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# Physics policy update

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The Institute of Physics' monthly policy newsletter, featuring a round up of the latest news, government consultations, related conferences and published reports

The newsletter, along with previous issues can be viewed on the Institute's website at [www.iop.org](http://www.iop.org)

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# 1. Policy news

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## Climate Change

### **Scientists identify 'tipping points' of climate change**

Nine ways in which the Earth could be tipped into a potentially dangerous state that could last for many centuries have been identified by scientists investigating how quickly global warming could run out of control.

**The Independent, 5 February 2008**

### **NERC goes to work on £1bn climate change partnership**

In partnership with other research councils, NERC is leading on the development of a £1bn project – Living with Environmental Change. The project will adopt an interdisciplinary approach to exploring the science and societal implications of environmental and climate change.

**THE, 14 February 2008, page 18**

## Energy and the Environment

### **Energy industry gears up for CO<sub>2</sub> challenge**

Coal-fired power stations are measuring the high cost of the EU's new greenhouse gas emissions targets, just as the price of their fuel has rocketed.

**Financial Times, 1 February 2008**

### **Nuclear clean-up authority turns eyes to US**

Dennis Spurgeon, assistant secretary for nuclear energy in the US Department of Energy, is being considered as chairman of the NDA by BERR.

**The Times, 1 February 2008**

### **Wind farms 'a threat to national security'**

Ambitious plans to meet up to a third of Britain's energy needs from offshore wind farms are in jeopardy because the MoD objects that the turbines interfere with its radar.

**The Times, 4 February 2008**

### **UK bonanza for old wind farms as new turbines held by red tape**

The large subsidies paid by British electricity consumers to fund the drive towards wind power are failing in their intention, instead generating sizeable profits for existing wind farm owners without producing many new turbines.

**Financial Times, 4 February 2008**

### **UK plans 'too weak' to boost wind power**

The UK's plans to ease the building of new wind farms will do little to encourage new turbines to be built to meet the government's exacting renewable energy targets, according to the renewable energy industry.

**Financial Times, 5 February 2008**

### **Nato alert on wind farms defence threat**

Nato has begun an investigation into British findings that wind farms make overflying planes invisible to radar as military chiefs fear a security threat from the rapid spread of the turbines.  
**The Times, 5 February 2008**

### **New RAB report assesses progress with developing wave and tidal stream power technologies**

A new report from the Renewables Advisory Board (RAB), which advises government on renewable energy issues, provides an assessment of the progress with developing and demonstrating wave and tidal stream power. Amongst its findings is the conclusion that, whilst the long-term goal is attractive and long-term prospects remain promising, progress has been slower than hoped.

**BERR Press Release, 7 February 2008**

### **Come clean on coal**

Editorial: What are we to make of promises to develop zero-carbon power plants?  
**New Scientist, 9 February 2008, page 5**

### **Coal funds cut**

**New Scientist, 9 February 2008, page 6**

### **Nuke-plant leukaemia link**

**New Scientist, 9 February 2008, page 6**

### **Energy fund fails to make grants**

The £50m Marine Renewables Deployment Fund, started in 2005, has so far only attracted two applications - both of which were rejected, the Times reports. Analysts found that ministers had made the conditions so tough that no grants for wave and tidal energy projects have been awarded.

**The Times, 11 February 2008, page 23**

### **Britain third worst in EU for renewables**

The scale of the renewable energy challenge facing Britain has been revealed by figures showing Britain installed about 270 solar photovoltaic systems on houses in 2007, compared with 130,000 in Germany.

**The Guardian, 15 February 2008**

### **£400m for low-carbon Britain – Defra announces 2008/09 Budget settlement**

Setting out details of Defra's 2008/09 budget settlement, Hilary Benn has announced an increase in funding for clean energy technologies, investments and enterprises to over £400m over the next three years. As part of the domestic Environmental Transformation Fund (ETF), the Carbon Trust will receive £47.4m to bring forward new energy technologies such as offshore wind, third-generation photovoltaic power, marine energy and biomass heating. This funding will also be used to increase the Carbon Trust's energy-saving loans scheme for small and medium sized enterprises by a further £12m to £62m since 2003.

