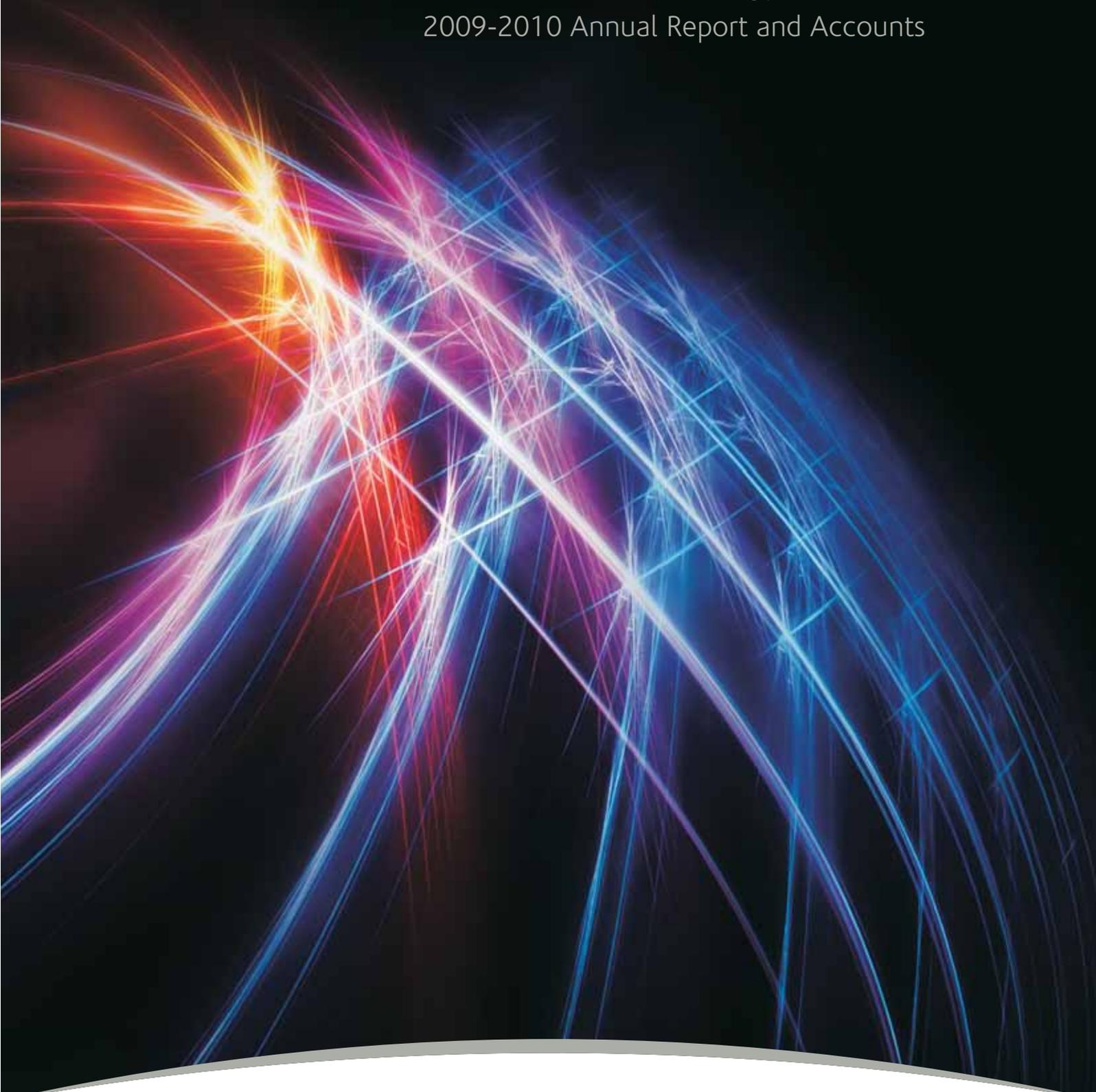


# Science and Technology Facilities Council

2009-2010 Annual Report and Accounts



Science & Technology  
Facilities Council



# Science and Technology Facilities Council (STFC)

## Annual Report and Accounts 2009-2010

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# Foreword

by Michael Sterling, Chairman

I am proud to present this annual report on behalf of all the staff who contributed to the immense scientific impact STFC has had during its existence. For the past three years the organisation has risen to every challenge while working toward attainment of our Vision.

Having taken on the role of Chairman during August 2009, I cannot express strongly enough how impressed I have been at the passion and dedication of STFC scientists, engineers and staff across all our sites during what has been anything but an easy time in the current economic climate.

The challenging times we have been through were clearly highlighted with the prioritisation exercise at the end of 2009. STFC handled this very differently and far more productively than previous exercises of this nature. This process will be further improved and repeated in the future to ensure we continue to deliver the best science. Whilst the outcome was painful we worked with our communities to ensure the best possible result for UK science. There is, however, simply no escaping the fact that we were forced to impose reductions in support across all our areas of science and technology.

STFC has a specific goal of maximising the return on public investment, by translating our scientific and technological achievements into real benefits for society. This goal is more important than ever in the current economic environment, and I am pleased with our progress to date. Our Vision document published in July 2009 highlighted this goal, which will be further developed with our corporate strategy later this year.

The UK Government has highlighted many areas of challenge for the nation. STFC can have specific impact on many of these areas including energy; climate and the environment; biomedical research; and security.

It is essential that the UK is driving change in these areas, both because of the impact on global society and also because of the huge potential to benefit the UK economy. This report highlights some of the many exciting and ground breaking areas where we have seen achievements during this last year but we continue to build on these into the future.

Finally I want to pay tribute to my predecessor Peter Warry who successfully led the Council in improving the quality of the science and technology which STFC delivers in his eight years as Chair of Council for STFC and its predecessor PPARC (the Particle Physics and Astronomy Research Council).



# Introduction

by Keith Mason, Chief Executive



Research has always had a key role in maintaining the health of the UK economy. The financial crisis and imperative to constrain public expenditure have only reinforced this importance, and over the past 12 months STFC has worked hard to expand the economic, societal, international and scientific benefits we deliver to the UK – an objective encapsulated in our corporate Vision published in July 2009.

As one of Europe's largest multidisciplinary research organisations, STFC is ideally placed to do even more in this regard – whether through our in-house laboratories and facilities, our management of the UK's membership of international scientific organisations, or the efforts of the university-based researchers we support. In some cases, this research has immediate potential economic benefit and, through our wholly owned subsidiary STFC Innovations Limited, we are putting more effort into translating this potential into reality. The harder task is identifying future opportunities arising from research which has less immediate non-scientific benefits – including disciplines such as particle and nuclear physics, and astronomy, for all three of which STFC is the national custodian. These research fields are often referred to as 'curiosity-driven' or 'blue skies', and STFC remains committed to supporting these fields for their own sake, for the reasons we outline in our Vision document including the basic human need to understand our world and the universe around us.

But it would be a mistake to assume that these more curiosity-driven disciplines are, in these more troubling economic times, of less intrinsic value than other areas with more immediate economic outputs. Over the past year, STFC in collaboration with other Research Councils and learned societies has successfully shown how the technological requirements of disciplines such as particle physics and astronomy have led directly to major advances in other fields including medical imaging, energy, security and climate. Just as the European particle physics lab CERN argues that the social transformations driven by the internet can be directly attributed to investment in particle physics, so can astronomy claim credit for advances in detector systems, camera technologies and security imaging. These are direct linkages – and they occurred because of investment in 'basic' research.

STFC has put in place over the past 12 months new programmes specifically designed to identify more quickly the range of potential flow-on benefits from these research fields, and to then translate them into real economic opportunities. This is a task we will continue to focus on in the years ahead, particularly around our two national science and innovation campuses – at Daresbury in Cheshire and Harwell in Oxfordshire. These already have built a critical mass of economic activity, centred around STFC's science and technology capabilities, enabled by partnerships with regional development agencies, universities, business and international

collaborations. The campuses represent an exciting new model to responsively bring science and business together, more easily and more productively than before.

The opening of the ESA Centre, coupled with the later announcement of major government and industry investment in the International Space Innovation Centre, at Harwell builds on STFC's existing expertise in space science and offers enormous scientific and economic returns ahead. The ongoing success of the Daresbury campus in securing new investment, start-ups and economic growth was further enhanced during the year with the addition of STFC's ITAC centre at the Daresbury laboratory. Both campuses are now firmly entrenched in the national science base, and will become increasingly important centres of critical mass.

But research is more than buildings, projects and inventions. It is people – highly skilled, motivated, incredibly intelligent researchers who are themselves a vital national asset. STFC-supported or employed researchers provide skills in problem solving, data analysis, engineering solutions and novel approaches used every day by business and government across the UK, Europe and the world.

In preparing the major reprioritisation of our science and technology programme during 2009-2010, STFC sought to protect and enhance this national skills base of highly trained people. Despite the sterling efforts of our staff, Council, Science Board, advisory committees and panels this was regrettably not always possible, and the pain caused to individual researchers by the necessary withdrawal of support from a range of projects and programmes proved the hardest aspect of this task. But we were able to map out a forward programme of research over the next five years which will deliver benefits to the UK and its people.

We were very open about the reasons for our prioritisation exercise, including the need to adjust to the hard economic times ahead. STFC is determined to use the resources it has to produce the best, most original science and innovation possible.

*Keith O. Mason*



# Organisation

*“Our Vision is  
to maximise the impact  
of our knowledge, skills,  
facilities and resources  
for the benefit of  
the United Kingdom  
and its people.”*

The Vision, published in July 2009, sets out the key role that our sponsored research, and research on STFC-provided facilities, plays in ensuring the future competitiveness of the UK. It recognises the contribution of fundamental research to society and the benefits that may be garnered from that research when properly marshalled. The benefits flow on a range of timescales and are often intertwined and invariably hard to predict. Our task is to ensure that we are prepared and receptive to such benefits and can recognise them when they appear.

## STFC – the organisation

Supporting world class research, innovation and skills for the UK are core functions of the STFC. We support a broad portfolio of world-class, cutting edge research, both curiosity-driven and application-led. Within Research Councils UK, we are responsible for the provision of the large-scale facilities that are the prerequisite for many modern advances across the entire research base, for the technical and technological infrastructure needed to deliver and keep these facilities at the cutting edge, and for the support of students and university researchers. Working with and through the universities, other research councils and international partners, we promote fundamental research across the spectrum of discovery, from the secrets of the Universe to new materials and medicines.

Fundamental research brings its own rewards, but in keeping with the Research Councils UK's strategic framework of 'Excellence with Impact', we also strive to extract the maximum benefit for society from our investment in research. This includes attracting young people into science, helping to address the global challenges facing society in relation to climate change, energy, security and health, and promoting innovation and new ways of working with industry to bring economic prosperity.

Our research facilities provide unique capabilities to understand the structure of materials at the atomic, molecular and biological scales. These are essential

tools for researchers addressing the challenges of the 21st century in energy, healthcare, the environment and security. We operate facilities in the UK – the ISIS neutron source, the Diamond Light Source with our partner Wellcome Trust and the Central Laser Facility – and overseas through partnerships in European organisations – the Institut Laue-Langevin neutron source, Grenoble, France and the European Synchrotron Research Facility, Grenoble, France. Each of these facilities carries out many hundreds of experiments each year for UK academic users, often supported by other research councils, and together the facilities generated close to a 1,000 UK-led papers in peer reviewed journals in 2008-2009. Roughly half of the UK-based facility time is used for experiments with international involvement and a significant fraction involves collaborations with industry.

## Large facilities funding model

In March 2010 as part of the outcome of a wider review of STFC, Lord Drayson announced that from April 2011 a new arrangement will see RCUK working with STFC to agree the availability and support requirements for the large domestic facilities (the Central Laser Facility, Diamond and ISIS). A project is currently being established to implement this new funding model.



A close-up photograph of a human eye, showing the iris and eyelashes. A thick, dark purple curved line starts from the top right corner and sweeps across the image towards the bottom left, partially obscuring the eye. The background is a soft, out-of-focus light color.

*World class*  
**research**

STFC's ISIS neutron source is helping in the treatment of babies born with severe cleft palates. One in every 700 babies in the UK is born with a cleft lip or palate. No one knows why it happens but the condition, where areas of the face fail to join together during pregnancy, can result in disfigurement, difficulty in breathing and may require surgery.



In order to correct this condition the tissue structure at the roof of the mouth must be repositioned. If the cleft defect is too wide, and there is insufficient local tissue, then radical surgery is needed. In these severe cases there can also be future complications including feeding problems, speech difficulties and facial growth.



**“The severest cases often have the least favourable outcomes,”** said Marc Swan, a plastic surgeon at the John Radcliffe Hospital in Oxfordshire. **“Unfortunately these are the most challenging children to treat surgically.”**

Swan instigated a study where a team of researchers at the University of Oxford, the John Radcliffe Hospital and the Georgia Institute of Technology in the United States, developed hydrogel materials as potential new treatments.

**• £145 million government investment has allowed the expansion of research programmes in soft matter, advanced materials and bio-science**

ISIS, based at the Rutherford Appleton Laboratory in Oxfordshire, is one of the world's leading sources of neutrons and muons. These sub-atomic particles can penetrate matter and, by pinpointing the location of atoms and molecules, determine the structure of materials and how this relates to their possible use.

The team used ISIS to examine the properties of hydrogels that absorb water – similar to those used to make soft contact lenses. The new gels allow a larger volume of water to be absorbed and retained, causing the gel to expand to up to 10 times its original size in only one direction.

If a small plate made of the hydrogel material is inserted into the roof of the patient's mouth, the gel will gradually expand and encourage skin and tissue growth. Once sufficient skin has been generated the plate can be removed and the additional tissue used to repair the cleft.

**“ISIS provided us with the high level of structural detail we needed to assess the new material. It gives unique and accurate results that we can't get with any other technique,”** said Professor David Bucknall from the Georgia Institute of Technology.

# Neutrons

*reduce the need for surgery*

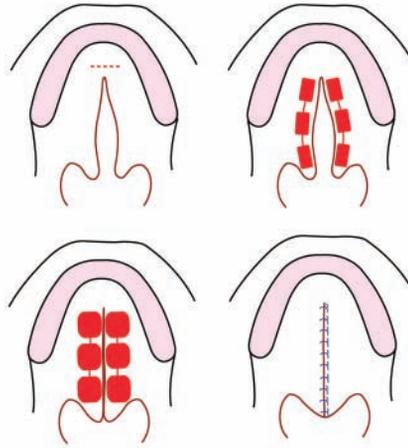
**• The neutron and muon beams produced at ISIS are used in research areas ranging from clean energy and the environment to pharmaceuticals, nanotechnology and IT**

## On target for better treatments

The hydrogel study is the first to be carried out by the Offspec instrument at the recently-opened second target station at ISIS.

Offspec is the world's most advanced neutron instrument for studying new surface structures. It can be used for a number of applications including biological membranes and data storage media.

"The instruments at the new ISIS second target station build on 25 years of expertise developed in the UK," said ISIS Director Andrew Taylor. "They are designed to allow new areas of research to flourish and make it easy for research teams to get the important results that they need."



Preliminary results on hydrogels show that treatment for severe cleft palates could be carried out without the need for complex surgery. Clinical trials in this area are expected to take place early in 2011.

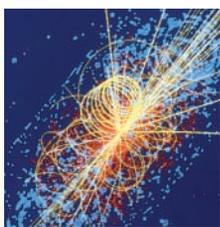
- ISIS supports a national and international community of more than 2,000 scientists

- ISIS publishes over 400 research papers each year and has published more than 9000 papers during its lifetime – making it one of the most productive facilities of its type in the world



The Large Hadron Collider (LHC) at the European Particle Physics Laboratory CERN, in Geneva, achieved a world first in March 2010 after colliding protons at the highest energies ever produced by a man-made particle accelerator.

# A world first for the Large Hadron Collider



“Achieving collisions at seven trillion electron volts marks the start of a new era in physics research,” said Professor John Womersley, a particle physicist and Director of Science Programmes at STFC, which funds the UK physics programme at CERN.

CERN is the largest particle physics laboratory in the world and the Large Hadron Collider is CERN’s newest facility. Its aim is to explore the nature of the Universe just moments after the Big Bang and search for particles and forces that have been predicted but not yet observed.

## • Grid-based technology developed for the LHC is being applied to epidemiology and climate change

STFC’s subscription to CERN allows UK researchers to use this unique facility. Situated underground, in a circular 27 km long tunnel, the LHC collides beams of protons travelling close to the speed of light.

The LHC, which will run for more than 20 years, provided the first collisions in November 2009, beginning a new era of physics. The record-breaking collisions also marked the start of a two-year campaign to crosscheck existing data before delivering new physics and data for a number of experiments.

“In the next couple of years this could lead to the discovery of a new law of physics called supersymmetry which could explain the dark matter that seems to dominate our universe,” Womersley explained, “and even to the discovery of the elusive Higgs boson particle.”

STFC invested more than £500 million over the thirteen-year construction period in funding the UK membership of CERN and supporting researchers at numerous UK universities and sites, including the STFC Rutherford Appleton Laboratory, which helped build the LHC’s detectors.

“When we study things at the Large Hadron Collider we need equipment which challenges technology and industry to the limit,” said Professor Peter Watkins from the University of Birmingham. “Anything we use in our experiments is reused for other projects. The most obvious is accelerators that are used every day for medical treatment in hospitals around the world.”

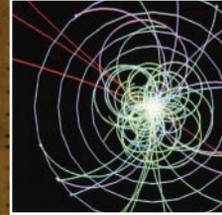
UK scientists are involved in all four major LHC experiments: ATLAS (A Toroidal LHC Apparatus), CMS (Compact Muon Solenoid), ALICE (A Large Ion Collider Experiment) and LHCb (LHC beauty).

As a result of STFC’s subscription to CERN, UK industry can win lucrative commercial contracts across a wide range of activities – from computing, electronics and vacuum technology to technical support work and cleaning facilities.

The UK company, Viglen, for example, was awarded a share of two contracts worth £1.8 million by CERN to provide high performance computing and storage equipment.

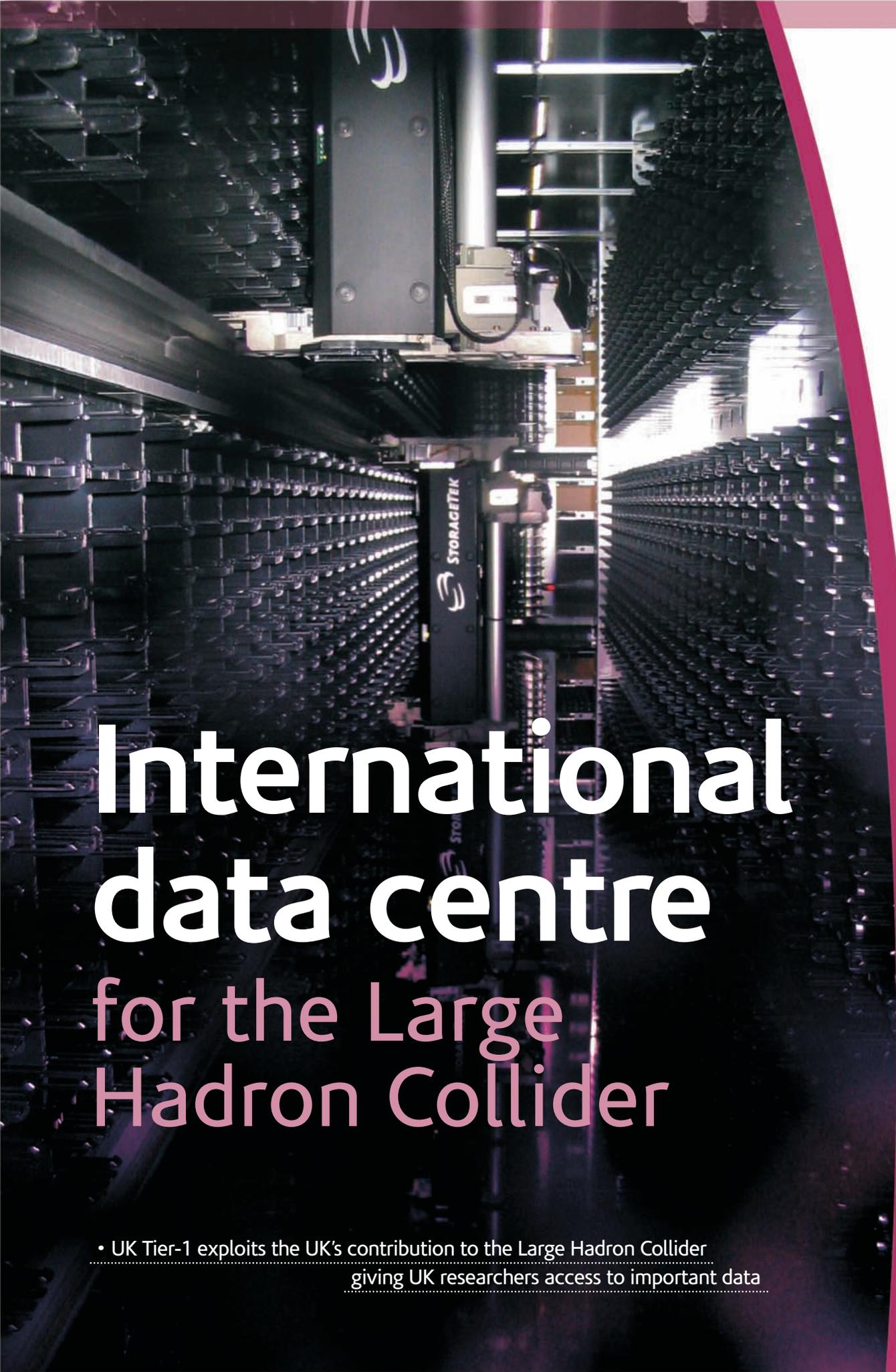
## • Technologies developed for nuclear and particle physics are used in medical scanners and safer radiography

• STFC Rutherford Appleton Laboratory and 15 UK universities  
were involved in construction work for the LHC  
with around 150 scientists currently involved in the experiments



• UK companies win contracts  
worth millions of pounds each year





# International data centre for the Large Hadron Collider

- UK Tier-1 exploits the UK's contribution to the Large Hadron Collider giving UK researchers access to important data

**Imagine a room the size of a house, full of racks of computers and magnetic data tape robots, powered through four dedicated electrical transformers, all backed up by a diesel generator.**

This is UK Tier-1, one of 11 international centres around the world analysing data from the Large Hadron Collider (LHC), the world's most powerful particle accelerator.

Based at the STFC Rutherford Appleton Laboratory e-Science building in Oxfordshire, UK Tier-1 is connected directly to the LHC at the underground European particle physics laboratory CERN near Geneva. The new Tier-1 building opened on 30 March 2010, the day real data started.

