:50:42,920

even bigger than a lot of the SETI

1161

00:50:49,900 --> 00:50:46,970

scientists realize because it's all

1162

00:50:52,990 --> 00:50:49,910

about communicating with beings without

1163

00:50:54,880 --> 00:50:53,000

using language this means you can't

1164

00:50:55,960 --> 00:50:54,890

speaking them and in any language we know

1165

00:50:58,990 --> 00:50:55,970

of you have to speak to them

1166

00:51:00,640 --> 00:50:59,000

symbolically now we do have mercy up to

1167

00:51:02,170 --> 00:51:00,650

a point that sucks because airports

1168

00:51:05,170 --> 00:51:02,180

you'll find that there are certain

1169

00:51:07,150 --> 00:51:05,180

symbols in science pictures pictographs

1170

00:51:09,610 --> 00:51:07,160

rather than words because you have a lot

1171

00:51:10,840 --> 00:51:09,620

of people in an airport speaking lots of

1172

00:51:11,230 --> 00:51:10,850

different languages from all over the

1173

00:51:14,230 --> 00:51:11,240

world

1174

00:51:16,030 --> 00:51:14,240

so from an example a picture of a plate

1175

00:51:18,670 --> 00:51:16,040

with the night and for beside it means

1176  
00:51:21,100 --> 00:51:18,680  
the cafeteria somebody can buy food into

1177  
00:51:24,520 --> 00:51:21,110  
a wineglass meter bar things like that

1178  
00:51:27,100 --> 00:51:24,530  
you see that at airports but until your

1179  
00:51:29,170 --> 00:51:27,110  
fellow humans how do you communicate

1180  
00:51:31,420 --> 00:51:29,180  
with beings that are not human that's

1181  
00:51:33,610 --> 00:51:31,430  
the difficult thing and as you see here

1182  
00:51:35,260 --> 00:51:33,620  
this is this attempt by Carl Sagan you

1183  
00:51:41,260 --> 00:51:35,270  
see on the cover of the government disk

1184  
00:51:43,300 --> 00:51:41,270  
on the Voyager probes is is how he

1185  
00:51:46,450 --> 00:51:43,310  
solved that problem we'll try to solve

1186  
00:51:49,330 --> 00:51:46,460  
it next slide please point here's

1187  
00:51:51,760 --> 00:51:49,340  
another image also designed by Carl

1188  
00:51:54,190 --> 00:51:51,770

Sagan this was a pioneer pros can we

1189

00:51:56,740 --> 00:51:54,200

have here is what's known as the pioneer

1190

00:51:58,510 --> 00:51:56,750

plaque so we have here it's similar to

1191

00:52:00,610 --> 00:51:58,520

the Arecibo message in many ways you

1192

00:52:03,070 --> 00:52:00,620

have a key at the top very top on the

1193

00:52:05,170 --> 00:52:03,080

left that is the hydrogen channel in

1194

00:52:08,440 --> 00:52:05,180

pictorial form in terms of diagram of

1195

00:52:11,380 --> 00:52:08,450

molecules these are two molecules with a

1196

00:52:15,700 --> 00:52:11,390

single atom single proton a single

1197

00:52:17,440 --> 00:52:15,710

electron which is what hydrogen is now

1198

00:52:19,270 --> 00:52:17,450

as you see the bottom here there is the

1199

00:52:20,920 --> 00:52:19,280

diagram of the solar system again like

1200

00:52:23,860 --> 00:52:20,930

the Arecibo message you can see there's

1201  
00:52:25,900 --> 00:52:23,870  
a long time from the third planet with a

1202  
00:52:29,470 --> 00:52:25,910  
picture there small picture graphic of

1203  
00:52:31,630 --> 00:52:29,480  
the actual spacecraft itself indicate an

1204  
00:52:33,550 --> 00:52:31,640  
arrow or they know that means it's

1205  
00:52:35,700 --> 00:52:33,560  
indicating that the crop that the craft

1206  
00:52:38,790 --> 00:52:35,710  
came from of that particular planet

1207  
00:52:42,420 --> 00:52:38,800  
you've done this star like structure

1208  
00:52:44,400 --> 00:52:42,430  
honor the on the left is actually a map

1209  
00:52:46,620 --> 00:52:44,410  
it's actually a map showing more ask

1210  
00:52:48,480 --> 00:52:46,630  
where the earth is but it is these lines

1211  
00:52:51,140 --> 00:52:48,490  
and sort of these lines here have run

1212  
00:52:53,610 --> 00:52:51,150  
the hydrogen coded numbers on them

1213  
00:52:56,820 --> 00:52:53,620

indicating distance and it's actually

1214

00:52:58,760 --> 00:52:56,830

the distance of the Earth to the nearest

1215

00:53:01,860 --> 00:52:58,770

pal starts the Pulsar discovered by

1216

00:53:05,730 --> 00:53:01,870

Jocelyn Bell Burnell who she thought

1217

00:53:09,960 --> 00:53:05,740

were she thought was a green mint

1218

00:53:11,970 --> 00:53:09,970

Susan Jocelyn Bell and you have here

1219

00:53:14,280 --> 00:53:11,980

this is this is interesting and you have

1220

00:53:17,910 --> 00:53:14,290

your picture of a large picture of the

1221

00:53:19,980 --> 00:53:17,920

spacecraft to human figures now you know

1222

00:53:22,350 --> 00:53:19,990

it's one of the human figures is doing

1223

00:53:24,510 --> 00:53:22,360

that with his hand now that is actually

1224

00:53:27,660 --> 00:53:24,520

the universal sign of friendship and

1225

00:53:29,010 --> 00:53:27,670

goodwill among humans and this is

1226

00:53:31,140 --> 00:53:29,020

literally everywhere in the world

1227

00:53:33,210 --> 00:53:31,150

wherever you go it's the same in all

1228

00:53:35,760 --> 00:53:33,220

cultures you can go to the middle of the

1229

00:53:37,440 --> 00:53:35,770

Amazon jungle and you can be tribes that

1230

00:53:39,810 --> 00:53:37,450

have never had any contact with the

1231

00:53:40,770 --> 00:53:39,820

outside world and you could hold your

1232

00:53:43,830 --> 00:53:40,780

hand up like that and they will

1233

00:53:45,330 --> 00:53:43,840

understand what that meant but we could

1234

00:53:49,050 --> 00:53:45,340

swipe further afield here than the

1235

00:53:51,800 --> 00:53:49,060

Amazon jungle I mean who knows how the

1236

00:53:54,570 --> 00:53:51,810

aliens would interpret that gesture

1237

00:53:58,620 --> 00:53:54,580

would it be awful if this somehow was

1238

00:54:00,150 --> 00:53:58,630

interpreted as a time line really really

1239

00:54:02,160 --> 00:54:00,160

could you tell us some kind of price of

1240

00:54:03,540 --> 00:54:02,170

silver and then only when the space was

1241

00:54:06,300 --> 00:54:03,550

irate Independence Day and I start

1242

00:54:07,800 --> 00:54:06,310

blowing up our cities we say we've done

1243

00:54:13,050 --> 00:54:07,810

this why are you doing it and wonder

1244

00:54:15,690 --> 00:54:13,060

when you sent us that is a slight

1245

00:54:16,920 --> 00:54:15,700

exaggeration but it's it is it has

1246

00:54:18,900 --> 00:54:16,930

traced the problem doesn't matter this

1247

00:54:19,800 --> 00:54:18,910

sort thing is actually quite risky you

1248

00:54:22,590 --> 00:54:19,810

