Team	
Rank	

LIVERPOOL PHYSICS OLYMPICS



Fermi Questions

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1	In June next year Venus will transit (pass in front of) the Sun. By how much does the Sun appear to dim during such a transit?	-1	%
2	How many molecules are there in a rain drop?	21	
3	Astatine is the rarest of the naturally occurring elements. What is the total mass of astatine in the Earth's crust?	-2	kg
4	How many people use the Internet?	9	
5	The spacecraft Voyager 1 is the most remote man made object. How far away is it from Earth?	13	m
6	What is the resistance of the tungsten filament in a 100 watt light bulb when it is switched on?	3	ohms
7	The Leonid meteor shower occurs every year in November. How fast does such a meteor enter the Earth's atmosphere?	5	m/s
8	What is the top speed of the world's fastest diesel locomotive?	2	m/s
9	How much personal computer time has been used in total in the Search for Extraterrestrial Intelligence (SETI)?	6	years
10	To how many decimal places has pi been calculated?	12	
11	What is the deepest hole bored into the Earth's crust?	4	m
12	How many bits can a standard DVD hold?	11	
13	How many standard-sized postage stamps would it take to completely cover the Earth?	18	
14	How many people were in the Beatles?	1	