Four experiments at different locations around the accelerator – ATLAS, ALICE, CMS and LHCb – measure these collisions, each collecting enough data each year to fill hundreds of thousand DVDs.

- **UK Tier-1 is one of 11 international centres spread across 10 countries**

## Analysing the forces of nature

The collected data is essential for scientists to explore what happened shortly after the Big Bang and to understand the fundamental particles and forces of Nature. It is sent across the Internet to all the Tier-1 centres, including UK Tier-1, where the raw data is stored, processed and reprocessed. 150 Tier-2 centres around the world – mostly universities – receive this processed information so that physicists can perform detailed analysis.

“It is key to the UK’s exploitation of the LHC so that UK physicists have access to the data as and when they need it,” explained Dr Neil Geddes, STFC’s Director of e-Science.

- **Each of the four experiments on the Large Hadron Collider record enough data to fill around 400,000 DVDs every year**



## UK expertise

The UK is one of the biggest contributors to the LHC and has supplied vital hardware, computing and scientific knowledge to the project, with UK expertise playing an important role in reconstructing what happened during the collisions.



“We are coping with huge volumes of scientific data,” said Geddes, “and the expertise to exploit large amounts of digital data is becoming increasingly important across a wide range of research fields, from biomedicine to Earth Observation and environmental science.”

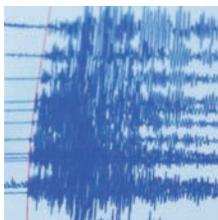
- **STFC funds the UK particle physics programme, including the CERN subscription**

The World Wide Web was designed and developed at CERN in the 1990s to help physicists communicate and today’s physicists are getting ready to use its successor, the Grid. UK scientists also make a key contribution through STFC’s GridPP project to the machine’s Computing Grid which will distribute and analyse the 15 petabytes of data (enough to fill 20 million CDs) produced each year between different countries and institutions.

In May 2008 a deadly earthquake struck the Sichuan province of China. More than 68,000 people died and millions of buildings collapsed. It was a terrible tragedy but, by studying this natural disaster with supercomputers, people will be able to plan for probable risks in the future. This will not only reduce possible damage but also, more importantly, save lives.

# Saving lives with supercomputers

STFC's computational science expertise is helping researchers at the National Autonomous University of Mexico (UNAM) to achieve this aim by devising a computer model of how the Earth moves during an earthquake.



The work, led and funded by UNAM's Institute of Engineering, studies the seismic waves through the Earth's crust of the 2008 earthquake in China as well as similar events around the world, including the 1985 earthquake in Mexico.

## Simulating how the Earth moves

"It was focused along the fault line so the main city in the area, Chengdu, was relatively lightly affected whereas some towns much further away along the fault line were completely demolished," said Ashworth. "We've been able to reproduce that in the computer simulation."

STFC Daresbury Laboratory used the highest levels of performance, allowing UNAM to achieve high-resolution simulation to an accuracy and magnitude unprecedented for this kind of research.

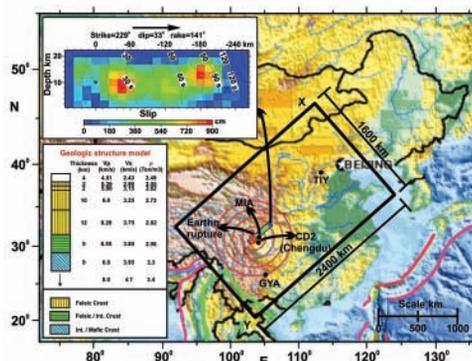
"We were able to develop a code on Daresbury's supercomputers which enabled us to run on thousands of processors simultaneously for many hours," Ashworth said.

The code was then taken to HECToR, the UK's largest, fastest and most powerful academic supercomputer. HECToR is the UK's high-end computing resource, funded by the UK Research Councils. It is available for use by academia and industry in the UK and Europe. HECToR uses more than 8,000 processors at the same time.

As well as looking at past events, the work is capable of studying ground motions from hypothetical earthquakes in vulnerable regions, and identifying where the shocks would be at their greatest, should an earthquake occur.

- Computer simulations of the Earth's natural processes can identify high risk zones in areas prone to earthquakes

"The Chinese earthquake is particularly interesting as the energy from the earthquake didn't spread out equally in all directions," explained Dr Mike Ashworth, Associate Director of the Computational Science and Engineering Department at STFC Daresbury Laboratory.



“Daresbury is one of the best computational modelling centres in the world,” declared UNAM’s Dr Mario Chavez. “Our research means that governments, developers and planners across the world could soon have access to vital earthquake ground motion data that will enable them to assess the strength and impact of large or extreme magnitude earthquake scenarios in their own region.”

“This kind of information could play a major role when working on the risk assessment for a facility site such as a nuclear power station,” continued Chavez, “or when designing homes, hospitals and schools in determining how resilient they need to be in order to minimise the damage caused by an earthquake.”

• Daresbury is an international leader  
in computational modelling

## The future for computational science

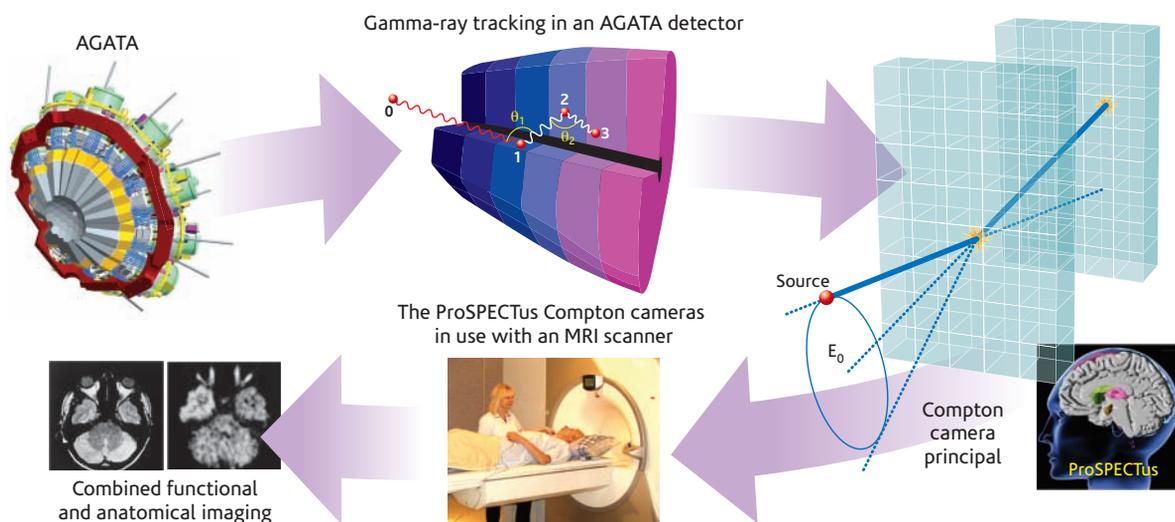
STFC is currently preparing business and science cases for the new proposed Hartree Centre, a national computational science institute based at the Daresbury Science and Innovation Campus in Cheshire. If successful in its bid for funding, it will focus on areas that have a high impact on human populations including energy, life sciences, security and the environment.

“This project is a great illustration of the growing importance of modelling and simulation of what happens naturally on Earth,” said Dr Richard Blake, Director of STFC’s Computational Science and Engineering Department.

“Computational science could help governments implement policies and plans to save the lives of many thousands of people across the globe in years to come.”

• The new Hartree Centre at Daresbury Laboratory  
will be a national computational science institute  
providing a national focus for STFC  
and the UK’s substantial expertise in this area

A pioneering project, combining nuclear physics with state-of-the-art technology, is set to reduce the time needed to detect brain tumours and improve both the diagnosis and treatment of cancer.



The advance, which will revolutionise a widely used medical imaging process, results from Project ProSPECTus – a collaboration between the University of Liverpool and the STFC Daresbury Laboratory’s Nuclear Physics Group and Project Engineering and Instrumentation departments and the Project Engineering and Detector and Electronics divisions within Technology department.

In order to detect tumours, or test how a patient’s heart is working, tiny amounts of radioactive pharmaceuticals are injected into the body. During this technique, SPECT (single photon emission computed tomography) imaging detects gamma rays emitted from the radioactive material and is able to provide important 3D information about the body.

## The next generation imaging technique

ProSPECTus decided to take a different approach to develop the next generation SPECT imaging technique. The project will update the underlying sensor technology by basing its technique on the Compton Camera.

This Compton Camera identifies the origins of gamma rays without using a collimator. As a result the radiation will be used much more efficiently than conventional systems. The dose of radiation administered to the patient can therefore be reduced or more patients can be scanned by one machine in a day.

# Earlier detection of brain tumours

A prototype SPECT imaging system is now underway. "Not only is ProSPECTus' technology much more sensitive than that of a traditional SPECT system," said Dr Andy Boston from the University of Liverpool, "it will also be possible to operate it simultaneously with MRI (Magnetic Resonance Imaging). This has never been an option before due to the MRI's strong magnetic field."

Liverpool's Magnetic Resonance and Image Analysis Research Centre (MARIARC) provided the project with MRI expertise and the SPECT system can be fitted retrospectively to the 350 or so existing MRI scanners across the UK.

**"For patients this means fewer appointments, earlier and more effective diagnosis of tumours, which means higher probability of effective treatment,"** Boston added.

The success is a direct spinout of the nuclear physics project AGATA (Advanced Gamma Tracking Array), which will construct a gamma-ray detector orders of magnitude more sensitive than any previous device.

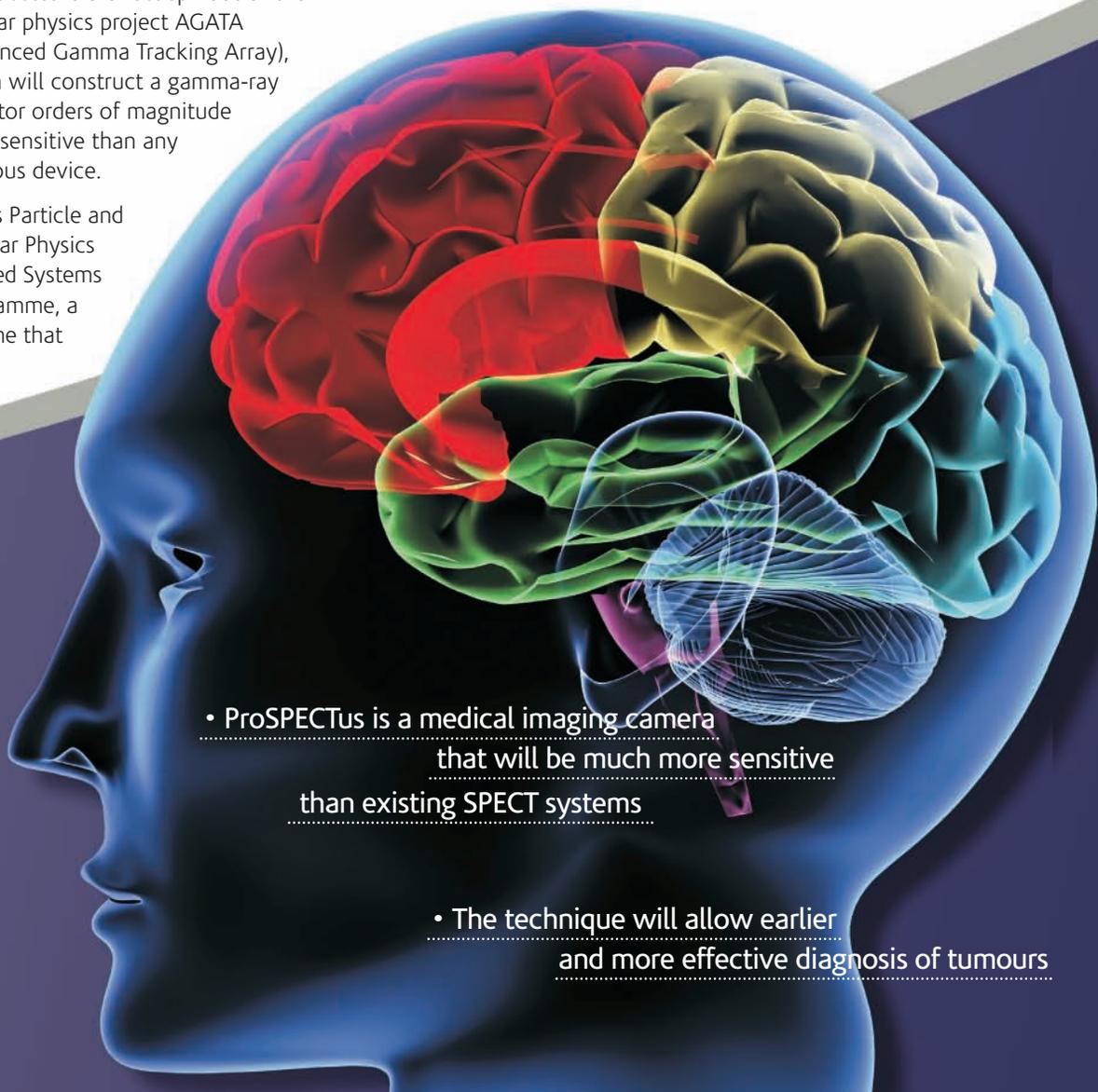
STFC's Particle and Nuclear Physics Applied Systems programme, a scheme that

• Due to the STFC scheme there is direct connection between blue skies nuclear physics research and benefit to society

helps exploit blue skies research such as that for AGATA, also funds ProSPECTus. It is generating knowledge exchange into new areas such as health, security and energy.

"This is a particularly exciting example of how technology emerging from one nuclear physics project (AGATA) can have a direct and positive impact on the future wellbeing of our society," said Ian Lazarus from STFC's Daresbury Laboratory.

The collaboration has worked well and, once the new device has been demonstrated, the next stage is for a company to exploit the technology for the nuclear medicine market.



• ProSPECTus is a medical imaging camera that will be much more sensitive than existing SPECT systems

• The technique will allow earlier and more effective diagnosis of tumours





*World class*

# innovation



# Open access to science

*for start-ups  
and small businesses*

Companies are already benefiting from STFC's new Innovations Technology Access Centres (I-TACs).



The two laboratories opened in February 2010 and are I-TAC, which covers materials, imaging, physics and an array of chemistry, and I-TAC Bio, specialising in biological sciences.

Based at the Daresbury Science and Innovation Campus, Cheshire, both buildings were previously support laboratories for the world's first second-generation Synchrotron Radiation Source (SRS).

After successfully operating for 28 years, the SRS closed. This presented STFC with another unique opportunity and has allowed a new generation of researchers – from both academia and business – to take advantage of more than £3 million of cutting edge equipment in fully equipped laboratories.

## Opportunities for R&D to flourish

“From the word go it was obvious that I-TAC understood and could fulfil the needs of a new biotech business,” said Carolyn Ruddell, Director of start-up company Vantage R&D.

- I-TAC gives both start-ups  
and established companies  
a competitive edge



“Having a base at I-TAC was a crucial stepping-stone for us as our technology was previously unproven,” she explained. “We made excellent progress and have been able to complete our initial feasibility studies ahead of schedule and in a cost effective manner.”

The research undertaken at I-TAC allowed Vantage R&D to research and support a patent application and this has now secured the company funding for their business.

Other companies are also convinced. Manchester-based Byotrol is I-TAC’s first long-term tenant, developing its hygiene technology for healthcare, food production and other consumer markets. Meanwhile BioEDEN, an international business, is using I-TAC as a backup storage facility for stem cells.

I-TAC also hosts Heritage Science Services (HSS), a multidisciplinary research company offering its services both regionally and nationally. HSS brings together the heritage sector, research institutions, university departments and small to medium sized businesses.

By providing ready access to scientific equipment, HSS can help reveal the history and technology of objects, identify the nature of original materials and understand the causes of deterioration.

## Cool science and hot labs

“I-TAC was established to provide start-up companies with a low cost, low commitment, convenient to use research base,” said I-TAC manager Martin Morlidge. “Companies can use fully functional laboratory space on a flexible

- **Businesses can access more than £3 million of cutting edge equipment in biological, materials, imaging and physical science laboratories**

time basis. This can be for a day, a week or longer periods.”

The result is tailor-made laboratory space – either long term with ‘lock and leave’ or ‘hotlabbing’ – where laboratories can be rented by the hour if necessary.

“If you wanted to run a biological experiment,” Morlidge said, “you could buy the laboratory for a day, have all that equipment, come in to the multi-user space, do your experiment and go away with the results at the end of the day.”

This flexible approach is working. “Before starting work at I-TAC our technology was completely unproven,” said Vantage R&D’s Ruddell. “Not any more.”

Researchers and companies using ITAC also have the opportunity to work alongside STFC’s highly skilled scientists and the leading academic institutions working on site.

- **Highly skilled scientists are available to offer support and expertise**

“In the current economic climate it can be difficult for innovative businesses to access affordable, ready to use, high specification laboratory space to carry out the much needed research and development to make them competitive,” said STFC’s chief executive Keith Mason.

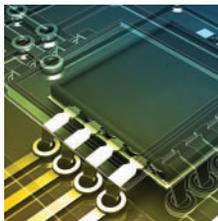
“These centres are great news for businesses and for Daresbury Science and Innovation Campus.”



**Innovations**  
Technology Access Centre

• Oxford Instruments is a global company providing high technology tools and systems for industry and research

The next generation mobile phones and computer chips will use advanced technology and, in many cases, new materials. The way these materials behave needs to be studied under a variety of conditions and neutron scattering experiments at STFC's ISIS neutron source provides unique results at the atomic scale.



High quality, superconducting magnets are an important part of this process. They are supplied to visiting research teams during their experiments at ISIS and are used on neutron instruments to examine how magnetic fields affect new materials.

A successful partnership, between ISIS and an Oxfordshire business, has not only improved the performance of these superconducting magnets, but it has made them more efficient, cheaper to operate and safer to run.

Normally superconducting magnets operate at extremely low temperatures and need large amounts of expensive liquid helium to keep them cold. ISIS, based at the STFC Rutherford Appleton Laboratory, wanted to reduce the amount of liquid helium while at the same time maintaining the magnet's design requirements.

• The collaboration between ISIS and industry resulted in a system that is more efficient, cheaper to operate and safer to run

## A bespoke scientific solution

"This was a difficult problem that required a bespoke solution," said ISIS scientist Oleg Kirichek. "It presented a huge investment risk for the supplier as nothing like it had been achieved before."

Oxford Instruments, a global company that has supplied equipment to ISIS for many years, accepted the challenge. It then collaborated with ISIS scientists to design several different magnets for the Wish, Let and Polref instruments at the ISIS Second Target Station.

"Working with ISIS gave us access to some of the world's leading neutron scientists," said John Burgoyne, manager of the Magnets Business Group at Oxford Instruments. "Their knowledge and expertise in neutron scattering was crucial to the successful delivery of these innovative systems."

In traditional cooling devices, liquid helium evaporates into a gas that is vented from the system. The new system captures the evaporated gas and turns it back into liquid helium.



# *A world class* collaboration

- The new technology can be offered to other customers enabling them to benefit from enhanced performance of superconducting magnet systems

“By working together we’ve developed a new type of cooling system which makes the magnet much more efficient to operate, cheaper to run and safer to operate,” said Kirichek.

The collaboration of innovation, research and industry not only resulted in new technology, it has enhanced the reputation of a successful company even further.

“It has enabled us to expand our knowledge and develop a new system that we can offer to other facilities,” said Oxford Instrument’s Burgoyne, “giving us a competitive edge over other instrument suppliers.”

Astrophysicists study the vastness of space. Biologists examine the complex inner machinery of a human cell. No wonder galaxies and microscopic proteins appear to have little in common.

# From **outer space** to improving **cancer care**

Combine these sciences with STFC's Central Laser Facility and Daresbury Laboratory's computational expertise, however, and the resulting collaboration could improve the treatment of cancer.

The connection lies in these numbers. There are trillions of cells in the human body, thousands of proteins in different cells. Cluster galaxies contain up to thousands of galaxies among trillions of stars in our Universe.

- The Central Laser Facility's new Octopus microscopes can build up a picture of how different groups of proteins work in a cell



“Some of the techniques we’ve developed to extract discrete objects from diffuse objects in astronomy have direct application to detecting fluorescent tagged molecules in cancer research,” explained Dr Mike Hobson from the University of Cambridge’s Astrophysics Department.

Hobson works on both the Planck Surveyor Observatory and AMI (Arcminute Microkelvin Imager), a radio telescope operated by his Astrophysics Department at the University of Cambridge. He is also part of an innovative collaboration to examine how molecules interact with each other in cell membranes during cancer.

It turns out that identifying a cluster galaxy embedded in cosmic background radiation is not so different to identifying individual molecules among the surrounding tissue of a cell.

## Innovative collaboration

The collaboration, which began in 2009 with a £5.5 million grant from BBSRC (Biotechnology and Biological Sciences Research Council), also includes cancer experts from King’s College London, computational scientists from the Oxford University and STFC’s Computational Science and Engineering Department at the Daresbury Laboratory, and the Central Laser Facility (CLF) at the Rutherford Appleton Laboratory.

“In a cancerous cell the molecular interactions are going to be different so we watch the proteins,” said STFC’s joint Principal Investigator of the project, Dr Marisa Martin-Fernandez.

“When we use a drug we can then look at how it affects the interactions and whether it’s going to work,” said Fernandez. “We do this by using the microscopes we’ve built at the CLF as these are capable of looking at the behaviour of individual proteins in interactive groups.”

## Microscopes

The microscopes, called Octopus, have a central core of around 20 lasers with groups of fibre optics resembling tentacles. If Fernandez wants to look at different types of proteins on the membrane of a cell, she can use a combination of lasers, each with different pulse shapes and coloured lights, to see exactly what is going on.

“The microscopes are unique,” Fernandez said, “because they have been designed to follow the behaviour of multiple protein types – instead of just one – at a molecular level.”

This knowledge will be important for cancer treatments as not every patient responds to the same treatment.

