1
00:00:06,559 --> 00:00:03,409
this is a laser that sends out a pulse

2
00:00:09,080 --> 00:00:06,569
at 100 megahertz and the pulse is split

3
00:00:12,140 --> 00:00:09,090
and it goes into both simultaneously

4
00:00:16,369 --> 00:00:12,150
into both of these spools and the all of

5
00:00:17,900 --> 00:00:16,379
the the optical lengths and the spool

6
00:00:19,609 --> 00:00:17,910
lengths have been very carefully

7
00:00:22,130 --> 00:00:19,619
calibrated so that the time it takes to

8
00:00:24,769 --> 00:00:22,140
transition or due to a transit of a

9
00:00:26,599 --> 00:00:24,779
pulse through one of the spools is the

10
00:00:27,920 --> 00:00:26,609
same as in the other spool but of course

11
00:00:30,560 --> 00:00:27,930
in the real physical world nothing can

12
00:00:33,080 --> 00:00:30,570
ever be exactly the same so we run this

13
00:00:36,049 --> 00:00:33,090

for a while and we see what the what the

14
00:00:37,610 --> 00:00:36,059
difference is in timing and for the the

15
00:00:39,979 --> 00:00:37,620
pulses to get through these two spools

16
00:00:42,470 --> 00:00:39,989
and you can measure it down to about a

17
00:00:44,060 --> 00:00:42,480
hundred femtoseconds so we get a very

18
00:00:45,830 --> 00:00:44,070
precise measurement of how long it takes

19
00:00:48,740 --> 00:00:45,840
for light to get through these things so

20
00:00:50,840 --> 00:00:48,750
the task will be to present only one of

21
00:00:53,119 --> 00:00:50,850
these spools to a meditator probably on

22
00:00:56,740 --> 00:00:53,129
some some fancy-looking little table

23
00:00:58,880 --> 00:00:56,750
here's the spool make light slow down

24
00:01:00,229 --> 00:00:58,890
imagine a field around it imagine

25
00:01:02,349 --> 00:01:00,239
whatever you need to do in order to have

26
00:01:04,759 --> 00:01:02,359
light slow down what they don't know

27
00:01:06,770 --> 00:01:04,769
except maybe psychically is that we have

28
00:01:08,649 --> 00:01:06,780
this other spool and I other spool we

29
00:01:11,210 --> 00:01:08,659
don't tell them about to act as a

30
00:01:13,490 --> 00:01:11,220
control comparison so we're looking at

31
00:01:15,230 --> 00:01:13,500
differences in the speed of light and

32
00:01:19,070 --> 00:01:15,240
how fast it transitions through these

33
00:01:20,539 --> 00:01:19,080
these two spools the the advantage of

34
00:01:22,609 --> 00:01:20,549
this is that we have extremely high

35
00:01:24,410 --> 00:01:22,619
resolution in terms of the actual speed

36
00:01:25,700 --> 00:01:24,420
of light takes only 20 micro seconds to

37
00:01:27,980 --> 00:01:25,710
get through this pool but since we have

38
00:01:31,539 --> 00:01:27,990

femtosecond resolution we can tell the

39
00:01:34,490 --> 00:01:31,549
about a something like one in a million

40
00:01:37,370 --> 00:01:34,500
factor of whether the speeds are going

41
00:01:40,490 --> 00:01:37,380
to be different the disadvantage of

42
00:01:43,580 --> 00:01:40,500
using optical fiber is that the glass

43
00:01:45,380 --> 00:01:43,590
the index of refractive attias sensitive

44
00:01:47,389 --> 00:01:45,390
to temperature so we have all kinds of

45
00:01:49,280 --> 00:01:47,399
temperature sensors inside outside in

46
00:01:51,350 --> 00:01:49,290
this apparatus in the room all over the

47
00:01:54,350 --> 00:01:51,360
place to be able to tell if we get a

48
00:01:56,209 --> 00:01:54,360
result was it due to temperature it

49
00:01:57,590 --> 00:01:56,219
turns out in the calibration tests that

50
00:02:01,730 --> 00:01:57,600
we can detect a temperature difference

51
00:02:04,459 --> 00:02:01,740
of something like a milli degree about a

52
00:02:06,319 --> 00:02:04,469
thousandth of a degree Fahrenheit which

53
00:02:08,330 --> 00:02:06,329
you can get pretty pretty easily if

54
00:02:10,190 --> 00:02:08,340
somebody walks into the room and happens

55
00:02:11,900 --> 00:02:10,200
to be closer to this one versus that one

56
00:02:13,980 --> 00:02:11,910
we can pick it up pretty quickly and

57
00:02:16,980 --> 00:02:13,990
it's due completely to the fact

58
00:02:20,010 --> 00:02:16,990
this is actually inside a the equivalent

59
00:02:22,350 --> 00:02:20,020
of a thermos with lots of padding and

