## **LIVERPOOL PHYSICS OLYMPICS**

Team	200
Rank	2000

## Fermi Questions

1	what is the mass of a £50 billion in £1 coins?	9	kg
2	What is the mean density of the Earth?	4	kg/m
3	How long will it take for a proton to complete a circuit of the Large Hadron Collider (when it's fixed!)?	-4	s
4	How old is the Universe?	18	s
5	How many people have won the Nobel Prize in Physics?	2	
6	How much information is being transmitted around the world via the internet at any given time?	12	bit/s
7	How long does it take our Sun to rotate once around the Galaxy?	16	s
8	What is the boiling point of Tungsten?	4	K
9	What is the gravitational force between the Earth and the Moon?	20	N
10	What is the total energy consumption of the global population in one year?	21	J
11	What is the mass of the Earth's atmosphere?	19	kg
12	How much taller is the Eiffel Tower in summer compared to winter?	-1	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?	4	
14	How many sides does a square have?	1	