

UK Science: How do you justify “Blue Sky” research?

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If you are a Physics student and have been interested in research as a career, then you would have been gravely disappointed at the funding cuts that the Science and Technologies Facilities Council (STFC) have introduced. Studentships and professorships in Physics and Astronomy will be cut by 25 percent and grants will be cut by 10 percent [1]. Funding will be withdrawn from over 25 international projects, which include ALICE - the detector at CERN), the Cassini-Huygens mission studying Saturn and the UK Neutrino factory - a planned particle accelerator that could help physicists understand the nature of one of the most mysterious particles [2]. The total reduction in research and development (R&D) in particle physics, nuclear physics, astronomy and space exploration is £115 million over five years. These savings will clear the £40 million deficit in its current budget and will help financial stability in the future [1].

Naturally, if science funding has to be cut due to such difficult economic circumstances, then the last area of research to face such cuts would be those that seem to have an impact on overall society, such as stem cell research or renewable energy. Reducing funding from curiosity-led - or “blue sky” - research, such as High Energy Physics and Astronomy sounds like the most logical option.

This is what the British Government decided and the STFC approved. Lord Drayson, the Science and Innovation Minister, said that the cuts demonstrated that there were “real tensions” in having large international projects under a single research council, leading to “grants being squeezed by increases in costs of the large international projects which are not solely within their control” [3]. Many scientists have shown their disapproval at the new funding scheme: David Evans, head of the ALICE research group at Birmingham



A farewell to ALICE from the UK? Reproduced from [6]

University, said that the project was “relatively inexpensive” at £500,000 per year and called the decision “crazy” seeing that the experiment is already built [3]. William Gelletly, a nuclear physicist from the University of Surrey, has commented on the fact that nuclear physics will face a 50 percent reduction over the five years, compared with particle physics and astronomy which are seeing smaller cuts of 5% and 10% respectively. Gelletly has said that his fields “is not well known in the STFC” and that the STFC needs urgent reform [3].

“ **Total reduction is £115m over five years** ”

But how do physicists and astronomers justify to the research councils that using public money to fund such large projects is actually worthwhile for the future? Michael Sterling, chair of the STFC, has said that “tough choices” had to be made and the decision has not been taken lightly. The £2.4 billion spending plan still includes other major projects such as the three other LHC detectors and the LIGO Dark Matter Research Labs [1,2]. Yet, there is a feeling among the scientific community that pulling projects will result in the UK lacking in influence in science internationally and more studentships and technological discoveries would be made abroad [4]. Scientists should challenge the Government in their commitment in funding scientific research. For example, Professor Brian Cox, fellow of the University of Manchester, has used his Twitter feed to engage a debate on the issue. He firmly believes that the Government have failed to support University research and scientific development and that grants to international projects should be decided by a specialist body alternative to the STFC [5].

Drayson said he will work with Sterling to find a better resolution in February 2010 [3]. Hopefully by then, research fellows and other prominent scientists will have convinced politicians that it is necessary to fund research and development sufficiently enough for the UK to remain influential in the blue sky areas of research and to provide enough studentships and research grants to do so. ■

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