



1  
00:00:14,920 --> 00:00:20,150  
okay

2  
00:00:27,910 --> 00:00:22,150  
can i call on someone in the meantime

3  
00:00:34,870 --> 00:00:31,830  
yes okay so black light power

4  
00:00:37,030 --> 00:00:34,880  
right black light power and it's uh

5  
00:00:38,549 --> 00:00:37,040  
president mills have developed this

6  
00:00:41,990 --> 00:00:38,559  
concept of a hydrino

7  
00:00:44,389 --> 00:00:42,000  
which is a hydrogen atom that spins down

8  
00:00:45,190 --> 00:00:44,399  
to a lower orbital and we're often

9  
00:00:47,910 --> 00:00:45,200  
connected

10  
00:00:50,229 --> 00:00:47,920  
with black light and the question is is

11  
00:00:52,470 --> 00:00:50,239  
our process the same as black lights

12  
00:00:53,590 --> 00:00:52,480  
the answer is not as far as we as as

13  
00:00:55,350 --> 00:00:53,600

we're concerned

14  
00:00:57,590 --> 00:00:55,360  
uh you know there may end up being some

15  
00:00:59,189 --> 00:00:57,600  
fundamental physics that connects us

16  
00:01:00,709 --> 00:00:59,199  
but right now we're coming from two

17  
00:01:02,389 --> 00:01:00,719  
completely different places

18  
00:01:04,469 --> 00:01:02,399  
and we're not talking about hydrogen

19  
00:01:07,990 --> 00:01:04,479  
going to a lower

20  
00:01:24,830 --> 00:01:08,000  
orbital uh i'm going to

21  
00:01:24,840 --> 00:01:33,270  
please

22  
00:01:36,870 --> 00:01:35,190  
mechanics has raised against zero-point

23  
00:01:40,390 --> 00:01:36,880  
energy extraction

24  
00:01:44,149 --> 00:01:40,400  
is that uh be able to

25  
00:01:45,910 --> 00:01:44,159  
because uh the zero point fluctuations

26  
00:01:47,270 --> 00:01:45,920  
are characteristic of our particular

27  
00:01:49,350 --> 00:01:47,280  
vacuum state

28  
00:01:51,429 --> 00:01:49,360  
and if it's possible to disrupt energy

29  
00:01:52,069 --> 00:01:51,439  
from them that implies that we're living

30  
00:01:54,870 --> 00:01:52,079  
in a

31  
00:01:55,510 --> 00:01:54,880  
false vacuum that there is some lower

32  
00:01:58,069 --> 00:01:55,520  
energy

33  
00:02:00,069 --> 00:01:58,079  
true vacuum state that would be where

34  
00:02:02,709 --> 00:02:00,079  
the excess energy could come from

35  
00:02:05,109 --> 00:02:02,719  
so if we extract it we will trigger a

36  
00:02:16,630 --> 00:02:05,119  
collapsibly true vacuum which would

37  
00:02:22,070 --> 00:02:20,229  
uh so so if you're right uh we'll have

38  
00:02:22,710 --> 00:02:22,080

sort of a i've turned it back on if

39

00:02:24,229 --> 00:02:22,720

you're right

40

00:02:27,350 --> 00:02:24,239

we'll have a quick instant in which we

41

00:02:31,430 --> 00:02:29,750

the time just why don't you just pass

42

00:02:34,550 --> 00:02:31,440

the okay

43

00:02:37,910 --> 00:02:34,560

uh so uh so

44

00:02:40,790 --> 00:02:37,920

is mine off i believe mine's off okay

45

00:02:41,910 --> 00:02:40,800

so uh as i said if we know if if you're

46

00:02:45,030 --> 00:02:41,920

right

47

00:02:47,750 --> 00:02:45,040

we'll know for a short instant um

48

00:02:48,070 --> 00:02:47,760

and more generally it's it's a question

49

00:02:50,309 --> 00:02:48,080

of

50

00:02:51,110 --> 00:02:50,319

what is vacuum energy and nobody really

51  
00:02:54,869 --> 00:02:51,120  
knows

52  
00:02:56,229 --> 00:02:54,879  
energy is uh the stochastic

53  
00:02:58,470 --> 00:02:56,239  
electrodynamic view

54  
00:02:59,430 --> 00:02:58,480  
is a more physical view than the

55  
00:03:01,110 --> 00:02:59,440  
uncertainty

56  
00:03:02,630 --> 00:03:01,120  
quantum mechanical view as you as you

57  
00:03:04,390 --> 00:03:02,640  
well know uh

58  
00:03:08,790 --> 00:03:04,400  
in the end we've got a lot to learn

59  
00:03:08,800 --> 00:03:14,710  
john

60  
00:03:17,990 --> 00:03:17,350  
to determine if the material that the

61  
00:03:20,309 --> 00:03:18,000  
plates are

62  
00:03:22,470 --> 00:03:20,319  
made of will affect the differential

63  
00:03:23,350 --> 00:03:22,480

between the inside and outside so that