don't know what you do not necessarily

1249

00:54:24,710 --> 00:54:22,600

what you're gonna sign so next one

1250

00:54:27,810 --> 00:54:24,720

please mine

1251

00:54:31,140 --> 00:54:27,820

now this is seriously this is called a

1252

00:54:32,850 --> 00:54:31,150

Louisville now this is Lulu more is an

1253

00:54:36,390 --> 00:54:32,860

actual interstellar object it's the

1254

00:54:39,330 --> 00:54:36,400

first interstellar object ever into the

1255

00:54:41,340 --> 00:54:39,340

solar system which has been universally

1256

00:54:43,050 --> 00:54:41,350

accepted as such in pass through the

1257

00:54:44,790 --> 00:54:43,060

solar system a couple years ago started

1258

00:54:48,870 --> 00:54:44,800

heading out into space yet to pass the

1259

00:54:50,700 --> 00:54:48,880

orbit of Saturn recently now this was

1260

00:54:53,010 --> 00:54:50,710

scanned there's no radio of nothing

1261

00:54:55,860 --> 00:54:53,020

radio light coming from it but it has

1262

00:54:57,720 --> 00:54:55,870

changed course and it shouldn't be doing

1263

00:55:00,420 --> 00:54:57,730

that it's actually is not obeying the

1264

00:55:02,160 --> 00:55:00,430

laws of orbital mechanics Kepler's laws

1265

00:55:03,810 --> 00:55:02,170

it's moving on to a different course

1266

00:55:06,300 --> 00:55:03,820

something than the astronomers are

1267

00:55:08,460 --> 00:55:06,310

currently scratching their heads

1268

00:55:10,200 --> 00:55:08,470

wondering how it's doing that there's a

1269

00:55:11,970 --> 00:55:10,210

local Abraham Lowe's it's very bravely

1270

00:55:14,280 --> 00:55:11,980

spoken how many says he thinks this is a

1271

00:55:16,020 --> 00:55:14,290

spaceship but they see mature known as

1272

00:55:19,110 --> 00:55:16,030

the Turner picture for obvious reasons

1273

00:55:22,110 --> 00:55:19,120

the mo is great speeds so it's about 10

1274

00:55:24,870 --> 00:55:22,120

it's about 3,000 feet long and about 300

1275

00:55:27,720 --> 00:55:24,880

feet across so it's very long and thin

1276

00:55:29,610 --> 00:55:27,730

it's a cigar-shaped object now this is

1277

00:55:31,080 --> 00:55:29,620

an artist depression no one knows what a

1278

00:55:32,610 --> 00:55:31,090

moveable it looks like no one's been

1279

00:55:34,230 --> 00:55:32,620

close enough to know what it looks like

1280

00:55:36,780 --> 00:55:34,240

they know what shape it is by analyzing

1281

00:55:39,120 --> 00:55:36,790

its orbit orbit rotation and how it

1282

00:55:40,980 --> 00:55:39,130

reflects the light it's only a speck of

1283

00:55:43,080 --> 00:55:40,990

light in the best telescope so this is a

1284

00:55:46,020 --> 00:55:43,090

completely this is a such this or rocky

1285

00:55:47,880 --> 00:55:46,030

natural look is a complete assumption on

1286

00:55:51,480 --> 00:55:47,890

the part of the artist it could very

1287

00:55:55,200 --> 00:55:51,490

easily be completely straight and almost

1288

00:55:57,540 --> 00:55:55,210

like the monolith in 2001 Space Odyssey

1289

00:55:59,400 --> 00:55:57,550

but is hanging out of the solar system

1290

00:56:01,610 --> 00:55:59,410

is changing course though I'm hoping

1291

00:56:04,590 --> 00:56:01,620

it'll totally run come back

1292

00:56:08,250 --> 00:56:04,600

that'll be undeniable next line please

1293

00:56:09,870 --> 00:56:08,260

with Mike right now we're going to play

1294

00:56:13,890 --> 00:56:09,880

another little video here now this is

1295

00:56:17,130 --> 00:56:13,900

some interesting this is a clip from a

1296

00:56:19,520 --> 00:56:17,140

TV show called UFO conspiracy road trip

1297

00:56:22,790 --> 00:56:19,530

produced by or anything

1298

00:56:24,830 --> 00:56:22,800

the BBC and it's basically a group of

1299

00:56:27,620 --> 00:56:24,840

UFO believers who have taken to meet a

1300

00:56:29,630 --> 00:56:27,630

SETI scientists this is an illustration

1301  
00:56:31,190 --> 00:56:29,640  
exactly what the setting experts think

1302  
00:56:33,290 --> 00:56:31,200  
of us his daughter says shots back

1303  
00:57:21,470 --> 00:56:33,300  
there's a search of treasure meant

1304  
00:57:32,030 --> 00:57:24,289  
yeah I know it's only rock topics every

1305  
00:57:52,250 --> 00:57:32,040  
time you add a volume button you know

1306  
01:00:20,620 --> 00:57:59,160  
[Music]

1307  
01:00:27,260 --> 01:00:24,110  
thousand there's a limit on how bad TV

1308  
01:00:30,680 --> 01:00:27,270  
program people accident that's a serious

1309  
01:00:32,740 --> 01:00:30,690  
conspiracy a road trip UFO for the BBC

1310  
01:00:35,150 --> 01:00:32,750  
now you may notice truly disgusting

1311  
01:00:36,860 --> 01:00:35,160  
Brigitte the UFO witness who I know I

1312  
01:00:38,330 --> 01:00:36,870  
know the right way and I know that she's

1313  
01:00:40,580 --> 01:00:38,340

been completely misrepresented in that

1314

01:00:44,600 --> 01:00:40,590

program i order not to go on the show

1315

01:00:46,240 --> 01:00:44,610

actually and said a sauce to know so the

1316

01:00:50,240 --> 01:00:46,250

your camera key to cut in between

1317

01:00:52,010 --> 01:00:50,250

different shots that's anything that is

1318

01:00:55,430 --> 01:00:52,020

not the discussion that they actually

1319

01:00:58,040 --> 01:00:55,440

had that is that the very carefully

1320

01:00:59,750 --> 01:00:58,050

edited interaction she's not necessarily

1321

01:01:02,570 --> 01:00:59,760

implying the things that he says and

1322

01:01:05,240 --> 01:01:02,580

vice-versa is that the whole point is to

1323

01:01:09,200 --> 01:01:05,250

try and misrepresent the entire UFO

1324

01:01:10,940 --> 01:01:09,210

issue renegade pictures actually

1325

01:01:12,560 --> 01:01:10,950

approached me and asked me if i wanted

1326

01:01:13,109 --> 01:01:12,570

to take part in this series of such a

1327

01:01:15,299 --> 01:01:13,119

three

1328

01:01:18,539 --> 01:01:15,309

service economy with one they wanted me

1329

01:01:19,920 --> 01:01:18,549

to be in they said then Jonathan baby on

1330

01:01:21,269 --> 01:01:19,930

this really wonderful new series we're

1331

01:01:23,009 --> 01:01:21,279

exploring these strengths do you think

1332

01:01:31,309 --> 01:01:23,019

that we want honest people who come on I

1333

01:01:37,829 --> 01:01:34,950

yes another video I'll tell you a video

1334

01:01:41,819 --> 01:01:37,839

is very interesting diseases so some

1335

01:01:47,420 --> 01:01:41,829

types of Carl Sagan on TV so watch of

1336

01:01:47,430 --> 01:02:04,710

[Laughter]

1337

01:03:19,470 --> 01:02:49,570

[Music]

