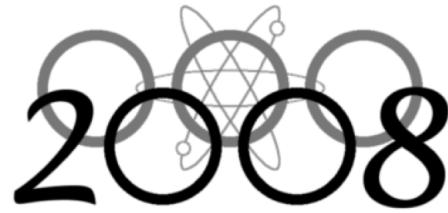


# LIVERPOOL PHYSICS OLYMPICS



**Team**

**Rank**

## *Fermi Questions*

- 1 What is the mass of a £50 billion in £1 coins?  kg
- 2 What is the mean density of the Earth?  kg/m<sup>3</sup>
- 3 How long will it take for a proton to complete a circuit of the Large Hadron Collider (when it's fixed!)?  s
- 4 How old is the Universe?  s
- 5 How many people have won the Nobel Prize in Physics?
- 6 How much information is being transmitted around the world via the internet at any given time?  bit/s
- 7 How long does it take our Sun to rotate once around the Galaxy?  s
- 8 What is the boiling point of Tungsten?  K
- 9 What is the gravitational force between the Earth and the Moon?  N
- 10 What is the total energy consumption of the global population in one year?  J
- 11 What is the mass of the Earth's atmosphere?  kg
- 12 How much taller is the Eiffel Tower in summer compared to winter?  m
- 13 If you hold a grain of sand at arm's length, how many galaxies are there in the patch of sky that it covers?
- 14 How many sides does a square have?