

PROJECT

BLUE



BOOK

Anomalous Propagation

1
00:00:30,470 --> 00:00:28,070
so what do we do

2
00:00:33,870 --> 00:00:30,480
we call it anomalous propagation and we

3
00:00:56,229 --> 00:00:33,880
move the frick on that's what they do

4
00:00:58,490 --> 00:00:56,239
[Music]

5
00:01:01,430 --> 00:00:58,500
anomalous propagation cases show

6
00:01:03,529 --> 00:01:01,440
unconventional flight characteristics so

7
00:01:05,810 --> 00:01:03,539
an example is here Selfridge Air Force

8
00:01:07,550 --> 00:01:05,820
Base 1951 speed of the blip varied from

9
00:01:11,710 --> 00:01:07,560
an estimated 3

10
00:01:14,570 --> 00:01:11,720
000 to estimated 28 000 miles per hour

11
00:01:17,929 --> 00:01:14,580
this is Larson Air Force Base speed at

12
00:01:19,789 --> 00:01:17,939
950 miles per hour in 1951 we couldn't

13
00:01:21,649 --> 00:01:19,799

achieve that object track continuously

14

00:01:24,289 --> 00:01:21,659

for a period of six minutes

15

00:01:26,390 --> 00:01:24,299

of course 340 degrees

16

00:01:28,969 --> 00:01:26,400

so for this case I put reference for

17

00:01:30,350 --> 00:01:28,979

your radar sighting of 2651 please

18

00:01:32,749 --> 00:01:30,360

advise immediately whether weather

19

00:01:33,530 --> 00:01:32,759

conditions prevalent in your area at the

20

00:01:35,510 --> 00:01:33,540

time

21

00:01:39,170 --> 00:01:35,520

favor the phenomena of anomalous

22

00:01:41,450 --> 00:01:39,180

microwave propagation and further in the

23

00:01:43,609 --> 00:01:41,460

notes you can see it says no temperature

24

00:01:45,649 --> 00:01:43,619

inversion

25

00:01:48,109 --> 00:01:45,659

did not favor anomalous microwave

26
00:01:51,170 --> 00:01:48,119
propagation and we can see here the

27
00:01:54,770 --> 00:01:51,180
fastest plane at that time of 755 miles

28
00:01:57,590 --> 00:01:54,780
an hour and 53 weather effect on radar

29
00:02:00,950 --> 00:01:57,600
speed from stationary to as fast or

30
00:02:04,609 --> 00:02:00,960
faster than a jet aircraft

31
00:02:06,770 --> 00:02:04,619
and we have experienced radar people

32
00:02:08,510 --> 00:02:06,780
for this case for instance

33
00:02:10,910 --> 00:02:08,520
we have an aircraft Landing control

34
00:02:13,729 --> 00:02:10,920
technician four years

35
00:02:15,350 --> 00:02:13,739
of experience so in these cases of

36
00:02:17,690 --> 00:02:15,360
anomalous propagation we have very

37
00:02:20,270 --> 00:02:17,700
experienced people working The Radars

38
00:02:21,710 --> 00:02:20,280

that are confused enough to report this

39

00:02:24,229 --> 00:02:21,720

as a UFO

40

00:02:25,670 --> 00:02:24,239

to Blue Book and it does come with data

41

00:02:27,710 --> 00:02:25,680

they even tell you what kind of Scopes

42

00:02:29,750 --> 00:02:27,720

they use PPI scoping B

43

00:02:31,910 --> 00:02:29,760

that tell you to describe the signal

44

00:02:34,910 --> 00:02:31,920

produced by rotating sweep

45

00:02:39,290 --> 00:02:34,920

a radar scan rate 30

46

00:02:41,089 --> 00:02:39,300

approximately 2 800 MC frequency of the

47

00:02:43,430 --> 00:02:41,099

transmitter

48

00:02:46,250 --> 00:02:43,440

sometimes even have drawings and radar

49

00:02:48,830 --> 00:02:46,260

pictures electronic radar appearance

50

00:02:50,330 --> 00:02:48,840

interference

51
