

Fermi Questions Quiz 8-18-18

1. If the energy in a bolt of lightning could be completely harvested, how many bolts would need to be harvested in order to meet the United States' annual electricity demands?
2. If all bolts that strike the Earth were harvested, how many seconds would it take to harvest the bolts in the previous question?
3. A ship over the deepest point in the Great Lakes sends an acoustic pulse downwards to measure the depth. How many seconds does it take for the signal to return?
4. How many newtons would an adult elephant weigh on Mars?
5. What is the momentum, in $\text{kg}\cdot\text{m}/\text{s}$, of a golf ball-sized hailstone?