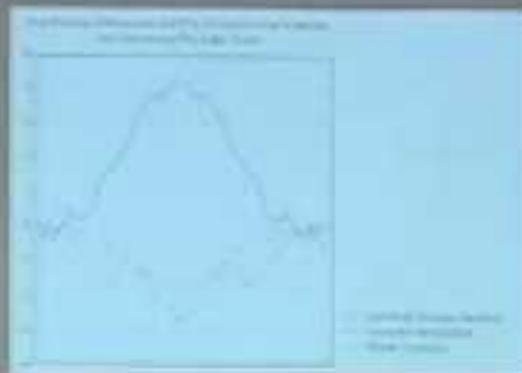


# Summary of ANOVA's

- Blank controls showed slight decreases in FFT analysis of cosmic ray patterns controlling for time
- Focused meditation was comparable to blank controls
- Spiritual energy healing intention showed moderate increases in FFT analysis of cosmic ray patterns
- Highly significant ( $p < .0000001$ ) differences comparing spiritual energy healing pattern with focused meditation and / or blank controls



1  
00:00:03,139 --> 00:00:01,610  
it just looks like great I remember

2  
00:00:05,269 --> 00:00:03,149  
there's nothing in there and remember

3  
00:00:06,860 --> 00:00:05,279  
it's also got subtraction but if you if

4  
00:00:08,990 --> 00:00:06,870  
you were looking closely at the screen

5  
00:00:11,930 --> 00:00:09,000  
you would see that there were a range of

6  
00:00:13,820 --> 00:00:11,940  
black spots and white spots the black

7  
00:00:15,650 --> 00:00:13,830  
spots were subtracting out the cosmic

8  
00:00:18,650 --> 00:00:15,660  
rays would that happen to have occurred

9  
00:00:20,779 --> 00:00:18,660  
in the control condition versus the

10  
00:00:23,990 --> 00:00:20,789  
white spots which other the cosmic rays

11  
00:00:25,880 --> 00:00:24,000  
that were then detected in the in

12  
00:00:28,939 --> 00:00:25,890  
whatever they quote intention trial or

13  
00:00:30,769 --> 00:00:28,949

its control trial was and this is just

14

00:00:32,299 --> 00:00:30,779

simply an amplification of that the tiny

15

00:00:34,630 --> 00:00:32,309

little spots in the corner are slight

16

00:00:39,470 --> 00:00:34,640

imperfections in the chip which I'm

17

00:00:42,410 --> 00:00:39,480

which were essentially constant the what

18

00:00:44,450 --> 00:00:42,420

we limited is by the way we we use image

19

00:00:46,250 --> 00:00:44,460

J software how many of you up by the way

20

00:00:49,040 --> 00:00:46,260

of familiar with the software anyone in

21

00:00:52,040 --> 00:00:49,050

this room it is available free from NIH

22

00:00:54,170 --> 00:00:52,050

if you've got an image image J and just

23

00:00:56,299 --> 00:00:54,180

Google that space NIH you can actually

24

00:00:58,729 --> 00:00:56,309

download the software it is very

25

00:00:59,900 --> 00:00:58,739

sophisticated imaging processing system

26

00:01:01,340 --> 00:00:59,910

and it made it possible to do these

27

00:01:04,130 --> 00:01:01,350

analyses which we couldn't have done

28

00:01:05,390 --> 00:01:04,140

otherwise but we then do is we take

29

00:01:07,310 --> 00:01:05,400

those because we're interested in the

30

00:01:10,520 --> 00:01:07,320

cosmic rays which are presumably quote

31

00:01:13,780 --> 00:01:10,530

random coming in through the from the

32

00:01:17,690 --> 00:01:13,790

obviously from from quote space the M

33

00:01:20,179 --> 00:01:17,700

what we do is we then do a min routine

34

00:01:23,240 --> 00:01:20,189

where we only accept those data points

35

00:01:29,510 --> 00:01:23,250

that are above 500 units using this the

36

00:01:31,219 --> 00:01:29,520

cameras on amplitude system most of the

37

00:01:33,319 --> 00:01:31,229

low light is within the range of ten to

38

00:01:35,450 --> 00:01:33,329

20 so what it does is it R essentially

39

00:01:36,859 --> 00:01:35,460

creates a black image but if you look

40

00:01:39,109 --> 00:01:36,869

very closely you'll see the little white

41

00:01:41,690 --> 00:01:39,119

