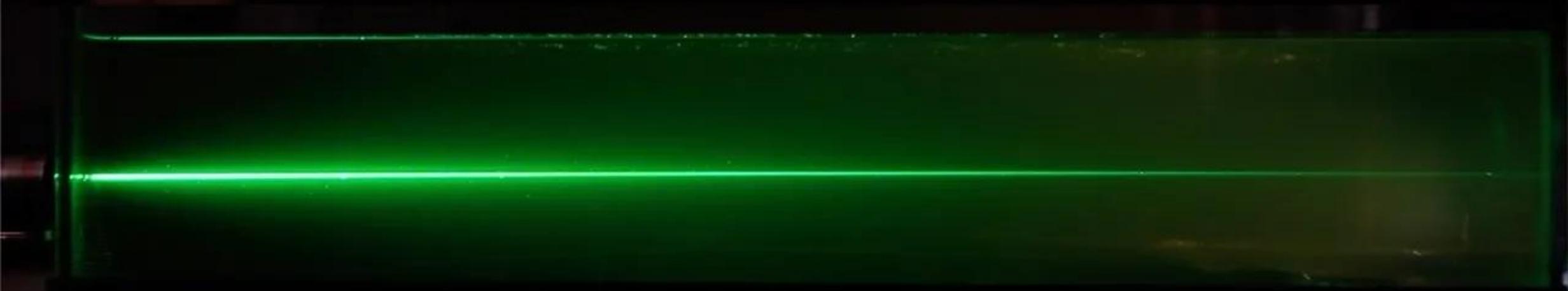


LASER UNBENDING



1
00:00:04,249 --> 00:00:01,670
so what do you do with your fish tank

2
00:00:06,889 --> 00:00:04,259
full of sugar water when you've finished

3
00:00:09,500 --> 00:00:06,899
your experiment well you make something

4
00:00:11,990 --> 00:00:09,510
sugar water this laser is bent because

5
00:00:14,209 --> 00:00:12,000
of the sugar gradient going down here

6
00:00:16,760 --> 00:00:14,219
denser at the bottom so it sends down so

7
00:00:19,970 --> 00:00:16,770
if I was to stick this in here and swirl

8
00:00:22,609 --> 00:00:19,980
it around we shouldn't Theory get thus

9
00:00:26,040 --> 00:00:22,619
the laser straightening out so let's see

10
00:00:33,460 --> 00:00:28,030
you

11
00:00:36,760 --> 00:00:33,470
laser is getting very distorted kind of

12
00:00:39,370 --> 00:00:36,770
like turbulence I'm looking at the sugar

13
00:00:43,690 --> 00:00:39,380

water it looks like hot air and a hot

14

00:00:47,200 --> 00:00:43,700

day like a bow of fire so faith mix it

15

00:00:50,439 --> 00:00:47,210

up and then let it sail down oops

16

00:00:54,010 --> 00:00:50,449

knocked over one of my pylons we should

17

00:00:55,540 --> 00:00:54,020

see that the laser becomes straight now

18

00:00:58,689 --> 00:00:55,550

it's bouncing around a bit because of

19

00:01:04,520 --> 00:00:58,699

the turbulent water there you can see

20

00:01:08,880 --> 00:01:07,650

it's becoming more diffuse simply

21

00:01:11,190 --> 00:01:08,890

because there's a bunch of crap in the

22

00:01:14,490 --> 00:01:11,200

waters now I may give it a good mix good

23

00:01:17,370 --> 00:01:14,500

hole all mixed up completely they're

24

00:01:20,010 --> 00:01:17,380

gonna let it settle down I also have my

25

00:01:26,820 --> 00:01:20,020

camera at the end my iPhone which is

26

00:01:29,430 --> 00:01:26,830

doing the kind of skyline view it's not

27

00:01:32,430 --> 00:01:29,440

over all of my mileage

28

00:01:35,670 --> 00:01:32,440

unfortunately so today we will be able

29

00:01:37,530 --> 00:01:35,680

to see something from inside all right

30

00:01:50,200 --> 00:01:37,540

once I've already knocked over I'm gonna

31

00:01:56,450 --> 00:01:53,180

and now you can see the laser is just

32

00:01:59,660 --> 00:01:56,460

essentially going in a straight line it

33

00:02:03,830 --> 00:01:59,670

is spreading out more because of all the

34

00:02:17,059 --> 00:02:03,840

crap in the water but it was bending

35

00:02:28,130 --> 00:02:18,950

straightline now

36

00:02:28,140 --> 00:02:32,430

you

37

00:02:37,350 --> 00:02:35,850

oh sure so the iPhone at the end of the

38

00:02:40,080 --> 00:02:37,360

tank did

39

00:02:42,720 --> 00:02:40,090

in footage on the left we see the view

40

00:02:45,090 --> 00:02:42,730

along the tank the ground has been

41

00:02:48,260 --> 00:02:45,100

raised up quite significantly so the the

42

00:02:50,910 --> 00:02:48,270

horizon the essential horizon as being

43

00:02:53,850 --> 00:02:50,920

flattened out and you can see if you

44

00:02:55,860 --> 00:02:53,860

look at the block on the left-hand side

45

00:02:57,780 --> 00:02:55,870

you can see over 18 you have to see the

46

00:02:59,370 --> 00:02:57,790

ground beyond it now if you look on the

47

00:03:01,890 --> 00:02:59,380

right-hand side the right-hand side

48

00:03:03,720 --> 00:03:01,900

image this is when the water has been

49

00:03:06,960 --> 00:03:03,730

mixed up and so there's no refraction

50

00:03:09,870 --> 00:03:06,970

and now you can see that the block on

51

00:03:12,720 --> 00:03:09,880

the left-hand side is now blocking the