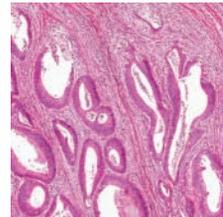
- The application of astronomical research to biological systems via STFC laboratories could improve the treatment of cancer

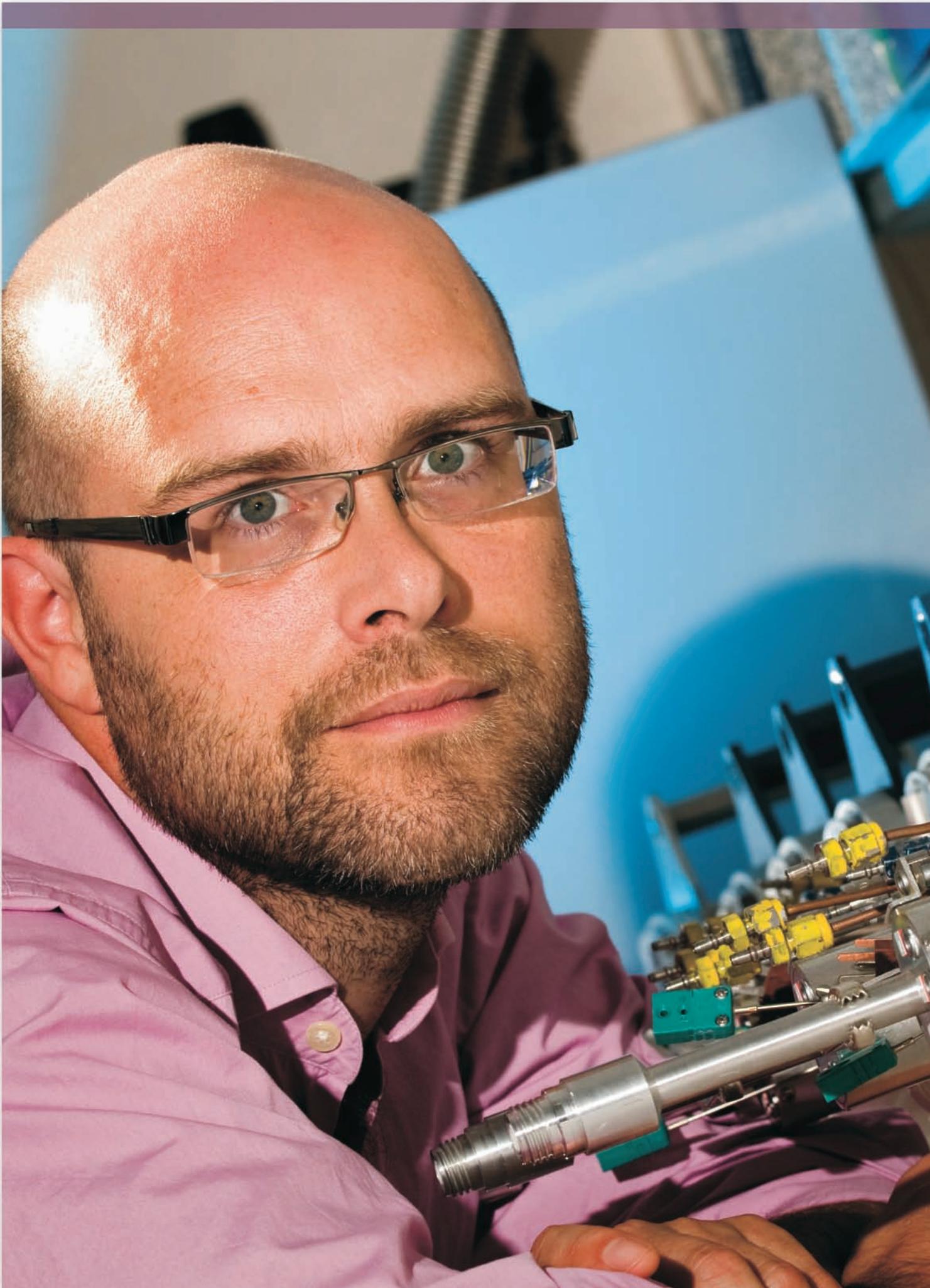
“The new targeted therapeutics in cancer promise a great deal in the clinic on an individual patient basis but we are a long way from knowing exactly who will benefit and who will not,” said Professor Peter Parker, Head of the Division of Cancer Studies at King’s College London and joint Principal Investigator on the project.

“Understanding how particular drug targets behave at a fundamental molecular level and ultimately developing ways of monitoring this behaviour in tumours will impact enormously on the personalised medicine agenda.”

If the right drug is matched to the right patient then the combination of astrophysics, biology, computer science and lasers will save lives.

- The collaboration involves STFC’s Rutherford Appleton and Daresbury Laboratories, King’s College London and the Universities of Oxford and Cambridge







*World class*  
**skills**



This up-to-date snapshot of former PhD students resulted from a career path study from DTZ, commissioned by STFC in 2009. The study provides the most recent examination of long-term career outcomes from postgraduate training. It is also a detailed assessment of skills used in the 6 to 9 years since gaining a PhD in astronomy, astrophysics, cosmology, particle physics, planetary science, solar research or space physics.

STFC, through funding students and PhDs, creates both the scientists of tomorrow and a highly skilled workforce for the UK's economy. Professions in the public and private sectors range from money market traders and IT consultants to university lecturers and engineers.

• 3 in every 4 people working in the private sector had jobs in financial or business services

# Following the careers of PhD students

## Success stories

Simon Robbins, for instance, ended up in the private sector after a PhD in particle astrophysics at the University of Oxford (2000-04) which involved working at the European Particle Physics Laboratory, CERN. He is now a software and digital engineer at Tandberg.

“Current STFC PhD students have an enormous range of career opportunities,” Robbins said. “Physicists with high-level computing and quantitative skills are highly sought after by employers in the software and business services sector. The technical computing skills I gained from my PhD are highly relevant in this type of career and my PhD also helped me to develop more generic skills such as time management, self-motivation and project planning which are valued in the private sector.”

Kim Page took a different route. Her PhD was in X-ray astronomy 2000-03 and she is now a scientist at the UK Swift Science data centre at the University of Leicester.

Swift is a NASA mission that studies gamma-ray burst science – some of the most violent events in the Universe. There is considerable UK involvement and Page now acts as a Burst Advocate and X-ray Burst support scientist during duty weeks responding to any gamma rays bursts detected.

“Although my PhD was in active galactic nuclei rather than gamma ray bursts,” said Page, “the knowledge of X-ray astronomy I gained during my PhD is very useful. I use some of the same data analysis software and continue to publish papers as I did during my PhD. Also contacts within the different groups can overlap and these networking skills will be useful whatever my future career path.”

Ewan O’Sullivan, like 1 in 2 people who responded to the study, also works at a university. He is now a Marie Curie Fellow at the University of Birmingham, where he did a PhD in astronomy 1998-2002.

• Almost all the respondents were working and 7 out of 10 were still engaged in scientific research

After his PhD, O’Sullivan took a postdoctoral fellowship at the Harvard-Smithsonian Center for Astrophysics working on X-ray observations of galaxies and groups of galaxies. He is now back in the UK working on feedback processes in galaxy groups, using a combination of radio and X-ray data.



“As I’m working as an astrophysicist full-time, many of the skills I acquired through my PhD are still directly applicable to my job,” said O’Sullivan. “The skills I gained in critical thinking, making presentations, communicating ideas clearly and working with, or leading a team are all core skills that I continue to use in my job today.”

In total, more than 200 people responded with universities the main source of jobs (49%). 1 in 4 people now work in the private sector and 1 in 4 in other government or public sector organisations, such as UK and international research establishments, hospitals, schools and colleges.

• The skills gained from a PhD most often mentioned, were writing software/programming, problem solving, subject-specific knowledge, quantitative data analysis and communication/team working



If a child touches a piece of Moon rock the excitement and wonder naturally spills over into science. Each year, thanks to STFC's lunar rock loan scheme, thousands of children are doing exactly that – reliving the Apollo manned Moon missions – and getting their hands on a genuine piece of history.

# Bringing the Moon *down to Earth*



The Moon rock belongs to NASA after astronauts brought back 382 kilograms of lunar material to Earth in the late 1960s and 1970s.

Whilst scientists study most of this material, fortunately the American space agency also decided to use a small proportion of the collected rock and soil to develop educational packages.

STFC is the UK's only authorised source of these rare samples and the person in charge of these important artefacts, Jane Butt, must have one of the most unusual jobs in the world.

## Lunar loan coordination

Jane is the UK's only Lunar Loan Coordinator and it's her job to ensure that four sets of precious Moon rock samples – embedded in pieces of circular Perspex – are not only loaned to schools, colleges, universities, museums and astronomical societies, but also returned.

"The Moon rocks are priceless," she said, "so before they are borrowed for the first time I have to go to the site to make sure there's secure storage."

Normally this means a safe but sometimes an alternative form of security must be arranged. "A school in Stornaway didn't have a safe," Jane recalled, "so a local police station kept the Moon rocks safe overnight in a cell."

The samples are seen by thousands of children across the UK, on loan from a Monday to a Friday. "We try to reach as many people as possible. The Moon rocks even go to Scout groups as it can contribute towards an astronomy badge."

Launched in 1984 and free of charge, the scheme continues to be popular. In 2009, during the 40th anniversary year of the Moon landings, Northview Primary School near Swindon was one of the many educational institutions that took advantage of the scheme.

## Space science for schools

"What can and might be found out in space really captures children's imaginations," said acting head teacher Jan Thomas. "Bringing the lunar samples into schools offers the children a unique chance to see and hold something that they would normally only see in a textbook and to learn about space in a fun and engaging way."

As well as loaning out the samples STFC also provides a teacher planning pack, support notes, resources and activities that can be used to make sure that pupils and teachers can get the most out of the experience.

- What can and might be found out in space really captures children's imaginations

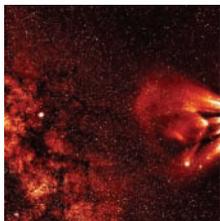


The loan sets also include different types of meteorites – some stony and some almost pure metal. "People never expect the weight of the iron ones," said Jane, "and there's one meteorite that scientists think is a piece of Mars."

"It's incredible to think that our children and young people can handle pieces of rock that have travelled millions of miles to end up on Earth and in their school," said STFC Chief Executive, Professor Keith Mason. "Studying the pieces of Moon rock and meteorites brings the sci-fi world of space to life for children and can educate both them and us about the places they came from."



## Thousands of people around the world are logging onto an award-winning website to help UK scientists improve the detection of solar storms.



The citizen scientists analyse data from two Heliospheric Imagers (HIs) onboard the two, near identical spacecraft that make up NASA's STEREO (Solar Terrestrial Relations Observatory) mission. These UK led instruments were built in Birmingham and are providing a unique view of the Sun-Earth system from uncharted regions of space.

Launched in 2006, STEREO is tracing the flow of energy and matter from the Sun to the Earth by studying coronal mass ejections (CMEs). These explosive and violent eruptions of matter from the Sun can disrupt satellites, telecommunications and power grids. HIs can track these CMEs across space and have produced around 100,000 images so far – an overwhelming amount of data for the team.

- **A UK-led consortium developed the Heliospheric Imagers (HIs) on the NASA STEREO mission**



A solution presented itself when HI Project Scientist Chris Davis appeared on the BBC TV series *The Sky at Night*. After the show Davis mentioned the enormous amount of data that had resulted from the mission.

Fortunately one of the programme's presenters, Chris Lintott, had been part of the Galaxy Zoo – where members of the public helped scientists by classifying millions of galaxies online from their home computers. Davis realised a similar project could help the UK team behind HI and so, in February 2010, Solar Stormwatch was born.

- **HI was built by the University of Birmingham and is operated by the STFC Rutherford Appleton Laboratory**

The website contains videos, its own Twitter feed, blog posts, an image gallery and an active discussion forum. "People are excited about having the opportunity

to participate in general science," said Davis, "and it's proving really popular. Around 16,000 people are participating so far – and that's just in a couple of months."

The multi-media collaboration between the STEREO HI team, Galaxy Zoo and the University of Greenwich has already won the Best Innovative Site category at Museums and the Web 2010.

Video tutorials or screen casts show users how to spot a solar storm by examining the bright bubble produced by the solar wind. "People are better than computers for this sort of task," explained Davis.

"We ask them to look for solar storms and anything odd they might see on the film, for example a circular optical effect produced by a bright star, or a trail caused when a dust particle hits the spacecraft and you get a shower of sparks. Informing us where the dust is and how dense the dust is around the Earth's orbit."

- **Stormwatch is helping scientists identify solar storms and improve space weather predictions**

The information is also helping scientists make a map of the distribution of dust around the Earth's orbit. "It tells you about formation of dust and how dust moves and gives you clues about the origin of the solar system."

The number of scientists using the data is expanding too. The user community includes both UK and International university groups.

The website also allows people to analyse real-time data. "It's possible we can get information about solar storms on their way to Earth, as they happen," Davis confirmed.

[www.solarstormwatch.com](http://www.solarstormwatch.com)

THE NATIONAL OBSERVATORY GREENWICH PRESENTS  
**SOLAR STORMWATCH**

- HOME
- WHY SCIENTISTS NEED YOU
- MISSION BRIEFING
- SPOT & TRACK STORMS
- TALK ABOUT IT

**Solar scientists need you!**

Help them spot explosions on the Sun and track them across space to Earth. Your work will give astronauts an early warning if dangerous solar radiation is headed their way. And you could make a new scientific discovery.

GET STARTED

**WHY SCIENTISTS NEED YOU**

Watch our solar scientists explain why your contributions are vital, and find out what they're doing with your results behind the scenes.

WATCH VIDEO



**TALK ABOUT IT**

Share your discoveries on the forum and Flickr, check out the space weather forecast on Twitter, and read our blog for all the latest news and challenges.

**Solar Stormwatch blog**

The Solar Stormwatch at the Royal Observatory Greenwich is a citizen science project that tracks solar activity in all things Sun-related why not come and try it?

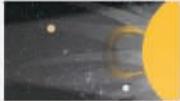
READ MORE

How did many of you have been tracking solar activity for some time, and we're starting to build up enough data to identify some storms from the larger numbers of people in.

**MISSION BRIEFING**

Explore our interactive mission briefing to get up to speed with solar science, zoom in on the STEREO spacecraft and meet our science team.

WATCH VIDEO



**Featured member**

**Ada Berghel Garcia (Lawrence Livermore)**



**Member since:** August 2008

It's my wishbone to the world we live in and the current. I never imagined there would be such wonderful people. The spirit of cooperation is out of this world, everyone helps, nobody makes us feel we're any less than the Zookeepers or blackbirds, truly a heavenly place on Earth.

**Achievements**

- New member
- Spot tracked

**Top members**

It's your mission, we've got all you need to make your discovery in your corner at any stage. 2 out of 5

**RELATED WEBSITES**



• Stormwatch engages the general public with real science where they help make discoveries

• Solar Stormwatch is a collaboration between the STEREO UK-led HI team, Galaxy Zoo and the Royal Observatory Greenwich

# The power of citizen science



# Gateways to the future

**The world faces serious challenges in security, energy, environment and healthcare. To make sure the UK remains at the forefront of developments in these areas, our world class scientists must work together with technologists, innovators and business.**

STFC has been exploring new ways of collaborating to encourage knowledge exchange and build a strong, interactive scientific community. Business will have access to cutting-edge facilities – and the people who know how to use them – to develop new products and services.

Sited within the national science and innovation campuses the Centres will act as national focal points for collaboration between researchers in industry and academia.

The aim is to encourage knowledge exchange and to build a strong and interactive community of world class scientists, technologists and innovators.

**The centres will do this by providing:**

- access to STFC's cutting edge facilities to help businesses develop new products and services
- unique opportunities for a new level of engagement among scientific partners
- access to highly skilled training opportunities
- a supportive environment for innovation to create the competitive conditions that attract investment

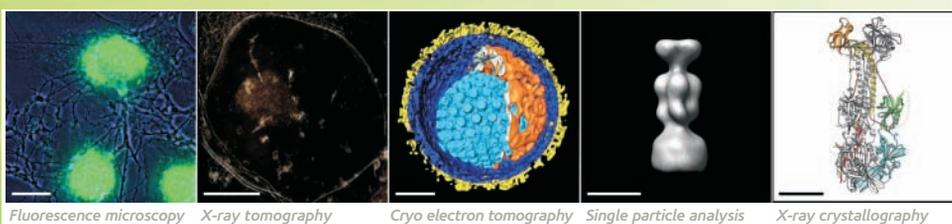
STFC sought views about the proposed centres through workshops and consultation from a broad range of stakeholders including STFC researchers and those at facilities supported by STFC, similar communities in other research councils as well as commercial and public sector researchers who may benefit from the centres' development. Examples of the Centres are:

### Imaging Solutions Centre with the Research Complex at Harwell



The Imaging Solutions Centre sits within the Research Complex at Harwell (RCaH), a new multi-disciplinary laboratory for cutting-edge research in physical and life Sciences. This powerful combination of facilities and expertise will enable significant advances in Imaging Science, and the Imaging Solutions Centre will aim to make these leading techniques accessible to a wide variety of users, including those from industry.

The Centre will tackle numerous scientific problems with important outcomes for energy provision, the environment, life sciences and medicine. It will also build strong links with commercial users of imaging solutions and give businesses the opportunity to use and benefit from STFC's sophisticated facilities.



Fluorescence microscopy X-ray tomography Cryo electron tomography Single particle analysis X-ray crystallography

### International Space Innovation Centre

The International Space Innovation Centre (ISIC) in Harwell will promote innovation and act as a collaborative hub for industry, laboratories and academia.

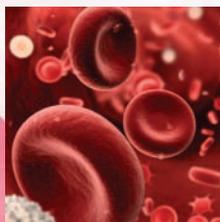


ISIC will provide facilities for businesses, universities, government and space-related organisations to work with scientists and engineers. Several companies already have offices on site.

Funding for the initial phase of ISIC was announced in March 2010, supporting the development of an Earth Observation Hub, a Visualisation Centre and a Security and Resilience Unit.

The European Space Agency (ESA) Space Business Incubator will also be based at ISIC. The partnership between ESA, STFC and the UK Technology Strategy Board will support entrepreneurs and start-up companies, helping them to develop products and services for non-space areas.

The global challenges of healthcare, security, energy and the environment are at the heart of our Vision. The Futures Programme was established in 2009 to ensure that STFC's strengths in skills, technology and research provide solutions to these issues.



# Working for the *future*

A key achievement is the team's contribution to the development of the STFC Strategy. Solutions to Global Challenges sets out how STFC's science, skills and facilities can address matters ranging from increasing pressure on natural resources and an ageing population, to the effects of climate change and terrorism.

The Programme has been allocated around £700,000 for activities over the next 12 months.

## Energy



The Energy Futures Programme brings together scientists from STFC, universities and industry to work on next generation energy technologies.

The Programme, already involved in more than 50 initiatives, ensures that STFC technology and research has maximum impact by designing materials and systems to harness cleaner energy sources, decarbonise fossil fuels and store energy.

An Energy Futures Forum has been developed to co-ordinate the work and contains representatives from across STFC. The Forum's achievements include collaborating with EDF Energy on hydrogen fuel cells and a proposal for a 100% renewable solar energy source for the Square Kilometre Array radio telescope in South Africa.

The programme is also supporting arrangements for the RCUK International Review of Energy in October 2010.

## Environment



*Geoengineering sandpit participants.*

The Environment Futures Programme works closely with the Natural Environment Research Council (NERC), enabling more environmental scientists to access STFC facilities.

A pilot NERC/STFC call for proposals on Networks of Sensors, launched in February 2010, received responses from 22 organisations. Successful projects will work closely with STFC staff across a broad range of departments.

A new project to investigate stratospheric particle injection for climate geoengineering will also make use of STFC's facilities. The research was recommended after an EPSRC/NERC-run Sandpit in March 2010.

## Healthcare



*Nanotechnology for Healthcare work experience students.*

The Medical Technology Exchange Centre (MedTEC) brings together the Healthcare Futures Programme and experts in related fields for better working with the NHS and other health organisations. Launched in May 2009 and based at Daresbury, Cheshire, it hosts the Northwest NHS Innovation Hub and seeks to encourage business onto the Campus.

A new Healthcare and Technology Exchange Awards Scheme, to give better access to STFC's technology and expertise, will be launched later in the year. The scheme will help develop high priority technology, devices and materials for the healthcare sector.

## Security



*The outer hall of the decommissioned SRS showing the area designated for the Security Futures Laboratory experimental area.*

The Security Futures Programme identifies STFC technologies and skills for defence and security applications.

In response to the National Security Strategy a new Security Futures Laboratory (SFL) was established at the Daresbury Laboratory in January 2010. Expanded in March 2010, and available to scientists, academics and industry, SFL's facilities cover materials detection, identification and more.

The team is also working with the Home Office's Office of Security and Counter-Terrorism as part of STFC's contribution to RCUK's Global Uncertainties Programme. After signing a Concordat in June 2009, we are collaborating with the Defence, Science and Technology Laboratory and working internationally on anomaly detection.



## The Daresbury Science and Innovation Campus *building for the future*

The highly supportive business environment at the Daresbury Science and Innovation Campus (DSIC) contributed to Daresbury being awarded 'Outstanding Science Park 2009' by the United Kingdom Science Park Association. The award recognises the significant contribution to the exploitation of the knowledge base as well as how the DSIC team has helped start-up companies access markets and secure funding. Many of the 100 start-ups and SMEs based in the Innovation Centre are now benefiting from the team's support.



Strategic collaboration and practical support to innovators is at the heart of the Campus, and 2009 saw the official launch of MedTech, a collaboration between STFC, the Medical Research Council (MRC) and TrusTECH (the North West NHS Innovation Hub). This venture is dedicated to improving patient care by helping companies to commercialise their technologies within the NHS.



Working with the other public sector Campus partners, Northwest Regional Development Agency (NWDA) and Halton Borough Council, STFC is following a robust process to find a private sector partner for a joint venture which will enable the further development of the Campus. The vision is to develop up to 1 million square feet of space for business, research and innovation and create over 6,000 jobs. A key first stage in this wider development is the construction of Vanguard House, a 'grow-on' facility for more established high-tech companies. It will provide almost 36,000 sq ft of high specification laboratory and office space for companies that have outgrown the Daresbury Innovation Centre and is part of the Campus's vision to provide a 'home for life' for science and technology companies. Funded by the NWDA, construction began in February 2010.

# Advances at Daresbury *Science and*

**2009-2010 has been marked by exciting developments at both National Science and Innovation Campuses. Each campus is clearly demonstrating the tangible economic benefits of collocating industry alongside publicly funded research.**





Space technology from the XXM-Newton mirrors is now being used in ultra-high resolution photolithography to produce the latest semiconductor chips.

Credit: ESA/Van Der Geest



The Planck satellite at ESA's European Space Research and Technology Centre (ESTEC) in Noordwijk, the Netherlands.

Credit: ESA

## The Harwell Science and Innovation Campus *making space for Space at Harwell*

In July 2009, the European Space Agency (ESA) opened its first UK research centre at Harwell. It will build on existing relationships with STFC's Space Science and Technology Department and focus on a number of key issues including climate change modelling, the development of new technologies for planetary exploration including robotics and innovative power sources.

Space at Harwell received a further boost with a £12 million grant from the Strategic Investment Fund to develop the International Space Innovation Centre (ISIC), a technology gateway centre.