1338

01:03:29,830 --> 01:03:26,100

doesn't have to be something else like

1339

01:03:32,020 --> 01:03:29,840

refracted image or cleanse the entry our

1340

01:03:39,640 --> 01:03:32,030

satellite so our psychological

1341

01:03:41,410 --> 01:03:39,650

aberrations some physical evidence till

1342

01:03:43,870 --> 01:03:41,420

close-up photograph of a strange

1343

01:05:11,110 --> 01:03:43,880

spacecraft or a small device of

1344

01:05:30,180 --> 01:05:16,940

hesitation means coming to the store

1345

01:05:36,690 --> 01:05:33,940

that's in three separate tips from Carl

1346

01:05:38,860 --> 01:05:36,700

Sagan taking different times in his life

1347

01:05:40,630 --> 01:05:38,870

the first one was from CPC has

1348

01:05:42,670 --> 01:05:40,640

cosmonauts which apart from that is

1349

01:05:44,410 --> 01:05:42,680

actually quite a good series and it was

1350

01:05:45,970 --> 01:05:44,420

the cosmos update which you made ten

1351

01:05:47,950 --> 01:05:45,980

years after that evening the other

1352

01:05:50,290 --> 01:05:47,960

ninety-two ten years after the original

1353

01:05:52,300 --> 01:05:50,300

cosmos series and then the final tip

1354

01:05:55,810 --> 01:05:52,310

where he said sitting it's the James

1355

01:05:57,760 --> 01:05:55,820

Bond bag died there was his use when he

1356

01:06:02,020 --> 01:05:57,770

sometime in the 60s that would have been

1357

01:06:03,760 --> 01:06:02,030

or the seventies maybe he'd ever changed

1358

01:06:08,290 --> 01:06:03,770

his position on the subject the whole

1359

01:06:10,870 --> 01:06:08,300

time it's not possible for someone of

1360

01:06:13,170 --> 01:06:10,880

his obvious intelligence not to

1361

01:06:16,480 --> 01:06:13,180

understand that when he said his false

1362

01:06:19,150 --> 01:06:16,490

what's more I was promised a ball was

1363

01:06:22,410 --> 01:06:19,160

discovered he had created the price a

1364

01:06:24,970 --> 01:06:22,420

Russian road to the TV series dark skies

1365

01:06:27,930 --> 01:06:24,980

there's a reason to think the car

1366

01:06:31,330 --> 01:06:27,940

sailing was approached by the government

1367

01:06:34,300 --> 01:06:31,340

and told to take this line about UFOs

1368

01:06:36,610 --> 01:06:34,310

he's persuaded somehow in the TV series

1369

01:06:39,640 --> 01:06:36,620

dark skies as a fictionalization similar

1370

01:06:43,240 --> 01:06:39,650

to my own books he's a fictional my the

1371

01:06:45,580 --> 01:06:43,250

real-life possible scenario and it

1372

01:06:47,740 --> 01:06:45,590

appears that ii was told the truth about

1373

01:06:50,410 --> 01:06:47,750

the UFOs and told that the necessity for

1374

01:06:52,180 --> 01:06:50,420

covering it up for the stability of

1375

01:06:55,030 --> 01:06:52,190

society which i'll come on to in a

1376  
01:06:56,170 --> 01:06:55,040  
minute but so you notice what he must

1377  
01:06:56,530 --> 01:06:56,180  
have known that what he's saying is

1378  
01:06:59,050 --> 01:06:56,540  
false

1379  
01:07:01,150 --> 01:06:59,060  
apparently he was originally before name

1380  
01:07:03,400 --> 01:07:01,160  
fame was quite keen on ufos when he

1381  
01:07:05,650 --> 01:07:03,410  
became famous that became was on TV all

1382  
01:07:08,140 --> 01:07:05,660  
the common the last when his line

1383  
01:07:11,560 --> 01:07:08,150  
changed they changed very suddenly and

1384  
01:07:19,600 --> 01:07:11,570  
it changed very radically next one came

1385  
01:07:21,550 --> 01:07:19,610  
like veneer he is mr. Sethi himself the

1386  
01:07:24,740 --> 01:07:21,560  
the assistant man who says he's the

1387  
01:07:27,740 --> 01:07:24,750  
loudest voice of all in all history

1388  
01:07:31,340 --> 01:07:27,750

said the universe is teeming the life

1389

01:07:34,100 --> 01:07:31,350

it's everywhere everywhere at set here

1390

01:07:36,080 --> 01:07:34,110

where the only life is human there's

1391

01:07:37,580 --> 01:07:36,090

some kind of wall built is also as a

1392

01:07:39,860 --> 01:07:37,590

wall built around the earth through it

1393

01:07:42,410 --> 01:07:39,870

only humans can live on earth and

1394

01:07:44,000 --> 01:07:42,420

everything else around us with all the

1395

01:07:45,170 --> 01:07:44,010

other life forms oh he's desperately

1396

01:07:48,710 --> 01:07:45,180

trying to mimic a man radio

1397

01:07:51,590 --> 01:07:48,720

transmissions it somehow separated from

1398

01:07:53,180 --> 01:07:51,600

us even as I say they themselves may be

1399

01:07:56,780 --> 01:07:53,190

more touched scientifically advanced and

1400

01:08:00,340 --> 01:07:56,790

we ourselves are developing space

1401

01:08:04,160 --> 01:08:00,350

properties we could go and visit them

1402

01:08:05,750 --> 01:08:04,170

the contradiction that the double

1403

01:08:08,210 --> 01:08:05,760

fingers talked about we'll call it

1404

01:08:11,750 --> 01:08:08,220

within his plans mind can't be

1405

01:08:13,340 --> 01:08:11,760

accidental he has to know something of

1406

01:08:17,749 --> 01:08:13,350

the truths maybe he has to be lying in

1407

01:08:20,090 --> 01:08:17,759

my opinion next why delay might now that

1408

01:08:24,470 --> 01:08:20,100

we told another issue is what's known as

1409

01:08:26,300 --> 01:08:24,480

Fermi's paradox or the great silence and

1410

01:08:28,370 --> 01:08:26,310

this is the conundrum oh it's not

1411

01:08:32,360 --> 01:08:28,380

redundant but it sees its call of the

1412

01:08:34,280 --> 01:08:32,370

dungeon which is the universe really is

1413

01:08:36,800 --> 01:08:34,290

teeming with life and some of the other

1414

01:08:39,620 --> 01:08:36,810

planets were a lot older than us the

1415

01:08:41,150 --> 01:08:39,630

question is why are they here the system

1416

01:08:43,010 --> 01:08:41,160

the reconfirming who was a famous

1417

01:08:44,420 --> 01:08:43,020

affinities a famous physicist and also

1418

01:08:45,740 --> 01:08:44,430

he came up with this idea because of

1419

01:08:46,280 --> 01:08:45,750

course this was called the Fermi's

1420

01:08:48,680 --> 01:08:46,290

paradox

1421

01:08:50,269 --> 01:08:48,690

next slide please Mike we are the

1422

01:08:52,789 --> 01:08:50,279

Australian base you have the earth you

1423

01:08:54,349 --> 01:08:52,799

know an older planet which is like three

1424

01:08:56,390 --> 01:08:54,359

point four six billion years old as

1425

01:08:58,910 --> 01:08:56,400

there's more advanced life on that

1426

01:09:00,769 --> 01:08:58,920

planet and they come forward to the

1427

01:09:02,539 --> 01:09:00,779

present day many questions will warranty

1428

01:09:04,670 --> 01:09:02,549

reached us it says this is the question

1429

01:09:07,970 --> 01:09:04,680

I was asking earlier more in a one-word

1430

01:09:10,820 --> 01:09:07,980

ways the law says they can't be here on

1431

01:09:11,930 --> 01:09:10,830

time I reach this and what why are they

1432

01:09:14,570 --> 01:09:11,940

not here why I thought they never

1433

01:09:16,430 --> 01:09:14,580

resupplies when we stick antennas power

1434

01:09:19,169 --> 01:09:16,440

into the cosmos we had nothing but

1435

01:09:21,720 --> 01:09:19,179

natural radiation nothing

1436

01:09:26,550 --> 01:09:21,730

at all so the question is days the

1437

01:09:31,140 --> 01:09:26,560

question where are they why would they

1438

01:09:32,880 --> 01:09:31,150

not come here next one came to mind when

1439

01:09:39,019 --> 01:09:32,890

he answer to Fermi's paradox the great

1440

01:09:43,919 --> 01:09:41,490

these photographs these two photographs

1441

01:09:45,450 --> 01:09:43,929

of the wondered one of the bottom of the

1442

01:09:47,550 --> 01:09:45,460

monitor I am absolutely certain are

1443

01:09:49,349 --> 01:09:47,560

genuine they serve craft which I think

1444

01:09:51,990 --> 01:09:49,359

that no of this earth and nothing random

1445

01:09:53,669 --> 01:09:52,000

anything not theirs we think these are

1446

01:09:56,550 --> 01:09:53,679

not produced by humans they're very

1447

01:09:57,720 --> 01:09:56,560

advanced whether they come from the

1448

01:09:59,430 --> 01:09:57,730

truth of the matter is all this life

1449

01:10:00,990 --> 01:09:59,440

that's how the universe is coming here

1450

01:10:03,770 --> 01:10:01,000

it is here it's just because they're not

1451

01:10:06,840 --> 01:10:03,780

been anything like we expect them to

1452

01:10:08,820 --> 01:10:06,850

transmitting on the hydrogen line coming

1453

01:10:10,860 --> 01:10:08,830

down on the White House lawn saying take

1454

01:10:14,070 --> 01:10:10,870

me to your leader and perfectly accented

1455

01:10:19,260 --> 01:10:14,080

Hollywood English does not mean they're

1456

01:10:21,000 --> 01:10:19,270

not real next slide please mind we want

1457

01:10:23,750 --> 01:10:21,010

to crop circles now these are very

1458

01:10:26,640 --> 01:10:23,760

interesting this is an idea this is

1459

01:10:28,500 --> 01:10:26,650

again this is a big question people say

1460

01:10:30,149 --> 01:10:28,510

well one of the owners don't if they

1461

01:10:32,669 --> 01:10:30,159

find out here from their distant planets

1462

01:10:35,459 --> 01:10:32,679

they do nothing instead they just make a

1463

01:10:38,720 --> 01:10:35,469

few marks in in a cornfield they abduct

1464

01:10:40,740 --> 01:10:38,730

a couple of wine or some yokels and

1465

01:10:43,050 --> 01:10:40,750

rotten other things like that when they

1466

01:10:45,810 --> 01:10:43,060

let them go and they go home why they do

1467

01:10:47,790 --> 01:10:45,820

no morning would they do that

1468

01:10:49,860 --> 01:10:47,800

and the thing is the answer that

1469

01:10:52,020 --> 01:10:49,870

question is not why would they do it is

1470

01:10:54,750 --> 01:10:52,030

this is well they saw what people really

1471

01:10:58,080 --> 01:10:54,760

mean is if I mean was we finally went to

1472

01:11:00,270 --> 01:10:58,090