**Defra Press Release, 21 February 2008**

## **Europe and other International**

### **US physicists face tough year ahead**

**Physics World, February 2008, page 7**

### **Potocnik calls on industry to boost innovation in line with EU policy**

Europe needs a more consistent and coherent approach to innovation and businesses should do more to align their innovation models with EU policy, Janez Potocnik, the Research Commissioner, told participants at the International Conference on Innovation Policy Strategy.

**Research Fortnight, 6 February 2008, page 6**

### **SME research funding project to distribute 400 million euros**

**Research Fortnight, 6 February 2008, page 6**

### **ERC Starting Grant first call results published**

The ERC has published the names and host institutions of the winners of its first round of Starting Independent Researcher Grants. There are 201 initially approved proposals, with a further 229 reserves. The ERC expects to fund a total of around 300 projects.

**Research Fortnight, 6 February 2008, page 6**

### **Voucher plan proposed to aid post-doc mobility**

A voucher scheme for post doctoral researchers which would provide financial support for them to work at the institution of their choice has won the support of the European Parliament. However, there are concerns from universities that the scheme would mean institutions hiring researchers for their vouchers rather than their research talents.

**Research Europe, 14 February 2008, page 1**

### **Committee to select EIT board is named**

The EC has announced the four members of the ad-hoc Identification Committee which will decide on the candidates for the governing board of the EIT.

**Research Europe, 14 February 2008, page 4**

### **Mid-term review could open door to funding increase for EU research programmes**

**Research Europe, 14 February 2008, page 5**

### **Universities back scheme to promote PhD training**

A Council for Doctoral Education has been established by the European University Association, aimed at improving and expanding PhD training across Europe.

**Research Europe, 14 February 2008, page 5**

### **Member states explore ways to evaluate Framework programme**

**Research Europe, 14 February 2008, page 6**

### **Member states must boost research spending, say MEPs**

MEPs have highlighted the need for member states to spend more on research during a Parliamentary session. The European Parliament also called for a reduction in the bureaucratic burden; improvements to knowledge exchange across Europe; clear indicators for measuring the success of the EU's Lisbon strategy; and a common energy policy to promote research into new energy technologies.

**Research Fortnight, 20 February 2008, page 15**

### **Commission launches nanoresearch code of conduct**

The EC has adopted a code of conduct for nanosciences and nanotechnologies research. The code is voluntary and Janez Potocnik, the EU's Research Commissioner, hopes it will help to address some of the concerns surrounding nanotechnology research.

**Research Fortnight, 20 February 2008, page 15**

### **Location, location: EIT spoilt for choice**

After receiving formal approval from the Industry, Research and Energy Committee of the European Parliament, the administrative body of the EIT will now decide on a location for the new institute. Bids have already been made from Vienna, Budapest, Wroclaw, Karlsruhe and Aachen, but the choice will be made as a result of "political realities, rather than scientific necessity".

**Research Europe, 28 February 2008, page 1**

## **Facilities and Space Science**

### **UK still hopeful of participating in Gemini project**

Fears that the UK could be forced to withdraw from an international telescope partnership because of funding cuts may have been allayed as talks begin to save the venture.

**The Guardian, 19 February 2008**

## **Higher Education**

### **Corporation tax mooted for universities**

HM Revenue and Customs have expressed concern that, when universities collaborate with industry, it may jeopardise the universities' charitable status, which relies on their activities being primarily for educational purposes and for 'public benefit'. This could mean that universities, which are currently exempt from corporation tax, have to pay tax on research income from industry. The Charity Commission, HMRC, universities and the CBI are discussing how to resolve the issue.

**Research Fortnight, 6 February 2008, page 1**

### **Proportion of PhDs studying science declines**

Science PhDs now account for 57% of all doctoral students compared with 65% a decade ago, says the Royal Society in a report published last week. The report calls for reduced fees or bursaries to encourage the study of science subjects, the introduction of an eight-year study period from the start of a first degree to the end of a PhD, and a national strategy for funding. However, others have pointed out that the relative decrease in science PhDs must be seen against the 79% rise in the number of students in pursuing doctorates in all subjects.