The combination of STFC's Space Science and Technology expertise, ESA and ISIC has already attracted a number of international aerospace companies keen to exploit the opportunities that the Campus offers. One of these is the French company, Magellium. Director, Marc Gorman explains, "The concept and spirit of ISIC corresponds closely to our view of how the Space Sector should develop: through collaborative ventures and knowledge exchange, with strong cross-fertilisation between research and industry. It provides an environment conducive to 'making things happen' – in particular growing and consolidating the UK space offer and taking it to the worldwide market. With ESA's increasing importance on the site, the ISIC will be seen as a truly international effort and will attract the interest of non-European industry and space agencies, an important strategic consideration for businesses looking to use the UK as a base for further export opportunities."

### Developing a community

STFC has played a key role in developing a range of activities to pull together over 140 businesses on the Harwell Campus. A Business Breakfast network has generated new relationships between Campus companies. The active involvement of Oxfordshire Innovation and Growth Team, Business Link and UK Trade and Investment provides these companies with complementary advice on funding, business development and reaching new markets.

# and Harwell *Innovation Campuses*



Our programme typically engages 100,000 young people, 6,000 teachers and many members of the public each year. We have a strong and vibrant public engagement programme at our laboratories and have continued to focus on our partnerships with others.



The Science in Society programme aims to stimulate and respond to public interest in research and technology developments; support and encourage researchers' public engagement work; and capitalise on the inspirational research work of our laboratories and national science & innovation campuses. A particular focus is on inspiring and involving teachers and young people.

# Inspiring and involving *the public*

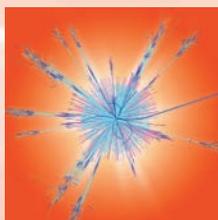


## Highlights during the year included:

### International Year of Astronomy

STFC contributed £600,000 for individual projects and national co-ordination, in partnership with the Royal Astronomical Society and the Institute of Physics. A highlight was 1000 Telescopes for Schools, from which a survey showed that 85% of schools said that it was "a valuable addition to the science teaching".

Max Alexander's *Explorers of the Universe* photographic exhibition launched at the Royal Albert Hall, London, in 2009 and then went on UK tour. Over two million people have seen iconic pictures of world famous UK astronomers and space scientist, mainly via his website.



### Particle Physics

The LHC restart attracted worldwide publicity and we remarketed our educational and popular resources including the popular *Little Book of the Big Bang* which is an innovative publication on the LHC.

In 2009 181 UK schools and over 200 teachers visited CERN to learn about the exciting developments in particle physics and enrich their science teaching.

### Space Education

STFC's Leading Space Education programme is operated by the Specialist Schools' & Academies' Trust. 30 leading space schools are enhancing science education through space, with growing impact. Shoeburyness High School in Essex has created a 'Space Academy' and its entire Year 8 science curriculum will be taught through space contexts and applications such as space travel, planetary chemistry and astrobiology. The Space Club meets weekly, with local primary schools also involved.



### Funding Schemes

Our Science in Society Fellows who champion STFC science and technology include Dr Maggie Aderin who made regular appearances on primetime TV programmes such as *The One Show* and *BBC Breakfast* news.

In 2009 our Small Awards supported 23 engagement projects, ranging from music festivals to classroom talks. The *Guerrilla Science* project brought together over 2,350 people for science orientated discussions, debates, art, music, experiments, demonstrations and lectures at the Secret Garden Party and Latitude music festivals. This novel way to engage a new audience had good impact.

In 2009 STFC in conjunction with the Institute of Physics supported 84 schools with small grants of £500 each, through a joint scheme. The aim is to help schools with small-scale projects or events to enhance the teaching and learning of physics.

### Support for Researchers

Our training courses in media awareness and public communications skills involved 35 scientists in the year.

## Events

Dr Lewis Dartnall of UCL gave the annual STFC Lecture for 2010 at the science teachers' annual meeting. His topic of *Update on the Search for Extraterrestrial Life* resulted in a very popular and well attended lecture.

October 2009 saw a Swindon-based 'Innovation Festival' which drew 17,000 local residents who engaged with a wide range of STFC and all research council-supported science.

In March 2010 over 22,000 students were able to experience cutting-edge STFC science at the Big Bang Science Fair in Manchester. Exhibits from STFC, the Cockcroft Institute, the Herschel and Planck space mission consortia, and other university groups covered topics such as the wonders of light, Big Questions, the Origins of the Universe through Herschel and Planck, future energy sources and living with Earth's nearest star, the Sun.







# Accounts

# Statutory basis of the Council

The Science and Technology Facilities Council (STFC) was established on 1 April 2007 as an independent Research Council under the Science and Technology Act 1965. STFC's Royal Charter was granted by Her Majesty the Queen on 7 February 2007.

STFC's activities during 2009-2010 have been in accordance with the objects set out in its Charter which is available on the Council's website (see <http://www.stfc.ac.uk/Charter>).

## The STFC Organisation

The STFC is one of Europe's largest multidisciplinary research organisations supporting scientists and engineers world-wide. The Council operates world class, large scale research facilities and provides strategic advice to the UK government on their development. It also manages the UK interests in major international collaborations such as CERN/ESO and research projects in support of a broad cross-section of the UK research community. The STFC also directs, coordinates and funds research, education and training.

As well as operating as a single corporate entity, STFC has operated its own wholly owned trading subsidiary, STFC Innovations Ltd (SIL, formerly CLIK Knowledge Transfer). This technology exploitation company successfully manages commercial activity through spin-outs, licensing and trading.

The STFC continued to be the major shareholder in The Diamond Light Source Limited (DLSL), a joint venture established with the Wellcome Trust Limited for the construction and operation of the Diamond facility, a third generation, medium energy, synchrotron radiation source. The STFC is also a partner in a number of other joint venture arrangements: RCUK Shared Services Centre Ltd.; Institut Laue Langevin (ILL) and the Harwell Science and Innovation Campus Public Sector Partnership (HSIC PubSP).

# Management commentary

## STFC financial performance

The Financial Statements have been prepared in accordance with a Direction issued by the Secretary of State for Business, Innovation and Skills (BIS) in pursuance of Section 2(2) of the Science and Technology Act 1965.

The Financial Statements have been prepared in accordance with International Financial Reporting Standards (IFRS) and the accounting and financial reporting standards issued or adopted by the International Accounting Standards Board as interpreted for Government use by the Financial Reporting Manual (FRoM).

As a Non Departmental Public Body (NDPB) the Council is required to remain within its specific budgeted limits agreed with BIS, under the governance of Resource Accounting and Budgeting (RAB); the regime by which HM Treasury, on behalf of Central Government, ensures Public Sector spending is satisfactorily controlled.

The STFC Financial Statements are the consolidation of the Council and its wholly owned subsidiary, STFC Innovations Limited. The STFC Consolidated Financial Statements incorporate the Council's share of the results of its joint ventures. The results of SIL and the joint ventures are consolidated in accordance with IFRS.

STFC has a balanced consolidated financial position for 2009-2010 with performance within 1% of budget.

	<b>Resource £'000</b>	<b>Capital £'000</b>	<b>Total £'000</b>
Allocation	558,099	147,174	705,273
Outturn	562,296	145,558	707,854
In year underspend/(overspend)	(4,197)	1,616	(2,581)

In compliance with the appropriate accounting policies the Financial Statements show net expenditure for the year of £635.7m. This is reconciled to the total outturn position as shown below:

	<b>Notes</b>	<b>£000</b>
Net expenditure for the year before reversal of cost of capital	Consolidated Statement of Net Expenditure	635,886
Funding from International Partners	Statement of changes in reserves	(2,133)
Funding from other Research Councils	Statement of changes in reserves	(10,898)
Capital funding from other Research Councils	Statement of changes in reserves	(8,477)
Property plant and equipment additions	12	57,692
Intangible additions	11	164
Joint Venture additions	13	35,479
DLSL consolidation adjustment*	-	(164)
Property, plant and equipment disposal and net write-on	12	302
Intangible asset disposal	11	3
Total outturn	-	707,854

\*Due to a change in the budgeting treatment of DLSL during 2009-2010.

Net expenditure for the year increased by £49.1m from £586.8m to £635.9m. This was primarily due to:

- an increase in research grants and other grants and awards of £18.3m following the introduction of Strategic High Performance Computing grants in 2009-2010 (£12.0m) and a reprioritisation within Particle Physics grants (£5.0m);
- an increase in international subscriptions of £26.0m due mainly to exchange rate differences;
- an increase in the share of post tax losses of joint ventures of £5.9m. The STFC % share of the losses has remained unchanged but the DLSL loss for the year increased by £7.1m due to additional depreciation as assets under construction are capitalised and an in year adjustment to the decommissioning provision.

These increases in expenditure were offset by:

- an increase in income of £1.6m due to additional income in 2009-2010 primarily due to new framework agreements, and
- a reduction in the unwinding of the discounting on provisions of £1.9m – the prior year charge was significantly greater than the current year owing to the increase in the provision for ISIS Target Station 2.

Net assets as at 31 March increased by £26.2m from £870.0m to £896.2m. This was as a result of:

- an increase of £25.8m in property plant and equipment assets, the main additions being: ISIS Target Station 2 (£11.4m); the Electron Building (£4.7m); stores building at Daresbury (£1.4m) and the RAL computer building (£0.7m);
- an increase in investments of £17.1m; attributable mainly to the purchase of additional DLSL share capital (£35.4m less impairment of £19.6m);
- a decrease in trade and other receivables of £21.7m primarily due to a reduction in international subscription prepayments following a change in the payment profiles for CERN and ESA;
- a reduction in the value of derivative financial instruments of £5.8m attributable to a smaller variance between the forward exchange rate and the spot rate ruling at the balance sheet date;
- a decrease in cash and cash equivalent of £2.8m as a result of effective cash management at the year end;
- a reduction in trade and other payables of £9.5m – a reduction in accruals of £12.5m due to large capital projects completing in the year (ISIS Target Station 2, RAL kitchen, RAL computer building) offset by an increase in payables of £2.8m mostly relating to grants payments due at the year end, and
- a net reduction in provisions of £5.4m – an increase in the decommissioning provision of £2.5m was offset by the utilisation of restructuring provisions; the net reduction was attributable to a release of the provision for restructuring relating to the closure of the Synchrotron Radiation Source at Daresbury.

## STFC directorates

STFC is structured on a Directorate basis for management reporting purposes:

- **Science Programme and Project work:** STFC's science and technology strategy, science operations and planning and international strategy;
- **Facilities Access and Development:** the management and operation of STFC's world class research facilities at RAL, Daresbury and the UK Astronomy Technology Centre (UKATC);
- **Knowledge Exchange:** the delivery and development of the effective transfer of knowledge between the STFC, universities, industries and other organisations;
- **Corporate Services and Affairs:** STFC's administrative information systems and technology, estates management operations and support services, health, safety and environment, human resources, and security. The development and implementation of a strong and effective communication strategy and programme;
- **Finance:** financial management of STFC including long term financial planning.

Note 2 of the Accounts gives a detailed breakdown of the STFC's income and expenditure Directorate but key points are:

- Science Programme and Project work accounts for 65% (£441.0m) of STFC's expenditure (£675.6m);
- Within Science Programmes 91% of the costs (£399.4m) are attributable to long term commitments for international subscriptions and research grants and as outlined above these have increased from the previous year; 6% (£25.9m) relates to joint venture funding for DLSL, the proportion being comparable with the prior year;
- 78% (£46.7m) of STFC's income from operating activities (£60.1m) is generated within Facilities Access and Development. This income is principally in relation to facility usage and is driven by the number of operational days at each facility;
- Knowledge Exchange expenditure has remained on a level with the previous year at 1% of the total expenditure but there has been a heightened level of activity in this area with respect to the Campus developments;
- Corporate Services and Affairs accounts for 6% (£42.1m) of total expenditure, consistent with the prior year; and
- Finance expenditure has increased year on year by £2.9m but remains constant at 11% of total expenditure. Finance Directorate collects certain costs on behalf of STFC, such as depreciation, movements in provisions and cost of capital and therefore a certain degree of fluctuation is to be expected.

## Creditor payment policy

The Council observes the Confederation of British Industries' Code of Practice. The Council adheres to the principle of the prompt payers code and makes every effort to comply with the agreed terms of payment of creditors' valid invoices for goods and services received.

In line with Treasury guidance STFC has moved towards making payments within 10 days; during 2009-2010 96% (2008-2009: 79%) of all invoices received by the Council were paid within 10 days.

The Council makes purchases using the Government Procurement Card (GPC) and the percentage of invoices paid within 10 days includes purchases made using the GPC.

## Going concern

The STFC Accumulated Income and Expenditure Reserve carried forward at 31 March 2010 shows a surplus of £719.5m.

The STFC has received formal notification from BIS of Grant in Aid funding for 2009-2010 taking into account the amounts required to meet the STFC's liabilities.

Since the issue of the grant letter BIS has advised that a £0.2m saving on STFC's budget will be required during 2010-2011. We expect to accommodate this reduction whilst still meeting our liabilities as they fall due.

At the date of issue of this report we remain satisfied that the preparation of the Financial Statements on a going concern basis remains appropriate.

# Governance

The Science and Technology Facilities Council is an independent non-departmental public body of BIS.

Ultimately STFC is accountable to the public through Parliament for the funds it expends. Parliament monitors and influences the Council's work through its Select Committees and the Parliamentary Ombudsman.

The STFC's working relationship and lines of accountability with its sponsor department BIS are defined through a Management Statement and Financial Memorandum, which are subject to periodic review.

## Council, Executive Board and Committees

The Council, STFC's governing body, was appointed in April 2007 by the Minister for Science and Innovation. Council members are drawn from a combination of academics and business backgrounds.

The Council's terms of reference reflect its responsibility to ensure that the STFC delivers its goals, and upholds its responsibility towards its stakeholders, users, members of the public and staff.

In addition, the Chair has specific responsibilities in relation to identification of strategic priorities, interaction with BIS, input and engagement with stakeholders, and staff recruitment and retention as well as representational duties.

In the discharge of its responsibility Council is supported by a number of support and advisory structures.

### Council membership and attendance 2009-2010

### Attendance

#### Chairman

Mr Peter Warry FREng (Retired July 2009)	2/2
Professor Michael Sterling FREng (appointed 1 August 2009)	7/7

#### Chief Executive

Professor Keith Mason	9/9
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#### Members

Professor Martin Barstow FRSA FInstP, University of Leicester	9/9
Professor Keith Burnett CBE FRS, University of Sheffield	7/9
Mr Marshall Davies, Independent Advisor	9/9
Professor Michael Edmunds FRAS FInstP, University of Cardiff	8/9
Mr Philip Greenish CBE, Royal Academy of Engineering	8/9
Dr Philip Kaziewicz, GI Partners	9/9
Professor Sir Peter Knight FRS, Imperial College London	9/9
Professor James Stirling CBE FRS, University of Cambridge	9/9

In accordance with the Council's Royal Charter, members are appointed by the Minister for Science and Innovation for a term of office not exceeding four years. All of the above named were deemed to be independent with the exception of the Chief Executive who is a STFC employee. Any financial or business relationships with STFC are listed in the Register of Members' Interests and in the Related Party Transactions (see note 22 to the Annual Accounts).

Mr Marshall Davies was assigned responsibility for investigating and advising on confidential whistle-blowing cases. Mr Paul Williams, BIS, was observer to STFC Council during 2009-2010 on behalf of the Secretary of State for Business, Innovation and Skills.

Minutes of the Council's meetings are available on the STFC website at <http://www.stfc.ac.uk/About/Strat/Council/Council.aspx>

#### Register of members' interests

A register of Council Members' private, professional and commercial interests was maintained by the Council. The register is also available on the STFC website at <http://www.stfc.ac.uk/About/Strat/Council/register.aspx>

## The Executive Board

The Responsibility for the Council's activities rests with members of the Council including the Chief Executive in his role as Accounting Officer. Recognising that in practice many of these activities are delegated by the Chief Executive, Council created the Executive Board to support the Chief Executive, and thereby the Council.

The Executive Board supports the CEO and Council by: provision of direction and oversight of STFC governance; approval and review implementation of organisational strategy; receipt of regular reports on the performance of the organisation; approval of the organisation's annual budgets and operating plans (within the delegated authority granted by Council) and all decisions involving financial expenditure or any matters that have material, reputation, legal/regulatory or strategic impact on the Council or its sponsoring department.

The Chief Executive and Executive Board delegate oversight of operational activity to the Operations Board and responsibility for recommendation of overall programme priorities and resource allocation to the Programme Board.

#### Membership of the Executive Board

	<b>Attendance</b>
Professor Keith Mason – CEO	12/14
Professor Richard Wade – Chief Operating Officer and Deputy CEO	14/14
Professor Colin Whitehouse – Director of Campus Strategy and Deputy CEO	13/14
Mr Gordon Stewart – General Counsel and Director, Corporate Affairs	13/14
Jane Tirard – Director, Finance	12/14
Mr Paul Hartley – Director, Corporate Services	14/14

#### In attendance

Mr Keith Williams – Director, Change	12/14
Mr Terry O'Connor – Director, Communications	12/14

The Executive Board is chaired by Professor Keith Mason and Council appoints the membership to the Board. Professor Richard Wade is Deputy Chair.

## Committees

### Audit Committee

The Council has established an Audit Committee to review internal and external audit matters, internal control and risk management, and the Council's accounts. The Committee met six times during the year.

The Audit Committee's Terms of Reference were ratified at the first meeting of the Council.

#### Membership and attendance 2009-2010:

#### Attendance

##### Chair

Mr Marshall Davies, Council Member	6/6
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##### External members

Dr Derek Chadwick, Novartis Foundation	6/6
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Mr Rob Low, Independent Advisor	6/6
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Mr Ric Piper MA FCA, Independent Advisor	5/6
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### Remuneration Committee

The remuneration of the senior staff in STFC is determined by the Council's own Remuneration Committee. See the Remuneration Report (page 67) for further details. The Committee met once during the year (the spring meeting took place in April 2010).

#### Membership and attendance 2009-2010:

#### Attendance

##### Chair

Mr Philip Greenish CBE, Council Member	1/1
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##### Members

Mr Marshall Davies, Council Member	1/1
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##### In attendance

Professor Keith Mason, Chief Executive	1/1
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Mr Paul Hartley, STFC (Secretary)	1/1
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Further details on the STFC Council and its advisory committees are available on the STFC website at <http://www.scitech.ac.uk/About+STFC/148.aspx>

### Political and charitable gifts

The Council made no political or charitable gifts during the year.

## Freedom of information

During 2009-2010 STFC received 83 formal requests for information. 40 responses were made under the terms of the Freedom of Information Act (FoIA) 2000.

Six requests required an extension of time over the 20 working day response deadline. There were no requests for internal review following receipt of the first response.

43 requests were dealt with under the Data Protection Act 1998 (42 for Grants reviewers' comments). All responses were made within the required 40 calendar day timeframe.

The STFC Publication Scheme and Information Charter are available on the website at:  
<http://www.stfc.ac.uk/access.aspx>

## Auditors

Internal audit was provided by the Research Council's Internal Audit Service.

The Accounts of the Council were audited by the Comptroller and Auditor General under the terms of Section 2(2) of the Science and Technology Act 1965. Their fee for 2009-2010 was £147,000 (includes £10,000 for work undertaken in relation to the IFRS restated Financial Statements).

The NAO fee for the work undertaken on the ILL 2010 audit, through the ILL Audit Commission, was £9,000.

The NAO also undertook a special assignment topic within ILL, Budgetary Review, in April 2009. The fee for this piece of work was £16,000.

So far as the Accounting Officer is aware, there is no relevant audit information of which the Council's auditors are unaware. The Accounting Officer has done all he should to make himself aware of any relevant audit information and to establish that the Council's auditors are aware of that information.

## Performance and related trends

This report covers the third year of operation of the STFC during the final year of the 2007 Comprehensive Spending Review (CSR07) period.

### Performance management

The Council's performance is reviewed formally through the BIS Performance Management System. First introduced in 2005-2006, this comprises:

- the Delivery Plan which sets out research council plans and programmes for the period 2008-2009 to 2011-2012. Published in December 2007, this document described the Council's plans and key deliverables for the period 2008-2012 to meet Government's Public Service Agreement (PSA) targets:
  - PSA 2: Improve the skills of the population, on the way to ensuring a world-class skills base by 2020;
  - PSA 4: Promote world class science and innovation in the UK.
- the complementary Scorecard which lists more detailed key, strategic-level deliverables and associated metrics and targets derived from the STFC Delivery Plan, and
- the Economic Impact Reporting Framework (EIRF) which focuses on the contribution an individual research council makes to achieve the Public Service Agreement target and performance.

Both the Delivery Plan and Scorecard are reviewed and refreshed annually to reflect the changing priorities of the Council.

Performance against the targets, milestones and metrics defined in these documents is monitored routinely by BIS through the use of quarterly reports and 'traffic light' based reporting system. The Scorecard is reviewed by Council and submitted to BIS for comment.

The Council is also required to produce an Annual Delivery Plan Report (see <http://www.stfc.ac.uk/About+STFC/4751.aspx>) which includes a summary of progress against the Scorecard targets. The most recent STFC Annual Delivery Plan Report was published in August 2010.

In 2009-2010, STFC reported against 125 detailed ongoing targets, nine at the strategic-level, of which 74% were met in full by the target date. Three targets that were classed as 'red' or 'amber' (at risk) were of a strategic nature. Those deliverables that were not met during the year are expected to be achieved in full by the next reporting period.

Throughout 2009-2010 STFC continued to maintain high quality service to users of the existing facilities (ISIS, Central Laser Facility (CLF), Diamond Light Source and the Isaac Newton Group (ING), La Palma, and Joint Astronomy Centre (JAC), Hawaii, ground-based telescopes) whilst developing programmes of on-going development to sustain their operational performance and enhance their capabilities.

#### Examples of major achievements throughout this reporting period include:

- The public launch of the ESA Centre at the Harwell Science and Innovation Campus;
- The Oxford University Protein Production Facility and Membrane Protein Crystallography group from Imperial College moved into the Research Complex at Harwell;
- Spin-out of Scitech Precision Ltd, located at STFC's Rutherford Appleton Laboratory at Harwell. The company combines unique expertise in microengineering and design to make ultra-precise parts for laser experiments;
- Continued promotional activities relating to the Large Hadron Collider (LHC) at CERN, including: a national tour, posters on the London underground, and provision of educational resources;
- Development of a portfolio of economic impact case studies, matched to BIS' key themes, and continuing work to collect and write case studies reflecting economic impact across the whole of STFC;
- Agreement with the Technology Strategy Board (TSB) that STFC will act as the academic host for Knowledge Transfer Partnerships, enabling industry to access the knowledge base of STFC laboratories; and
- Two CERN industry roadshows with UKTI (UK Trade and Investment) attended by 66 companies, of which 50 held 1:1 meetings with CERN procurement teams.