60
00:02:24,360 --> 00:02:22,360
air bubbles and all kinds of stuff you

61
00:02:27,630 --> 00:02:24,370
still see a difference so it's very very

62
00:02:29,220 --> 00:02:27,640
sensitive so the this apparatus will not

63
00:02:31,320 --> 00:02:29,230

be in the vicinity of people doing the

64
00:02:33,150 --> 00:02:31,330
experiment we can't do that this will be

65
00:02:37,670 --> 00:02:33,160
in the sealed room the people doing the

66
00:02:39,960 --> 00:02:37,680
experiment will be at a distance and

67
00:02:51,150 --> 00:02:39,970
I'll end there and thank you for your

68
00:02:55,980 --> 00:02:51,160
kind attention questions comments big

69
00:02:57,570 --> 00:02:55,990
experiments couple comments and one

70
00:02:59,190 --> 00:02:57,580
question first of all you said you

71
00:03:00,900 --> 00:02:59,200
didn't know if you do the double slit

72
00:03:03,630 --> 00:03:00,910
experiment instead of the interferometer

73
00:03:04,800 --> 00:03:03,640
perhaps you do one half the slip red and

74
00:03:06,120 --> 00:03:04,810
the other one blue and tell them to

75
00:03:09,630 --> 00:03:06,130
concentrate red or blue and that would

76
00:03:13,950 --> 00:03:09,640
take to one side or the other that's a

77
00:03:15,900 --> 00:03:13,960
good idea um also in the interferometer

78
00:03:17,010 --> 00:03:15,910
experiment you said that the Pulsar is

79
00:03:18,660 --> 00:03:17,020
sort of like the heart rate have you

80
00:03:21,050 --> 00:03:18,670
measured against heart rate because that

81
00:03:24,360 --> 00:03:21,060
may give you an indication of

82
00:03:27,300 --> 00:03:24,370
physiologic I haven't looked at heart

83
00:03:29,040 --> 00:03:27,310
rate on this that this is a created

84
00:03:32,670 --> 00:03:29,050
movie I mean the you know we're taking

85
00:03:35,130 --> 00:03:32,680
pictures one frame per second so this is

86
00:03:37,440 --> 00:03:35,140
actually not it's not real time it's

87
00:03:38,910 --> 00:03:37,450
just okay Sam movie okay but still there

88
00:03:40,920 --> 00:03:38,920

might be correlation you might check out

89
00:03:43,290 --> 00:03:40,930
it might be physically and finally if

90
00:03:44,970 --> 00:03:43,300
the speed of light is changing and after

91
00:03:47,250 --> 00:03:44,980
you do that in vacuo so the heat is

92
00:03:48,690 --> 00:03:47,260
infecting it well you could probably be

93
00:03:50,190 --> 00:03:48,700
doing is you could be changing the

94
00:03:53,790 --> 00:03:50,200
permittivity of the permeability of

95
00:03:57,600 --> 00:03:53,800
space and or your your light medium

96
00:03:59,790 --> 00:03:57,610
right yeah and my I was very glad to see

97
00:04:01,410 --> 00:03:59,800
in this conference so far a number of

98
00:04:03,360 --> 00:04:01,420
people talking about theoretical issues

99
00:04:06,180 --> 00:04:03,370
because my mind really doesn't go there

100
00:04:08,760 --> 00:04:06,190
I can't I can't do that so for some

101
00:04:11,040 --> 00:04:08,770
reason but so I'm purely an empiricist

102
00:04:12,870 --> 00:04:11,050
and I figure that if I get a result like

103
00:04:14,580 --> 00:04:12,880
this my job then is to present it to a

104
00:04:15,780 --> 00:04:14,590
bunch of theorists to excite them and

105
00:04:18,630 --> 00:04:15,790
figure out well now how do you explain

106
00:04:20,970 --> 00:04:18,640
that so what I'm good at is figuring out

107
00:04:23,340 --> 00:04:20,980
how to do this and to get the right set

108
00:04:26,280 --> 00:04:23,350
and setting to encourage people to

109
00:04:27,360 --> 00:04:26,290
actually get a result in the percent of

110
00:04:30,150 --> 00:04:27,370
an experiment steam

111
00:04:31,680 --> 00:04:30,160
is the ordering of the photos have they

112
00:04:33,540 --> 00:04:31,690
been analyzed to see whether they're

113
00:04:35,790 --> 00:04:33,550

strictly random you mentioned they're

114
00:04:38,129 --> 00:04:35,800
randomly selected by computer I'm just

115
00:04:42,360 --> 00:04:38,139
wondering since operators can interact

116
00:04:44,010 --> 00:04:42,370
with re geez whether subjects it may be

117
00:04:46,080 --> 00:04:44,020
more complex mechanism not just

118
00:04:48,960 --> 00:04:46,090
