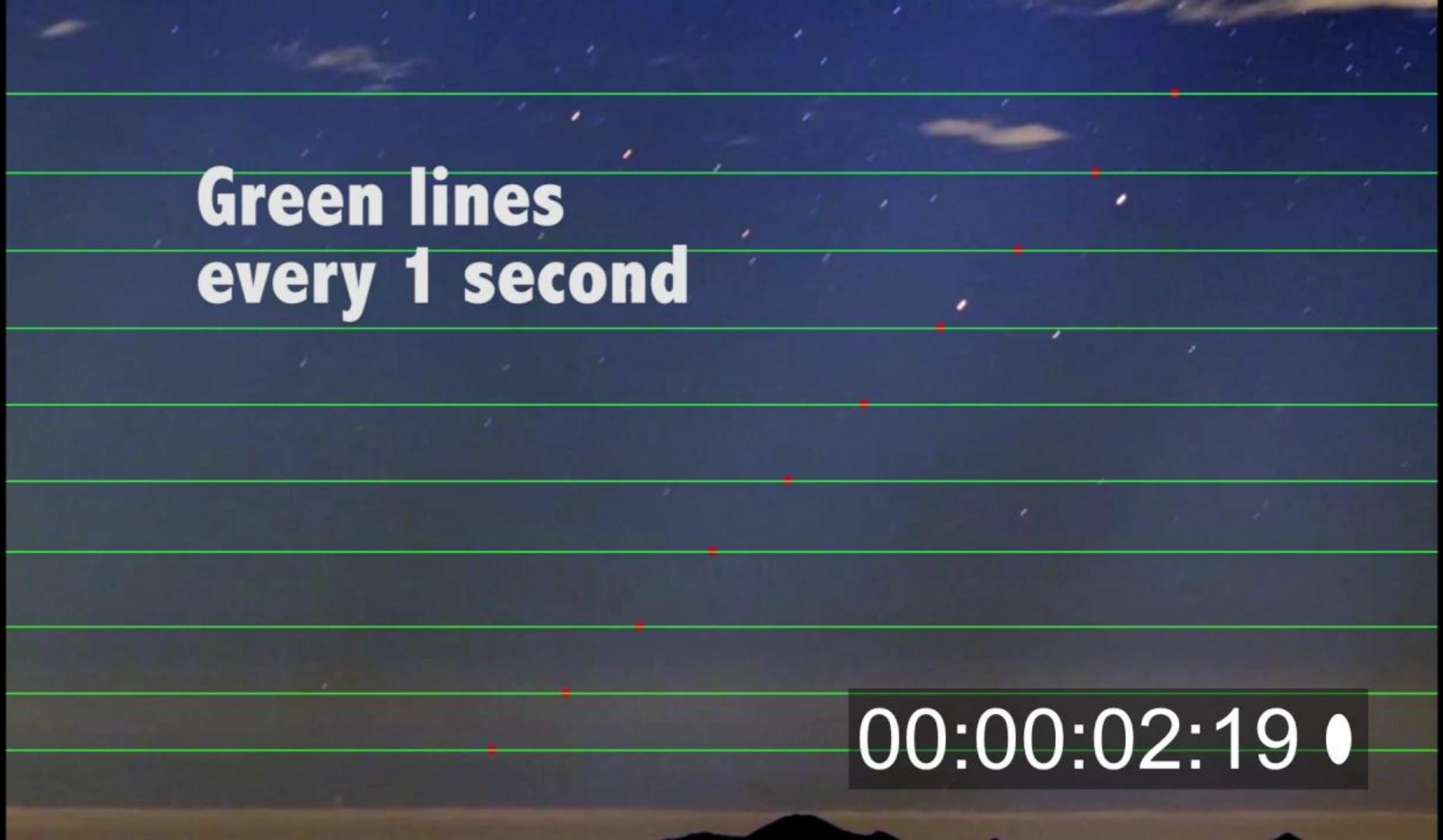
Green lines
every 1 second
00:00:02:19

1
00:00:04,039 --> 00:00:02,000
as the stars get closer to the horizon

2
00:00:06,490 --> 00:00:04,049
they seem to slow down a little bit

3
00:00:09,470 --> 00:00:06,500
because of the atmospheric refraction

4
00:00:13,280 --> 00:00:09,480
this is actually occurring in this video

5
00:00:17,150 --> 00:00:13,290
bye-bye back at broschi it's a little

6
00:00:19,099 --> 00:00:17,160
hard to see what I did is I waited into

7
00:00:25,220 --> 00:00:19,109
some very distinctive styles appeared

8
00:00:29,150 --> 00:00:25,230
these two stars right here and I took

9
00:00:31,070 --> 00:00:29,160
this section of the image and I took it

10
00:00:33,020 --> 00:00:31,080
into Photoshop increase the contrast and

11
00:00:38,869 --> 00:00:33,030
then place the line every one second

12
00:00:40,760 --> 00:00:38,879
where the leading star was so here's the

13
00:00:43,520 --> 00:00:40,770

full clip I've added a timecode so you

14
00:00:46,160 --> 00:00:43,530
can see that the star does in fact

15
00:00:48,560 --> 00:00:46,170
coincide with the line at the exact one

16
00:00:51,709 --> 00:00:48,570
second mark

17
00:00:54,439 --> 00:00:51,719
and here it is again at one-quarter

18
00:00:57,380 --> 00:00:54,449
speed if you look carefully at the

19
00:01:00,469 --> 00:00:57,390
leading star of the two stones when it

20
00:01:04,100 --> 00:01:00,479
hits a red dot or green line it can be

21
00:01:04,729 --> 00:01:04,110
exactly the same as the second mark on

22
00:01:06,710 --> 00:01:04,739
the timecode

23
00:01:15,170 --> 00:01:06,720
so here it is coming up on the five

24
00:01:17,120 --> 00:01:15,180
second so no five six so it's showing

25
00:01:19,279 --> 00:01:17,130
that these lines are spaced exactly one

26
00:01:21,499 --> 00:01:19,289
second apart and as you can see they get

27
00:01:28,550 --> 00:01:21,509
significantly closer together as you get

28
00:01:30,680 --> 00:01:28,560
closer to the horizon so what would this

29
00:01:32,870 --> 00:01:30,690
look like if it was a actually going at

30
00:01:35,770 --> 00:01:32,880
a constant speed well let's have some

31
00:01:38,690 --> 00:01:35,780
blue dots showing what would happend

32
00:01:40,340 --> 00:01:38,700
parrying the actual positions in the red

33
00:01:42,080 --> 00:01:40,350
dots with the extrapolated positions in

34
00:01:43,880 --> 00:01:42,090
the blue dots you can see how far behind

35
00:01:46,160 --> 00:01:43,890
the star is lagging behind its actual

36
00:01:47,749 --> 00:01:46,170
geometric position the blue dot here's a

37
00:01:50,210 --> 00:01:47,759
close-up of the final situation showing