## Performance data

- Achieved collisions at 7 TeV (3.5 TeV/beam) on the LHC;
- Agreed medium-term support and management arrangements for e-MERLIN (Multi Element Radio Linked Interferometer Network) with the University of Manchester;
- Continued progress on ALMA (Atacama Large Millimetre Array), with all sub-contracts in place and full operation of the European Front End Integration Centre at Harwell;
- Started shared risk observing with SCUBA-2 on the JCMT in Hawaii;
- Completed a further five Diamond Phase II beamlines, bringing the total number of operational beamlines to 14;
- Demonstrated enhanced energy operation of ALICE (Accelerators and Lasers in Combined Experiments) after upgraded performance of the accelerator systems;
- Beam now being taken by all seven ISIS Second Target station Phase 1 instruments. Six instruments started user operation within the year, with the seventh instrument in technical commissioning; and
- Established the Engineering Technology Centre at the Rutherford Appleton and Daresbury Laboratories.

## Performance targets achieved

ISIS delivered more than 680 experiments in the year for its user community, produced 646 mA-hr of beam, and registered a user satisfaction of 91% over a range of 15 indicators.

The Central Laser Facility comprises the Lasers for Science Facility (LSF), and the Vulcan, Artemis and Astra-Gemini lasers. In 2009-2010, the CLF scheduled 154 weeks of user time for 34 experiments. It recorded a user satisfaction of 90%, a reliability of 89%, and an availability of 106% (including out-of-hours working). The Laser Loan Pool (managed on behalf of EPSRC) made 15 loans over the year.

Diamond, in its third full year of operation, provided 714 experiments for 2706 users. The overall user satisfaction rate was 90% against a target of 80%.

During 2009-2010, STFC ensured access for the UK research community to a significant proportion of Europe's major research facilities: 21.2% of public access to the neutron source at the Institut Laue-Langevin (ILL) and 16.1% of public access to the European Synchrotron Radiation Source (ESRF), both in Grenoble, France. Although these figures are related to shareholding, they are dependent on the high scientific quality of beamtime proposals.

For the ground-based telescopes, UK access was maintained as follows: Isaac Newton Group at La Palma: 47.6%, and at Joint Astronomy Centre in Hawaii: 49.5% for the James Clerk Maxwell Telescope (JCMT); 85% for the UK Infrared Telescope (UKIRT).

## Operational initiatives

During 2009-2010, the STFC continued to take forward major capital expenditure, including:

### ISIS Second Target Station Phase I and Phase II

Building on the success of the ISIS pulsed neutron facility, the Second Target Station (TS2) provides a qualitatively different capability for research in soft matter, bio-molecular science, and advanced materials. The Phase I Project was formally completed in July 2009, on time and to budget (£145 million including contributions from Spain, Italy, The Netherlands and the EU FP7). TS2 is now in regular operation and six of the seven instruments have scheduled users. Instrument performance is world class, fully validating the TS2 concept and target/moderator/instrument designs. The first paper resulting from TS2 work was published in January 2010. Preparatory work for TS2 Phase II (budget £29M, final approval pending) is well advanced, with detailed engineering design of the four instruments underway and ongoing developments with international partners.

### Harwell Science and Innovation Campus

The Harwell Science and Innovation Campus Joint Venture between STFC, UKAEA and Goodman continued to mature throughout the year with activities focused on campus branding, estate master planning and the design of Gateway Centres that are destined to be built at Harwell. Gateway Centres are portals where science and industry can come together to solve problems that will generate significant economic impact for the UK.

The campus continues to provide a significant economic benefit to the local community with over 120 tenant organisations conducting business from the Harwell site. The European Space Agency has opened a suite of offices on the campus and is setting up new programmes to further the Agency's work. This has brought a great deal of interest from UK and European space industry companies who are now also setting up small satellite offices on the campus.

### Daresbury Science and Innovation Campus (DSIC)

The Daresbury Science and Innovation Campus project team have spent the year consolidating its current business offering whilst also planning for the future. In 2009 the campus won a prestigious United Kingdom Science Park Association (UKSPA) award for being the most Outstanding Science Park for providing an environment in which it is possible to provide access to new markets, contribute to technology development, assist with research linkages, provide access to capital networks and finance, provide sources of competitive advantage, enhance supply and distribution networks and increase on-park business to business interactions.

The campus continued to work closely with its key stakeholders the Northwest Regional Development Agency (NWDA), Halton Borough Council and the three leading North West Universities (Lancaster, Liverpool and Manchester) to deliver science and technology based solutions for research and commercial projects.

The team continued to carry out due diligence studies on all aspects of the proposed Joint Venture partnership to ensure that the Daresbury Science and Innovation Campus is built on firm business foundations. DSIC is now engaged in a procurement process to select a commercial sector partner with whom to form a joint venture as a sustainable vehicle for fulfilling the potential of the Campus over the next 15-20 years. The procurement process is at an advanced stage and it is anticipated that the new joint venture will be established during 2010.

## Infrastructure sustainability programme

In 2009-2010 work has continued across the STFC property portfolio to address the many areas where buildings and infrastructure have, through lack of investment, fallen below an acceptable level

The focus in Edinburgh at the UK Astronomy Technology Centre (UK ATC) has been on the replacement of the copper domes on the Grade A Listed Observatory building which is 115 years old. Work was due to be completed in 2009-2010, but as the old copper was removed more serious structural problems were revealed that are now being repaired.

At Daresbury decommissioning of the Synchrotron Radiation Source (SRS) has continued. The original plan saw the whole SRS complex being demolished to make way for Daresbury Science and Innovation Campus Joint Venture developments. Financial constraints have made this impossible and the old SRS buildings are now being refurbished to create modern facilities for campus stakeholders and commercial tenants.

The Rutherford Appleton Laboratory has seen the opening of the new R89 computer building in December 2009 to coincide with data being delivered from the Large Hadron Collider in CERN, the opening of the new multi-disciplinary Research Complex at Harwell and the completion of the Restaurant refurbishment project. In order to allow the Diamond Light Source to construct the first of its long beam lines the Little Stars Nursery had to be relocated to the ATLAS building; the new nursery opened for business in October and has subsequently received an Outstanding award from OFSTED.

## Personal data related incidents

Incidents, the disclosure of which would in itself create an unacceptable risk of harm, may be excluded in accordance with the exemptions contained in the Freedom of Information Act 2000 or may be subject to the limitations of other UK information legislation.

<b>Table 1: Summary of protected personal data related incidents formally reported to the information commissioner's office in 2008-2009</b>				
<b>Previous years Statement on information risk</b>	<p>During 2008-2009, the Senior Information Risk Owner initiated an internal project to review, revise and update the internal arrangements for the management of information risk in light of both the Data Handling Review and the issue of the Security Policy Framework (SPF). While the project is still ongoing, it has:</p> <ul style="list-style-type: none"> <li>• Successfully encrypted over 1300 STFC laptops in line with SPF standards,</li> <li>• Raised awareness of information risk at the senior level,</li> <li>• Issued guidance to staff on how to protect personal data.</li> </ul> <p>As the primary business of the STFC is to support, run and develop large scale scientific facilities for open academic research within the UK and abroad, the majority of information assets do not attract any form of protective marking such as PROTECT or higher and are outside the scope of the SPF.</p> <p>During 2008-2009 STFC had two instances where a small amount of Personal Protected Data (PPD) was put at risk. Subsequent investigations have resulted in changes in local working practices that have reduced the likelihood of these events occurring again. There have been four near misses where IT equipment not containing PPD were stolen or lost.</p> <p>The STFC has in place arrangements to monitor and assess its information risks and will continue to identify and address any weaknesses and ensure continuous improvements of its systems.</p>			
<b>Date of incident (month)</b>	<b>Nature of incident</b>	<b>Nature of data involved</b>	<b>Number of people potentially affected</b>	<b>Notification steps</b>
Not applicable	None	None	Nil	Not applicable
<b>Further action on information risk</b>	STFC will continue to work with the other Research Councils, BIS and partners to implement and comply with the cross government mandatory minimum standards to protect personal data.			

Incidents deemed by the Data Controller not to fall within the criteria for report to the Information Commissioner's Office but recorded centrally within the Department are set out in the table below. Small, localised incidents are not recorded centrally and are not cited in these figures.

Catagory	Nature of incident	Total
I	Loss of inadequately protected electronic equipment, devices or paper documents from secured Government premises	Nil
II	Loss of inadequately protected electronic equipment, devices or paper documents from outside secured Government premises	Nil
III	Insecure disposal of inadequately protected electronic equipment, devices or paper documents	One
IV	Unauthorised disclosure	One
V	Other	Nil

Table 3 provides additional information on the incidents listed in Table 2.

Date of incident (month)	Nature of incident	Nature of data involved	Number of people potentially affected	Notification steps
July	Insecure disposal of one desktop computer	Local email and documents	1	Individual
<b>Further action on information risk</b>	The member of staff reported the loss of a desktop PC after moving office. An investigation showed that the desktop has been disposed of incorrectly. Local procedures have been reinforced to prevent the reoccurring.			

Date of incident (month)	Nature of incident	Nature of data involved	Number of people potentially affected	Notification steps
December	Unauthorised disclosure of HR records	Paper documents	7	2 individuals notified by post
<b>Further action on information risk</b>	As part of the STFC migration to a new human resources system, paper records were sent from STFC to SSC Ltd for document scanning and input. Due to human error, a small set of documents were then incorrectly sent by internal post to a NERC site in Edinburgh. The mistake was immediately noted, the documents returned and an investigation started. At no time did the information reach the public domain. Local proccures in SSC were improved to prevent any recurrences. Following an assessment of the paperwork only 2 of the 7 individuals were notified of the event. The others were not notified as the data were not sensitive.			

## Near misses

During 2009-2010 six laptops used by STFC staff were stolen from STFC sites. Four of the laptops did not contain any personal or sensitive data and were used for training courses or presentations. Two laptops did contain personal data but were fully protected by whole disk data encryption and strong passwords. In all cases the physical security of the STFC sites has been reviewed and improved.

During 2009-2010, one Personal Digital Assistant (PDA) used by STFC staff was lost at an airport. It contained no personal or sensitive data and had been encrypted. One USB stick was declared lost and then subsequently found.

In October 2009 STFC was alerted by SSC Ltd that there was a technical weakness in the security of some of its IT systems that had the potential to allow SSC contractors anonymous access over 1,000 staff records. A full investigation concluded that while the weakness existed, there was no evidence or suggestion that it had been used. The SSC systems and local and cross Council working procedures were rapidly reviewed and updated to remove the weakness. All STFC staff were informed of the potential incident as was BIS. To date, there has been no evidence or suggestion that the data were misused, lost or disclosed.

## Statement and actions on managing information risk

During 2009-2010, the internal project to review, revise and update the internal arrangements for the management of information risk continued. It has:

- issued clear guidance to staff on how to identify sensitive data;
- issued clear guidance and best practice to protect sensitive data;
- provided a number of tools to staff for the protection of sensitive data;
- implemented the cross Council Protective Marking Policy;
- raised awareness with staff on the need to protect data; and
- identified Information Asset Owners.

As the primary business of the STFC is to support, run and develop large scale scientific facilities for open academic research within the UK and abroad, the majority of information assets do not attract any form of protective marking such as PROTECT or higher and are outside the scope of the SPF.

During 2009-2010 STFC had eight incidents or near misses where a Personal Protected Data (PPD) was or could have been put at risk. Subsequent investigations have resulted in changes in local working practices that have reduced the likelihood of these events occurring again.

The STFC has in place arrangements to monitor and assess its information risks and will continue to identify and address any weaknesses and ensure continuous improvements of its systems.

## Safety, health and environment issues

The STFC continues to maintain a safe and healthy working environment for its employees, contractors working on its behalf, tenants located at its laboratories, visitors to sites and users of facilities. The STFC Health and Safety Policy, developed and launched in 2007 was reviewed and re-issued by the STFC SHE Committee and the Chief Executive in 2009.

Health and safety management in the STFC is based on the establishment of clear line management responsibilities. In addition the Chief Executive appoints Directors at each of the major STFC laboratories to maintain an independent overview of health and safety on the site, to monitor the implementation of Council Policy, and to bring to his attention the need for any action to improve health and safety performance.

Safety committees are a key component of the STFC safety management system. These meet regularly on a Departmental, Site and STFC Corporate-level basis, and include management and employee representatives. They consider incident reports, injury statistics and proposed new safety codes, and also provide a forum through which employee safety representatives can raise areas of concern. Independent of the Departmental and Site safety committees, the STFC Safety, Health and Environment (SHE) Committee, chaired by a Deputy CEO, provides a focus for reviewing and developing the overall STFC SHE Management system, and approving the launch of new codes.

The STFC SHE Group including site Radiation Protection Advisers (RPAs), and Occupational Health professionals monitor corporate SHE performance and advise management, and Departmental and Site safety committees.

During 2009-2010 the STFC made further significant progress in developing its SHE Management Systems:

- a further seven SHE codes have been developed and launched across the STFC, and several further codes are planned for 2010-2011;
- Departmental SHE improvement plans continue to provide the focus for reviewing and driving SHE improvement activities;
- following approval of the SHE audit and inspection code, a small team of STFC staff undertook auditor training and completed a programme of SHE audits providing independent assurance to senior management of the implementation of the STFC SHE management system and a route to update and develop SHE codes;
- improving SHE communication remains a key STFC focus, and in addition to proactively sharing learning from SHE incidents using 'What, Why, Learning' posters and SHE Notices, the STFC SHE website now provides the focus for SHE matters for STFC staff and those that work at STFC sites; and
- a first SHE Culture Survey was undertaken of STFC staff attitudes to SHE matters across the STFC. The overall survey response was a commendable 44% demonstrating a very clear staff interest in SHE matters. Reports and analysis are awaited but the initial review shows that a positive SHE culture exists within the STFC.

The principal STFC laboratories, Daresbury (DL) and Rutherford Appleton (RAL), both again received Royal Society for the Prevention of Accidents (RoSPA) Awards, for their health and safety management practices and overall health and safety performance. Both Laboratories also received RoSPA President's Award for achieving over ten consecutive years of Gold Awards.

Accident and near-miss reporting and investigation continue to be important drivers of improvement in the STFC health and safety management systems, and provided the basis of objective reporting of health and safety performance. Focusing on near-miss reporting continues to be successful as more near-misses are now reported than incidents – each reported near-miss provides the STFC with the opportunity to address its root cause and minimise the potential for future repeat incidents.

STFC injury statistics from the financial years 2008-2009 and 2009-2010 are presented in the table below:

Statistics	2009-2010	2008-2009
Total injuries to employees	99	102
Total injuries to contractors	43	41
Total injuries to users/visitors/tenants	16	13
<b>All Injuries</b>	<b>158</b>	<b>156</b>
Reportable injuries to employees	6	8 <sup>2</sup>
Reportable injuries to contractors	2	5
Reportable injuries to users/visitors/tenants	0	0
<b>All reportable injuries<sup>3</sup></b>	<b>8</b>	<b>13</b>
<b>Reportable Injuries per 1000 Employees<sup>4</sup></b>	<b>3.24</b>	<b>4.15</b>

<sup>1</sup> 2008-2009 Annual Report figure revised due to an incorrectly reported incident date and two injuries subsequently identified as having occurred to contractors rather than staff.

<sup>2</sup> 2008-2009 Annual Report figure revised as one injury was later found not to have been reportable.

<sup>3</sup> Injuries which must be reported to the Health and Safety Executive (HSE) under the Reporting of Injuries, Diseases, and Dangerous Occurrence Regulations (RIDDOR), including all that result in more than three days absence from work.

<sup>4</sup> Previously a standard STFC employee number was employed. This has now been replaced with more accurate financial year average staff numbers.

The total number of injuries to STFC staff, contractors and others working at STFC sites in 2009-2010 was 158, with no significant changes to those experienced by staff, users/tenants or contractors. The number of reportable injuries in 2009-2010, 8, is lower than in previous years as is the rate of injury per 1000 employees.

When the STFC was established, liability for employment-related matters and historical liabilities transferred to it from the Rutherford Appleton and Daresbury Laboratories as well as the Chilbolton Observatory and the UK Astronomy Technology Centre (UK ATC). The buildings at these sites date from the period when asbestos was a widely used building material, primarily in lagging and insulation. Managed early removal exercises were undertaken 20-30 years ago but there are still significant quantities of asbestos in the fabric of buildings and, in some cases, there is debris from previous removal. In accordance with Health and Safety Executive (HSE) recommendations, all asbestos has been recorded in the STFC Asbestos databases, and the policy is to manage all asbestos and to remove it only where there is a risk that it will be disturbed or where it poses some other unacceptable risk. The STFC formally launched a SHE code outlining the controls for the management of asbestos hazards in 2009-2010.

Occupational Health teams at STFC sites, in addition to pre-employment and hazard specific health screening and surveillance, continued to participate in and support a range of national health initiatives alongside regular 'Life Style Screening'. These events organised by charities, or the Department of Health included - 'No Smoking Day', 'Men's Health Week', 'Know Your Numbers', and at DL 'Holistic Therapy' services made available on site.

Two SHE codes implemented in 2009-2010, health surveillance and management of first aid, provided a framework of occupational health management across the STFC and the opportunity to refresh management processes and controls. Reviews have been undertaken of first aid provision at RAL and DL and training programmes implemented to meet revised HSE statutory training requirements.

## Radiological safety

Recognising increasing regulatory demands in the management of ionising radiation, a range of organisational changes and additional resources have been assigned to STFC radiation management in general. As part of these changes, the site Radiation Protection Advisers (RPAs) at RAL and DL have transferred to the STFC SHE Group where they will provide specialist advice independent of facility management.

Building upon the launch of the radioactive sealed source and radioactive waste management SHE codes, a general radiation management code was launched in 2009-2010. A final code, radioactive open source management, is drafted and will complete the suite of STFC radiation management codes in 2010-2011.

Landauer Inc. continued to provide the STFC with a Health and Safety Executive (HSE) approved dosimetry service during 2009 - 2010 and made all statutory returns to both the HSE's Central Index of Dose Information (CIDI) and the Health Protection Agency's National Registry for Radiation Workers (NRRW). Personal doses continued to be low, with the majority of personal dosimeters having doses below the detector reporting level.

All statutory returns relating to the STFC's holding of radioactive materials were made to schedule to both the Environment Agency (EA) and UK Safeguards Office/European Atomic Energy Community (EURATOM).

The on-going revision of local rules and completion of prior risk assessments were carried out by site RPAs for all work involving ionising radiation hazards.

## DL

Decommissioning of the SRS facility at DL continued in 2009-2010 presenting certain radioactivity management challenges as components and structural items are monitored for induced activity prior to removal and controlled disposal. A small number of activated components have been identified and it is anticipated that this number will increase as the decommissioning project continues.

In 2009 the Laboratory was inspected by an Environment Agency Radioactive Substances Inspector and a Counter Terrorism Security Adviser from Cheshire Constabulary. The inspection went well, with only minor recommendations for improvement being made.

The planned programme of radioactive source disposal continued with a small number of sources removed for disposal in September 2009. A new Certificate of Registration covering the safe-keeping and use of sealed radioactive

sources was issued by the Environment Agency in December 2009, to reflect the reduced holding of radioactive material on the DL site.

The ALICE and EMMA commissioning programmes continued, with ongoing progress towards the design parameters of the ALICE accelerator, and first electrons transported down the EMMA injection line. Radiation surveys carried out at each operating parameter increase confirmed the acceptability of protection provided by the shield walls. Thorough induced activity surveys also continued.

The table below shows the results of monitoring of Daresbury Laboratory's classified radiation workers during 2009. All doses were well below the statutory annual limits specified in the Ionising Radiations Regulations 1999 and the annual target dose of 1 mSv established by the SRS. The annual dose limit for employees is 20 mSv and that for members of the public 1 mSv.

Year	Dose (mSv)			
	0.00 - 0.09	1.10 - 0.49	0.50 - 0.99	>0.99
2008	24	0	0	0
2009	7	0	0	0

DL now has six classified radiation workers and an additional 29 non-classified workers are provided with regular personal dosimetry as part of the Laboratory's demonstration that doses are As Low As Reasonably Practicable (ALARP). SRS closure has naturally resulted in a significant reduction in the Health Physics team at DL.

## RAL

The safe operation of the new ISIS second target station (TS2) represented a major achievement of the radiation safety programme at the RAL. Seven neutron beam lines and a new neutron detector calibration facility were fully commissioned on TS2. Three, new High Activity Sealed Sources (HASS) were acquired and safely installed in the calibration facility.

The RPA continued to provide advice and assistance to managers concerning projects such as that for the ISIS Down Stream EPB Proton Window Replacement, MICE, the Central Laser Facility 10 Petawatt upgrade, critical examinations of x-ray sets, maintenance of the closed source accountancy software system, review of dosimetry and interpretation of the relevant codes.

An action plan to cope with accidents involving radiation and medical services was up-dated and the RPA provided 5 relevant training sessions for a total of 40 RAL Accident Investigation Team members.

Ancillary equipment to support the radiation protection programme was maintained, including purchase and commissioning of new neutron radiation and contamination monitoring equipment to replace obsolescent equipment.

Annual doses for occupationally-exposed workers remained within the upper dose range constraint of 3 mSv for ISIS and below the dose investigation level of 6 mSv per person established for RAL. Annual personal doses remained below 0.3 mSv for other members of RAL and the public at large.

RAL had 363 classified radiation workers and 137 non-classified workers including contractors during the calendar year. All were provided with regular personal dosimetry as part of the Laboratory's demonstration that doses are ALARP.

The following table presents the results of annual personal radiation dose monitoring conducted at RAL:

Year	Dose (mSv)						
	0.00 - 0.09	0.10 - 0.49	0.50 - 0.99	1.00 - 1.99	2.00 - 2.99	3.00 - 3.99	>3.99
2008	265	228	19	6	4	0	0
2009	376	95	17	8	4	0	0

## Environment

Development of the STFC Environmental Management System continued. Key achievements include:

- Launch of the first STFC Environmental Policy committing the Council to ensuring high standards of environmental management throughout the Council's activities;
- Reviewing and refreshing membership of site Environment Committees;
- Launch of the Management of Radioactive Waste SHE Code, and
- Successfully establishing centralised battery recycling collection points across all STFC UK sites.

Significant additional developments driven by environmental considerations at STFC sites include:

- At DL, valves have been installed on silt traps in order to protect the Bridgewater Canal which borders the site. Decommissioning of the SRS facility has resulted in equipment being reused at other facilities around the world and as much as possible of what remains has been recycled;
- At RAL, a centralised waste and recycling facility is now fully operational. A 'Tiger Team' has looked at energy usage in ISIS and has identified possible ways of saving energy which are being investigated further. The 'Rocket' composter is now fully operational, has been licensed and approved by the Environment Agency and is generating compost for use at RAL. The decentralised gas boilers have been modernised and a building management system installed enabling much greater control of building energy usage;
- STFC Swindon Office, where the STFC is a campus tenant alongside sister Research Councils, achieved ISO14001 accreditation for its Environmental Management systems. Key highlights have been the installation of additional water meters to monitor usage, motion-triggered lighting systems installed in campus buildings halving electricity use in some, and a campus waste compound has been planned; and
- At the JAC, Hawaii, a campaign clear-out of waste electronic and electrical equipment resulted in 0.76te being disposed of. In addition, the final quarterly environmental management day on the summit of Mauna Kea removed 1.3te of rubbish concluding the clean up of this environmentally and culturally sensitive site.

