

THE LASER-IPL GUYS

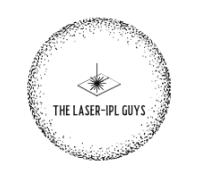
How Long is a Beam
of Light?



How long is a beam of light?

It depends on 2 factors:

The speed of light, and
how long the light is switched ON for



So, what is the speed of light?

300,000,000 metres/second

or 186,000 miles/second

(in free space/vacuum)





How long is a 1 nanosecond beam?

1 nanosecond is 0.000000001 seconds

which is 10^{-9} s

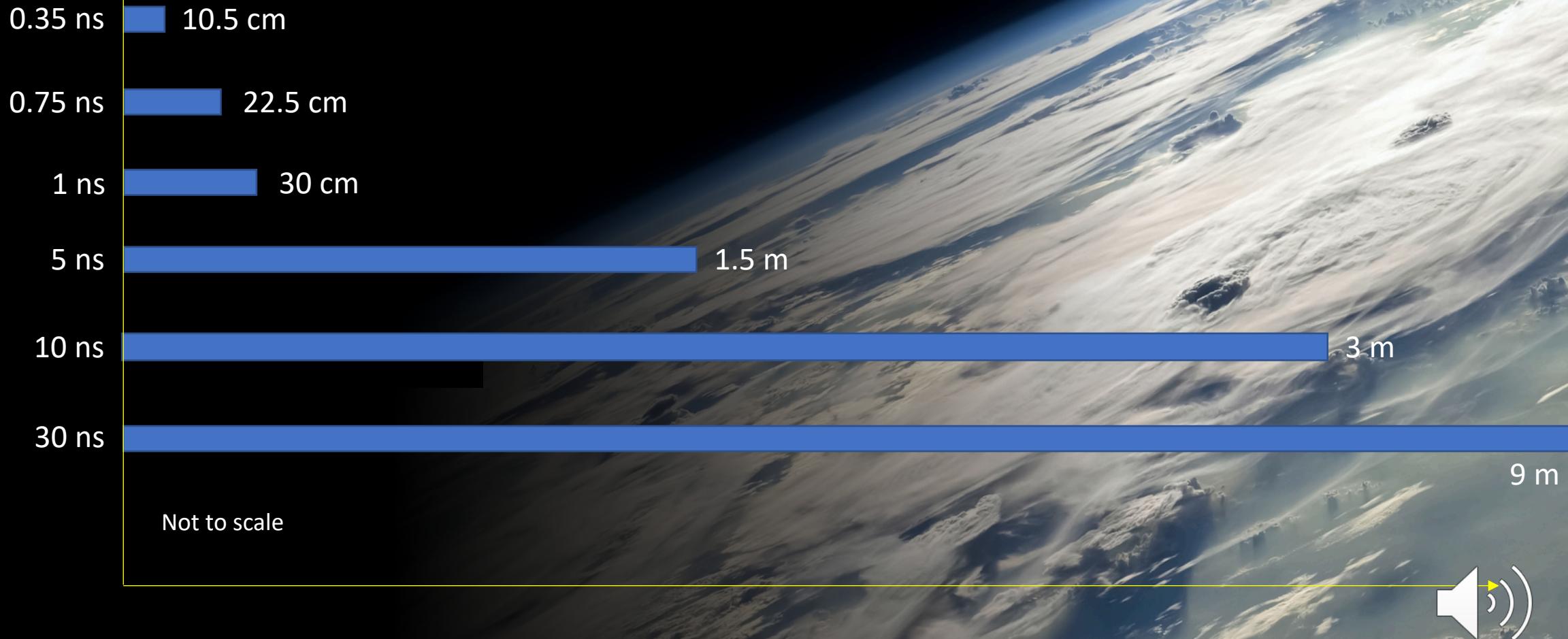
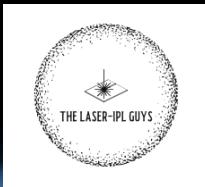
$300,000,000 \text{ m/s} = 3 \times 10^8 \text{ m/s}$

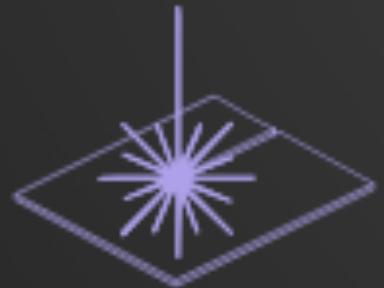
Which is
0.3 metres
or 30 cm

So, the length of a beam of light
of 1 ns duration is $10^{-9} \times 3 \times 10^8 \text{ m}$



Tattoo laser pulsewidths and their beam lengths





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Thanks for listening

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