**Research Fortnight, 6 February 2008, page 3**

### **HEFCE announces £1.3bn for research infrastructure**

HEFCE is to make £1.3bn available to universities from its Capital Investment Fund, which replaces the SRIF. The money is for long-term investment in research infrastructure and to improve facilities for staff. HEFCE is also urging universities to use the money to develop expertise in areas of "national strategic priority". The council has announced separate funds of £1.1bn for teaching at universities.

**Research Fortnight, 6 February 2008, page 3**

### **Government pledges an extra £10m for Scottish universities**

Fiona Hyslop, the Scottish education minister, has promised an extra £10m to Scotland's universities after a disappointing spending review settlement in 2007. The money is supposed to help Scottish higher education to compete with the English system, in which universities gain extra income from fees. Universities Scotland welcomed the announcement. However, The Scotsman reports that individual universities are rather less enthusiastic.

**Research Fortnight, 6 February 2008, page 3**

### **Teaching infrastructure cash is below HEFCE's own target**

**THE, 7 February 2008, page 4**

**HEFCE chief: VAT hampers savings plan**  
**THE, 7 February 2008, page 16**

**Student numbers up but debt bites**

Government figures out show a 7% rise in the number of students applying to university. But opposition MPs say the statistics mask a stagnation in the number of applications by pupils from low-income homes. The Guardian has seen research by the Sutton Trust which indicates that money worries are putting teenagers from poorer families off. "Very few of them know about bursaries or maintenance grants on offer," it says. In contrast: "Independent schools, it would seem, develop an ethos in which going away to university is perceived as being the 'natural' choice." "Its findings set the government's fee-charging regime at odds with ministers' ambitions," the Guardian says. The FT reports that more than half of applicants are now considering a local choice of university so that they can stay at home and keep costs down.

**The Guardian, 14 February 2008, page 1**

**Universities 'banking' on fees rise**

The Guardian reports that universities are now in more debt than at any point in the past decade and are banking on being allowed to raise top-up fees for students. Their spending plans are dependent on Parliament lifting the cap on tuition fees from its current £3,145 in 2009, the paper says.

**The Guardian, 19 February 2008, page 6**

## **Innovation and Business**

**Tipping point**

An editorial discusses the apparent lack of response to the DIUS consultation on a science and innovation strategy. It encourages responses, arguing that the increased investment in scientific research is not resulting in the hoped-for boost to innovation and the economy, warning that with no visible return for its money the government may decide to cut spending for basic science, focusing instead on innovation.

**Research Fortnight, 6 February 2008, page 2**

**Scottish government announces new R&D grant**

Three existing grant schemes are being consolidated into one general grant in a bid to stimulate commercial research and development. The General R&D Grant, which will be delivered and administered by Scottish Enterprise, combines the Scottish Enterprise's Small Company Innovation Support, R&DPLUS and the Scottish government's SCORE scheme.

**Research Fortnight, 6 February 2008, page 14**

**Weak and strong converge on innovation scoreboard**

The newly published 'European innovation scoreboard 2007' reveals that many of the countries which have traditionally been seen as low performers in innovation are now starting to catch up to average levels in the EU and, with their growth happening at a faster rate than the growth of the leading innovators, there are signs of 'convergence'.

**Research Europe, 28 February 2008, page 4**

## **Research and the RAE/REF**

**The damage is done, but let's not make it worse**

**New Scientist, 2 February 2008, page 3**

**Physics cuts bite**  
**New Scientist, 2 February 2008, page 4**

**Physicists call for STFC heads to roll**

A group of solar-terrestrial physicists has called on STFC to change its membership after issuing a no-confidence vote on the “financial, administrative, decision-making, and communication arrangements within the STFC, as presently implemented”. The Magnetosphere, Ionosphere and Solar-terrestrial (MIST) community met on 21 January to respond to the STFC cuts to physics programme. They have demanded to see documents detailing the decision-making process, and have asked how the STFC plans to distribute future grants.

**Research Fortnight, 6 February 2008, page 3**

**Research councils plan review of full economic cost payments**

Research Councils UK will be undertaking a review of progress since the introduction of FEC of research, although it is not intended to explore the concerns held by some universities and the research councils that the FEC funds may not always be used properly. The article also notes EPSRC’s decision to cut the number of its research grants, following similar decisions by STFC and AHRB, in order to meet the FEC of research.