00:02:53,630 --> 00:02:50,340
here they tried to say that another

52
00:02:55,790 --> 00:02:53,640
radar did it but you can see here at the

53
00:02:59,030 --> 00:02:55,800
bottom speed was from 1800 miles per

54
00:03:03,470 --> 00:02:59,040
hour to 84 100 miles per hour

55
00:03:09,589 --> 00:03:06,110
Rendell shim for his case right in the

56
00:03:11,690 --> 00:03:09,599
same place here in 1956

57
00:03:15,110 --> 00:03:11,700
they had a UFO this is actually seen by

58
00:03:18,229 --> 00:03:15,120
the radar and Visually

59
00:03:22,550 --> 00:03:18,239
here is the report from it see my cursor

60
00:03:26,330 --> 00:03:22,560
it says 4 000 miles per hour

61
00:03:28,610 --> 00:03:26,340
so in this bent Waters case this uh Dr

62
00:03:30,770 --> 00:03:28,620
Whipple was involved who's kind of been

63
00:03:33,830 --> 00:03:30,780

around hovered around Blue Book and all

64

00:03:36,050 --> 00:03:33,840

that kind of stuff uh for a long time

65

00:03:37,490 --> 00:03:36,060

which so he's suggesting to put cameras

66

00:03:39,649 --> 00:03:37,500

up in hot spots

67

00:03:41,930 --> 00:03:39,659

uh from which numerous reports have come

68

00:03:44,030 --> 00:03:41,940

and might be patrolled by a dozen or so

69

00:03:46,910 --> 00:03:44,040

fish act cameras operating

70

00:03:49,130 --> 00:03:46,920

uh automatically

71

00:03:51,050 --> 00:03:49,140

or Dr Whipple stated that as far as the

72

00:03:53,330 --> 00:03:51,060

report at hand is concerned no obvious

73

00:03:55,490 --> 00:03:53,340

physical solution is suggested he

74

00:03:59,149 --> 00:03:55,500

deplored the inadequacy of the typical

75

00:04:01,430 --> 00:03:59,159

UFO reports as a scientific document

76

00:04:03,229 --> 00:04:01,440

he further stated that the nature of

77

00:04:05,149 --> 00:04:03,239

such reports is not likely to change and

78

00:04:07,309 --> 00:04:05,159

urge that if the Air Force Series Senate

79

00:04:08,869 --> 00:04:07,319

attempts to resolve this problem both

80

00:04:10,550 --> 00:04:08,879

scientifically

81

00:04:12,890 --> 00:04:10,560

and in the public mind

82

00:04:16,129 --> 00:04:12,900

at the Air Force do more than continue

83

00:04:19,610 --> 00:04:16,139

its passive investigational attitudes

84

00:04:21,650 --> 00:04:19,620

this was said by Hector quintilla the

85

00:04:23,870 --> 00:04:21,660

director of blue book it is to be

86

00:04:25,730 --> 00:04:23,880

regretted that so unusual a citing

87

00:04:27,710 --> 00:04:25,740

report did not contain more factual

88

00:04:30,710 --> 00:04:27,720

material on which to base an evaluation

89

00:04:32,870 --> 00:04:30,720

the lake and Heath report is one of the

90

00:04:35,689 --> 00:04:32,880

more unusual UFO reports involving

91

00:04:37,969 --> 00:04:35,699

electronic and visual observations and

92

00:04:39,770 --> 00:04:37,979

subsequent Pursuit by fighter plane yet

93

00:04:41,270 --> 00:04:39,780

report does not State whether it was

94

00:04:42,890 --> 00:04:41,280

definitely established that Visual and

95

00:04:44,570 --> 00:04:42,900

electronic sightings refer to the same

96

00:04:47,870 --> 00:04:44,580

object or even if they occurred

97

00:04:48,469 --> 00:04:47,880

precisely simultaneously

98

00:04:51,230 --> 00:04:48,479

um

99

00:04:52,969 --> 00:04:51,240