specks of the cosmic rays and what I've

42

00:01:43,940 --> 00:01:41,700

done in the lower images is just amplify

43

00:01:46,580 --> 00:01:43,950

those with a sharpening technique so you

44

00:01:49,550 --> 00:01:46,590

actually see what the pattern is it

45

00:01:53,300 --> 00:01:49,560

looks like patterns of stars it looks

46

00:01:56,749 --> 00:01:53,310

like a little pencil stars and the they

47

00:01:59,480 --> 00:01:56,759

vary both in position and amplitude okay

48

00:02:01,719 --> 00:01:59,490

and now the question we're looking at is

49

00:02:05,450 --> 00:02:01,729

is there something in the in the

50

00:02:07,130 --> 00:02:05,460

structure of those patterns and the way

51  
00:02:08,690 --> 00:02:07,140  
that you can get at the structure of the

52  
00:02:10,690 --> 00:02:08,700  
patterns is to do fast Fourier

53  
00:02:12,920 --> 00:02:10,700  
transforms of the images

54  
00:02:15,350 --> 00:02:12,930  
which this software does very

55  
00:02:17,240 --> 00:02:15,360  
conveniently and so you just take this

56  
00:02:18,830 --> 00:02:17,250  
at you you hit the FFT button it's

57  
00:02:20,630 --> 00:02:18,840  
really nice how the software networks

58  
00:02:23,600 --> 00:02:20,640  
and all of a sudden it creates a

59  
00:02:26,240 --> 00:02:23,610  
spectral image now if that if it was

60  
00:02:29,330 --> 00:02:26,250  
purely random you would essentially see

61  
00:02:30,830 --> 00:02:29,340  
just a cluster of gray scales and it

62  
00:02:33,020 --> 00:02:30,840  
would be no centering of that

63  
00:02:34,580 --> 00:02:33,030

information but you'll notice if you

64

00:02:36,140 --> 00:02:34,590

look very closely which is hard to do

65

00:02:37,490 --> 00:02:36,150

again in the screen that you'll notice

66

00:02:38,930 --> 00:02:37,500

that there's a little blip born in the

67

00:02:41,120 --> 00:02:38,940

center it actually makes somewhat of a

68

00:02:43,940 --> 00:02:41,130

line and then if you do what's called

69

00:02:46,280 --> 00:02:43,950

the plot profile analysis which is just

70

00:02:48,920 --> 00:02:46,290

a simple procedure when you can have the

71

00:02:52,880 --> 00:02:48,930

software analyze each column of pixels

72

00:02:57,710 --> 00:02:52,890

it's a 512 by 512 pixel array it will

73

00:02:59,870 --> 00:02:57,720

then average each of those 512 columns

74

00:03:02,330 --> 00:02:59,880

and if there was nothing if it was just

75

00:03:04,040 --> 00:03:02,340

an average pattern you'd get a straight

76

00:03:05,870 --> 00:03:04,050

line or a slight squiggly line and

77

00:03:08,540 --> 00:03:05,880

you'll notice in this particular one it

78

00:03:10,070 --> 00:03:08,550

happened to show a curve which meant

79

00:03:13,040 --> 00:03:10,080

there was some structuring in the in the

80

00:03:15,140 --> 00:03:13,050

center of the FFT and it was that kind

81

00:03:18,620 --> 00:03:15,150

of analysis that we then did because

82

00:03:22,400 --> 00:03:18,630

this could be all automated now this is

83

00:03:26,180 --> 00:03:22,410

a complex pattern and I'll just briefly

84

00:03:30,680 --> 00:03:26,190

describe it up but that because this is

85

00:03:37,220 --> 00:03:30,690

now a summary of the averaging of each

86

00:03:40,880 --> 00:03:37,230

of the individual fft s4 that the upper

87

00:03:43,270 --> 00:03:40,890

right one is the when the spiritual

88

00:03:46,759 --> 00:03:43,280

healing intention trials were given

89