The STFC will be part of the government's Carbon Reduction Commitment scheme and has been gathering baseline energy usage data to enable compliance with the scheme. The data will also be used to inform staff in the larger buildings of their energy use with a view to encouraging further energy saving.

		2009-2010	2008-2009
Electricity (kWh)	DL <sup>i</sup>	16,877,192	24,540,079
	RAL <sup>iii</sup>	98,357,100	94,284,331
	SO <sup>ii</sup>	493,338	460,163
	UK ATC	1,404,395	1,392,796
Natural gas (kWh)	DL	2,722,327	2,235,427
	RAL	7,731,390	13,339,132
	SO	207,773	207,729
	UK ATC	1,599,665	1,033,891
Propane gas (kWh)	DL <sup>i</sup>	283,824	429,870
	RAL <sup>iii</sup>	59,000	17,850
	SO <sup>ii</sup>	0	0
	UK ATC	0	0
Water (m <sup>3</sup> )	DL <sup>i</sup>	4,745	6,112
	RAL	150,813	157,414
	SO	2,677	2,033
	UK ATC	5,220	5,168
Waste to landfill (kg)	DL <sup>i</sup>	88,651	85,577
	RAL	185,520	281,240
	SO	-	9,034
	UK ATC <sup>iv</sup>	22,360	22,360

i) Significant reductions in DL electricity and water usage followed SRS closure and propane use from user hostel closure.

ii) All Swindon figures are based on 12% of site total for Polaris House.

iii) Increase in RAL 2009-2010 propane usage arose from installation of temporary kitchens while site kitchens refurbished. Increase in RAL 2009-2010 electricity usage is accountable to ISIS TS2 becoming full operational in Sept 2008.

iv) UK ATC waste figures are based on number of skips and average weight of skips which has not changed.

Disposals of solid radioactive wastes from DL were in compliance with its EA Certificate of Authorisation: 3 redundant sealed sources were disposed of under the terms of an Exemption Order to RSA93.

The ISIS Facility at RAL through its normal operation, produces small quantities of radioactive solid, liquid and gaseous wastes. The gaseous wastes, mainly tritium and short-lived radioactive nuclides, are discharged into the atmosphere via authorised and monitored ventilation stacks. The measured gaseous radiation levels of 100 GBq of tritiated water vapour and 22.6 TBq of other nuclides were typical of previous years and well within the authorised annual limits of 2,500 GBq and 200 TBq respectively. Disposals of solid and liquid radioactive wastes from RAL were in compliance with its EA Certificate of Authorisation: a tantalum target (40 TBq beta/gamma and 48 GBq alpha); 3.8 tes (5.8 MBq) of solids; 270 m<sup>3</sup> (0.86 MBq) of tritiated water; 1.5 tes (348 MBq) of organic waste; and 79 closed sources to approved disposal organisations.

## Social and community issues

### Employee relations and communication

This year saw a continuation of the constructive and effective joint working and partnership between STFC management and employee representatives. During the year consultation and negotiation has taken place over a wide range of issues, including pay, appraisal, implementation of Shared Services, the Science prioritisation exercise and wider resource planning. In addition, the joint project to develop harmonised conditions of service for STFC was brought to a successful conclusion.

Staff engagement increased during 2009-2010 via a mix of events, publications and local media channels to promote the activities of STFC programmes internally. A series of monthly First Thursday Fora events continued to provide face-to-face dialogue between senior management and staff at each of the four UK sites. These delivered key messages on STFC programmes and business issues and enabled direct staff feedback. A weekly e-newsletter, 'In.Brief', continues to provide a short topical update of news and events with links to further detailed on-line information. The quarterly staff newsletter 'Spectrum' moved to bi-monthly publication by re-deploying resources on a reduced print run but greater access on-line. Emphasis on content was also geared towards celebration of people and their contributions to STFC. Two Senior Staff Conference events provided a forum for engaging and empowering team leaders on STFC's business and strategy development and insight into the 'Blueprint' change management programme.

A staff survey, involving more than 26 percent of all staff, was conducted in the autumn to establish a base-line for the delivery of the internal communications programme. This provided qualitative feedback on the positive perception and impact of the channels employed, highlighted areas that could be improved and will allow a measure of our success in the future. The two most widely-used internal communications channels are In.Brief and the Staff Forum events. Ninety four percent of respondents agreed or agreed strongly that Staff Forum events are an important way to see and hear STFC's senior management.

### Equality and diversity

The Council is committed to equality of opportunity in the workplace and recognises the benefits of the wider range of skills, experience and attitudes that a diverse workforce brings.

During 2009-2010 the STFC remained a member of the Employers' Forum on Disability and has worked closely with the UK Resource Centre for Women in Science Engineering and Technology.

In line with legislative requirements the Council has progressed the action plans contained in its disability and gender schemes and has published its race scheme. The Diversity Forum has continued to meet to ensure that employees, including representatives from minority groups, are involved in the formulation and implementation of diversity action plans and initiatives, and a newsletter 'Diversity Matters' has kept staff updated about diversity related issues. 'Appreciating Difference' training courses have continued to run, and a new course on Disability Awareness had been introduced.

Work has continued to Equality Impact Assess the STFC's main policies, processes and activities, and full assessments have been completed on two of the highest impact processes – recruitment and awarding grants. The recommended improvements are, wherever possible, being implemented.

The STFC continues to support a number of initiatives aimed at improving the gender balance among the SET workforce and at senior management level, including a WiSTEM network and a leadership programme for senior women. During the year a brochure was published aimed at attracting more women to apply for SET posts, and the STFC was pleased to be one of five organisations to take part in the pilot of the UK Resource Centre's SET Fair Standard for gender equality which was launched in November 2009.

As at 31 March 2010:

- The average age of employees in STFC was 44.3;
- 5.4% of employees were non-white. The majority of non-white staff were to be found in middle to senior management positions;
- 22.5% of all employees were female. STFC, in addition to offering a range of flexible working patterns to support work-life balance, was also engaged in various initiatives to encourage women back into the workplace in science, engineering and technology posts, and to support employees through mentoring and network groups; and
- STFC had no accurate data on the numbers of disabled employees because employees were not required to declare. Less than 1% of staff were known to be disabled.

## Learning and development

STFC continues to invest significantly in developing the scientific, technical, specialist and managerial competencies of its people by providing on site courses and learning resources, supporting attendance at national and international conferences, encouraging and supporting staff to obtain professional qualifications and supporting a mentoring scheme.

As part of a continuing drive to improve leadership and management capability a new manager feedback process was introduced this year based on the organisation's management competency framework CRISTAL, and Executive Board members completed a programme of one to one and group executive leadership coaching. As part of the Blueprint Increasing Change Capability project a network of 30 Change Leaders have completed the accredited 'Principles of Change Management' course.

The STFC continues to run a highly regarded engineering apprentice scheme which has achieved Institute of Engineering and Technology (IET) accreditation, and a graduate training scheme which is accredited by the Institute of Mechanical Engineering (IMechE), the IET and the Institute of Physics (IoP). In September 2009 a graduate intern scheme was introduced and eleven interns were recruited onto 6 month placements.

## Investors in People

The STFC remains a recognised Investor in People and is using the revised standard to help drive its improvement programme.

## STFC sickness absence 2009-2010: summary of key findings

STFC actively manages sickness absence to minimise the impact on its work programme. Data are provided to managers and Senior Management on a regular basis. The preparation of composite, corporate data on an annual basis enables STFC to benchmark performance against comparator bodies. The Cabinet Office best practice approach is followed in preparing and analysing corporate absence data.

The following data have been abstracted from a composite analysis of absence records across STFC's UK Establishments over the period 1 April 2009 to 31 March 2010:

- the total number of working days lost to sickness absence over the period was **6656**;
- the derived absence rate (days lost per person) was **3.48**; the headline absence rate (days lost per fte) was **3.58**;
- the level of self-certificated absence was **3454** days; medically-certificated absence was **3202** days;
- there were 48 longer term absence cases (continuous or linked absences of 20 working days or more) over the period; the number of days lost to longer term absence represents **27.0%** of the total days lost; and
- the causes resulting in the largest working time losses were colds/coughs/influenza, (**27.3%** of days lost to sickness), respiratory and all other infections (**16.0%**), and surgery/post-operative recovery (**12.0%**).

STFC is regarded by the Civil Service as a medium sized employer. The 2009-2010 headline absence rate of **3.58** days compares favourably with a range of Civil Service departments and agencies in this group (based on quarterly absence statistics for the 2009 calendar year published recently by the Cabinet Office). Using the Civil Service measure of available working days per fte (225), the headline absence rate represents lost time of **1.59%**.

## RCUK Shared Services Centre Limited

The seven Research Councils have agreed to establish a Shared Services Centre (SSC), based in Swindon. The SSC will provide finance, grants, human resources, information systems, procurement and payroll operational services to each of the Councils and their Institutes. The Councils are setting up the SSC with the aim of reducing spend on administration through sharing and standardising processes.

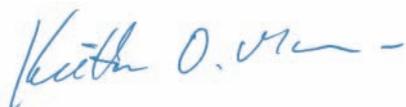
At the start of 2009–2010, STFC was already receiving services from RCUK Shared Services Ltd for procurement, and for ITC services in Polaris House, Swindon. Significant milestones during 2009-2010 included:

- the transfer of transactional HR to SSC in October 2009, and
- the transfer of payroll to SSC in December 2009.

STFC began taking finance services from the SSC in May 2010. The transfer of grants to the SSC has been revised from the autumn of 2010 to February 2011.

The Councils have agreed to share all the implementation costs and STFC's share is 20.54%. The costs for 2009-2010 have been accounted for in STFC's books as £4,251,560 expensed (2008-2009: £3,312,661), £584,201 as provisions for redundancy and system termination costs (2008-2009: £812,976) and £2,053,001 (2008–2009: £3,224,469) as additions to the Assets in the Course of Construction.

The transition to SSC is regarded as a business critical project and is referred to in our Statement on Internal Control.



**Keith Mason**  
Accounting Officer

Date: 30 November 2010

# Remuneration report

## Remuneration policy

### Council Chair and Members

Remuneration rates for Council Chair and Council Members are the same across Research Councils. The Science and Research Group (SRG) within the Department for Business, Innovation and Skills advises Research Councils of the rates they are required to pay and these are reviewed annually by SRG.

### Chief Executive

The remuneration of all Research Council Chief Executives is determined by the Science and Research Group. Chief Executives are paid both a basic salary and performance pay comprising annual, RCUK and appointment term bonuses of up to 5, 5 and 10% respectively.

The basic salaries are derived from three pay bands, which reflect the differing sizes and responsibilities of the Councils. Each band has four increments and, subject to at least satisfactory performance, Chief Executives receive an increment each year until they reach the top of the scale. In addition it is practice that all amounts are revalorised in line with the Senior Civil Service.

At the beginning of each year, the Director General for Science and Research (DGSR), and the relevant Council Chairs, agree with Chief Executives a set of individual and RCUK performance objectives for the year. In addition a set of appointment term objectives are agreed early in the appointment, which are reviewed annually. At the end of the year the Chief Executive, Chair and an independent Council Member write an assessment of performance over the year, and the DGSR, with advice from colleagues, agrees an SRG assessment of overall performance and specific achievements against objectives for annual and appointment term objectives.

A Remuneration Committee established and chaired by the DGSR then meets to review the Chief Executives' performance and to agree its recommendations, taking into account the assessments and any comments in the papers.

The appointment term bonus is assessed each year and the amounts agreed are retained and are then paid out at the end of the appointment term. If the Chief Executive leaves early the Remuneration Committee may recommend a reduced bonus be paid depending on the circumstances.

### Other senior employees

The STFC Remuneration Committee is a standing committee of Council, and its role is to determine the remuneration of the senior staff in STFC, both base pay and annual performance related bonus payments, based on the achievement of both corporate and individual objectives.

Membership during 2009-2010 was:

Mr Philip Greenish, Chairman and Council Member

Mr Marshall Davies, Audit Committee Chairman and Council Member

Professor Keith Mason, Chief Executive, also attended as an observer and Mr Paul Hartley acted as secretary to the Committee.

The Committee took account of the remuneration policy for senior civil servants, set by the Cabinet Office following independent advice from the Review Body on Senior Salaries (for further information about the Review Body on Senior Salaries see [www.ome.uk.com](http://www.ome.uk.com)).

In determining the base pay of senior staff in STFC, the Remuneration Committee also took account of:

- the staff member's individual performance;
- salary relativities with other Research Councils and other academic analogues;
- the need to recruit, retain and motivate staff of an appropriate calibre to lead and manage STFC; and
- a comprehensive job evaluation of the senior roles in STFC, carried out for the Committee by external consultants using the Job Evaluation for Senior Posts (JESP) methodology in 2008-2009, and any significant changes in responsibility since then.

In determining bonus payments the Committee broadly followed the Cabinet Office guidance, but decided to allocate a slightly smaller overall sum to reflect both STFC's organisational performance in 2008-2009 and the national economic situation. A portion of that sum was allocated on a per-capita basis to all senior employees provided their performance during the year was judged to be fully satisfactory or better; and the remaining portion on the basis of an assessment of each individual's performance during the year, taking account of each individual's self-assessment, his/her line manager's appraisal of that self-assessment, and the Committee's own moderation of these.

## Contracts of employment

### Council chair and members

Council Chair and Council Member appointments are Ministerial Appointments made by the Secretary of State for Business, Innovation and Skills. The process for new appointments to the Council Chair and Council Members is conducted under the Code of the Commissioner for Public Appointments. This is available at [www.ocpa.gov.uk](http://www.ocpa.gov.uk). In accordance with the Code, vacancies are advertised nationally and a panel, including independent members, oversees the process. The panel reviews all applications, shortlists and interviews, and then makes a recommendation to the Secretary of State. Once the Secretary of State has made a final decision, an offer of appointment is issued by SRG on his behalf to the successful candidate.

Council Chair and Council Members are defined as Office Holders. They are neither employees nor civil servants. Appointments are made for three years initially with the possibility of reappointment for up to a further three years. Appointments are non-pensionable and there is no compensation for loss of office.

### Other senior employees

All appointments to permanent roles in STFC are made on the basis of merit and through fair and open competition. The Chief Executive allocates responsibilities to senior employees.

Unless otherwise stated below, the staff covered by this report hold appointments which are open-ended until they reach the normal retirement age of 65. As is the case with other STFC employees, the contract may be extended beyond age 65 by mutual agreement. Senior employees are required to give a notice period of three months.

Early termination of employment, other than for misconduct, would result in the individual receiving compensation as set out in STFC's Conditions of Employment Memoranda, which in this area enact the provisions of the Civil Service Compensation Scheme.

## Audited information

### Remuneration of Council members

The Council comprises external appointees and the Chief Executive. The Chief Executive's remuneration is detailed below. The standard honorarium paid to Council members increased to £6,850 (2008-2009 £6,740) with effect from 1 October 2009. The standard honorarium paid to the Council Chairman is dependent on the level of activity during the year. Council members did not become members of a pension scheme and there were no superannuation payments relating to the fees paid to them.

Remuneration was in the following ranges:

	Annual honoraria	
	2009-2010 £'000	2008-2009 £'000
Professor Martin Barstow (appointed 1 March 2009)	5-10	5-10
Professor Keith Burnett	5-10	5-10
Mr Marshall Davies	5-10	5-10
Professor Michael Edmunds	5-10	5-10
Mr Philip Greenish	5-10	5-10
Dr Philip Kaziewicz	5-10	5-10
Professor Peter Knight (appointed 1 March 2009)	5-10	5-10
Professor Anneila Sargent (resigned 31 March 2009)	-	5-10
Professor Michael Sterling (appointed 1 August 2009)	20-25	-
Professor James Stirling (appointed 1 March 2009)	5-10	5-10
Mr Peter Warry (resigned 31 July 2009)	15-20	15-20

Full year equivalent fee is shown for those Council members that served for part of the year.

The Council reimburses travel and subsistence expenses necessarily incurred by Council members attending meetings or undertaking other tasks arising from their membership, in accordance with the conditions and at the rates applying to the Council's employees. The amount reimbursed for 2009-2010 was £13,519 (2008-2009: £11,936).

## Salary and pension entitlements of senior employees

The following sections provide details of the remuneration and pension interests of senior employees who were members of the STFC Executive Board during the year.

	Remuneration*	
	2009-2010 £'000	2008-2009 £'000
Professor Keith Mason	135-140	130-135
Mr Jeff Down (from 1 April 2009 - 21 April 2009)	90-95	90-95
Mr Paul Hartley	100-105	95-100
Mr Gordon Stewart	115-120	110-115
Jane Tirard	105-110	105-110
Professor Richard Wade	110-115	110-115
Professor Colin Whitehouse	90-95	95-100

### Notes

- a. \*Remuneration includes any allowances and non-consolidated bonus but not benefits in kind or employer's pension contribution.
- b. Full year equivalent salary is shown for those senior employees that have only served on the Board for part of the year.
- c. Mr Jeff Down retired on 21 April 2009. Salary for the period 1 April 2009 - 21 April 2009 was in the band £0-£5,000.
- d. Bonuses paid in 2009-2010 relate to performance in 2008-2009. Bonuses for performance in 2009-2010 were agreed by the Remuneration Committee in September 2010 and will be paid and disclosed in 2010-2011.
- e. The average earnings increase in 2009-2010 for senior employees, excluding the Chief Executive, was £3,631 (3.5%).

## Benefits in kind

The monetary value of benefits in kind covers any benefits provided by the employer and treated by the Inland Revenue as a taxable emolument.

Professor Mason received some assistance under the relocation terms within his letter of appointment. The assessed monetary value of this assistance for 2009-2010 was £2,000 (2008-2009: £1,967).

Jane Tirard received some assistance under the relocation terms within her letter of appointment 2009-2010: £12,000 (2008-2009: nil).

No other members of the Executive Board received benefits in kind in 2009-2010.

## Pension benefits

See Note 4 of the Financial Statements for details of the pension scheme arrangements.

Real increase in pension and related lump sum at retirement age:

	Accrued pension at retirement age as at 31/3/10 and related lump sum £'000	Real increase in pension and related lump sum at retirement age £'000	CETV at 31/3/10 (or date left STFC EB) £'000	CETV at 31/3/09* £'000	Real increase in CETV £'000
Professor Keith Mason	55 - 60 plus no lump sum	2.5 - 5 plus no lump sum	1,145	944	92
Mr Jeff Down (from 1 April 2009 - 21 April 2009)	40 - 45 plus 130 - 135 lump sum	2.5 - 5 plus 10 - 12.5 lump sum	1,057	962	88
Mr Paul Hartley	35 - 40 plus 75 - 80 lump sum	2.5 - 5 plus 5 - 7.5 lump sum	743	584	74
Mr Gordon Stewart	5 - 10 plus no lump sum	2.5 - 5 plus no lump sum	61	32	22
Jane Tirard	0 - 5 plus no lump sum	0 - 2.5 plus no lump sum	39	7	28
Professor Richard Wade	35 - 40 plus 115 - 120 lump sum	0 - 2.5 plus 5 - 7.5 lump sum	896	755	48
Professor Colin Whitehouse	10 - 15 plus no lump sum	0 - 2.5 plus no lump sum	230	170	38

\*The figure may be different from the closing figure in the 2008-2009 Annual Report and Accounts. CETV is calculated using a formula supplied by the Cabinet Office. The difference is attributable to changes in the calculation and the factors used.

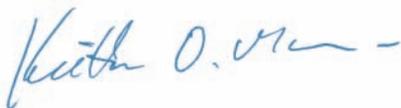
## Cash Equivalent Transfer Values

A Cash Equivalent Transfer Value (CETV) is the actuarially assessed capitalised value of the pension scheme benefits accrued by a member at a particular point in time. The benefits valued are the member's accrued benefits and any contingent spouse's pension payable from the scheme. A CETV is a payment made by a pension scheme or arrangement to secure pension benefits in another pension scheme or arrangement when the member leaves a scheme and chooses to transfer the benefits accrued in their former scheme. The pension figures shown relate to the benefits that the individual has accrued as a consequence of their total membership of the pension scheme, not just their service in a senior capacity to which disclosure applies.

The CETV figures include the value of any pension benefit in another scheme or arrangement which the individual has transferred to the Research Councils Pension Scheme and for which the Scheme has received a transfer payment commensurate to the additional pension liabilities being assumed. They also include any additional pension benefit accrued to the member as a result of their purchasing additional pension or additional years of pension service in the scheme at their own cost. CETVs are calculated within the guidelines and framework prescribed by the Institute and Faculty of Actuaries.

## Real increase in CETV

This reflects the increase in CETV effectively funded by the employer. It does not include the increase in accrued pension due to inflation, contributions paid by the employee (including the value of any benefits transferred from another pension scheme or arrangement) and uses common market valuation factors for the start and end of the period.

A handwritten signature in blue ink that reads "Keith O. Mason".

**Keith Mason**  
Accounting Officer

Date: 30 November 2010

# Annual accounts

## Statement of the responsibilities of the Science and Technology Facilities Council and of its Chief Executive

Under Section 2(2) of the Science and Technology Act 1965 the Council is required to prepare a statement of accounts for each financial year in the form and on the basis directed by the Secretary of State for Business, Innovation and Skills with the consent of the Treasury. The accounts are prepared on an accruals basis and must show a true and fair view of the Council's state of affairs at the year end and of its income and expenditure, recognised gains and losses and cash flows for the financial year.

In preparing the accounts, the Accounting Officer is required to comply with the requirements of the Government Financial Reporting Manual and in particular to:

- observe the Accounts Direction issued by the Secretary of State for Business, Innovation and Skills, including the relevant accounting and disclosure requirements, and apply suitable accounting policies on a consistent basis;
- make judgements and estimates on a reasonable basis;
- state whether applicable accounting standards as set out in the Government Financial Reporting Manual have been followed and disclose and explain any material departures in the Financial Statements; and
- prepare the Financial Statements on the going concern basis.

The Secretary of State for Business, Innovation and Skills has designated the Chief Executive of the Science and Technology Facilities Council (STFC) as Accounting Officer of STFC. The responsibilities of an Accounting Officer, including responsibility for the propriety and regularity of the public finances for which the Accounting Officer is answerable, for the keeping of proper records and for safeguarding STFC's assets are set out in 'The Responsibilities of an NDPB Accounting Officer' issued by the Treasury and published in 'Managing Public Money'.

