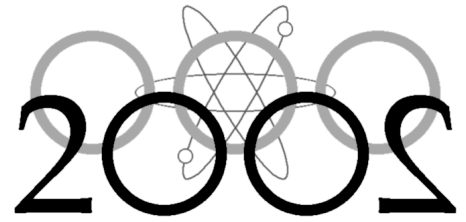


LIVERPOOL PHYSICS OLYMPICS



Team

Rank

Fermi Questions

- | | | | |
|----|--|---------------------------------|-------|
| 1 | What is the ratio of the Earth's mass to the Moon's mass? | <input type="text" value="2"/> | |
| 2 | What is the mass of the Earth's atmosphere? | <input type="text" value="19"/> | kg |
| 3 | What is the temperature of the surface of the Sun? | <input type="text" value="4"/> | K |
| 4 | How much water is used by the population of the UK? | <input type="text" value="12"/> | kg/yr |
| 5 | If a signal is transmitted along a transatlantic optic fibre from Liverpool, how long will it take to reach New York? | <input type="text" value="-2"/> | s |
| 6 | How many seconds have passed in this millennium? | <input type="text" value="8"/> | |
| 7 | If one Gbyte of information is printed out as text (using this font size) what mass of paper would be required? | <input type="text" value="3"/> | kg |
| 8 | If Pluto is the same size as the Moon, but ten thousand times further away, how many times fainter does it appear to be? | <input type="text" value="11"/> | |
| 9 | How many atoms are there in a cup of tea? | <input type="text" value="25"/> | |
| 10 | By how much does the water flowing over a 100 m high waterfall heat up if its potential energy is converted into thermal energy? | <input type="text" value="-1"/> | K |
| 11 | What is the angle subtended by this full stop (.) when viewed from a normal reading distance? | <input type="text" value="-3"/> | rad |
| 12 | What is the mass of a droplet of drizzle? | <input type="text" value="-8"/> | kg |
| 13 | What is the smallest object that the Hubble telescope could resolve on the surface of the Moon? (Hint: $\theta = \lambda / d$) | <input type="text" value="2"/> | m |
| 14 | By typing the letters on a keyboard at random, one key per second, how long is it likely to be before the word 'Liverpool' is spelled out? | <input type="text" value="5"/> | yr |