**Research Fortnight, 6 February 2008, page 4**

**Astronomers cut off from Gemini find few options to observe northern skies**

Astronomers say that the Gemini project’s decision to refuse UK researchers all access to its northern hemisphere telescope leaves them with few viable options for continuing research based on observations in that region. Gemini’s governing board ruled on 25 January that, following Britain’s withdrawal from Gemini South late last year, UK astronomers will also lose access to Gemini North, with immediate effect.

**Research Fortnight, 6 February 2008, page 5**

**...and whose side is the REF on?**

An opinion piece criticises the current proposals for the REF, querying the suitability of bibliometrics to capture quality in all research areas, and the dependence on Thomson Scientific’s Web of Science database. The article suggests that research income could be a robust proxy indicator and that to capture the user value and economic impact of research, the REF could measure how much private funding is generated from institutions’ public funds on a pound for pound basis.

**Research Fortnight, 6 February 2008, page 17**

**Spoils of division**

**Research Fortnight, 6 February 2008, page 18**

**STFC 2007/08 Programmatic Review: Next Steps**

STFC Council is in the final stages of its current programmatic review, a biennial exercise that informs the construction of its future programme.

**STFC Press Release, 7 February 2008**

**News from Council – January 2008**

Report from STFC’s strategy meeting held on 28 and 29 January 2008.

**STFC Press Release, 7 February 2008**

**STFC Council meeting, 28-29 January 2008**

STFC funding for university research grants in physics will remain broadly level for the next year, STFC has confirmed. In addition, STFC reaffirms its commitment to the development of the Daresbury Science and Innovation Campus.

**STFC Press Release, 7 February 2008**

### **Researchers may play dirty to beat REF**

An article warns of the potential forms of "manipulation and gamesmanship" which could be used by academics to increase the number of citations their research papers receive, and hence improve their ratings under the proposed REF. Suggested methods include: joining 'citation clubs'; not citing anyone else's work, regardless of its relevance; not publishing in low-impact journals; and not researching in fields, such as engineering, which are "not yet well covered by the Thomson Scientific database".

**THE, 7 February 2008, page 6**

### **EPSRC announces reduction in grants**

EPSRC has joined the list of councils to confirm a cut in research grants. It has warned that researchers should expect a "slight reduction in real terms in the level of research volume over the period". Blue-skies research will be hit.

**THE, 7 February 2008, page 21**

### **REF will topple RAE stars, report warns**

A report by Cranfield University comparing 2001 RAE scores with those that would have been achieved through the use of metrics, as proposed in the planned new REF, has demonstrated that the rankings of universities could change dramatically under the different systems.

**THE, 14 February 2008, page 4**

### **REF consultation: academe's concerns**

The responses to the consultation on the proposed REF have highlighted a number of common concerns over: the different assessment methods for research in the sciences and the humanities; the "very tight" timescale for introducing the new system; the role of peer review; and the need for additional metrics reflecting "applied and user-focused research".

**THE, 14 February 2008, page 8**

### **Researchers and politicians demand changes at top of facilities council**

The senior management at STFC has been criticised by both the astronomy research community and MPs. The RAS's council has written to the chief executive of the STFC, Keith Mason, expressing concern at "a crisis in astronomy funding", whilst Labour MP Peter Soulsby has tabled an early day motion in the House of Commons calling for a change in structure and leadership at the STFC.

**Research Fortnight, 20 February 2008, page 16**

### **Don't sacrifice basic science for research, say MPs**

MPs have called into question the viability of the government's ambition to develop a world-class science and innovation campus at one of the UK's major physics facilities.

**The Guardian, 21 February 2008**

### **Plans for RAE metrics draw fire from research councils**

RCUK has publicly criticised HEFCE's plans to replace the RAE with a new REF, stating that the plans are "not acceptable in their current form". In particular they argue that science and non-science subjects should not be differentiated, and that some form of peer review is needed for all disciplines.