# Statement on internal control

## Scope of responsibility

As Accounting Officer, I have responsibility for maintaining a sound system of internal control that supports the achievement of STFC's policies, aims and objectives, whilst safeguarding the public funds and departmental assets for which I am personally responsible, in accordance with the responsibilities assigned to me in Managing Public Money, the STFC Management Statement and Financial Memorandum.

I am accountable to Parliament and responsible to the Secretary of State for Business, Innovation and Skills for the allocation of resources and for the establishment of a sound system of internal control. In particular I ensure that:

- the strategic planning framework supports the 10-year Plan, the Secretary of State's overall strategic priorities for the research base and any relevant wider strategic aims;
- financial and other management controls ensure regularity, propriety and are appropriate and sufficient to safeguard public funds and that compliance is effectively monitored;
- risks (strategic and operational) faced in pursuance of our business are robustly assessed and effectively managed; and
- material issues and risks are communicated and discussed with our sponsor department (BIS) as appropriate, either through formal 6-monthly review meetings or through regular interactions as the need dictates.

## The purpose of the system of internal control

The system of internal control is designed to manage risk to a reasonable level rather than to eliminate all risk of failure to achieve policies, aims and objectives; it can therefore only provide reasonable and not absolute assurance of effectiveness. The system of internal control is based on an ongoing process designed to identify and prioritise the risks to the achievement of departmental policies, aims and objectives, to evaluate the likelihood of those risks being realised and the impact should they be realised, and to manage them efficiently, effectively and economically. The system of internal control has been in place in STFC for the year ended 31 March 2010 and up to the date of approval of the annual report and accounts, and accords with Treasury guidance.

## Capacity to handle risk

Facilitating great science and developing world leading technology are the goals of the STFC; without taking risks STFC will not achieve its goals. The identification and analysis of risk has always been inherent in much of what STFC does. In some activities, such as health and safety, our appetite for risk is rightly minimal, but in many activities, where the potential rewards are highly desirable our attitude is more robust.

I, in tandem with Council and Audit Committee, receive periodic assurance that risks have been fully considered and managed. Complimentary activities, including a Scheme of Delegation and a Stewardship Reporting Framework, reinforce the risk management framework by

- defining Directors' areas of responsibility and delegated authorities;
- providing a framework for further sub-delegation; and
- providing assurance on the management of key activities.

## The risk and control framework

I am responsible for the identification, management and treatment of risk across STFC. I am supported in this task by an Audit Committee; a sub-committee of Council. Audit Committee is tasked to:

- ensure that the risk profile is being effectively monitored and managed;
- receive the various assurances which are available about risk management and consequently delivering an overall opinion about risk management; and
- comment on the adequacy of risk management and internal control in STFC and on the appropriateness of assurance processes that are in place.

The STFC risk management framework is embedded within all activities of the staffing and board structure. This includes the strategic level (e.g. long/ medium term plans) and at the operational level (e.g. delivery of science, projects and facilities).

STFC's risk policy is to:

- manage risk actively across the full breadth of STFC's work;
- devolve responsibility for risk management to the most appropriate level and locality within STFC;
- integrate risk management with planning and budgeting to ensure that risks are taken fully into account in strategic investment decisions;
- encourage a risk-aware, risk-enabled approach to working;
- provide guidance and training on the tools and techniques of risk assessment and risk management;
- establish appropriate assurance and monitoring mechanisms; and
- continue to develop risk management policy and good practice.

## Review of effectiveness

As Accounting Officer, I have responsibility for reviewing the effectiveness of the system of internal control. My review of the effectiveness of the system of internal control is informed by the work of the internal auditors and the executive managers within the department who have responsibility for the development and maintenance of the internal control framework, and comments made by the external auditors in their management letter and other reports. I have been advised on the implications of the result of my review of the effectiveness of the system of internal control by the Council, the Audit Committee and Executive Board. Plans are in place to address weaknesses and ensure continuous improvement of the system.

The outcome of this review concludes on a positive and reasonable control environment. Particular strengths of the system of internal control were noted as:

- continued delivery of world class facilities and science;
- strong oversight by Council, Executive Board, Operations Board, and Audit Committee; and
- good operational risk management particularly within projects and facility management.

Improvements were noted in key areas such as strategy development, communications and the organisational structure. Key issues for STFC going forward are:

- the economic climate (including potential further financial constraints) provides challenges over the affordability and scale of investment in world class science; and
- SSC Ltd must deliver the systems, including quality management information, to manage these resources within extremely tight targets.

STFC remains focused on delivering improvements and initiatives are in hand, most notably:

- improvements in the manner strategic priorities and risks are identified, assessed and monitored;
- the impact of a volatile change environment (including the economic climate) on activities;
- implementation of the SSC finance and grants modules;
- the development of financial and other management information.

This assessment is consistent with a range of independent and management assurance mechanisms including:

- Internal Audit: RCIAS provide a positive reasonable assurance concerning the adequacy of the risk management, control and governance systems established by management;
- Director Stewardship returns: conclude on a substantial assurance although some areas of improvement exist as noted above. Action plans are in place to deliver these improvements;
- Funding Assurance Programme (FAP) and Quality Assurance and Validation (QAV): validation procedures conducted on a Cross Council basis to oversee regularity of Research expenditure at Research Organisations. This is achieved through a set of processes coordinated by RCUK that provide assurance principally to the Research Councils and by extension the Higher Education Funding Councils that expenditure on and the costing methodologies for grants in HEIs is being applied appropriately;
- Information Assurance: the Senior Information Risk Owner review of the Security Policy Framework (SPF) concluded that the STFC has in place arrangements to monitor and assess its information risks and will continue to identify and address any weaknesses and ensure continuous improvements of its systems;
- Follow up on review recommendations indicates good progress in implementation of recommended improvements. Whilst these improvements will require time to bed in and mature, it is clear that STFC already benefits from these enhanced controls.

## Significant issues

### Arms Length Bodies

STFC works nationally and internationally with a number of partner organisations as highlighted elsewhere in the annual report and accounts. Where part of the business of STFC is conducted with and through an Arm's Length Body (ALB), we seek to ensure that there are robust governance arrangements in place, setting out the terms of our relationship, in order to promote high performance and safeguard propriety and regularity. The ALBs relevant to STFC are not wholly owned subsidiaries and invariably reflect UK representative roles across international boundaries.

However, in relation to the ILL STFC is unable to obtain sufficient evidence to support the appropriate consolidation of the ILL joint venture investment. This is due to issues in relation the application of International Financial Reporting Standards and ILL's ability to account for their fixed assets. STFC continues to work with ILL through representation on its various committees, including the ILL Audit Commission to resolve these issues.

### RCUK Shared Services Centre Ltd

The RCUK Shared Services Centre implementation is a business critical project that is intended to deliver a single organisation administrative support service for all UK Research Councils. This includes main administrative activities in Human Resources; Payroll; Finance and Procurement; IT; and Grants processing.

In our report last year we stated that the SSC was due to go live in the autumn of 2009 and the key risks related to cost and time overruns and the seamless provision of efficient and effective back office functions. These risks remain, including:

- Human resources (HR) and payroll: HR and payroll services are functioning reasonably well. There are a number of issues that need to be addressed and we continue to work with SSC to address these issues and develop these systems;
- Finance systems were migrated in May 2010. A number of issues have emerged around system functionality and controls within the Oracle system but these have been identified and a cross Council Services Review Group is overseeing the requisite improvements; and
- Grants: migration to SSC for grants operations has been revised from the autumn of 2010 to February 2011. As a consequence of this slippage the costs to STFC have increased and we continue to monitor the impact of this closely.

STFC takes assurance in relation to SSC (project and SSC Ltd services) from the following activities:

- governance and risk management of the implementation project is provided by the RCUK SSC Project Board on behalf of the Research Councils. An RCUK SSC Project Audit Committee comprising representatives from each Research Council's Audit Committee operates to provide oversight on risk management and control of the project;
- during 2009-2010 considerable effort has been expended in establishing the security and controls framework now operating in the RCUK SSC Ltd;
- STFC has put in place a project to manage the transfer of operations to the SSC;
- Internal audit assurance has been provided on:
  - the RCUK SSC Ltd. business operations (supporting that company's annual Statement on Internal Control);
  - the readiness of STFC to transfer to SSC live operations; and
  - independent assurance on project delivery;
- for the future, a comprehensive internal audit strategy relating to the RCUK SSC project and operations for 2010-2011 and beyond has been developed. A feature of this strategy is that the control framework operating within the Enterprise Resource Planning (ERP) platform and the interfaces with the respective Research Councils will be tested end to end after the implementation of the solution; and
- other project management assurance has been provided through external consultants and the project is subject to Office of Government Commerce (OGC) Gateway independent review.

The majority of the financial transactions reflected in the STFC Financial Statements have originated in STFC's existing financial systems. The exceptions to this are the payroll data for the last 4 months of the year, the implementation costs of the project and related party transactions with SSC Ltd. and the other Research Councils that were live on the SSC system. Since December 2009 the STFC payroll has been processed through the SSC. To address initial concerns on the processing of transactions, arising from the reliability and completeness of management information from SSC Ltd, STFC undertook additional testing. There was a satisfactory outcome on all the main issues identified. However, the quality and availability of management information from SSC Ltd remains a risk factor as referred to throughout this statement.

Following STFC's migration to SSC Ltd, a number of process and technical issues have emerged which have been, and continue to be, addressed by the Service Review Group. This group is comprised of representatives of all the migrated Councils and SSC Ltd (as a customer of SSC services); together with the SSC service delivery team (as a provider of SSC services). All known issues have been captured to form an orderly focus for resolution and a basis for entry into full SSC service delivery. However, it is my opinion as Accounting Officer that the current level of internal control falls below STFC's normal expectations. Transitional problems persist, in particular, within the security and internal controls framework that govern Cash Management and Accounts Payable processes. I am confident that current plans will improve this situation by the end of the current financial year.

A delay in agreement of related party transactions in the SSC system and issues surrounding the qualification of STFC in respect of the ILL consolidation impacted our ability to meet the original pre summer recess timetable for the laying of STFC's accounts.

## STFC Risk Management

Within the risk framework process we identified other notable themes:

- Financial Resources and Financial Management: the prevailing economic climate requires more robust underlying financial discipline, analysis and reporting. Funding challenges resulted in STFC conducting a thorough reprioritisation exercise to enable it to focus its limited resources on its highest priorities. Through the SSC project and development of a new financial reporting tool we will be able to continue to improve the quality, relevance, accuracy and timeliness of financial information to aid decision making.
- Change Environment: the aforementioned economic factors, SSC and Blueprint represent an ever evolving business environment with a consequent burden on existing resources. Increased demands are placed on staff to contribute to the change programme and maintain existing activities at the same time. Through the Blueprint programme STFC has introduced revised disciplines and standards to manage this change.
- Performance Management – we continue to operate under BIS Delivery Plan and Scorecard process pending development of a new performance management system to support implementation of the Corporate Strategy.
- Estate Maintenance: we have conducted a condition survey of our estate and are assessing estates maintenance plans, prioritising funding to minimise backlog in key areas.

## Summary and conclusions

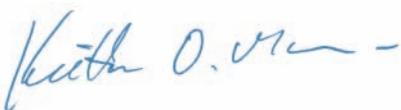
The breadth of assurances provided to date indicates good progress in introducing improvements. STFC continues to deliver world class science, technology and facilities. As a consequence of the reprioritisation exercise and working with key stakeholders, STFC has a clearer focus on its agreed priorities. It has developed the strategic and operational planning framework to deliver these plans and continues to introduce revised structures and processes through the Blueprint Programme. As a result of the Drayson review Foreign Exchange risks for international subscriptions will be managed at BIS departmental level. STFC will retain a significantly reduced residual exposure in relation to its other international activities.

STFC recognises the material challenges it is facing. Against a backdrop of significant reorganisation and bedding down of SSC, change continues to impact on our operations. The medium and longer term forecasts of the effect of the financial crisis upon public expenditure confirm continued tough times for many years to come. In line with good business practice we are conducting a review our financial plans with an objective to reduce internal resource utilisation and maximise investment in science.

Key issues going forward include:

- embedding the strategic planning framework and cascading this through the organisational chain;
- SSC migration and continuity of key back office functions;
- estates backlog maintenance, including legal compliance;
- change management, particularly the impact on our people; and
- developing quality management information systems to inform our decisions and to provide assurance on performance.

It is acknowledged by me, Council and senior staff that STFC needs to maintain momentum in improving its robust system of control. However, it is reassuring to note that while the change agenda continues at a fast pace, this has not impacted on the high quality of our operations. The underpinning scientific, financial and administrative control environment within STFC continues to operate effectively. I remain particularly positive on the quality of control that continues to deliver world class science, technology and facilities. I remain confident STFC will continue to operate on a sound and well-controlled basis.



**Keith Mason**  
Accounting Officer

Date: 30 November 2010

# The Certificate of the Comptroller and Auditor General to the Houses of Parliament

I certify that I have audited the financial statements of the Science and Technology Facilities Council for the year ended 31 March 2010 under the Science and Technology Act 1965. These comprise the Consolidated Statement of Net Expenditure, the Consolidated Statement of Financial Position, STFC Statement of Financial Position, Consolidated Statement of Cash Flows, STFC Statement of Cash Flows, Statement of Changes in Reserves and the related notes. These financial statements have been prepared under the accounting policies set out within them. I have also audited the information in the Remuneration Report that is described in that report as having been audited.

## Respective responsibilities of the Accounting Officer and auditor

As explained more fully in the Statement of Accounting Officer's Responsibilities, the Accounting Officer is responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view. My responsibility is to audit the financial statements in accordance with applicable law and International Standards on Auditing (UK and Ireland). Those standards require me and my staff to comply with the Auditing Practices Board's Ethical Standards for Auditors.

## Scope of the Audit of the Financial Statements

An audit involves obtaining evidence about the amounts and disclosures in the financial statements sufficient to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or error. This includes an assessment of: whether the accounting policies are appropriate to the Science and Technology Facilities Council's circumstances and have been consistently applied and adequately disclosed; the reasonableness of significant accounting estimates made by the Science and Technology Facilities Council and the overall presentation of the financial statements.

In addition, I am required to obtain evidence sufficient to give reasonable assurance that the expenditure and income reported in the financial statements have been applied to the purposes intended by Parliament and the financial transactions conform to the authorities which govern them.

## Opinion on Regularity

In my opinion, in all material respects the expenditure and income have been applied to the purposes intended by Parliament and the financial transactions conform to the authorities which govern them.

## Qualified Opinion due to limitation of scope

The audit evidence available to me was limited because the Science and Technology Facilities Council did not maintain sufficient financial information for the Institut Laue-Langevin joint venture to enable me to evaluate whether the requirements of IAS 31 *Joint Ventures* have been appropriately applied. As a result, I was unable to obtain sufficient, appropriate evidence to support the £26.74m investment in the joint venture disclosed in note 13 to the accounts and the associated transactions in the Consolidated Statement of Net Expenditure. I was also unable to obtain sufficient, appropriate audit evidence to support the corresponding 2008-2009 and 1 April 2008 figures.

Except for the financial effects of adjustments which might have been determined to be necessary had I been able to obtain sufficient, appropriate audit evidence over the investment in the Institut Laue-Langevin joint venture, in my opinion:

- the financial statements give a true and fair view of the state of the Science and Technology Facilities Council and the consolidated affairs as at 31 March 2010 and of the Science and Technology Facilities Council's and the consolidated net expenditure, changes in reserves and cash flows for the year then ended; and
- the financial statements have been properly prepared in accordance with the Science and Technology Act 1965 and Secretary of State directions issued thereunder with the approval of Treasury.

## Opinion on other matters

In my opinion:

- the part of the Remuneration Report to be audited has been properly prepared in accordance with the Secretary of State directions issued under the Science and Technology Act 1965 with the approval of Treasury; and
- the information given in the management commentary for the financial year for which the financial statements are prepared is consistent with the financial statements.

## Matters on which I report by exception

In respect solely of the limitation on my work relating to the investment in the Institut Laue- Langevin joint venture:

- I have not obtained all the information and explanations that I considered necessary for the purposes of my audit; and
- proper accounting records have not been maintained.

I have nothing to report in respect of the following matters which I report to you if, in my opinion:

- the financial statements are not in agreement with the accounting records or returns; or
- the Statement on Internal Control does not reflect compliance with HM Treasury's guidance.

## Report

My report on pages 81 to 82 provides further detail of my qualified opinion on the financial statements.

**Amyas C E Morse**

Comptroller and Auditor General  
National Audit Office  
157-197 Buckingham Palace Road  
Victoria  
London  
SW1W 9SP

Date: 8 December 2010

# The Report of the Comptroller and Auditor General to the House of Commons

## Introduction

The Science and Technology Facilities Council (STFC), a non-departmental public body of the Department for Business, Innovation and Skills, supports research, innovation and skills for the UK by supporting a broad portfolio of research and providing large scale scientific facilities. As part of its remit the Council provides funding (referred to as subscriptions) for a number of international scientific collaborations. One of these is the Institut Laue-Langevin (ILL), which is a research centre located in France, that makes use of subatomic particles to study the structure and behaviour of all kinds of materials in microscopic detail. Funding from the Council to the ILL in 2009-2010 amounted to £16.98 million.

The arrangements for the governance of the ILL are set out in a 1974 Concordat between the three Associate members, namely UK, France and Germany. The Concordat notes that the Associates have full power to take decisions in accordance with the objects of the Association. The UK's interest is overseen by the STFC.

The Council has prepared its 2009-2010 financial statements applying International Financial Reporting Standards (IFRS) for the first time, with a transition date of 1 April 2008. The governance arrangements for ILL meet the definition of a joint venture under IAS 31 (*a contractual arrangement whereby two or more parties undertake an economic activity that is subject to joint control*). The STFC has a 33 per cent interest in the ILL. The Council has elected the equity method of accounting to consolidate its share of the ILL; that is, to record the investment as a share of the net assets of the ILL, and to reflect a share of ILL's profit or loss in the Council's own Statement of Net Expenditure.

## Purpose of the Report

The financial statements on the following pages represent the results of the Science and Technology Facilities Council for the period from 1 April 2009 to 31 March 2010. I have limited the scope of my audit opinion as I was unable to obtain sufficient audit assurance to support the balances relating to the consolidation of the ILL as an investment of £26.74 million in the Council's Consolidated Statement of Financial position for 2009-2010 and previous periods. The report also provides an overview of progress made to address the issues raised.

## My obligations as Auditor

Under the Science and Technology Act 1965 I am required to examine, certify and report on the financial statements that I receive. I am required, under International Standards on Auditing (UK and Ireland), to obtain evidence to give reasonable assurance that the Science and Technology Facilities Council financial statements are free from material misstatement. In forming my opinion I examine, on a test basis, evidence supporting the disclosures in the financial statements and assess the significant estimates and judgements made in preparing them. I also consider whether the accounting policies are appropriate, consistently applied and adequately disclosed. I am required to satisfy myself that, in all material respects, the expenditure and income of the Science and Technology Facilities Council have been applied to the purposes intended by Parliament and conform to the authorities that govern them.

## Limitation of Scope on the consolidation of the Institut Laue-Langevin as an investment in the Science and Technology Facilities Council financial statements

I limited the scope of my audit opinion on the Science and Technology Facilities Council 2009-2010 accounts in relation to the investment balance recorded in the 2009-2010 Consolidated Statement of Financial position of £26.74 million. The limitation extends to the prior year figures included for the ILL investment for 2008-2009 and in the Statement of Financial position at 1 April 2008. The Council has not been able to provide sufficient evidence on

the appropriateness of the balance for the reasons explained below. The Council is not able to estimate the extent of adjustments that might be necessary from the issues identified.

The Council has derived the balance of £26.74 million from the net asset value of the ILL's balance sheet within the audited accounts for the ILL for 2009, as no better information is reasonably available to them. However, as explained below, these accounts do not provide a robust and reliable basis to support the amount recorded in the Council's accounts.

The ILL accounts received a qualified opinion from its auditor because the fixed asset value included was not supported by a robust inventory. The Fixed Asset Register contained a significant number of fixed assets whose physical existence at the ILL was no longer certain. As a consequence the gross value and depreciation of the fixed assets included in the ILL accounts at 31 December 2009 may be significantly overvalued. The ILL auditor also concluded that the guidance used by the ILL for accounting for fixed assets is not fully applied or appropriate. Consequently, there is a risk of error concerning the valuation of fixed assets and the classification of expenditure as an operating expense or as an asset. The ILL accounts received a similar qualification for the years 2008 and 2007.

In addition, the ILL's accounts are prepared in accordance with French accounting principles which provide a different accounting framework from IFRS. ILL is not obliged to follow IFRS for their own accounts but any figures taken onto STFC's accounts must follow IFRS. Neither the ILL nor the STFC currently have adequate information to assess the significance of the differences, or to re-state, if necessary, the relevant figures underpinning the investment in the STFC's accounts on an IFRS basis. Given the uncertainties, there is a risk that the value of the investment in the ILL is incorrectly stated in the Council's accounts, and that it is not stated at a comparable value to the other investments held by the Council.

## **Actions being taken by the Institut Laue-Langevin and the Science and Technology Facilities Council**

The problems with fixed asset recording by the Institute were highlighted by the ILL auditor's report in previous years, and the ILL started to address this matter during 2009 when they carried out a physical inventory of the fixed assets, removing from the register fixed assets not physically present but still showing on the fixed asset register. Some 10 million euros had been removed by the 2009 calendar year end, but work continued to validate the fixed asset records into 2010. The ILL is producing revised procedures for this area with the intention of ensuring that assets are correctly included and valued in the fixed register. ILL expects the work to be completed by the end of calendar year 2010.

The STFC has requested the ILL to undertake a formal review of the adjustments that would be necessary to provide IFRS figures for the STFC's investment in future years.

With both of the matters above being addressed the Council should have the necessary robust information in order to make the appropriate adjustments to the value of the ILL investment consolidated into their accounts in future years.