so further report does not give exact

100

00:04:55,070 --> 00:04:52,979

weather information which might enable

101
00:04:57,890 --> 00:04:55,080
one to charge whether charge weather

102
00:04:59,870 --> 00:04:57,900
conditions with any Precision relative

103
00:05:03,070 --> 00:04:59,880
to anomalous propagation such as

104
00:05:06,350 --> 00:05:03,080
frequently occurs with radars

105
00:05:09,469 --> 00:05:06,360
this case is from born home Denmark

106
00:05:11,689 --> 00:05:09,479
which uh it's interesting because this

107
00:05:13,969 --> 00:05:11,699
case really worried or interested Air

108
00:05:16,189 --> 00:05:13,979
Force people high brass people and they

109
00:05:18,950 --> 00:05:16,199
thought this could have been related to

110
00:05:20,629 --> 00:05:18,960
the lakenheath case Radar's first

111
00:05:24,469 --> 00:05:20,639
reported two to three objects on an

112
00:05:30,469 --> 00:05:28,550
that's not faster than objects could go

113
00:05:32,749 --> 00:05:30,479

at that time but if you look in the

114

00:05:35,270 --> 00:05:32,759

right in the comments it says the fact

115

00:05:38,390 --> 00:05:35,280

that the objects were orbiting over one

116

00:05:40,070 --> 00:05:38,400

spot at 700 knots supports this can and

117

00:05:42,650 --> 00:05:40,080

here I was just talking about this the

118

00:05:45,710 --> 00:05:42,660

number of UFO reports submitted from

119

00:05:49,490 --> 00:05:45,720

unsafe area during August as generated

120

00:05:51,529 --> 00:05:49,500

considerable interest in concern

121

00:05:53,390 --> 00:05:51,539

within Air Force

122

00:05:55,070 --> 00:05:53,400

of particular interest are those

123

00:05:57,890 --> 00:05:55,080

signings that occurred near lakenheath

124

00:06:01,570 --> 00:05:57,900

on the 16th of August in the born home

125

00:06:04,189 --> 00:06:01,580

Island sighting of the 22nd of August

126

00:06:06,590 --> 00:06:04,199

Air Force is interested and they were

127

00:06:09,050 --> 00:06:06,600

concerned with UFO sightings that they

128

00:06:11,990 --> 00:06:09,060

caught on radar in Denmark

129

00:06:14,450 --> 00:06:12,000

and lakenheath this was at El Toro

130

00:06:17,150 --> 00:06:14,460

California UFO observed visually and by

131

00:06:19,490 --> 00:06:17,160

radar from Night of 11th November to

132

00:06:21,469 --> 00:06:19,500

morning 12th of November blips which

133

00:06:25,370 --> 00:06:21,479

kept suddenly appearing and disappearing

134

00:06:28,370 --> 00:06:25,380

indicated speeds from 50

135

00:06:33,230 --> 00:06:28,380

50 miles an hour to 15

136

00:06:38,330 --> 00:06:35,629

so what do we do

137

00:06:40,790 --> 00:06:38,340

we call it anomalous propagation and we

138

00:06:43,189 --> 00:06:40,800

move the frick on that's what they do

139

00:06:45,110 --> 00:06:43,199

here we go Duluth Minnesota this one's

140

00:06:46,550 --> 00:06:45,120

radar interference so here you can see

141

00:06:48,890 --> 00:06:46,560

in the corner this is what they do when

142

00:06:51,050 --> 00:06:48,900

they have a visual

143

00:06:53,090 --> 00:06:51,060

they have radar

144

00:06:55,070 --> 00:06:53,100

they separated they say what you saw was

145

00:06:56,749 --> 00:06:55,080

Venus

146

00:07:00,610 --> 00:06:56,759

and we had some radar interference