another planet I would not do that but

1473

01:11:01,680 --> 01:11:00,280

that's answered the wall fighting when

1474

01:11:03,209 --> 01:11:01,690

essentially putting ourselves in the

1475

01:11:06,400 --> 01:11:03,219

aliens position this is one all think

1476

01:11:12,890 --> 01:11:09,710

this is where we come on to the last

1477

01:11:15,830 --> 01:11:12,900

factor of the Drake Equation FM which is

1478

01:11:18,440 --> 01:11:15,840

missing if M stands for mindset it's not

1479

01:11:20,420 --> 01:11:18,450

just the creases that revolve control

1480

01:11:22,160 --> 01:11:20,430

electromagnetic relation can communicate

1481

01:11:24,770 --> 01:11:22,170

what proportion of those that can

1482

01:11:27,350 --> 01:11:24,780

communicate have the mindset to do so in

1483

01:11:29,060 --> 01:11:27,360

other words they think might us we

1484

01:11:30,710 --> 01:11:29,070

shouldn't put ourselves in the aliens

1485

01:11:33,950 --> 01:11:30,720

shoes over we can't do that even

1486

01:11:35,450 --> 01:11:33,960

effective two feet but this is an

1487

01:11:38,270 --> 01:11:35,460

example on tour now this is an amazing

1488

01:11:40,280 --> 01:11:38,280

image here it's it's like the old

1489

01:11:41,480 --> 01:11:40,290

dot-matrix images of music labels you

1490

01:11:43,640 --> 01:11:41,490

don't you have to look at it from a

1491

01:11:46,730 --> 01:11:43,650

distance and things maybe blur your eyes

1492

01:11:48,200 --> 01:11:46,740

a little bit just to see in how the

1493

01:11:51,130 --> 01:11:48,210

light plays it looks like a human face

1494

01:11:56,390 --> 01:11:51,140

it appears in a field in Hampshire in

1495

01:11:57,770 --> 01:11:56,400

2001 this presentation the whole earth

1496

01:11:59,480 --> 01:11:57,780

and someone came up to me said then I

1497

01:12:00,890 --> 01:11:59,490

know who makes these circles it's

1498

01:12:02,570 --> 01:12:00,900

alright that these were made by people I

1499

01:12:06,410 --> 01:12:02,580

know that I said well how do you know or

1500

01:12:08,210 --> 01:12:06,420

they told me they prove that they

1501

01:12:09,770 --> 01:12:08,220

confess think they did at home but if

1502

01:12:12,620 --> 01:12:09,780

they never admit it because I think they

1503

01:12:15,620 --> 01:12:12,630

arrested by the place and I said well

1504

01:12:17,390 --> 01:12:15,630

how do you know they did it and see I've

1505

01:12:18,410 --> 01:12:17,400

actually had to I don't think we make

1506

01:12:20,390 --> 01:12:18,420

these things of planks

1507

01:12:23,030 --> 01:12:20,400

no couple people well when this bit of

1508

01:12:25,640 --> 01:12:23,040

3d box image crop circle table works um

1509

01:12:28,550 --> 01:12:25,650

two different crop circle teams

1510

01:12:30,890 --> 01:12:28,560

confessed to making it see but one of

1511

01:12:33,260 --> 01:12:30,900

them's lying or both of them are a crop

1512

01:12:35,300 --> 01:12:33,270

circle makers can tell lies too and the

1513

01:12:37,970 --> 01:12:35,310

hundreds that panel a hypothesis is a

1514

01:12:40,580 --> 01:12:37,980

claim they can be falsified this image

1515

01:12:43,490 --> 01:12:40,590

is most incredible piece of work

1516

01:12:47,360 --> 01:12:43,500

whoever did it it's very amazing thing

1517

01:12:49,250 --> 01:12:47,370

now on the next one do you mind now what

1518

01:12:51,710 --> 01:12:49,260

you just a few days after that image

1519

01:12:54,740 --> 01:12:51,720

appear that this one did in the same

1520

01:12:55,250 --> 01:12:54,750

field now on this is this design look

1521

01:12:57,500 --> 01:12:55,260

familiar

1522

01:13:00,470 --> 01:12:57,510

is it does you see this before you next

1523

01:13:03,230 --> 01:13:00,480

slide please mind I think there they are

1524

01:13:05,390 --> 01:13:03,240

so close together the face and the

1525

01:13:06,740 --> 01:13:05,400

Arecibo message just next to each other

1526

01:13:09,320 --> 01:13:06,750

in the same feels to cut the days of

1527

01:13:11,990 --> 01:13:09,330

power next slide please point and here

1528

01:13:12,660 --> 01:13:12,000

we have in the Arecibo message just just

1529

01:13:15,240 --> 01:13:12,670

like it was

1530

01:13:20,570 --> 01:13:15,250

the Arecibo Observatory in November 1974

1531

01:13:22,230 --> 01:13:20,580

is Peterman field or take a closer look

1532

01:13:23,640 --> 01:13:22,240

it's not is it

1533

01:13:25,470 --> 01:13:23,650

it's different do you remember the first

1534

01:13:29,280 --> 01:13:25,480

one do you know the one that was said

1535

01:13:30,870 --> 01:13:29,290

about Shiva it it's a bit different I

1536

01:13:33,870 --> 01:13:30,880

said that so the first thing the topic

1537

01:13:36,690 --> 01:13:33,880

is exactly the same the binary code site

1538

01:13:38,340 --> 01:13:36,700

at the prime of the key now you come

1539

01:13:40,320 --> 01:13:38,350

down to the DNA molecule it's very

1540

01:13:42,270 --> 01:13:40,330

different it's not quite exactly the

1541

01:13:44,010 --> 01:13:42,280

same is there's not DNA as we know it

1542

01:13:46,560 --> 01:13:44,020

it's something similar but it's slightly

1543

01:13:47,970 --> 01:13:46,570

different differently structure someone

1544

01:13:50,670 --> 01:13:47,980

has to know an awful lot of part of

1545

01:13:52,530 --> 01:13:50,680

biochemistry to produce this to actually

1546

01:13:54,810 --> 01:13:52,540

invent something like this and look at

1547

01:13:57,060 --> 01:13:54,820

the figure that's a figure that's not

1548

01:13:59,760 --> 01:13:57,070

human it is not there

1549

01:14:02,970 --> 01:13:59,770

big head large eyes small stature is a

1550

01:14:05,040 --> 01:14:02,980

brain on the left you can see there's a

1551

01:14:06,870 --> 01:14:05,050

different number and they're smaller

1552

01:14:08,370 --> 01:14:06,880

there's different none of them but look

1553

01:14:11,430 --> 01:14:08,380

at the solar system diagram here we have

1554

01:14:13,020 --> 01:14:11,440

the Sun they all the star and three of

1555

01:14:15,000 --> 01:14:13,030

the planets are raised up but what's

1556

01:14:17,490 --> 01:14:15,010

modest this group of four which point

1557

01:14:19,800 --> 01:14:17,500

you might refer to a group of moons

1558

01:14:21,900 --> 01:14:19,810

around against giant or something but

1559

01:14:23,220 --> 01:14:21,910

these creatures live on for three

1560

01:14:25,380 --> 01:14:23,230

different planets of their solar system

1561

01:14:27,390 --> 01:14:25,390

so they're different from only live on

1562

01:14:29,220 --> 01:14:27,400

one other thing at the bottom is you

1563

01:14:31,110 --> 01:14:29,230

decipher what the purple think the

1564

01:14:33,150 --> 01:14:31,120

bottom I don't know what that is but so

1565

01:14:36,600 --> 01:14:33,160

probably another crop circle appeared

1566

01:14:38,970 --> 01:14:36,610

very close to the location of the appear

1567

01:14:40,980 --> 01:14:38,980

this particular crop circle and it was a

1568

01:14:44,790 --> 01:14:40,990

more complicated version of that next

1569

01:14:48,210 --> 01:14:44,800

slide please Mike disappeared the fourth

1570

01:14:50,130 --> 01:14:48,220

year in 2002 in the same field in

1571

01:14:52,080 --> 01:14:50,140

Hampshire this is one of the most

1572

01:14:54,210 --> 01:14:52,090

remarkable crop circles ever seen

1573

01:14:56,820 --> 01:14:54,220

first you have another amazing dominant

1574

01:14:58,950 --> 01:14:56,830

matrix image of a grey alien actually

1575

01:15:01,080 --> 01:14:58,960

looks like a war a more detailed picture

1576

01:15:05,370 --> 01:15:01,090

whether the simple more figure on that

1577

01:15:07,710 --> 01:15:05,380

on the Arecibo decline it's as if we ask

1578

01:15:10,100 --> 01:15:07,720

the Arecibo message was sent someone out

1579

01:15:12,050 --> 01:15:10,110

there so now let's not make them wait 50

1580

01:15:14,990 --> 01:15:12,060

that's the point we're now in our own

1581

01:15:16,760 --> 01:15:15,000

way it's that they knew we sent that

1582

01:15:19,490 --> 01:15:16,770

message because they're closest to the

1583

01:15:20,840 --> 01:15:19,500

earth or made them the m30 galaxy and

1584

01:15:22,880 --> 01:15:20,850

all this s we'll find out we're going to

1585

01:15:28,130 --> 01:15:22,890

apply our own work we can reply the way

1586

01:15:29,720 --> 01:15:28,140

we do not the way these humans do but a

1587

01:15:31,010 --> 01:15:29,730

circular structure is raised because

1588

01:15:33,080 --> 01:15:31,020

there's actually a message in there in

1589

01:15:35,980 --> 01:15:33,090

there in code if it's a nasty to code

1590

01:15:38,600 --> 01:15:35,990

that's used which is a note of Unicode

1591

01:15:42,920 --> 01:15:38,610

now it's amazing it's all perfect not

1592

01:15:47,840 --> 01:15:42,930

one mistake was made on this next slide

1593

01:15:50,630 --> 01:15:47,850

please Mike all these images I just

1594

01:15:53,450 --> 01:15:50,640

showed you appeared in one film farmer's

1595

01:15:56,600 --> 01:15:53,460

field the field is next to this the

1596

01:15:58,880 --> 01:15:56,610

Chilbolton radio observe the truth this

1597

01:16:02,030 --> 01:15:58,890

particular Observatory has been a key

1598

01:16:05,570 --> 01:16:02,040

node in the setting Network and has been

1599

01:16:09,260 --> 01:16:05,580

used to listen for creatures from other

1600

01:16:11,270 --> 01:16:09,270

planets and maybe as I said the aliens

1601  
01:16:12,740 --> 01:16:11,280  
main might well want to communicate with

1602  
01:16:14,150 --> 01:16:12,750  
us what we make transmissions out into

1603  
01:16:16,940 --> 01:16:14,160  
the universe but they may not want to

1604  
01:16:18,620 --> 01:16:16,950  
communicate the way we expect them to or

1605  
01:16:22,970 --> 01:16:18,630  
warmint it they may want to mutate in

1606  
01:16:24,410 --> 01:16:22,980  
the same way next slide please mind mr.