00:03:48,460 --> 00:03:46,769

minus its preceding control trial

90

00:03:51,830 --> 00:03:48,470

because remember there were four trials

91

00:03:55,250 --> 00:03:51,840

so you could either so it's either 3-2

92

00:03:58,550 --> 00:03:55,260

or 4-3 it's the difference in those

93

00:04:01,130 --> 00:03:58,560

spectral arrays averaged and then you

94

00:04:02,750 --> 00:04:01,140

can see the the plot profile to the

95

00:04:07,060 --> 00:04:02,760

right and you'll notice that there's an

96

00:04:10,699 --> 00:04:07,070

increase in that in that spectral peak

97

00:04:13,610 --> 00:04:10,709

the one on the bottom is the same

98

00:04:17,690 --> 00:04:13,620

identical sequence that time to have

99

00:04:22,099 --> 00:04:17,700

drawn out for the intention trial the

100

00:04:24,150 --> 00:04:22,109

meditation trial where the the subject

101  
00:04:26,430 --> 00:04:24,160  
put his attention imagine the stand

102  
00:04:28,170 --> 00:04:26,440  
and and focuses attention meditating on

103  
00:04:30,000 --> 00:04:28,180  
the thinking you'll notice that it's a

104  
00:04:32,880 --> 00:04:30,010  
different pattern and you'll notice it

105  
00:04:37,710 --> 00:04:32,890  
happens to have a lower part and the

106  
00:04:40,640 --> 00:04:37,720  
other two are the matched controls

107  
00:04:43,530 --> 00:04:40,650  
Royals the 16 runs of the controls

108  
00:04:45,660 --> 00:04:43,540  
separately placed for the same set of

109  
00:04:48,690 --> 00:04:45,670  
analyses and you'll notice there's a

110  
00:04:51,330 --> 00:04:48,700  
little bit of a pattern there that's

111  
00:04:53,490 --> 00:04:51,340  
sort of matching what the the other one

112  
00:04:57,780 --> 00:04:53,500  
does it's not so striking in that in the

113  
00:05:00,770 --> 00:04:57,790

second one there when you then take all

114

00:05:05,130 --> 00:05:00,780

of this data average it together and

115

00:05:08,070 --> 00:05:05,140

then look at the the middle point with

116

00:05:12,800 --> 00:05:08,080

where the peak was which is the mid

117

00:05:15,390 --> 00:05:12,810

century in the middle 56 columns in the

118

00:05:18,030 --> 00:05:15,400

512 which is what we then focused our

119

00:05:21,690 --> 00:05:18,040

analyses on this is the summary curve

120

00:05:24,660 --> 00:05:21,700

and what it shows is that in the

121

00:05:28,370 --> 00:05:24,670

spiritual energy healing trials you'll

122

00:05:30,930 --> 00:05:28,380

see that averaged peak increase and

123

00:05:34,770 --> 00:05:30,940

you'll notice that for the focused

124

00:05:36,720 --> 00:05:34,780

meditation which is that dashed line is

125

00:05:39,780 --> 00:05:36,730

there each it shows a slight decrease

126

00:05:42,030 --> 00:05:39,790

it's slightly more but not statistically

127

00:05:46,470 --> 00:05:42,040

so then the slight little decrease that

128

00:05:49,200 --> 00:05:46,480

you see for the blank controls and when

129

00:05:51,890 --> 00:05:49,210

you do the the appropriate repeated

130

00:05:56,190 --> 00:05:51,900

measures analysis of various is only did

131

00:05:58,409 --> 00:05:56,200

analysis variants on the data that turns

132

00:06:01,470 --> 00:05:58,419

out the results were are quite

133

00:06:03,780 --> 00:06:01,480

statistically significant so what are

134

00:06:05,970 --> 00:06:03,790

the summary of these findings the blind

135

00:06:08,010 --> 00:06:05,980

controls showed slight decreases in the