147

00:07:07,809 --> 00:07:04,370

I don't I can't okay uh here's another

148

00:07:12,350 --> 00:07:07,819

one Guam anomalous propagation

149

00:07:13,969 --> 00:07:12,360

2880 knots on a collision course uh the

150

00:07:17,230 --> 00:07:13,979

speed of the target the fact that no

151
00:07:19,969 --> 00:07:17,240
plane was to be in the area lack of oral

152
00:07:21,650 --> 00:07:19,979
observation and the fact that the target

153
00:07:24,110 --> 00:07:21,660
was not observed on an outward course

154
00:07:26,450 --> 00:07:24,120
all tend to mitigate against an aircraft

155
00:07:28,309 --> 00:07:26,460
Target on the other hand anomalous

156
00:07:30,110 --> 00:07:28,319
propagation frequently causes false

157
00:07:33,589 --> 00:07:30,120
Targets on radar Scopes traveling at

158
00:07:36,290 --> 00:07:33,599
apparently fantastic speeds

159
00:07:40,670 --> 00:07:36,300
even had cases like this one at missile

160
00:07:45,170 --> 00:07:42,710
indicates the probable cause anomalous

161
00:07:47,689 --> 00:07:45,180
propagation so that's what they say it

162
00:07:49,730 --> 00:07:47,699
is but yet you have testimony from

163
00:07:52,969 --> 00:07:49,740

people like this first lieutenant U.S

164

00:07:55,309 --> 00:07:52,979

Air Force Chief Target Branch says in

165

00:07:56,510 --> 00:07:55,319

the past 12 years I have observed all

166

00:07:58,309 --> 00:07:56,520

types of weather wind temperature

167

00:08:00,589 --> 00:07:58,319

inversion false returns birds and

168

00:08:02,689 --> 00:08:00,599

numerous other objects on radar but

169

00:08:05,210 --> 00:08:02,699

never a Target like this moving with the

170

00:08:07,129 --> 00:08:05,220

speed and direction of these

171

00:08:10,550 --> 00:08:07,139

is why these anomalous propagation

172

00:08:12,710 --> 00:08:10,560

instances are so interesting because

173

00:08:16,249 --> 00:08:12,720

you have them

174

00:08:19,010 --> 00:08:16,259

and then you have the radar operator

175

00:08:20,930 --> 00:08:19,020

who is so experienced

176

00:08:21,890 --> 00:08:20,940

saying I've never seen anything like

177

00:08:28,129 --> 00:08:21,900

this

178

00:08:32,290 --> 00:08:28,139

October 7 1965 radar

179

00:08:35,510 --> 00:08:32,300

atmospheric conditions visual Astro

180

00:08:37,070 --> 00:08:35,520

so in that case anomalous propagation

181

00:08:39,110 --> 00:08:37,080

this is what they write anomalous

182

00:08:40,790 --> 00:08:39,120

propagation although there evidently was

183

00:08:42,949 --> 00:08:40,800

no temperature inversion During the

184

00:08:45,130 --> 00:08:42,959

period anomalous propagation is the most

185

00:08:47,329 --> 00:08:45,140

likely candidate for the situation

186

00:08:49,310 --> 00:08:47,339

since latent radar waves are both

187

00:08:52,009 --> 00:08:49,320

electromagnetic in nature

188

00:08:54,410 --> 00:08:52,019

could also cause the visual

189

00:08:56,930 --> 00:08:54,420

appearances as well which this is what

190

00:09:02,509 --> 00:08:56,940

they did on the Washington DC siting in

191

00:09:05,090 --> 00:09:02,519

1952 which was 13 years before this

192

00:09:06,470 --> 00:09:05,100

13 years before this and they still

193

00:09:08,870 --> 00:09:06,480

don't have it figured out they're

194

00:09:10,370 --> 00:09:08,880