1607  
01:16:25,040 --> 01:16:24,420  
Thomas McKenna how many of you heard of

1608  
01:16:28,430 --> 01:16:25,050  
this guy

1609  
01:16:30,530 --> 01:16:28,440  
he caught he's well-known he's a he's a

1610  
01:16:32,660 --> 01:16:30,540  
brilliant man she's Craig Wright a great

1611  
01:16:34,550 --> 01:16:32,670  
orator he their speeches he does online

1612  
01:16:36,440 --> 01:16:34,560  
as hundreds of hours speeches he talked

1613  
01:16:38,120 --> 01:16:36,450

like ten times as long as I have this

1614

01:16:41,390 --> 01:16:38,130

evening and he's very very interesting

1615

01:16:44,720 --> 01:16:41,400

indeed and he was a big critic aesthetic

1616

01:16:46,220 --> 01:16:44,730

he said there's a search for axis

1617

01:16:48,560 --> 01:16:46,230

Russell intelligence was rather like

1618

01:16:51,980 --> 01:16:48,570

pointing at us code of the sky expecting

1619

01:16:54,350 --> 01:16:51,990

to see an Italian restaurant as I swiped

1620

01:16:56,450 --> 01:16:54,360

that's overstating is someone by another

1621

01:17:00,650 --> 01:16:56,460

point he's making he's making the same

1622

01:17:02,900 --> 01:17:00,660

point I was about FM we dealing with a

1623

01:17:05,690 --> 01:17:02,910

far more difficult communication problem

1624

01:17:08,390 --> 01:17:05,700

when we originally thought it's not as

1625

01:17:09,050 --> 01:17:08,400

simple and even even something might say

1626

01:17:11,150 --> 01:17:09,060

another

1627

01:17:13,460 --> 01:17:11,160

thirdly that there was a challenge of

1628

01:17:15,260 --> 01:17:13,470

communication in our language but it's

1629

01:17:17,180 --> 01:17:15,270

much worse that's a communication with

1630

01:17:19,370 --> 01:17:17,190

that psychology is so different from

1631

01:17:20,930 --> 01:17:19,380

ours we may not even be able to

1632

01:17:22,490 --> 01:17:20,940

understand it we have trouble

1633

01:17:24,980 --> 01:17:22,500

communicating with other species of our

1634

01:17:26,600 --> 01:17:24,990

planet I mean if you have a dog for

1635

01:17:28,160 --> 01:17:26,610

example or another pet there is a

1636

01:17:30,560 --> 01:17:28,170

limited amount of communication between

1637

01:17:32,360 --> 01:17:30,570

the two of you if a dog gets hungry I'll

1638

01:17:33,530 --> 01:17:32,370

let you know if someone comes to my

1639

01:17:35,480 --> 01:17:33,540

house he doesn't want to kill it you

1640

01:17:38,390 --> 01:17:35,490

know if you want to go for a walk away

1641

01:17:40,010 --> 01:17:38,400

you know but ever so every so often the

1642

01:17:41,020 --> 01:17:40,020

dog will do something everyone's got a

1643

01:17:43,430 --> 01:17:41,030

dog I'm sure you've had this experience

1644

01:17:44,450 --> 01:17:43,440

he'll do something you look everything

1645

01:17:47,240 --> 01:17:44,460

why is he doing that

1646

01:17:51,650 --> 01:17:47,250

he knows he's your dog we don't were

1647

01:17:53,030 --> 01:17:51,660

human as for when it cut this small

1648

01:17:55,130 --> 01:17:53,040

companies hurting he's trying to turn

1649

01:17:57,620 --> 01:17:55,140

communicate with dolphins and she sort

1650

01:18:00,260 --> 01:17:57,630

of understood this quite a lot when you

1651  
01:18:02,330 --> 01:18:00,270  
walk world and you go to complete alien

1652  
01:18:06,830 --> 01:18:02,340  
creature that has evolved with the very

1653  
01:18:10,570 --> 01:18:06,840  
basic primeval soup into a multi-organ

1654  
01:18:12,680 --> 01:18:10,580  
on old multicells intelligent organism

1655  
01:18:14,390 --> 01:18:12,690  
the question is we may be a position

1656  
01:18:15,020 --> 01:18:14,400  
where communication will be extremely

1657  
01:18:18,050 --> 01:18:15,030  
difficult

1658  
01:18:21,710 --> 01:18:18,060  
next slide please party how many of you

1659  
01:18:24,050 --> 01:18:21,720  
see this film a rival are good as your

1660  
01:18:26,180 --> 01:18:24,060  
people you also you see if you love your

1661  
01:18:27,650 --> 01:18:26,190  
foes you love this this is a very recent

1662  
01:18:29,840 --> 01:18:27,660  
movie but it's a breakthrough the ones

1663  
01:18:32,000 --> 01:18:29,850

anything different movies vary a lot in

1664

01:18:34,340 --> 01:18:32,010

technical quality intellectual content

1665

01:18:36,470 --> 01:18:34,350

this one scores very high on both maxes

1666

01:18:39,110 --> 01:18:36,480

it's probably the best thing innovative

1667

01:18:40,910 --> 01:18:39,120

movie I've ever seen it is about whether

1668

01:18:42,230 --> 01:18:40,920

it's basically spaceships come down to

1669

01:18:44,300 --> 01:18:42,240

earth from another world and there's

1670

01:18:46,550 --> 01:18:44,310

lots of panic and no one knows what to

1671

01:18:49,000 --> 01:18:46,560

do and they send a linguist it and to

1672

01:18:51,770 --> 01:18:49,010

try and learn communicate with them and

1673

01:18:53,900 --> 01:18:51,780

just dislike their language is just so

1674

01:18:59,570 --> 01:18:53,910

difficult just working out what they

1675

01:19:01,820 --> 01:18:59,580

mean it's just done it's just it's just

1676

01:19:04,940 --> 01:19:01,830

really really the trickiness it's a

1677

01:19:08,870 --> 01:19:04,950

people who made this film understand the

1678

01:19:11,000 --> 01:19:08,880

point I'm making here indeed we see

1679

01:19:12,709 --> 01:19:11,010

people are crying encounters with UFOs

1680

01:19:14,390 --> 01:19:12,719

and aliens people who are contactees in

1681

01:19:16,160 --> 01:19:14,400

the abductees though you've reported

1682

01:19:17,660 --> 01:19:16,170

this they've reported that they have

1683

01:19:19,580 --> 01:19:17,670

taken part in communication in these

1684

01:19:21,320 --> 01:19:19,590

preachers but even so there is

1685

01:19:26,680 --> 01:19:21,330

misunderstanding a lot is lost in

1686

01:19:32,030 --> 01:19:26,690

translation next like this point so

1687

01:19:33,950 --> 01:19:32,040

anyone spot the hidden message yeah if

1688

01:19:36,830 --> 01:19:33,960

the point the wrong way leads what's

1689

01:19:38,810 --> 01:19:36,840

what it is this is this is actually a

1690

01:19:40,189 --> 01:19:38,820

photograph of the County chomsky Very

1691

01:19:43,129 --> 01:19:40,199

Large Array which I showed you earlier

1692

01:19:44,660 --> 01:19:43,139

taken at sunset these telescopes are

1693

01:19:47,060 --> 01:19:44,670

pointing to to clean up into their

1694

01:19:49,310 --> 01:19:47,070

evidence of waiting waiting for a call

1695

01:19:52,100 --> 01:19:49,320

waiting for some kind of communication

1696

01:19:54,229 --> 01:19:52,110

from someone out there but the song is

1697

01:19:56,930 --> 01:19:54,239

already there look there's a flying

1698

01:19:58,970 --> 01:19:56,940

saucer right behind them it's in it's on

1699

01:20:02,240 --> 01:19:58,980

our planet it's just hovering above the

1700

01:20:04,220 --> 01:20:02,250