presented some kind of interaction of

119
00:04:51,030 --> 00:04:48,970
subjects with that re G as well as a

120
00:04:52,950 --> 00:04:51,040
precognition yeah that's a good question

121
00:04:54,270 --> 00:04:52,960
and we we have checked at least in the

122
00:04:56,719 --> 00:04:54,280
studies that I've done involving

123
00:04:58,740 --> 00:04:56,729
pictures we've checked to see whether

124
00:05:00,540 --> 00:04:58,750
pleasant pictures come up more often

125
00:05:02,700 --> 00:05:00,550
than not pleasant pictures and basically

126
00:05:04,439 --> 00:05:02,710
it is random they're coming up with the

127
00:05:07,439 --> 00:05:04,449
frequency you would expect which is a

128
00:05:08,790 --> 00:05:07,449
little surprising actually because some

129
00:05:10,800 --> 00:05:08,800
of the pictures you really don't want to

130
00:05:12,540 --> 00:05:10,810
see there I mean they're very nasty

131
00:05:13,770 --> 00:05:12,550
pictures and once you see them they're

132
00:05:16,200 --> 00:05:13,780
in your head and you want to get them

133
00:05:18,510 --> 00:05:16,210
out but they still come up with the same

134
00:05:20,520 --> 00:05:18,520
frequency now I don't think that's

135
00:05:22,800 --> 00:05:20,530
actually true for its true across all

136
00:05:25,439 --> 00:05:22,810
subjects pooled but I don't think it's

137
00:05:27,330 --> 00:05:25,449
true on some individuals because i have

138
00:05:30,000 --> 00:05:27,340

a few individuals who once they figure

139
00:05:33,800 --> 00:05:30,010
out that there are erotic targets they

140
00:05:36,300 --> 00:05:33,810
really get a lot of erotic targets and

141
00:05:37,770 --> 00:05:36,310
that sometimes you see a present them in

142
00:05:39,420 --> 00:05:37,780
effect in that study and sometimes you

143
00:05:40,650 --> 00:05:39,430
don't but I go back and look at it

144
00:05:43,529 --> 00:05:40,660
they're getting like they're just

145
00:05:45,629 --> 00:05:43,539
basically getting a porn download that's

146
00:05:48,450 --> 00:05:45,639
what they're getting so I think some

147
00:05:50,339 --> 00:05:48,460
people actually are able to influence a

148
00:05:52,020 --> 00:05:50,349
generator to get what they want but in

149
00:05:55,860 --> 00:05:52,030
general across all subjects dude they're

150
00:05:58,140 --> 00:05:55,870
not doing that Dean you generally

151
00:06:00,230 --> 00:05:58,150
produce mind-blowing results but these

152
00:06:03,510 --> 00:06:00,240
ones to me are just doubly mind-blowing

153
00:06:05,969 --> 00:06:03,520
the fact that you've been able to

154
00:06:09,180 --> 00:06:05,979
distinguish between a likely future in

155
00:06:11,270 --> 00:06:09,190
the actual future is very exciting and

156
00:06:17,240 --> 00:06:11,280
I'd really like to replicate that one

157
00:06:23,460 --> 00:06:22,140
interferometer versus the double slit as

158
00:06:26,370 --> 00:06:23,470
you know I disagree with the

159
00:06:28,020 --> 00:06:26,380
interferometer interpretation and I

160
00:06:31,020 --> 00:06:28,030
think if you can show the double slit

161
00:06:34,230 --> 00:06:31,030
thing works as far as I know that'll be

162
00:06:36,810 --> 00:06:34,240
the first really solid proof that we do

163
00:06:38,620 --> 00:06:36,820

have some sort of an observer effect and

164
00:06:41,320 --> 00:06:38,630
that there really is a quantum

165
00:06:43,270 --> 00:06:41,330
mechanical aspect to what we do and I

166
00:06:45,430 --> 00:06:43,280
haven't seen anything else that really

167
00:06:47,980 --> 00:06:45,440
shows that well my inspiration actually

168
00:06:50,680 --> 00:06:47,990
were two experiments done in at the pair

169
00:06:54,220 --> 00:06:50,690
lab and in the pair lab a double stood

170
00:06:56,050 --> 00:06:54,230
apparatus actually worked but the the

171
00:06:58,120 --> 00:06:56,060
sister experiment was done by a skeptic

172
00:07:00,670 --> 00:06:58,130
from York University and his version of

173
00:07:06,070 --> 00:07:00,680
it did not work so the score so far is

174
00:07:08,380 --> 00:07:06,080
two to one basically your great

175
00:07:11,710 --> 00:07:08,390
experiments something curious about your

176
00:07:16,300 --> 00:07:11,720
curves that you show on those skin

