

Input to review of STFC
UK Nuclear Physics Community

Introduction

STFC covers essentially the following three areas:

International subscriptions

National Facilities (DIAMOND, ISIS etc.)

Grants and project funding for Astronomy, Nuclear Physics, Particle Physics and Space Science

Since STFC was formed in 2007 the costs of the first two items have led to a major reduction in the third item which has the result of destroying internationally excellent UK science. The third item has to be protected from increased costs of the other two.

The way forward

The following solutions are proposed:

National Laboratory

A national laboratory should be setup to run UK facilities such as DIAMOND and ISIS. It would derive its funding from the Research Councils who wish to exploit its facilities. This could be agreed as a rolling programme with a 3 to 5 year horizon. This would ensure that facilities and potential use was coupled. A new strategy group would be needed, with independent and international members, to determine the need for new facilities and to consider the development of existing facilities. This plan is described in more detail in the submission from the Institute of Physics.

Subscriptions

Major subscriptions (CERN, ESA, ESO) should be paid to an agreed formula with any exchange rate fluctuations being covered by Treasury. Any increases in activity in these areas should be tensioned against exploitation/grant funding in these areas and be the responsibility of the research council that makes the major use of the facility.

Smaller subscriptions (ESRF, ILL etc.) should be the responsibility of the research council that funds the science of the majority of UK users of that facility. This research council would then tension the subscription and exploitation of the facility against its wider programme.

Grant funding

Nuclear Physics grant funding was in EPSRC until 2007 and then moved to STFC. Funding will have dropped from £10M p.a. plus studentships/fellowship with EPSRC to £6M p.a. after the recent STFC cuts. Before the move in 2007 there was no project funding from

EPSRC for almost two years while the move was organised. Hence Nuclear Physics funding has now been affected and too low for at least 5 years. The result is that Nuclear Physics funding has dropped to a critically low level. If Nuclear Physics research in the UK is to have any future then funding has to be restored to a minimum of the EPSRC level and a major change is needed in how grant funding levels are determined.

There are two options for Nuclear Physics. The first is to remain in a remodelled STFC, the second would be to transfer back to EPSRC which would have to adopt different grant giving mechanisms.

In the remodelled STFC option Grant and Project funding for Astronomy, Nuclear Physics, Particle Physics and Space Science has to be reorganised to ensure:

- Only the best international science in each field is supported based on the excellence of the science.
- The peer review process is not dominated by large groups from a single subject area, contains international experts and has sufficient independent members to avoid the current conflicts of interest.
- The resulting programme is of strategic value to the UK.
- a firm link is established between funding for fundamental science projects and applications which directly benefit the UK economy

For the second option of a transfer to EPSRC where the nuclear physics programme could be considered alongside the physical science programme there would need to be changes to allow long term (10 to 20 year) commitments to projects and facilities, rolling grants to keep the expertise needed to deliver this long term programme and shorter term exploitation grants.

UK Nuclear Physics Research Groups to:

University of Birmingham

University of Manchester

Brighton University

University of Surrey

University of Edinburgh

University of York

University of Glasgow

University of the West of Scotland

University of Liverpool