observatory and they're ignoring you the

1701

01:20:08,720 --> 01:20:04,230

only the antennae are all pointing the

1702

01:20:11,390 --> 01:20:08,730

other way and that is that is a portrait

1703

01:20:13,580 --> 01:20:11,400

of this conundrum I'm talking about this

1704

01:20:15,260 --> 01:20:13,590

evening this is division between ufology

1705

01:20:19,490 --> 01:20:15,270

and the search for suppressing

1706

01:20:22,540 --> 01:20:19,500

intelligence it's like these mines right

1707

01:20:27,020 --> 01:20:22,550

this is a big hall been waiting for

1708

01:20:29,180 --> 01:20:27,030

conspiracy and coverup expose this is

1709

01:20:33,290 --> 01:20:29,190

there some kind of conspiracy is there

1710

01:20:34,160 --> 01:20:33,300

some kind of government intervention to

1711

01:20:37,220 --> 01:20:34,170

cover this up

1712

01:20:39,200 --> 01:20:37,230

and indeed maybe we have got signals

1713

01:20:40,760 --> 01:20:39,210

from space and the government on telling

1714

01:20:42,800 --> 01:20:40,770

us about the maintenance name is suppose

1715

01:20:44,060 --> 01:20:42,810

maybe SETI it's been suppressed as so

1716

01:20:47,180 --> 01:20:44,070

morning that things like gossip are

1717

01:20:48,740 --> 01:20:47,190

being suppressed and we can expect in

1718

01:20:50,300 --> 01:20:48,750

India we can anticipate this off

1719

01:20:51,169 --> 01:20:50,310

theoretical grounds next slide please

1720

01:20:55,640 --> 01:20:51,179

them

1721

01:20:57,680 --> 01:20:55,650

what now all this is this is basically

1722

01:20:59,419 --> 01:20:57,690

the pointless deep acid is making a base

1723

01:21:03,500 --> 01:20:59,429

in a different kind of what he says here

1724

01:21:04,910 --> 01:21:03,510

in this article but it's actually oh

1725

01:21:06,470 --> 01:21:04,920

sorry this is the actual article he's

1726

01:21:08,629 --> 01:21:06,480

criticizing see this is from the

1727

01:21:10,550 --> 01:21:08,639

life-size no signs of aliens in the

1728

01:21:12,350 --> 01:21:10,560

closest 1300 stars

1729

01:21:15,020 --> 01:21:12,360

hunt funded by russian billionaire

1730

01:21:18,740 --> 01:21:15,030

the breakthrough Nissen project by yuri

1731

01:21:19,939 --> 01:21:18,750

milner now on 1300 stars is not very

1732

01:21:21,770 --> 01:21:19,949

much it's very close to the others

1733

01:21:23,149 --> 01:21:21,780

within a hundred light years or so

1734

01:21:24,979 --> 01:21:23,159

doesn't everybody more to see

1735

01:21:27,410 --> 01:21:24,989

but Steve Wright Senator Steve Bassett

1736

01:21:29,600 --> 01:21:27,420

was written an article in GST passage of

1737

01:21:33,320 --> 01:21:29,610

the paralysis burger it's good maybe

1738

01:21:35,570 --> 01:21:33,330

good speaker he's a good guy he has said

1739

01:21:39,320 --> 01:21:35,580

they see the whole SETI project was

1740

01:21:41,629 --> 01:21:39,330

designed to divert much people's

1741

01:21:44,060 --> 01:21:41,639

attention away from UFO specifically by

1742

01:21:46,850 --> 01:21:44,070

the government that's what he calls the

1743

01:21:48,620 --> 01:21:46,860

truth her mother was funding a lot of

1744

01:21:51,890 --> 01:21:48,630

attention a lot of media coverage Carl

1745

01:21:57,020 --> 01:21:51,900

Sagan promoting it knowing full well

1746

01:21:59,689 --> 01:21:57,030

there are UFOs and Stan Freeman a great

1747

01:22:01,790 --> 01:21:59,699

Stanton T Friedman had passed away he

1748

01:22:05,080 --> 01:22:01,800

said sat east of silly effort to

1749

01:22:07,850 --> 01:22:05,090

investigate next slide things minded

1750

01:22:09,919 --> 01:22:07,860

this is a similar Brookings Institute is

1751

01:22:11,840 --> 01:22:09,929

what I mean why he what he can

1752

01:22:14,149 --> 01:22:11,850

anticipate a cover-up on theoretical

1753

01:22:17,180 --> 01:22:14,159

grounds because this organized actually

1754

01:22:23,270 --> 01:22:17,190

in 1959 just after NASA had been created

1755

01:22:26,629 --> 01:22:23,280

released a a document advising NASA on

1756

01:22:29,080 --> 01:22:26,639

the how to handle the discovery of

1757

01:22:32,890 --> 01:22:29,090

intelligent extraterrestrial life

1758

01:22:35,330 --> 01:22:32,900

this document referred to not only

1759

01:22:37,629 --> 01:22:35,340

extant life that is living creatures

1760

01:22:41,689 --> 01:22:37,639

found in space but the remains of past

1761

01:22:43,729 --> 01:22:41,699

civilizations and what bookings did it

1762

01:22:45,260 --> 01:22:43,739

is specifically mentioned a cover-up did

1763

01:22:47,810 --> 01:22:45,270

percenters specifically say they should

1764

01:22:49,640 --> 01:22:47,820

be cover-up but it it really read it

1765

01:22:51,439 --> 01:22:49,650

really didn't hit that would be

1766

01:22:53,540 --> 01:22:51,449

necessary in as many words reading

1767

01:22:57,919 --> 01:22:53,550

between the lives he says I said

1768

01:22:59,450 --> 01:22:57,929

effectively if you read the revelation

1769

01:23:01,280 --> 01:22:59,460

of extraterrestrial life the revelation

1770

01:23:04,100 --> 01:23:01,290

that we're not alone that we know this

1771

01:23:07,220 --> 01:23:04,110

little oasis of life in an infinite

1772

01:23:10,660 --> 01:23:07,230

cosmic desert that would have a massive

1773

01:23:14,270 --> 01:23:10,670

impact on the government the church

1774

01:23:15,510 --> 01:23:14,280

Science Society in general it may be an

1775

01:23:18,540 --> 01:23:15,520

idea not to static

1776

01:23:21,360 --> 01:23:18,550

on the rooftops so there is every reason

1777

01:23:23,880 --> 01:23:21,370

to suppose that the government would be

1778

01:23:25,440 --> 01:23:23,890

interested in a cover-up of just the

1779

01:23:28,620 --> 01:23:25,450

presence of extraterrestrial life

1780

01:23:31,280 --> 01:23:28,630

next slide please point and that is a

1781

01:23:34,170 --> 01:23:31,290

good example or taller the face on Mars

1782

01:23:36,930 --> 01:23:34,180

it I believe it is an artifact of an

1783

01:23:37,410 --> 01:23:36,940

extraterrestrial civilization the last

1784

01:23:39,510 --> 01:23:37,420

presenter

1785

01:23:41,970 --> 01:23:39,520

you could have an entire presentation on

1786

01:23:43,770 --> 01:23:41,980

that subject alone but their sports the

1787

01:23:45,420 --> 01:23:43,780

way nASA has done with this indicates

1788

01:23:47,670 --> 01:23:45,430

that they are taking the advice of the

1789

01:23:49,710 --> 01:23:47,680

Brookings Institute a view similar to

1790

01:23:51,750 --> 01:23:49,720

the sovereign are getting there's no

1791

01:23:53,580 --> 01:23:51,760

produce been said that it's been imaged

1792

01:23:55,080 --> 01:23:53,590

from a normal distance but the actual

1793

01:23:58,440 --> 01:23:55,090

image is deliberately distorted to make

1794

01:24:02,810 --> 01:23:58,450

it look less interesting it seems as if

1795

