

UK physical scientists brace for new round of funding cuts

They are advocating for projects and facilities that are threatened by the government's cost-cutting plans.

By Sarah Wild

Researchers, universities, and science organizations in the UK and abroad are preparing for and speaking out against the large proposed cuts to government physics and astronomy funding.

The Science and Technology Facilities Council (STFC), the entity that funds and supports physics and astronomy research and operates large science facilities across the UK, announced earlier this year its intent to slash research funding. Over the next four years, the council needs to find £162 million (about \$218 million) in total savings, a spokesperson says. The council's budget is £835 million this fiscal year and is set to reach £842 million in 2029–30.

The council is part of UK Research and Innovation (UKRI), an umbrella funding body. UKRI has received a record £38.6 billion for use over the next four years, and most fields of science are not earmarked for cuts. But the STFC's costs—particularly from the energy costs of facilities and changes in foreign exchange rates—are rapidly outstripping its funding allocation, according to UKRI chief executive Ian Chapman in a February open letter.

The STFC reduced its funding for new grants by 15% in 2025, and now it is looking to make even greater cuts. Earlier this year, Michele Dougherty, executive chair of the STFC, asked scientists in the UK's particle-physics, astronomy, and nuclear-physics communities how their projects would respond to 20%, 40%, and 60% cuts in funding and for the financial point at which they would no longer be able to sustain them. The STFC spokesperson says that the council is consulting the research community and partners and that decisions will be made later this year.

"There is no sugarcoating how damaging the proposed cuts would be for UK physics and astronomy," says Emma Chapman, an astrophysicist at the University of Nottingham who would be affected by the reduced funding. "Groups would close, and early-career

researchers would lose their jobs. The UK would lose its footing in current and next-generation international collaborations."

The proposed cuts come as the UK physical sciences community is facing not only the reduced availability of grants but also the shelving of several large projects. Two months before UKRI's chief executive released his open letter, the funding body chose not to contribute to LHCb 2030+, an upgrade to the Large Hadron Collider beauty experiment at CERN. UKRI has also declined to contribute funding to a new US particle accelerator, the Electron–Ion Collider at Brookhaven National Laboratory. And it is pausing plans for two national facilities that have already received government funding: the Relativistic Ultrafast Electron Diffraction and Imaging facility and the Critical Mass UK mass spectrometry center.

Patrick Vallance, the minister of state for science, innovation, research, and nuclear, and UKRI's Chapman wrote in a letter to a Parliament committee in March that the projects were deprioritized based on advice from UKRI's expert infrastructure advisory committee. "It is a feature of competitive grant funding that we always receive many more good ideas than we can afford to fund," they wrote. Regarding the decision not to fund LHCb 2030+, they noted that the UK remains "the second largest overall contributor to CERN."

Researchers push back

The prospect of reduced funding is already having an effect in the UK, according to the Institute of Physics (IOP). "Even the potential of having cuts is having a serious impact, with early-career researcher jobs being pulled and uncertainty playing into an already under-pressure university system," IOP president Paul Howarth says. "If the kinds of cuts currently being flagged go ahead, it would be a huge blow to the foundations of physics research and the physics landscape in the UK."



▲ The Daresbury Laboratory, shown in an aerial photo, is one of two major research campuses operated by the UK's Science and Technology Facilities Council. The UK government has paused funding for the Relativistic Ultrafast Electron Diffraction and Imaging national user facility that had been slated to be built at the lab. (Photo from the Science and Technology Facilities Council.)

The proposed cuts “risk having a disproportionate impact on exactly the kind of research where the UK is currently strongest,” says Eloy de Lera Acedo, head of the Cavendish Laboratory’s radio astronomy and cosmology group at the University of Cambridge. “Large long-term programs in radio astronomy, particle physics, and cosmology depend critically on continuity, both in funding and in people. These are not systems you can pause and restart without consequence.”

The UK has already invested heavily in major international facilities, such as the Square Kilometre Array radio telescope, de Lera Acedo says. “Cutting domestic research capacity just as these begin delivering data is like buying a Formula 1 car and then not funding the team to drive it,” he says. “We will still pay the entry fee, but we won’t be competitive, and we won’t capture the full scientific or economic return.”

The funding situation has spurred some researchers to push back against the plans. Several published open letters are urging the STFC and UKRI to rethink the proposed cuts. Dozens of physics department heads have written to Vallance expressing their “deep concern” about the threat to physics. Several other organizations, such as the IOP and the Royal Astronomical Society (RAS), are also speaking out against the proposed cuts. Howarth and RAS president Jim Wild sent a letter to Vallance on 12 May requesting that he commission a comprehensive assessment of the impact of the proposed STFC cuts.

Not only UK researchers are concerned. More than 600 international theoretical and high-energy physicists have written a letter urging the STFC and UKRI to reconsider the physics funding reduction.

One of the signatories is Michel-

angelo Mangano, a theoretical physicist at CERN. “In collider-based high-energy physics, we only have a handful of big experiments worldwide,” he says. Those projects rely on global international participation and the reliability of long-term commitments, he says, adding that the scale and target of the announced cuts could have a big impact on such projects by compromising years of investment and threatening the student pipeline.

The University of Nottingham’s Chapman says that current spending levels have already made securing funding “impossible,” which is affecting her ability to support PhDs and postdocs. But the push-back against the cuts has been “huge,” she says, and she believes that people in government are listening to researchers’ concerns: “That is encouraging. I expect there will be cuts, but my hope is that they are spread across a broader range of research areas.”

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