**THE, 28 February 2008, page 4**

### **Minister dismisses talk of STFC crisis**

Speaking to the House of Commons Innovation, Universities and Skills Committee, Ian Pearson, the science and innovation minister, has countered wide-ranging suggestions of a "crisis" in UK physics, arguing that STFC will not be facing the reported £80m deficit, as this money was never promised to the Council.

**Research Europe, 28 February 2008, page 16**

## **Miscellaneous**

### **Defra 'short of £1bn'**

Environment ministers are set to discuss budget crisis cuts of almost £1bn over three years. Environment secretary Hilary Benn has called them together after most sections of the Defra and its agencies failed to find sufficient savings to meet a £300m shortfall from April. The ministry is still more than £100m short despite cuts, including compulsory redundancies at one agency and generous voluntary severance payments for staff.

**The Guardian, 5 February 2008, page 6**

### **Committee announces engineering inquiry**

The House of Commons IUS Committee has announced a wide-ranging inquiry into engineering in the UK. The committee will be accepting submissions of case studies in particular areas of interest. The subjects of the first two studies will be announced shortly and the deadline for submissions will be Friday 15 March.

**Research Fortnight, 6 February 2008, page 5**

### **Science at the foreign office gets the heave**

The Foreign and Commonwealth Office (FCO) is reviewing its support for the Science and Innovation Network following a revision of its strategic framework, which saw science and innovation lose priority status. Responsibility for the network may be transferred to another Government department, but critics are concerned this would leave the FCO with little scientific expertise.

**Research Fortnight, 20 February 2008, page 1**

### **Women, science and representation**

The UK Resource Centre for Women in Science, Engineering and Technology has published a study showing that female scientists are much less likely than their male counterparts to be quoted in the media. There are concerns that a lack of positive examples of female researchers in the media might deter women from pursuing a career in science.

**The Guardian, 25 February 2008, page 2**

## **Further information**

For further information on the headlines featured in this section, please refer to the relevant websites of the source publications.

- **Department for Business, Enterprise and Regulatory Reform:** [www.berr.gov.uk](http://www.berr.gov.uk)
- **Department for Environment, Food & Rural Affairs:** [www.defra.gov.uk](http://www.defra.gov.uk)
- **Department of Innovation, Universities and Skills:** [www.dius.gov.uk](http://www.dius.gov.uk)
- **The Economist:** [www.economist.com](http://www.economist.com)
- **Financial Times:** [www.ft.com](http://www.ft.com)
- **The Guardian:** [www.guardian.co.uk](http://www.guardian.co.uk)
- **Higher Education Funding Council for England:** [www.hefce.ac.uk](http://www.hefce.ac.uk)
- **The Independent:** [www.independent.co.uk](http://www.independent.co.uk)

- **Nature:** [www.nature.com/nature](http://www.nature.com/nature)
- **New Scientist:** [www.newscientist.com](http://www.newscientist.com)
- **Nuclear Engineering International:** [www.connectingpower.com](http://www.connectingpower.com)
- **Office of Science and Innovation:** [www.dti.gov.uk/science/whatsnew.html](http://www.dti.gov.uk/science/whatsnew.html)
- **Physics World:** [www.physicsweb.org](http://www.physicsweb.org)
- **Research Fortnight and Research Europe:** [www.ResearchResearch.com](http://www.ResearchResearch.com)
- **Science:** [www.sciencemag.org](http://www.sciencemag.org)
- **The Times:** [www.timesonline.co.uk](http://www.timesonline.co.uk)
- **Times Higher Education:** [www.timeshighereducation.co.uk](http://www.timeshighereducation.co.uk)

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## 2. Consultations

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### Policy consultations in process

Subject	Agency	Status	Deadline	Lead
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For a list of current government consultations please visit  
[www.direct.gov.uk/D11/Directories/PublicConsultations](http://www.direct.gov.uk/D11/Directories/PublicConsultations)

### Policy submissions made by the Institute of Physics in 2008

Response from the Manager, Science Policy to Defra's consultation on sustainable products – improving the efficiency of energy using products (27 February 2008)

Response from the Director, Education and Science to HEFCE's consultation on the Research Excellence Framework (14 February 2008)