01:24:05,460 --> 01:24:02,820

NASA are taking that advice next 1t5

1796

01:24:07,020 --> 01:24:05,470

there was actually a protocol for the

1797

01:24:10,340 --> 01:24:07,030

discovery of extraterrestrial life it

1798

01:24:13,530 --> 01:24:10,350

doesn't look as if the the consti

1799

01:24:15,420 --> 01:24:13,540

potential for subversion is there what

1800

01:24:18,150 --> 01:24:15,430

happens is the SETI Institute uh known

1801

01:24:20,640 --> 01:24:18,160

as negotiating a cone conduct with

1802

01:24:23,430 --> 01:24:20,650

various governments and press protocols

1803

01:24:25,350 --> 01:24:23,440

from eating signal detection now this is

1804

01:24:27,420 --> 01:24:25,360

an actually division of the SETI

1805

01:24:29,930 --> 01:24:27,430

Institute has an amazing name the

1806

01:24:34,140 --> 01:24:29,940

Central Bureau of astronomical telegrams

1807

01:24:35,580 --> 01:24:34,150

has tried the net and so the Central

1808

01:24:38,640 --> 01:24:35,590

Bureau nice constant telegrams is

1809

01:24:41,160 --> 01:24:38,650

basically is what manages if someone in

1810

01:24:42,330 --> 01:24:41,170

a SETI movement to text a signal the

1811

01:24:43,950 --> 01:24:42,340

first thing you do is they keep it

1812

01:24:46,320 --> 01:24:43,960

themselves they don't spread it around

1813

01:24:48,330 --> 01:24:46,330

they then discuss it with their peers

1814

01:24:50,430 --> 01:24:48,340

from around the world although people

1815

01:24:55,560 --> 01:24:50,440

within the set a movement they verify

1816

01:24:58,590 --> 01:24:55,570

that it is real and then they carry on

1817

01:25:00,300 --> 01:24:58,600

mania they carry a very carefully

1818

01:25:01,620 --> 01:25:00,310

controlled others they for the present

1819

01:25:03,360 --> 01:25:01,630

the United States or the various other

1820

01:25:05,250 --> 01:25:03,370

heads of government where it has to be

1821

01:25:06,780 --> 01:25:05,260

but they carry off a carefully

1822

01:25:07,590 --> 01:25:06,790

controlled publication within the

1823

01:25:10,560 --> 01:25:07,600

scientific

1824

01:25:12,180 --> 01:25:10,570

other media and no one should make a

1825

01:25:15,120 --> 01:25:12,190

reply to any signal so that's been

1826

01:25:16,890 --> 01:25:15,130

negotiated no 1.20 signal and so it's

1827

01:25:20,010 --> 01:25:16,900

been talked about then they have an

1828

01:25:21,180 --> 01:25:20,020

organized response so you could say well

1829

01:25:23,130 --> 01:25:21,190

there you know the bit where they

1830

01:25:26,150 --> 01:25:23,140

informed the government that's that is

1831

01:25:29,160 --> 01:25:26,160

an area where subversion could occur

1832

01:25:34,590 --> 01:25:29,170

theoretically couldn't it next slide

1833

01:25:35,880 --> 01:25:34,600

please mind you I think not now of

1834

01:25:37,320 --> 01:25:35,890

course you may say well come on they can

1835

01:25:39,150 --> 01:25:37,330

cover that baby like they've come across

1836

01:25:41,130 --> 01:25:39,160

as well that name picked up another not

1837

01:25:41,810 --> 01:25:41,140

in shiraz well they covered up other

1838

01:25:44,220 --> 01:25:41,820

things

1839

01:25:45,180 --> 01:25:44,230

Gary care each other's hits or another

1840

01:25:47,280 --> 01:25:45,190

penso incident

1841

01:25:48,750 --> 01:25:47,290

they've come about up they try to they

1842

01:25:51,450 --> 01:25:48,760

do try to cover up these things where it

1843

01:25:55,830 --> 01:25:51,460

may happen but there's a very different

1844

01:25:58,170 --> 01:25:55,840

flow of information between signals from

1845

01:26:00,000 --> 01:25:58,180

outer space and flying saucer practic on

1846

01:26:01,710 --> 01:26:00,010

the earth before you sort of practice on

1847

01:26:03,210 --> 01:26:01,720

the earth become a movie and they've

1848

01:26:05,640 --> 01:26:03,220

seen it off they get rid the debris and

1849

01:26:08,160 --> 01:26:05,650

they put out a weather balloon story if

1850

01:26:11,070 --> 01:26:08,170

a signal comes from outer space they

1851  
01:26:13,130 --> 01:26:11,080  
can't exactly put do not cross time

1852  
01:26:15,660 --> 01:26:13,140  
around there Kenny

1853  
01:26:17,820 --> 01:26:15,670  
this is just a picture just a few more

1854  
01:26:19,050 --> 01:26:17,830  
than the radiant s those that exist

1855  
01:26:20,160 --> 01:26:19,060  
around the world and the optical

1856  
01:26:23,010 --> 01:26:20,170  
telescopes earth and that ones are not

1857  
01:26:24,990 --> 01:26:23,020  
the corn I think this is just a handful

1858  
01:26:26,250 --> 01:26:25,000  
of very telescopes there are thousands

1859  
01:26:27,660 --> 01:26:26,260  
of these two scopes that we all

1860  
01:26:30,930 --> 01:26:27,670  
countries the world

1861  
01:26:32,670 --> 01:26:30,940  
even have one of the South Pole the

1862  
01:26:34,350 --> 01:26:32,680  
number of strivers work in there but the

1863  
01:26:35,970 --> 01:26:34,360

various other people is a huge number of

1864

01:26:40,070 --> 01:26:35,980

professional astronomers a massive

1865

01:26:44,100 --> 01:26:40,080

network now I believe it's not possible

1866

01:26:46,380 --> 01:26:44,110

to suppress some kind of interesting

1867

01:26:49,320 --> 01:26:46,390

thing coming from space that detected by

1868

01:26:51,750 --> 01:26:49,330

telescope astronomy is the one truly

1869

01:26:54,450 --> 01:26:51,760

democratic science all the data's of my

1870

01:26:55,860 --> 01:26:54,460

hands and I really don't think you

1871

01:26:57,160 --> 01:26:55,870

weren't possible to cover it up if there

1872

01:27:00,160 --> 01:26:57,170

was a signal from that

1873

01:27:01,750 --> 01:27:00,170

next slide please one it's not only the

1874

01:27:03,820 --> 01:27:01,760

professed astronomers it's the Anytus

1875

01:27:06,040 --> 01:27:03,830

astronomy still while most popular

1876

01:27:07,330 --> 01:27:06,050

hobbies you anyone you pick up for a few

1877

01:27:09,760 --> 01:27:07,340

hundred pounds of the pick up a piece

1878

01:27:12,070 --> 01:27:09,770

the telescope the shop and people don't

1879

01:27:14,620 --> 01:27:12,080

let those of you that said astronomical

1880

01:27:16,750 --> 01:27:14,630

community and think they can now get on

1881

01:27:19,720 --> 01:27:16,760

a line and have access to much bigger

1882

01:27:23,110 --> 01:27:19,730

telescopes now so I think I think normal

1883

01:27:24,490 --> 01:27:23,120

always discovered that way the millions

1884

01:27:28,209 --> 01:27:24,500

of millions of amateur astronomers would

1885

01:27:29,979 --> 01:27:28,219

also be looking at this is it's a

1886

01:27:31,479 --> 01:27:29,989

top-heavy conspiracy beyond belief so I

1887

01:27:33,430 --> 01:27:31,489

don't think there won't be a cover-up of

1888

01:27:37,540 --> 01:27:33,440

a signal from another world

1889

01:27:40,800 --> 01:27:37,550

next time please point so when we see