136

00:06:10,800 --> 00:06:08,020

FFT analysis of the contrary patterns

137

00:06:14,130 --> 00:06:10,810

controlling for time focus meditation

138

00:06:15,659 --> 00:06:14,140

was comparable to the blind controls the

139

00:06:18,330 --> 00:06:15,669

spiritual energy healing intention

140

00:06:20,159 --> 00:06:18,340

showed moderate increases in ft analysis

141

00:06:22,890 --> 00:06:20,169

of the cosmic-ray patterns and these

142

00:06:25,020 --> 00:06:22,900

effects were significantly different

143

00:06:27,900 --> 00:06:25,030

separate doing comparing each with their

144

00:06:29,070 --> 00:06:27,910

respective comparing the original into

145

00:06:32,010 --> 00:06:29,080

healing with the matched focus

146

00:06:34,380 --> 00:06:32,020

meditation of mind controls so what are

147

00:06:35,670 --> 00:06:34,390

the future research questions here of

148

00:06:37,450 --> 00:06:35,680

course the number one question here of

149

00:06:40,010 --> 00:06:37,460

course is belief

150

00:06:42,770 --> 00:06:40,020

you want to know if this is a a

151  
00:06:46,219 --> 00:06:42,780  
replicable phenomena of causing an

152  
00:06:50,119 --> 00:06:46,229  
alteration in the in the structural

153  
00:06:52,790 --> 00:06:50,129  
pattern of the the cosmic ray data is

154  
00:06:54,290 --> 00:06:52,800  
this purely a healer belief does a bill

155  
00:06:56,570 --> 00:06:54,300  
he'll they have to believe in a higher

156  
00:06:57,890 --> 00:06:56,580  
frequency higher power effect in order

157  
00:07:00,260 --> 00:06:57,900  
to get this effect or not of course the

158  
00:07:01,999 --> 00:07:00,270  
answer is we don't know nom this was a

159  
00:07:04,279 --> 00:07:02,009  
if you would have proof in principle

160  
00:07:06,260 --> 00:07:04,289  
kind of experiment of course the scale

161  
00:07:08,869 --> 00:07:06,270  
and motivation of the healer is

162  
00:07:10,999 --> 00:07:08,879  
important some of you may be aware that

163  
00:07:13,070 --> 00:07:11,009

I'm Dean Radin recently published a

164

00:07:15,439 --> 00:07:13,080

paper in an explorer looking at the

165

00:07:17,149 --> 00:07:15,449

effects of skilled meditated versus

166

00:07:18,860 --> 00:07:17,159

controls attempting to influence the

167

00:07:22,909 --> 00:07:18,870

interference pattern in an

168

00:07:24,619 --> 00:07:22,919

interferometer we by the way now have

169

00:07:26,420 --> 00:07:24,629

borrowed his interferometer and are

170

00:07:27,950 --> 00:07:26,430

doing the same kind of research now also

171

00:07:29,510 --> 00:07:27,960

with spiritual of the healing and the

172

00:07:30,770 --> 00:07:29,520

whole question of the skill because in

173

00:07:32,869 --> 00:07:30,780

his day to buy the weight the skill

174

00:07:36,110 --> 00:07:32,879

mattered and this person was clearly

175

00:07:38,990 --> 00:07:36,120

motivated he had an intense desire to at

176  
00:07:40,850 --> 00:07:39,000  
least discover something however he was

177  
00:07:43,219 --> 00:07:40,860  
blind to what the specific hypotheses

178  
00:07:45,769 --> 00:07:43,229  
were at least in terms of the cosmic-ray

179  
00:07:48,620 --> 00:07:45,779  
patterns there's a type of spiritual

180  
00:07:50,480 --> 00:07:48,630  
energy healing matter because some you

181  
00:07:54,709 --> 00:07:50,490  
know as I say most focus on universal

182  
00:07:56,600 --> 00:07:54,719  
energy is focused is is sort of allowing

