

The TOTAL power of an accelerating (non-relativistic) charge is called **Larmor's formula**.

It depends on  $c$ ,  $\mu_0$ ,  $a$  (acceleration) and  $q$  (charge).

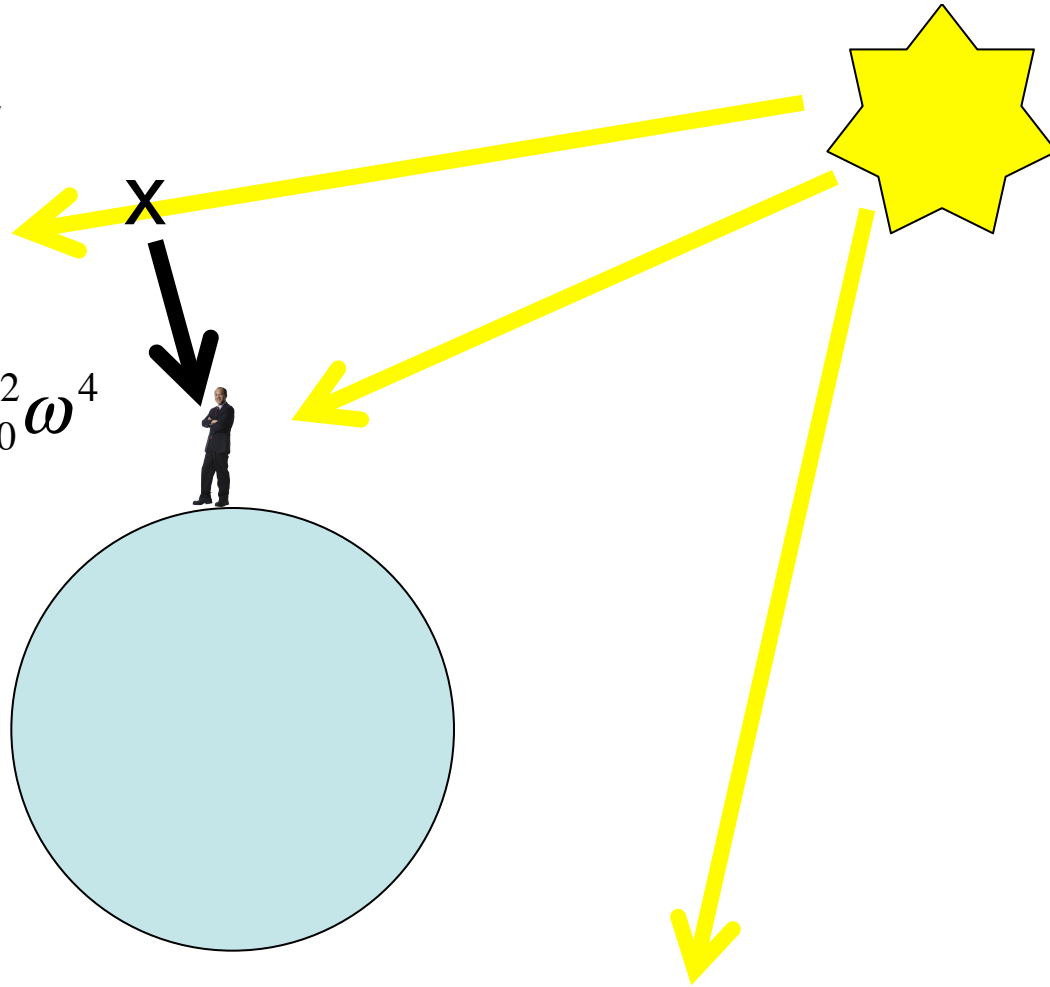
So I presume that means  $P = c^A \mu_0^B a^C q^D$   
(!/? It's at least a plausible guess...)

Figure out the *constants* A-D in that formula, without using any physics beyond units! (This is *dimensional analysis*)

Note:  $[P] = \text{Watts} = \text{kg m}^2/\text{s}^3$ ,  
 $[\mu_0] = \text{N/A}^2 = \text{kg m/C}^2$

Larmor:  $P_{tot} = \frac{\mu_0}{6\pi c} q^2 a^2$

E-dipoles:  $\langle P \rangle = \frac{\mu_0}{12\pi c} p_0^2 \omega^4$



If light scatters from point “x” and heads towards the observer,

What color is it likely to be? Why???

Is the scattered light polarized? If so, which way?