1890

01:27:45,040 --> 01:27:40,810

this will we see our fearless leader

1891

01:27:48,640 --> 01:27:45,050

Boris badenov standing outside number 10

1892

01:27:50,530 --> 01:27:48,650

in telling us that we picked up and it

1893

01:27:52,150 --> 01:27:50,540

sound of signal from another world oh

1894

01:27:53,439 --> 01:27:52,160

this is one occasion he just brush his

1895

01:27:57,340 --> 01:27:53,449

hair for I really don't

1896

01:28:01,050 --> 01:27:57,350

next slide please might all another

1897

01:28:03,310 --> 01:28:01,060

going for himself will he do the same

1898

01:28:07,479 --> 01:28:03,320

nobody would be on Twitter at first but

1899

01:28:09,700 --> 01:28:07,489

I am here to tell you today that we have

1900

01:28:11,860 --> 01:28:09,710

detected a signal from the star Zenith

1901

01:28:15,550 --> 01:28:11,870

City Line and there is a Dyson Sphere

1902

01:28:17,280 --> 01:28:15,560

around 20 star they may be forced to do

1903

01:28:19,360 --> 01:28:17,290

this

1904

01:28:24,939 --> 01:28:19,370

the thing about that is though I mean

1905

01:28:27,100 --> 01:28:24,949

that's why please Michael yeah this is

1906

01:28:31,090 --> 01:28:27,110

something I hope to see under seen this

1907

01:28:33,390 --> 01:28:31,100

game fortunately a lot of humble prom

1908

01:28:36,189 --> 01:28:33,400

anyone want to get down his thread I

1909

01:28:37,990 --> 01:28:36,199

think you're just retired to store boy

1910

01:28:44,650 --> 01:28:38,000

down I'm going to do this guy's some

1911

01:28:46,420 --> 01:28:44,660

egotistical someone save my time I'm

1912

01:28:49,450 --> 01:28:46,430

donating my common reason why instead of

1913

01:28:53,120 --> 01:28:49,460

my brother is it oh right

1914

01:29:00,530 --> 01:28:53,130

I'm gonna save your backside next locust

1915

01:29:02,090 --> 01:29:00,540

boys so you make people easier

1916

01:29:05,420 --> 01:29:02,100

distractions it's just a disappear it's

1917

01:29:08,240 --> 01:29:05,430

a distraction from what we are doing

1918

01:29:10,670 --> 01:29:08,250

maybe this is what Steve Bassett said

1919

01:29:12,920 --> 01:29:10,680

SETI is the city effort to investigate

1920

01:29:14,960 --> 01:29:12,930

it's it's the attempt to divert

1921

01:29:16,310 --> 01:29:14,970

attention away from what really happened

1922

01:29:19,130 --> 01:29:16,320

to practice which is looked at the UFOs

1923

01:29:20,300 --> 01:29:19,140

are the area's already neither that's

1924

01:29:22,700 --> 01:29:20,310

the point there on this earth already

1925

01:29:26,930 --> 01:29:22,710

they've reached us and says he's

1926

01:29:30,500 --> 01:29:26,940

distracting that away from us and I

1927

01:29:32,000 --> 01:29:30,510

think I can't disagree with that when

1928

01:29:33,590 --> 01:29:32,010

you look at this behavior of Carl Sagan

1929

01:29:36,020 --> 01:29:33,600

is promotion of steady at the same time

1930

01:29:38,600 --> 01:29:36,030

as a continuous mindless just

1931

01:29:41,990 --> 01:29:38,610

discrediting and dismissal of the unifor

1932

01:29:44,810 --> 01:29:42,000

nominee how the to do that the same time

1933

01:29:47,150 --> 01:29:44,820

must mean that he is was it - he's

1934

01:29:48,590 --> 01:29:47,160

attentive about of facts however as

1935

01:29:51,230 --> 01:29:48,600

there are too many people involved in a

1936

01:29:54,770 --> 01:29:51,240

setting which which means Fermi all just

1937

01:29:56,540 --> 01:29:54,780

to be a cover-up if it was simply do

1938

01:29:59,780 --> 01:29:56,550

receive a signal and one day when we

1939

01:30:02,770 --> 01:29:59,790

receive a signal it might actually have

1940

01:30:06,320 --> 01:30:02,780

a positive knock-on effect on ufology

1941

01:30:08,390 --> 01:30:06,330

because you will even know the the set

1942

01:30:10,340 --> 01:30:08,400

of components will say fine you finally

1943

01:30:12,440 --> 01:30:10,350

found a signal this is the only contact

1944

01:30:14,330 --> 01:30:12,450

together in the years ever it may make

1945

01:30:16,700 --> 01:30:14,340

the general public look in our direction

1946

01:30:18,560 --> 01:30:16,710

- and start asking the very relevant

1947

01:30:22,640 --> 01:30:18,570

questions I've asked this evening in his

1948

01:30:24,880 --> 01:30:22,650

talk it many get people in the right

1949

01:30:28,130 --> 01:30:24,890

mindset

1950

01:30:31,220 --> 01:30:28,140

full of racing of the profile of ufology

1951

01:30:33,080 --> 01:30:31,230

I believe the success of SETI does not

1952

01:30:37,550 --> 01:30:33,090

necessarily is not necessarily a bad

1953

01:30:41,150 --> 01:30:37,560

thing so I lost ultimate immensely next

1954

01:30:43,430 --> 01:30:41,160

like these money if you're really was

1955

01:30:45,560 --> 01:30:43,440

love UFOs in another area 51 on a crash

1956

01:30:48,050 --> 01:30:45,570

retrievals in Roswell I mean you know

1957

01:30:49,490 --> 01:30:48,060

you to know better - buying a copy of

1958

01:30:52,070 --> 01:30:49,500

the books I've got here this evening

1959

01:30:52,569 --> 01:30:52,080

there was well trilogy Roswell rising

1960

01:30:55,599 --> 01:30:52,579

anomaly

1961

01:30:57,579 --> 01:30:55,609

squad next slide - Mike Ross won't

1962

01:31:01,419 --> 01:30:57,589

reveal the world after disclosure and

1963

01:31:04,629 --> 01:31:01,429

again also right next one's a so that's

1964

01:31:06,369 --> 01:31:04,639

I don't what's doing that it's a

1965

01:31:08,379 --> 01:31:06,379

head-fake awesome alright there's the

1966

01:31:11,500 --> 01:31:08,389

last one which is worth while redeemed

1967

01:31:13,629 --> 01:31:11,510

humanity of the disclosure and these

1968

01:31:15,699 --> 01:31:13,639

certain books are fictional they're just

1969

01:31:18,129 --> 01:31:15,709

novels but it's a fictional scenario

1970

01:31:19,869 --> 01:31:18,139

where I ask the question what is what is

1971

01:31:21,819 --> 01:31:19,879

that we were given truth instead of lies

1972

01:31:23,199 --> 01:31:21,829

what would happen have to think very

1973

01:31:25,989 --> 01:31:23,209

carefully about that and I came up with

1974

01:31:27,729 --> 01:31:25,999

a an imaginary scenario and I think

1975

01:31:29,679 --> 01:31:27,739

you'll probably if you enjoy these

1976

01:31:31,449 --> 01:31:29,689

sources you hear about it as good people

1977

01:31:33,759 --> 01:31:31,459

enjoy those books it's in the pounds

1978

01:31:36,489 --> 01:31:33,769

eight or 15 pounds per - or 25 pounds

1979

01:31:37,569 --> 01:31:36,499

for all three so I think all the leaves

1980

01:31:40,119 --> 01:31:37,579

telling the one which you would get

1981

01:31:42,339 --> 01:31:40,129

signed by me if you know you can get on

1982

01:31:43,750 --> 01:31:42,349

Amazon as well if not but just thank you

1983

01:31:44,829 --> 01:31:43,760

very much all of these been good to talk