64

00:03:26,309 --> 00:03:23,360

perhaps

65

00:03:26,630 --> 00:03:26,319

certain materials of molecular structure

66

00:03:28,550 --> 00:03:26,640

or

67

00:03:29,830 --> 00:03:28,560

metal different metals might create a

68

00:03:33,430 --> 00:03:29,840

greater differential

69

00:03:35,350 --> 00:03:33,440

uh yes so the question is

70

00:03:36,630 --> 00:03:35,360

is the nature of the chasmir cavity

71

00:03:39,910 --> 00:03:36,640

plates uh

72

00:03:42,869 --> 00:03:39,920

how does it affect the casimir force and

73

00:03:44,550 --> 00:03:42,879

these uh properties that i'm talking

74

00:03:46,630 --> 00:03:44,560

about the answer is yes it depends quite

75

00:03:48,309 --> 00:03:46,640

a lot on the casino cavity plates

76

00:03:51,270 --> 00:03:48,319

there's been a fair bit of work on it

77

00:03:53,429 --> 00:03:51,280

and in fact recently one hoop has shown

78

00:03:55,030 --> 00:03:53,439

that you can get a repulsive force as

79

00:03:56,869 --> 00:03:55,040

well as an attractive force

80

00:03:58,949 --> 00:03:56,879

by changing the conditions of the casino

81

00:04:01,190 --> 00:03:58,959

cavity

82

00:04:02,869 --> 00:04:01,200

there's this is really a new field

83

00:04:04,550 --> 00:04:02,879

there's a lot that needs to go on my

84

00:04:05,910 --> 00:04:04,560

student who's working on this

85

00:04:07,350 --> 00:04:05,920

is going off to a conference

86

00:04:08,390 --> 00:04:07,360

specifically on the issue that you're

87

00:04:10,309 --> 00:04:08,400

talking about

88

00:04:11,750 --> 00:04:10,319

looking at the casino cavity plates and

89

00:04:13,270 --> 00:04:11,760

finding out what how their

90

00:04:15,830 --> 00:04:13,280

characteristics affect

91

00:04:17,030 --> 00:04:15,840

uh what's inside uh and we don't know

92

00:04:21,590 --> 00:04:17,040

yet

93

00:04:23,270 --> 00:04:21,600

um yeah with being an engineer

94

00:04:24,629 --> 00:04:23,280

and we're the first graduate students at

95

00:04:26,150 --> 00:04:24,639

your hands so to speak

96

00:04:27,990 --> 00:04:26,160

how are you coming on the design of the

97

00:04:32,150 --> 00:04:28,000

first test uh so we

98

00:04:33,270 --> 00:04:32,160

had a um darpa contract a fairly large

99

00:04:36,790 --> 00:04:33,280

contract

100

00:04:38,870 --> 00:04:36,800

to look at this and we spent a year

101  
00:04:39,990 --> 00:04:38,880  
building casimir cavities and testing

102  
00:04:42,390 --> 00:04:40,000  
them and so on

103  
00:04:43,030 --> 00:04:42,400  
in the end of it we had a few glimmers

104  
00:04:46,950 --> 00:04:43,040  
of

105  
00:04:49,270 --> 00:04:46,960  
hope that maybe this is working but uh

106  
00:04:51,030 --> 00:04:49,280  
in retrospect i think that the approach

107  
00:04:52,469 --> 00:04:51,040  
we took to making casimir cavities which

108  
00:04:52,950 --> 00:04:52,479  
there isn't time for me to go into right

109  
00:04:54,550 --> 00:04:52,960  
now

110  
00:04:57,189 --> 00:04:54,560  
was not reliable and we weren't getting

111  
00:04:59,590 --> 00:04:57,199  
good spacing we did see these energy

112  
00:05:01,590 --> 00:04:59,600  
bursts that people have talked about

113  
00:05:03,110 --> 00:05:01,600

but there are multiple ways to interpret

114

00:05:06,310 --> 00:05:03,120

it is it is it a

115

00:05:08,070 --> 00:05:06,320

zero point energy force or is it perhaps

116

00:05:09,350 --> 00:05:08,080

some sort of sparking or something else

117

00:05:10,950 --> 00:05:09,360

that's being induced

118

00:05:13,110 --> 00:05:10,960

so we now have a completely different

119

00:05:15,510 --> 00:05:13,120

method for making casimir cavities we've

120

00:05:17,029 --> 00:05:15,520

got this stainless steel chamber

121

00:05:19,270 --> 00:05:17,039

very well controlled for doing the

122

00:05:19,749 --> 00:05:19,280

testing and we'll find out over the next

123

00:05:21,990 --> 00:05:19,759

year

124

00:05:24,150 --> 00:05:22,000

it's not an easy experiment to do