Letter from the Director, Education and Science to the chairman of the House of Commons Innovation, Universities and Skills Committee's providing supplementary evidence to inform the 'Science Budget Allocations' Inquiry (31 January 2008)

Submission from the Chief Executive of nominations of physicists to serve on the RCUK Review of UK Physics (25 January 2008)

Response from the Manager, Science Policy to the RCUK's Large Facilities Roadmap for 2007 consultation (24 January 2008)

Oral evidence from Professor John Wilson, on behalf of the Institute, to inform the House of Commons Innovation, Universities and Skills Committee's Inquiry into 'renewable electricity-generation technologies' (23 January 2008)

Oral evidence from the Director, Education and Science to inform the House of Commons Innovation, Universities and Skills Committee's Inquiry into the 'Science Budget Allocations' (21 January 2008)

Letter from the Director, Education and Science to the Minister for Lifelong Learning, FE and HE, regarding the implementation of the funding withdrawal for Equivalent or Lower Qualifications (ELQs) (21 January 2008)

Response from the Director, Education and Science to inform the Royal Commission on Environmental Pollution's study on 'Adapting the UK to Climate Change' (17 January 2008)

Response from the Director, Education and Science to inform the House of Commons Innovation, Universities and Skills Committee's Inquiry into 'renewable electricity-generation technologies' (15 January 2008)

Response from the Director, Education and Science to inform the House of Commons Innovation, Universities and Skills Committee's Inquiry into the 'Funding for Equivalent or Lower Qualifications (ELQs)' (14 January 2008)

Joint response from the Institute's Director, Education and Science, and the Royal Astronomical Society's President to inform the House of Commons Innovation, Universities and Skills Committee's Inquiry into the 'Science Budget Allocations' (11 January 2008)

**For a list of all of the Institute's policy submissions please visit  
[www.iop.org/Our\\_Activities/Science\\_Policy/Consultations/index.html](http://www.iop.org/Our_Activities/Science_Policy/Consultations/index.html)**

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## 3. Press releases

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### **Policy related press releases made by the Institute of Physics in 2008**

Institute of Physics continues to urge a moratorium (24 January 2008)

Physicists make plea to halt research council delivery plan (11 January 2008)

**For a full list of all the Institute's press releases please visit  
[www.iop.org/News/index.html](http://www.iop.org/News/index.html)**

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## 4. Events

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### ***Science Board***

Organised by the Institute of Physics  
Venue: The Institute of Physics  
27 March 2008

### ***Standing Conference of Physics Professors***

Organised by the Institute of Physics  
Venue: The Institute of Physics  
11 April 2008

### ***Intelligent robots in science and society***

Organised by POST, the Institute of Physics, Walking with Robots, and Science  
Venue: The House of Commons  
22 April 2008

### ***Engineering Life: The emerging field of synthetic biology***

Organised by the RSC, the IOB and the Institute of Physics  
Venue: The Royal Academy of Engineering  
24 April 2008

### ***Science Board***

Organised by the Institute of Physics  
Venue: The Institute of Physics  
12 June 2008

### ***Newton medal seminar (tbc)***

Organised by the Institute of Physics  
Venue: The Institute of Physics  
17 June 2008

### ***Future nuclear power – the practicalities***

Organised by the Institute of Physics  
Venue: ESOF 08, Barcelona  
18 July 2008

### ***Fusion – will it always be 40 years away?***

Organised by the Institute of Physics in association with the EPS  
Venue: ESOF 08, Barcelona  
18 July 2008

### ***Science Board***

Organised by the Institute of Physics  
Venue: The Institute of Physics  
16 October 2008

For a full list of all the Institute's science policy events visit  
[www.iop.org/Our\\_Activities/Science\\_Policy/Events/index.html](http://www.iop.org/Our_Activities/Science_Policy/Events/index.html)

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# 5. Publications

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***Research Fields in Physics***

The Institute of Physics

January 2008

**For a full list of all the Institute's science policy publications visit  
[www.iop.org/Our\\_Activities/Science\\_Policy/Publications/page\\_4144.html](http://www.iop.org/Our_Activities/Science_Policy/Publications/page_4144.html)**

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## 6. Further information

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