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Dr Ian Pearson MP  
Minister of State, Science & Innovation,  
1 Victoria Street,  
London SW1H 0ET

**Re: STFC Funding Shortfall,**

Dear Minister,

I am writing to you with regard to the Comprehensive Spending Review funding crisis threatening fundamental science and scientific facilities that are supported by the new Science & Technology Facilities Council (STFC), which was created in April 2007 following the merger of PPARC and CCLRC. The apparent increase in the STFC budget masks a net shortfall of £80M to support the current portfolio of activities, which after subtracting fees for international subscriptions and salaries, results in a 16% reduction in funds for the operation of facilities and support for research at UK universities. The shortfall directly results from under-provision for the cost of Full Economic Costs on (ex-PPARC) research grants, the removal of promised funding for redundancy costs arising from the closure of SRS, and the imposition of VAT on the Diamond Operation (both ex-CCLRC).

Physics is one of only a few subjects identified as of national and strategic importance, and currently benefits from increasing applications for undergraduate physics courses. Of particular concern is the effect that the CSR outcome will have upon the viability of many physics departments, since a substantial fraction of the academic and research staff is engaged in STFC funded projects. My own field of astrophysics is perhaps uniquely capable of attracting students to study for science A-levels. Astronomy is offered at GCSE level, with free school access to robotic telescopes through the National Schools Observatory. Yet the first decision from STFC resulting from the CSR shortfall was the announcement to prematurely withdraw from the Gemini Observatory, a pair of 8m optical/infrared telescopes providing complete coverage of the northern and southern hemispheres, in which the UK has invested £35M since 1992.

The STFC decision to withdraw from Gemini Observatory, taken without wider community involvement, is very damaging to the UK international credibility. As the current chair of the UK National Time Allocation Committee (NTAC) for Gemini, I see this development as very regrettable. Science output from Gemini Observatory is now

reaching fruition, plus UK optical/IR interest to the northern hemisphere is ramping-up. On the UK NTAC, interest in Gemini Observatory has increased substantially over the past couple of years. (Indeed the UK over-subscription for Gemini Observatory exceeded *all* other partner countries in the current semester). The northern hemisphere remains the focus of world-leading, STFC-funded UK surveys such as WFCAM which is ongoing at the UK infrared telescope (UKIRT), plus the forthcoming SCUBA-2 instrument at the James Clark Maxwell telescope (JCMT). Follow-up to space-based missions with large UK participation also requires all-sky coverage (e.g. Swift, Herschel), yet the long-term strategy to decrease involvement with the Isaac Newton Group of telescopes on La Palma makes the UK reliance upon Gemini Observatory even more acute.

Unless the CSR settlement can be eased, the decision to withdraw from Gemini Observatory, together with other anticipated cuts to STFC funding of physics research and facilities, will severely damage the ability of the UK community to tackle key strategic scientific goals. Indeed, the current conditions of membership for Gemini Observatory requires a 2 year fee to be paid, prior to the end of the current contract in 2012, saving only £4M over the next 3 years, whilst leaving the UK astronomical community without access to a northern 8m telescope. It could be argued that there would still be access to southern skies with European Southern Observatory (ESO), although Gemini South is about to commission new instruments FLAMINGOS-2 and MCAO for which no equivalent instrumentation is available at ESO. Still, rather than withdraw from Gemini completely, it would be of greater strategic value to reduce the UK commitment to Gemini South through the sale of telescope time to current partners. This could potentially allow STFC to make substantial savings over the period of the current CSR (e.g. 20:10% share in Gemini North:South from 2008-10 would also save £4M), whilst enabling leading blue skies research from the UK community. There are other financial incentives to remain a partner of Gemini, since the Gemini Board was on the point of signing a lucrative contract with the UK Astronomy Technology Centre (ATC) to build a second generation instrument PRVS (Precision Radial Velocity Spectrometer) planet-hunter which is now in jeopardy.

The decision on Gemini is just the first of many unpalatable options facing SFTC as a result of the CSR settlement. The situation would be greatly eased if you were to enable some uplift in the allocation for future years,

Yours Sincerely,

**Professor Paul Crowther,**  
Chair UK Gemini NTAC

*Copy to Mr Richard Caborn, MP for Sheffield Central*