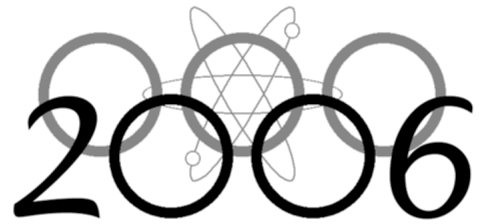


LIVERPOOL PHYSICS OLYMPICS



Team

Rank

Fermi Questions

- 1 How many seconds are there in a year?
- 2 If the super volcano in Yellowstone National Park erupts a 10 cm layer of lava over the entire USA, what is the volume of lava? m³
- 3 What is the density of gold? kg/m³
- 4 How much does one litre of air weigh? N
- 5 How far away is the most distant object visible with the naked eye? m
- 6 If a laser is pointed at the Moon, how big would the spot be? m
- 7 If the Earth's population doubles every 10 years, how long will it be before the mass of people exceeds that of the Earth? year
- 8 A fly lands on a 35,000 tonne ocean liner. How much lower in the water will the ship settle? m
- 9 To what diameter would the Earth have to be compressed to create a black hole? m
- 10 What is the potential energy lost by a hammer falling from the International Space Station? J
- 11 How much energy is released in an earthquake measured at 4.5 on the Richter scale? J
- 12 How many Hydrogen atoms fit on the head of a pin?
- 13 What is the number of Joules of energy in an electron volt (eV)?
- 14 How long does it take the Sun to generate the amount of energy equal to the world's annual energy requirement? s