they're still figuring out anomalous

195

00:09:12,769 --> 00:09:10,380

propagation

196

00:09:14,210 --> 00:09:12,779

the only logical explanation of the

197

00:09:16,250 --> 00:09:14,220

sighting is that there are radical

198

00:09:18,590 --> 00:09:16,260

variations in the atmosphere during this

199

00:09:21,710 --> 00:09:18,600

period which result in both Visual and

200

00:09:25,430 --> 00:09:23,630

observers known as sparkling light

201
00:09:27,350 --> 00:09:25,440
changing from red to Green to Red for

202
00:09:29,030 --> 00:09:27,360
about three hours objects settle Beneath

203
00:09:30,889 --> 00:09:29,040
The Horizon and vanished object was

204
00:09:32,810 --> 00:09:30,899
basically stationary in the west object

205
00:09:35,090 --> 00:09:32,820
was allegedly picked up on radar however

206
00:09:37,430 --> 00:09:35,100
radar analysis suggested

207
00:09:39,470 --> 00:09:37,440
that anomalous propagation was

208
00:09:43,670 --> 00:09:39,480
apparently the cause of the radar paint

209
00:09:47,930 --> 00:09:46,130
anomalous propagation Sergeant Burns had

210
00:09:50,090 --> 00:09:47,940
no explanation for the sighting and said

211
00:09:51,530 --> 00:09:50,100
he had never seen anything like it

212
00:09:52,850 --> 00:09:51,540
before

213
00:09:56,030 --> 00:09:52,860

the equipment was checked for

214

00:09:57,889 --> 00:09:56,040

malfunction and none was discovered

215

00:09:59,449 --> 00:09:57,899

29th air division whether Personnel

216

00:10:01,070 --> 00:09:59,459

suggested that the temperature inversion

217

00:10:02,750 --> 00:10:01,080

might have caused anomalous propagation

218

00:10:04,430 --> 00:10:02,760

of the radar causing false returns

219

00:10:05,690 --> 00:10:04,440

electronic warfare Personnel said

220

00:10:09,889 --> 00:10:05,700

interference

221

00:10:12,290 --> 00:10:09,899

from Sage Raiders was unlikely

222

00:10:14,810 --> 00:10:12,300

anomalous propagation just blowing these

223

00:10:18,410 --> 00:10:14,820

experienced people's minds now this is

224

00:10:22,730 --> 00:10:18,420

the kicker so we go from 1950 we took us

225

00:10:25,070 --> 00:10:22,740

1950 to 1968 still dealing with

226

00:10:28,850 --> 00:10:25,080

anomalous propagation still baffling

227

00:10:33,050 --> 00:10:30,949

right

228

00:10:35,630 --> 00:10:33,060

all these times they've

229

00:10:38,090 --> 00:10:35,640

upgraded Radars they've made new radar

230

00:10:39,769 --> 00:10:38,100

sets throughout those years and they're

231

00:10:41,509 --> 00:10:39,779

still dealing with this

232

00:10:43,130 --> 00:10:41,519

they don't have their people trained to

233

00:10:46,910 --> 00:10:43,140

recognize it

234

00:10:49,069 --> 00:10:46,920

if that's what it is number three

235

00:10:51,350 --> 00:10:49,079

this is a kicker

236

00:10:53,389 --> 00:10:51,360

so after all these anomalous propagation

237

00:10:56,389 --> 00:10:53,399

incidents we look at

238

00:10:58,670 --> 00:10:56,399

from 50 to here 68

239

00:11:01,550 --> 00:10:58,680

you finally get an admission from

240

00:11:05,030 --> 00:11:01,560

somebody a colonel in the U.S Air Force

241

00:11:06,949 --> 00:11:05,040

says the obvious in quotation marks

242

00:11:10,490 --> 00:11:06,959

excuse

243

00:11:12,170 --> 00:11:10,500

or explanation

