

Quantum Zone, June 2013



This report has been compiled by the I'm a Scientist team as a summary, containing moderator observations and our web data, to provide some meaningful information on the zone.

There were a low yet constant number of questions submitted throughout the two weeks. A few students showed a high interest in quantum physics, repeatedly asking often quite long and complex questions. All five scientists engaged really well and they often added to and supported each other's answers. The zone stood out because of the quality and depth of physics questions asked.

Number of page views in the 3 weeks surrounding the event

Zone page	Page views
Total zone	26,112
ASK page	1,405
CHAT page	3,059
VOTE page	1,145
Jack Miller	1,104
Fiona Coomer	694
David Freeborn	1,149
Dave Farmer	1,098
Chris Mansell	757

Key figures from I'm a Scientist June 2013 for the zone, the average of all 18 zones, and the whole event

	Zone	Zones average	Whole event
Registered students	350	372	6,697
% of active students (used ASK, CHAT, VOTE or commented)	88%	83%	-
Questions asked	524	963	17,337
Questions approved	237	309	5,558
Answers given	440	533	9,597
Comments	104	73	1,306
Votes	305	276	4,962
Live chats	14	13	240
Lines of live chat	4,613	4,735	85,225
Schools	10	8	138

Popular topics

The main theme in the live chats was cosmology, with lots of questions on black holes, supernovae, parallel universes and the big bang. Students were fascinated by interstellar collisions, and there was the occasional religion versus science debate. Most live chats started with 'what will you do with the £500?' and 'do you like what you do?' etc.

In the questions, students were very interested in the big bang, what happened before it and the philosophical side of theoretical physics. There were a number of questions on particle accelerators, due to some of the scientists working, or having worked, at the Large Hadron Collider in Geneva. One interesting question asked: '[How do you make a black hole by smashing particles?](#)' Quantum computing was another popular topic, with questions on the differences between quantum and normal computers and the main uses and applications of quantum computers: '[How is a quantum computer different to a normal computer?](#)'

Sample questions

[Where is the universe? It gives me a headache each time I think about this question...](#)

[I want to know about the origin of magnetic field. So many times I scratched my head but didn't got any answer.](#)

[Physicists repeat their experiments hundreds of times due to natural variation. Do you think it is statistically unfair that we only get to do our GCSES once?](#)

[I know that magnets can be used to create small \(toy sized\) hovering vehicles however in your opinion do](#)

[you think this a technique that could be used on a mass human sized scale?](#)

[Do you think that science is becoming less understandable for the average person because of all the scientific developments?](#)

[If you got sucked into a black hole and survived, and somehow got out into a parallel universe where humans are much less evolved, what would be the first thing you would teach them?](#)

[Since space and time are the same is it that whatever happens at different positions in space should take place at different time?](#)

[Can entropy be reversed?](#)

Keywords of questions asked in the zone (the size of the word represents its popularity; the number indicates the number of times it was tagged as a keyword)

[atom](#)₈ [belief](#)₄ [black hole](#)₉ [cancer](#)₆ [chemistry](#)₇ [cold](#)₄
[computer](#)₁₃ [cure](#)₄ [discovery](#)₁₀ [earth](#)₄ [education](#)₆ [energy](#)₅
[entanglement](#)₃ [experiment](#)₆ [future](#)₇ [inspiration](#)₄ [invention](#)₆ [laser](#)₄ [lhc](#)₃
[life](#)₅ [light](#)₈ [maths](#)₅ [media](#)₄ [medicine](#)₆ [parallel universe](#)₈
[particle](#)₁₀ [personal](#)₈ [philosophy](#)₈ [physics](#)₁₈ [preference](#)₁₈
[properties](#)₅ [quantum](#)₂₀ [quantum](#)
[mechanics](#)₅ [reaction](#)₃ [research](#)₈ [scientist](#)₄ [society](#)₄ [space](#)₁₇
[subatomic](#)₁₁ [technology](#)₁₄ [theory](#)₅ [time](#)₇ [universe](#)₂₀ [win](#)₈ [work](#)₆

Keywords from live chats in the zone (the size of the word represents its popularity)

A word cloud where the size of each word indicates its popularity. The most prominent words are 'work', 'physics', 'time', 'people', and 'quantum'. Other visible words include 'day', 'help', 'working', 'possible', 'life', 'job', 'energy', 'world', 'research', 'big', 'particle', 'use', 'cancer', 'light', 'awesome', 'new', 'space', 'money', 'find', 'years', 'universe', 'important', and 'research'.

Examples of good engagement

The scientists in the zone got on well and often chatted with each other while waiting for students to arrive online. They frequently added to each other's answers and backed up each other's points. There were a number of complex questions that many of the scientists contributed to, and students also left comments, as can be seen from the examples above.

Scientist winner: Dave Farmer

Dave's plans for the prize money: *"I'd like to create a series of YouTube videos that explain areas of physics on the GCSE and A-Level syllabus in greater depth."* [Read Dave's thank you message here.](#)



Student winner: rajathjackson

For asking lots of good questions, **rajathjackson** will receive a £20 WH Smith voucher and a certificate.

Feedback

We're still collecting feedback from teachers, students and scientists but here are a few of the comments made during the event...

"this is very helpful, so is science, so thank you very much" – plomelin, student

"To all, thank you for your time it has been enlightening!!" – chloehowling, student

"I'm honestly amazed at the standard of the questions we were asked throughout the event, Quantum physics is not an easy topic to wrap your heads round, but you guys did excellently and you certainly helped me learn a lot in the meantime." – Dave Farmer, scientist

"Thank You! This chat has been very useful and informative!" – dragonskull200015, student

"I have learned looooooads" – jessicaaa, student

"thank you for answering our Questions it was really intreting to listen to" – kowen, student

"I wish this never will end...." – kitcatanddubby, student