183  
00:07:58,640 --> 00:07:56,610  
it to occur but some are just sell

184  
00:08:01,249 --> 00:07:58,650  
focused it's my energy having in effect

185  
00:08:03,680 --> 00:08:01,259  
I'm sending love to the to whatever the

186  
00:08:06,619 --> 00:08:03,690  
individual is and then there's the whole

187  
00:08:08,450 --> 00:08:06,629  
intriguing possibility which we bar by

188  
00:08:10,010 --> 00:08:08,460

the way are looking at is the quote

189

00:08:12,499 --> 00:08:10,020

spirit assisted kind of healing

190

00:08:14,300 --> 00:08:12,509

traditions such as John of God we're

191

00:08:18,019 --> 00:08:14,310

literally and by the way more than fifty

192

00:08:20,240 --> 00:08:18,029

percent of healers report that when they

193

00:08:23,089 --> 00:08:20,250

are quote in the flow they are receiving

194

00:08:24,950 --> 00:08:23,099

some sort of assistance from what they

195

00:08:27,830 --> 00:08:24,960

call their hire guides all the way to

196

00:08:29,689 --> 00:08:27,840

the divine but we have never brought

197

00:08:32,360 --> 00:08:29,699

that into the laboratory we the

198

00:08:33,860 --> 00:08:32,370

collective we we were doing it now and

199

00:08:37,610 --> 00:08:33,870

of course then there's examination of

200

00:08:40,880 --> 00:08:37,620

other photon frequency bands now I end

201  
00:08:43,069 --> 00:08:40,890  
with this image here it's a sculpture

202  
00:08:46,280 --> 00:08:43,079  
from bill war L that happens to be

203  
00:08:49,990 --> 00:08:46,290  
called I reached two forces unseen bill

204  
00:08:52,150 --> 00:08:50,000  
writes poems for his major works and

205  
00:08:53,770 --> 00:08:52,160  
in lectures that I give on the energy

206  
00:08:56,350 --> 00:08:53,780  
healing experiments book I often end

207  
00:08:57,970 --> 00:08:56,360  
with this poem I'm not of course not

208  
00:08:59,920 --> 00:08:57,980  
going to take time to hear the poem here

209  
00:09:02,680 --> 00:08:59,930  
but I do want to raise the polym

210  
00:09:05,380 --> 00:09:02,690  
following thought imagine for the moment

211  
00:09:08,020 --> 00:09:05,390  
that with these super sensitive cameras

212  
00:09:09,700 --> 00:09:08,030  
with these new technologies originally

213  
00:09:12,640 --> 00:09:09,710

designed for looking into deep space in

214

00:09:14,110 --> 00:09:12,650

master physics now being pointed inward

215

00:09:16,420 --> 00:09:14,120

looking at living systems and now

216

00:09:18,520 --> 00:09:16,430

looking at and by a photon emission and

217

00:09:21,670 --> 00:09:18,530

remember the cosmic rays here was simply

218

00:09:25,570 --> 00:09:21,680

a quote artifact of the technology but

219

00:09:28,570 --> 00:09:25,580

we can quantify it if it turns out to be

220

00:09:34,030 --> 00:09:28,580

the case that we can measure document

221

00:09:36,840 --> 00:09:34,040

changes in patterns of light including

222

00:09:39,940 --> 00:09:36,850

high frequency light that's associated

223

00:09:44,470 --> 00:09:39,950

with the human intention to involve

224

00:09:47,110 --> 00:09:44,480

spiritual matters we may be with this

225

00:09:49,900 --> 00:09:47,120

contemporary technology opening up new

226

00:09:51,700 --> 00:09:49,910

areas of science because for the first

227

00:09:53,920 --> 00:09:51,710

time we may be able to get a handle on

228

00:09:58,960 --> 00:09:53,930

quantifying something that's associated