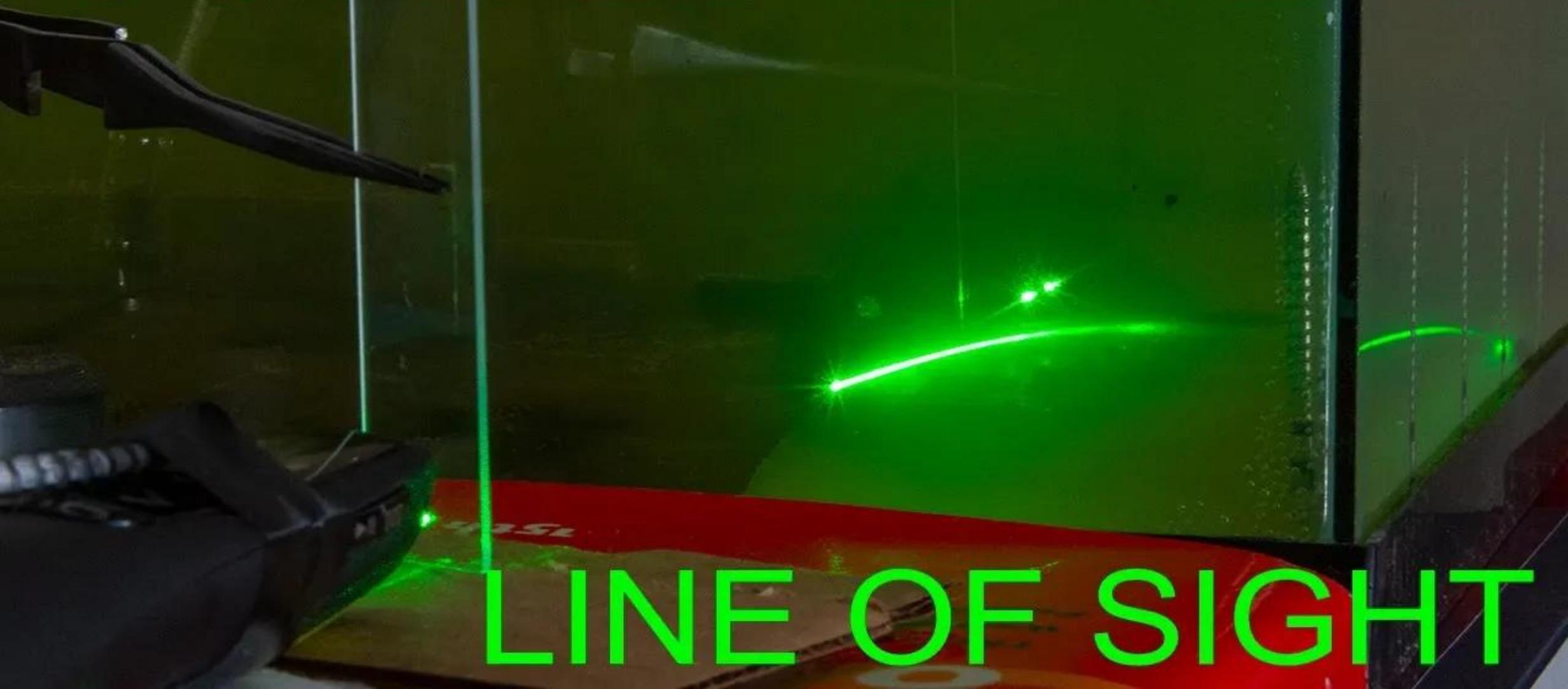


CURVED LASER!



LINE OF SIGHT

1
00:00:05,240 --> 00:00:02,629
this is a laser being bent by the

2
00:00:08,600 --> 00:00:05,250
density gradient in this shimmer water

3
00:00:11,690 --> 00:00:08,610
in a tank and the lasers over here comes

4
00:00:14,690 --> 00:00:11,700
in over here and it hits this coin over

5
00:00:16,970 --> 00:00:14,700
here now sir someone asked me if you're

6
00:00:19,609 --> 00:00:16,980
looking at this end of the tank why can

7
00:00:21,349 --> 00:00:19,619
you still see the laser Bend if we're

8
00:00:23,599 --> 00:00:21,359
looking in the same direction as the

9
00:00:27,050 --> 00:00:23,609
laser then shouldn't we see the laser

10
00:00:29,330 --> 00:00:27,060
like a straight line because our point

11
00:00:30,950 --> 00:00:29,340
of view is that it's the same thing

12
00:00:33,080 --> 00:00:30,960
about the light going into our eye

13
00:00:36,410 --> 00:00:33,090

should bend the same as a laser and the

14

00:00:38,119 --> 00:00:36,420

answer is that we're not putting the

15

00:00:39,500 --> 00:00:38,129

camera in the exact same position as a

16

00:00:41,150 --> 00:00:39,510

laser we would need to have it in line

17

00:00:43,430 --> 00:00:41,160

with the laser which because we cannot

18

00:00:45,889 --> 00:00:43,440

do if we do that it cuts off the laser

19

00:00:50,510 --> 00:00:45,899

so what I've done is I've set up these

20

00:00:53,840 --> 00:00:50,520

pieces of glass here and I have the

21

00:00:55,670 --> 00:00:53,850

laser shining at 45 degrees into this

22

00:00:59,869 --> 00:00:55,680

one piece of glass and then on into here

23

00:01:02,450 --> 00:00:59,879

so if you come down here we can see the

24

00:01:04,789 --> 00:01:02,460

reflection of the laser beam in the tank

25

00:01:06,410 --> 00:01:04,799

and there it is it's at the top is the

26

00:01:10,160 --> 00:01:06,420

thing that's moving from left to right

27

00:01:12,679 --> 00:01:10,170

at the top and I'm just going to zoom in

28

00:01:15,260 --> 00:01:12,689

here so you can see it a bit better and

29

00:01:18,800 --> 00:01:15,270

if I move down until the laser is

30

00:01:20,810 --> 00:01:18,810

actually lined up with itself then it's

31

00:01:23,749 --> 00:01:20,820

actually a perfectly straight line so we

32

00:01:27,260 --> 00:01:23,759

are now looking along the same line as

33

00:01:29,330 --> 00:01:27,270

the laser and our line of sight is