244

00:11:13,910 --> 00:11:12,180

for the sightings appears to be

245

00:11:16,670 --> 00:11:13,920

temperature inversion

246

00:11:19,430 --> 00:11:16,680

if there is nothing sneaky behind

247

00:11:22,069 --> 00:11:19,440

anomalous propagation here

248

00:11:24,290 --> 00:11:22,079

there would be absolutely no need for

249

00:11:25,550 --> 00:11:24,300

this person to write excuse in

250

00:11:30,050 --> 00:11:25,560

quotations

251
00:11:31,370 --> 00:11:30,060
would put the obvious explanation for

252
00:11:33,470 --> 00:11:31,380
the sightings appears to be temperature

253
00:11:35,210 --> 00:11:33,480
in Persian

254
00:11:37,009 --> 00:11:35,220
and what do we hear about UFOs the

255
00:11:40,009 --> 00:11:37,019
observables right

256
00:11:42,590 --> 00:11:40,019
variations in speed 150 to 2000 miles

257
00:11:45,650 --> 00:11:42,600
per hour instant acceleration

258
00:11:48,710 --> 00:11:45,660
no sound no noise was heard

259
00:11:51,650 --> 00:11:48,720
all these cases

260
00:11:54,050 --> 00:11:51,660
represent

261
00:11:56,150 --> 00:11:54,060
those observables

262
00:11:57,590 --> 00:11:56,160
and goes down to the ground and picks up

263
00:11:59,870 --> 00:11:57,600

ground targets

264

00:12:02,150 --> 00:11:59,880

that's what they blame it all on maybe

265

00:12:03,889 --> 00:12:02,160

some cases are but

266

00:12:06,710 --> 00:12:03,899

um when you have people admitting that

267

00:12:08,690 --> 00:12:06,720

it's an excuse

268

00:12:12,889 --> 00:12:08,700

and they're still dealing with the

269

00:12:16,550 --> 00:12:14,930

you know if they really knew that that

270

00:12:18,230 --> 00:12:16,560

was the problem

271

00:12:20,569 --> 00:12:18,240

you wouldn't have people reporting this

272

00:12:21,710 --> 00:12:20,579

stuff it wouldn't be important enough to

273

00:12:23,269 --> 00:12:21,720

report

274

00:12:26,569 --> 00:12:23,279

you know because it would be a part of

275

00:12:29,090 --> 00:12:26,579

the training for the radar operators

276

00:12:31,610 --> 00:12:29,100

you know if you ever see this this is

277

00:12:33,110 --> 00:12:31,620

what it means they would see it go I

278

00:12:34,910 --> 00:12:33,120

don't need to make a report I was

279

00:12:36,710 --> 00:12:34,920

trained on this

280

00:12:38,509 --> 00:12:36,720

over the course of a couple decades they

281

00:12:41,630 --> 00:12:38,519

never were and they reported them as

282

00:12:43,370 --> 00:12:41,640

UFOs and obviously we saw some baffle

283

00:12:44,930 --> 00:12:43,380

the Air Force like the bent Waters Lake

284

00:12:48,050 --> 00:12:44,940

and Heath

285

00:12:50,629 --> 00:12:48,060

uh cases and there's a lot more of those

286

00:12:52,009 --> 00:12:50,639

cases like I just picked a few randomly

287

00:12:53,810 --> 00:12:52,019

to go through

288

00:12:56,569 --> 00:12:53,820

there's a lot more of those

289

00:12:58,190 --> 00:12:56,579

and of course there are cases that were

290

00:13:00,829 --> 00:12:58,200

not apparently picked up on radar that

291

00:13:02,810 --> 00:13:00,839

people saw and described visually as

292

00:13:05,750 --> 00:13:02,820

moving

293

00:13:07,850 --> 00:13:05,760

you know as the objects that were picked

294

00:13:10,370 --> 00:13:07,860

up on radar that we just went through