177
00:07:18,580 --> 00:07:16,310
response it's on set they all start at

178
00:07:23,050 --> 00:07:18,590
the same point but you show data before

179
00:07:25,360 --> 00:07:23,060
onset of trauma this diverge this isn't

180
00:07:28,210 --> 00:07:25,370
an analytical some magic there the magic

181
00:07:30,190 --> 00:07:28,220
is that analytically you clamp the skin

182
00:07:31,840 --> 00:07:30,200
conductance or the the pupil dilation

183
00:07:33,550 --> 00:07:31,850
whatever the measure is you clamp it at

184
00:07:35,020 --> 00:07:33,560
the moment of the button press because

185
00:07:37,540 --> 00:07:35,030
we're actually interested in is the

186
00:07:39,340 --> 00:07:37,550
change in physiology from the moment

187
00:07:41,710 --> 00:07:39,350
that you begin the trial but isn't it

188
00:07:44,710 --> 00:07:41,720

strange that the flow free flow before

189
00:07:47,200 --> 00:07:44,720
the onset sort of the same pattern you

190
00:07:53,170 --> 00:07:47,210
still see the red curve above the blue

191
00:07:55,300 --> 00:07:53,180
one yes that's strange I just I just

192
00:07:58,210 --> 00:07:55,310
want to make one quick comment after

193
00:08:01,950 --> 00:07:58,220
complementing Dean similarly for the

194
00:08:06,190 --> 00:08:01,960
elegance and the multi degrees that you

195
00:08:07,810 --> 00:08:06,200
capture clearly your work in my mind

196
00:08:10,150 --> 00:08:07,820
points us toward the significance of

197
00:08:17,080 --> 00:08:10,160
Charlie tarts proposal 40 years ago that

198
00:08:18,730 --> 00:08:17,090
we need state-specific sciences because

199
00:08:22,420 --> 00:08:18,740
the difference in meditators and non

200
00:08:24,490 --> 00:08:22,430
meditators yes I think we have in order

201
00:08:26,950 --> 00:08:24,500
Russell than York and then we'll see how

202
00:08:29,260 --> 00:08:26,960
much time I'm very happy to see a

203
00:08:31,660 --> 00:08:29,270
success with showing that what a person

204
00:08:33,730 --> 00:08:31,670
ceases the actual future because that

205
00:08:37,120 --> 00:08:33,740
had been a contentious issue for many

206
00:08:38,980 --> 00:08:37,130
years a dozen years they ago I did that

207
00:08:42,010 --> 00:08:38,990
experiment with my daughter Elizabeth

208
00:08:44,380 --> 00:08:42,020
where we had one with six targets one

209
00:08:48,940 --> 00:08:44,390
had a fifty percent probability in the

210
00:08:51,190 --> 00:08:48,950
other had a tenth probability of coming

211
00:08:54,700 --> 00:08:51,200
up and we again showed that people

212
00:08:57,910 --> 00:08:54,710
do indeed see the actual target and not

213
00:09:00,730 --> 00:08:57,920

the highly probable target the presence

214
00:09:03,490 --> 00:09:00,740
of a big targets percentage why did not

215
00:09:06,010 --> 00:09:03,500
interfere with the ESP and for people

216
00:09:08,650 --> 00:09:06,020
who are using psychic ability to

217
00:09:10,630 --> 00:09:08,660
forecast changes in the stock market is

218
00:09:12,760 --> 00:09:10,640
very important that you see what's

219
00:09:14,520 --> 00:09:12,770
actually going to happen rather than

220
00:09:16,960 --> 00:09:14,530
what people think is going to happen

221
00:09:20,260 --> 00:09:16,970
right and it's actually thinking about

222
00:09:21,430 --> 00:09:20,270
what Courtney presented with La that you

223
00:09:24,940 --> 00:09:21,440
know that that makes me kind of nervous

224
00:09:29,440 --> 00:09:24,950
as well if that's an actual future as

225
00:09:31,810 --> 00:09:29,450
opposed to a probable future um you

226
00:09:34,390 --> 00:09:31,820
commented that you hoped to get some

227
00:09:38,050 --> 00:09:34,400
theoretical interest out of this and I'd

228
00:09:39,940 --> 00:09:38,060
like to mention that your interferometer

229
00:09:41,860 --> 00:09:39,950
experiment has opened I think the

230
00:09:45,570 --> 00:09:41,870
biggest theoretical can of worms we've

231
00:09:49,960 --> 00:09:45,580
ever seen in a sigh experiment because

232
00:09:52,690 --> 00:09:49,970
every study of the the double slit or

233
00:09:54,640 --> 00:09:52,700
double path interference effect has

234
00:09:57,930 --> 00:09:54,650
established that what breaks the