**Amyas C E Morse**  
Comptroller and Auditor General  
National Audit Office  
157-197 Buckingham Palace Road  
Victoria  
London  
SW1W 9SP

Date: 8 December 2010

## Consolidated statement of net expenditure for the Year Ended 31 March 2010

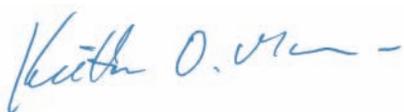
	Note	STFC Total 2010 £'000	Consolidated Total 2010 £'000	Consolidated Total 2009 £'000
<b>Income</b>				
Income from operating activities	3	60,104	60,104	58,505
<b>Total income</b>		<b>60,104</b>	<b>60,104</b>	<b>58,505</b>
<b>Expenditure</b>				
Staff costs	4	83,672	83,672	81,370
Restructuring	5	(4,276)	(4,276)	(1,356)
Research grants	6	120,429	120,429	108,348
Other grants and awards	7	37,432	37,432	31,170
International subscriptions	8	241,521	241,521	215,479
Equipment and supplies		24,221	24,221	28,645
Services		49,692	49,692	46,088
Intangible amortisation	11	191	191	245
Intangible impairments	11	3	3	(10)
Depreciation	12	38,986	38,986	36,972
Property, plant and equipment impairments	12	186	186	179
Joint venture funding		25,879	25,879	26,303
Notional cost of capital		31,250	31,250	28,288
Other operating costs	9	26,429	26,429	25,845
<b>Total expenditure</b>		<b>675,615</b>	<b>675,615</b>	<b>627,566</b>
<b>Net operating costs</b>		<b>(615,511)</b>	<b>(615,511)</b>	<b>(569,061)</b>
Interest	10	14	14	228
Unwinding of discount on provisions	19	(686)	(686)	(2,623)
Share of post tax losses of joint ventures	13	-	(19,689)	(13,752)
<b>Net operating costs before tax</b>		<b>(616,183)</b>	<b>(635,872)</b>	<b>(585,208)</b>
<b>Net operating costs after tax</b>		<b>(616,183)</b>	<b>(635,872)</b>	<b>(585,208)</b>
Loss on disposal of tangible assets		(4)	(4)	(1,557)
Profit on disposal of intangible assets		1	1	-
Loss on disposal of assets held for sale		(11)	(11)	(60)
<b>Net expenditure for the year</b>		<b>(616,197)</b>	<b>(635,886)</b>	<b>(586,825)</b>
Reversal of cost of capital		31,250	31,250	28,288
<b>Net expenditure for the year after reversal of cost of capital</b>		<b>(584,947)</b>	<b>(604,636)</b>	<b>(558,537)</b>

All activities are continuing.

The notes on pages 90 to 131 form part of these accounts.

## Consolidated statement of financial position as at 31 March 2010

	Note	Consolidated Total 2010 £'000	Consolidated Total 2009 £'000	Consolidated Total 2008 £'000
<b>Non-current assets</b>				
Intangible assets	11	567	585	635
Property, plant and equipment	12	622,962	597,192	547,109
Interests in joint ventures	13	331,454	314,363	291,211
Trade and other receivables	14	7,055	7,791	8,068
<b>Total non-current assets</b>		<b>962,038</b>	<b>919,931</b>	<b>847,023</b>
<b>Current assets</b>				
Inventories		-	-	24
Trade and other receivables	14	36,739	58,486	47,621
Derivative financial instruments	15	1,654	7,431	8,105
Cash and cash equivalents	16	4,379	7,211	30,765
<b>Total current assets</b>		<b>42,772</b>	<b>73,128</b>	<b>86,515</b>
Assets classified as held for sale	17	861	1,504	2,366
<b>Total assets</b>		<b>1,005,671</b>	<b>994,563</b>	<b>935,904</b>
<b>Current liabilities</b>				
Trade and other payables	18	( 68,803)	(78,256)	(91,460)
Provisions	19	( 1,988)	(5,744)	(4,210)
<b>Total current liabilities</b>		<b>( 70,791)</b>	<b>(84,000)</b>	<b>(95,670)</b>
<b>Non-current assets less net current liabilities</b>		<b>934,880</b>	<b>910,563</b>	<b>840,234</b>
<b>Non-current liabilities</b>				
Trade and other payables	18	(9,037)	(9,293)	(9,514)
Provisions	19	(29,631)	(31,289)	(30,561)
<b>Total non-current liabilities</b>		<b>(38,668)</b>	<b>(40,582)</b>	<b>(40,075)</b>
<b>Assets less liabilities</b>		<b>896,212</b>	<b>869,981</b>	<b>800,159</b>
<b>Reserves</b>				
Income and expenditure reserve		719,500	700,852	641,128
Revaluation reserve		153,278	154,172	159,031
Government grant reserve		23,434	14,957	-
<b>Government funds</b>		<b>896,212</b>	<b>869,981</b>	<b>800,159</b>



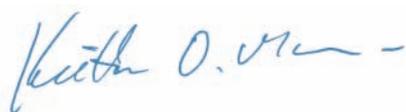
**Keith Mason**  
Accounting Officer

Date: 30 November 2010

The notes on pages 90 to 131 form part of these financial statements.

## STFC statement of financial position as at 31 March 2010

	Note	STFC Total 2010 £'000	STFC Total 2009 £'000	STFC Total 2008 £'000
<b>Non-current assets</b>				
Intangible assets	11	567	585	635
Property, plant and equipment	12	622,962	597,192	547,109
Interests in joint ventures	13	351,941	316,462	285,432
Trade and other receivables	14	7,055	7,791	8,068
<b>Total non-current assets</b>		<b>982,525</b>	<b>922,030</b>	<b>841,244</b>
<b>Current assets</b>				
Inventories		-	-	24
Trade and other receivables	14	36,739	58,486	47,621
Derivative financial instruments	15	1,654	7,431	8,105
Cash and cash equivalents	16	4,379	7,211	30,765
<b>Total current assets</b>		<b>42,772</b>	<b>73,128</b>	<b>86,515</b>
Assets classified as held for sale	17	861	1,504	2,366
<b>Total assets</b>		<b>1,026,158</b>	<b>996,662</b>	<b>930,125</b>
<b>Current liabilities</b>				
Trade and other payables	18	(68,803)	(78,256)	(91,460)
Provisions	19	(1,988)	(5,744)	(4,210)
<b>Total current liabilities</b>		<b>(70,791)</b>	<b>(84,000)</b>	<b>(95,670)</b>
<b>Non-current assets less net current liabilities</b>		<b>955,367</b>	<b>912,662</b>	<b>834,455</b>
<b>Non-current liabilities</b>				
Trade and other payables	18	(9,037)	(9,293)	(9,514)
Provisions	19	(29,631)	(31,289)	(30,561)
<b>Total non-current liabilities</b>		<b>(38,668)</b>	<b>(40,582)</b>	<b>(40,075)</b>
<b>Assets less liabilities</b>		<b>916,699</b>	<b>872,080</b>	<b>794,380</b>
<b>Reserves</b>				
Income and expenditure reserve		766,727	728,365	654,889
Revaluation reserve		126,538	128,758	139,491
Government grant reserve		23,434	14,957	-
<b>Government funds</b>		<b>916,699</b>	<b>872,080</b>	<b>794,380</b>



**Keith Mason**  
Accounting Officer

Date: 30 November 2010

The notes on pages 90 to 131 form part of these financial statements.

## Consolidated statement of cash flows for the year ended 31 March 2010

	Note	2010 £'000	2009 £'000
<b>Cash flow from operating activities</b>			
Net deficit after cost of capital and interest		(635,886)	(586,825)
Adjustment for cost of capital charge		31,250	28,288
Interest		(14)	(228)
Amortisation	11	191	245
Impairment of intangibles	11	3	(10)
Depreciation	12	38,986	36,972
Loss on disposal of plant, property and equipment		4	1,557
Loss on disposal of intangibles		(1)	-
Loss on disposal of assets held for sale		11	60
Impairment of property, plant and equipment	12	186	179
Write down of investment	13	19,689	13,752
Decrease/(increase) in trade and other receivables	14	22,483	(10,588)
Decrease in inventories		-	24
Decrease in trade and other payables	18	(9,709)	(13,425)
Use of restructuring provision	19	(3,531)	(4,210)
(Decrease)/increase in provisions	19	(2,569)	3,849
Unwinding of discount on provisions	19	686	2,623
<b>Net cash outflow from operating activities</b>		<b>(538,221)</b>	<b>(527,737)</b>
<b>Returns on investment and servicing of finance</b>			
Interest	10	14	228
<b>Cash flows from investing activities</b>			
Purchase of property, plant and equipment		(57,780)	(89,066)
Purchase of intangibles	11	(164)	(245)
Proceeds of disposal of property, plant and equipment		22	487
Proceeds of disposal of intangibles		0	28
Proceeds of disposal of assets held for sale		355	734
Investments additions	13	(35,453)	(31,091)
<b>Net cash outflow from investing activities</b>		<b>(93,020)</b>	<b>(119,153)</b>
<b>Cash flows from financing activities</b>			
Grant in aid		607,100	602,699
Capital funding from other Research Councils		8,477	13,422
Other funding from Research Councils		10,898	-
Funding from international partners		2,133	8,231
Release from income and expenditure reserve*		(213)	(1,244)
<b>Net cash inflow from financing activities</b>		<b>628,395</b>	<b>623,108</b>
Net increase/(decrease) in cash and cash equivalents in the period	16	(2,832)	(23,554)
<b>Cash and cash equivalents at the beginning of the period</b>	16	<b>7,211</b>	<b>30,765</b>
<b>Cash and cash equivalents at the end of the period</b>	16	<b>4,379</b>	<b>7,211</b>

Funding from other bodies for specific assets are taken to the reserves (Income and Expenditure or Government Grant Reserve) and released to the Statement of Net Expenditure over the asset lives to match depreciation.

In accordance with IAS 7: Statement of cash flows, cash flows between STFC and joint ventures are included under the appropriate heading but other joint venture cash flows are excluded.

The notes on pages 90 to 131 form part of these financial statements.

## STFC statement of cash flows for the year ended 31 March 2010

	Note	2010 £'000	2009 £'000
<b>Cash flow from operating activities</b>			
Net deficit after cost of capital and interest		(616,197)	(573,073)
Adjustment for cost of capital charge		31,250	28,288
Interest		(14)	(228)
Amortisation	11	191	245
Impairment of intangibles	11	3	(10)
Depreciation	12	38,986	36,972
Loss on disposal of plant, property and equipment		4	1,557
Profit on disposal of intangibles		(1)	-
Loss on disposal of assets held for sale		11	60
Impairment of property, plant and equipment	12	186	179
Write down of investment	13	-	-
Decrease/(increase) in trade and other receivables	14	22,483	(10,588)
Decrease in inventories		-	24
Decrease in trade and other payables	18	(9,709)	(13,425)
Use of restructuring provision	19	(3,531)	(4,210)
(Decrease)/increase in provisions	19	(2,569)	3,849
Unwinding of discount on provisions	19	686	2,623
<b>Net cash outflow from operating activities</b>		<b>(538,221)</b>	<b>(527,737)</b>
<b>Returns on investment and servicing of finance</b>			
Interest	10	14	228
<b>Cash flows from investing activities</b>			
Purchase of property, plant and equipment		(57,780)	(89,066)
Purchase of intangibles	11	(164)	(245)
Proceeds of disposal of property, plant and equipment		22	487
Proceeds of disposal of intangibles		0	28
Proceeds of disposal of assets held for sale		355	734
Investment additions	13	(35,453)	(31,091)
<b>Net cash outflow from investing activities</b>		<b>(93,020)</b>	<b>(119,153)</b>
<b>Cash flows from financing activities</b>			
Grant in aid		607,100	602,699
Capital funding from other Research Councils		8,477	13,422
Other funding from Research Councils		10,898	-
Funding from international partners		2,133	8,231
Release from income and expenditure reserve*		(213)	(1,244)
<b>Net cash inflow from financing activities</b>		<b>628,395</b>	<b>623,108</b>
Net increase/decrease in cash and cash equivalents in the period	16	(2,832)	(23,554)
<b>Cash and cash equivalents at the beginning of the period</b>	16	<b>7,211</b>	<b>30,765</b>
<b>Cash and cash equivalents at the end of the period</b>	16	<b>4,379</b>	<b>7,211</b>

\*Funding from other bodies for specific assets are taken to the reserves (income and expenditure or government grant reserve) and released to the Statement of Net Expenditure over the asset lives to match depreciation.

In accordance with IAS 7: Statement of cash flows, cash flows between STFC and joint ventures are included under the appropriate heading but other joint venture cash flows are excluded.

The notes on pages 90 to 131 form part of these financial statements.

## Statement of changes in Taxpayers' Equity for the year ended 31 March 2010

(See also Note 27)

	STFC Total £'000	Consolidated Total £'000
<b>Income and expenditure reserve</b>		
Balance at 1 April 2008	654,889	641,128
Funding from international partners	8,231	8,231
Reversal of cost of capital	28,288	28,288
Transfer from revaluation reserve	10,784	10,784
Transfer to government grant reserve**	(1,535)	(1,535)
Release to SNE	(1,244)	(1,244)
Cash flow hedge	(674)	(674)
Net expenditure for the year	(573,073)	(586,825)
<b>Total recognised income and expense for 2008-2009</b>	<b>(529,223)</b>	<b>(542,975)</b>
Grant in aid financing	602,699	602,699
<b>Balance at 31 March 2009</b>	<b>728,365</b>	<b>700,852</b>
<b>Changes in reserves 2009-2010</b>		
Funding from international partners	2,133	2,133
Funding from other Research Councils	10,898	10,898
Reversal of cost of capital	31,250	31,250
Transfer from revaluation reserve	9,142	9,142
Release to SNE	(213)	(213)
Cash flow hedge	(5,777)	(5,777)
Investment write on	26	1
Net expenditure for the year	(616,197)	(635,886)
<b>Total recognised income and expense for 2009-2010</b>	<b>(568,738)</b>	<b>(588,452)</b>
Grant in aid financing	607,100	607,100
<b>Balance at 31 March 2010</b>	<b>766,727</b>	<b>719,500</b>
	<b>£'000</b>	<b>£'000</b>
<b>Revaluation reserve</b>		
Balance at 1 April 2008	139,491	159,031
Migration adjustment***	1,594	1,594
Net loss on revaluation of property, plant and equipment	(1,329)	(1,329)
Net loss on revaluation of intangibles	(32)	(32)
Net loss on revaluation of assets held for resale	(121)	(121)
Revaluation of investments	(61)	5,813
Transfer to income and expenditure reserve	(10,784)	(10,784)
<b>Total recognised income and expense for 2008-2009</b>	<b>(10,733)</b>	<b>(4,859)</b>
<b>Balance at 31 March 2009</b>	<b>128,758</b>	<b>154,172</b>
<b>Change in reserves 2009-2010</b>		
Net gain on revaluation of property, plant and equipment	6,949	6,949
Net gain on revaluation of intangibles	8	8
Net loss on revaluation of assets held for resale	(35)	(35)
Net gain on revaluation of assets	-	1,326
Transfer to income and expenditure reserve	(9,142)	(9,142)
<b>Total recognised income and expense for 2009-2010</b>	<b>(2,220)</b>	<b>(894)</b>
<b>Balance at 31 March 2010</b>	<b>126,538</b>	<b>153,278</b>

The notes on pages 90 to 131 form part of these financial statements.

	<b>STFC Total £'000</b>	<b>Consolidated Total £'000</b>
<b>Government grant reserve*</b>		
Balance at 31 March 2008	-	-
Funding from other Research Councils	13,422	13,422
Transferred from income and expenditure reserve**	1,535	1,535
<b>Total recognised income and expense for 2008-2009</b>	<b>14,957</b>	<b>14,957</b>
Balance at 31 March 2009	<b>14,957</b>	<b>14,957</b>
<b>Changes in reserves 2009-2010</b>		
Funding received	8,477	8,477
<b>Total recognised income and expense for 2008-2009</b>	<b>8,477</b>	<b>8,477</b>
Balance at 31 March 2010	<b>23,434</b>	<b>23,434</b>
<b>Total Government Funds at 31 March 2010</b>	<b>916,699</b>	<b>896,212</b>
<b>Total Government Funds at 31 March 2009</b>	<b>872,080</b>	<b>869,981</b>
<b>Total Government Funds at 31 March 2008</b>	<b>794,380</b>	<b>800,159</b>

\* The Government Grant Reserve relates to funding received from the Medical Research Council for the construction of a research complex. Once the asset has been capitalised the reserve will be released to the Statement of Net Expenditure over the life of the asset to match depreciation.

\*\* Government Grant reserve was created in 2008-2009 – prior to this funding was taken to the Income and Expenditure Reserve. This transfer is to ensure the funding is appropriately classified.

\*\*\* The migration adjustment relates to the transfer of the land and building assets from an off line manual system onto the fixed asset register. See also note 12.

The notes on pages 90 to 131 form part of these financial statements.

# Notes to the financial statements

## 1. Accounting policies

The principal accounting policies applied in the preparation of these financial statements are set out below. These policies have been applied consistently to all the years presented, unless otherwise stated, and in preparing an opening IFRS Statement of Financial Position at 1 April 2008 for the purpose of transition to IFRS.

### 1.1 Basis of accounting

The Financial Statements have been prepared in accordance with a Direction issued by the Secretary of State for Business Innovation and Skills (BIS) in pursuance of Section 2(2) of the Science and Technology Act 1965.

The Financial Statements have been prepared in accordance with International Financial Reporting Standards (IFRS) and meet the accounting and disclosure requirements of the Companies Act 1985 and the accounting and financial reporting standards issued or adopted by the International Accounting Standards Board as interpreted for Government use by the Financial Reporting Manual (FRoM) and in so far as these requirements are appropriate. Where the FRoM permits a choice of accounting policy, the accounting policy which is judged to be most appropriate to the particular circumstances of STFC (the Council) for the purpose of giving a true and fair view has been selected. The particular policies adopted the Council are described below. They have been applied consistently in dealing with items that are considered material to the accounts.

Since this is the first year in which the Council has prepared Financial Statements under IFRS, the comparatives have been restated from accounting principles generally accepted in the UK (UK GAAP) to comply with IFRS. Disclosures required under IFRS 1 concerning the transition from UK GAAP to IFRS are given in Note 27.

New standards and interpretations issued by the International Accounting Standards Board (IASB) and the International Financial Reporting Interpretations Committee (IFRIC), becoming effective during the year, have not had a material impact on the Council's Financial Statements.

The Financial Statements are presented in £ sterling and all values are rounded to the nearest thousand, except where indicated otherwise.

#### Adoption of standards effective in 2009-2010

The following revised standards and interpretations have been applied by the Council from 1 April 2009:

<b>International Financial Reporting Standards (IFRS/IAS)</b>		<b>Effective date</b>
IFRS 7	Amendments to IAS 39 and IFRS 7: reclassification of financial assets	1 July 2008
IFRS 7	Update to amendments to IAS 39 and IFRS 7: reclassification of financial assets	1 July 2008
IFRS 7	Amendment to IFRS 7 – improving disclosures about financial instruments	1 January 2009
IFRS 8	Operating Segments (amendment 1.1.10 effective from the accounting period from 1 January 2010 and applied to 2009-2010)	1 January 2009
IAS 23	Borrowing Costs	1 January 2009
IAS 1	Presentation of Financial Statements	1 January 2009
IFRS 1	Amendments to IFRS 1: First-time adoption of IFRS and IAS 27: Consolidated and Separate Financial Statements	1 January 2009

**IFRS effective in 2009-2010 but not relevant**

The following amendments were mandatory for accounting periods beginning on or after 1 April 2009 but were not relevant to the operations of the Council:

<b>International Financial Reporting Standards (IFRS/IAS)</b>		<b>Effective date</b>
IFRS 2	Share-based Payment (amendment)	1 January 2009
IAS 32	IAS 32 Financial Instruments: Presentation and IAS 1 Financial Instrument Presentation Amendments – Puttable Financial Instruments and Obligations Arising on Liquidation.	1 January 2009

**International Financial Reporting Interpretations Committee (IFRIC)**

IFRIC 15	IFRIC 15: Agreements for the construction of Real Estate	1 January 2009
IFRIC 16	IFRIC 16: Hedges of a Net Investment in a Foreign operation	1 October 2008

**Standards, interpretations and amendments to published standards which are not yet effective**

The IASB and IFRIC issued the following standards and interpretations with an effective date after the date of these financial statements. They have not been adopted early by the Council and the Council does not anticipate that the adoption of these standards and interpretations will have a material impact on the Council's reported income or net assets in the period of adoption.

Effective for the Council for the financial year beginning 1 April 2010:

<b>International Financial Reporting Standards (IFRS/IAS)</b>		<b>Effective date</b>
IAS 39	Amendments to IFRIC 9 and IAS 39: Embedded derivatives	30 June 2009
IFRS 1	Revised version of IFRS 1 with improved structure	1 July 2009
IFRS 3	Business Combinations	1 July 2009
IAS 27	Consolidated and Separate Financial Statements	1 July 2009
IAS 39	Amendment to IAS 39 Financial Instruments: Eligible hedged items	1 July 2009

**International Financial Reporting Interpretations Committee (IFRIC)**

IFRIC 17	Distribution of Non-Cash Assets to Owners	1 July 2009
IFRIC 18	Transfers of Assets from Customers	1 July 2009

Effective for the Council in future years:

<b>International Financial Reporting Standards (IFRS/IAS)</b>		<b>Effective date</b>
IFRS 1	Amendment to IFRS 1 – additional exemptions for first-time adopters	1 October 2010
IFRS 2	Amendment to IFRS 2 – group cash-settled share-based payment transactions	1 October 2010

## 1.2 Consolidation

The STFC Financial Statements are the consolidation of the STFC parent and its wholly owned subsidiary undertaking, STFC Innovations Limited (SIL). The STFC parent position holds the investment in joint ventures at cost.

The Consolidated Financial Statements are the STFC Financial Statements as above consolidated with the value of the investment in joint ventures being carried at cost plus post-acquisition changes in STFC's share of net assets of the joint venture in accordance with the equity method of accounting.

Where there is no difference between the STFC and Consolidated position in the comparative Statement of Financial position notes only the Consolidated position is shown.

## 1.3 Accounting estimates and judgements

The preparation of Financial Statements requires management to make estimates and assumptions. These affect the reported amounts of assets and liabilities; the disclosure of contingent assets and liabilities at the date of the Financial Statements; and the reported amounts of revenues and expenses during the reporting period.

On an ongoing basis, management evaluates its estimates and judgements including those relating to property, plant and equipment and provisions.

Management bases its estimates and judgements on historical experience and on various other factors that are believed to be reasonable under the circumstances, the results of which form the basis for making judgements about the carrying value of assets and liabilities that are not readily available from other sources. Actual results may differ from these estimates under different assumptions and conditions.

The estimates and judgements that have a significant risk of causing material adjustments to the carrying amounts of assets and liabilities within the next financial year are:

- valuation of property, plant and equipment. Property, plant and equipment are revalued at least every five years and are revised in the intervening years by use of appropriate indices. To reduce the risk of material misstatement, the indices used are those recommended by professional valuers;
- calculation of the decommissioning provision for ING, JAC and RAL. The calculations are based on estimates of the current cost of the work to be undertaken, assumptions regarding inflation rates and VAT changes and the timing of the decommissioning. To reduce the risk of material misstatement the estimates and assumptions are reviewed annually; and
- calculation of the restructuring provision (SRS and SSC). This calculation is based on assumptions regarding number of staff departures, timing and full cost of the departures. As the majority of the liability has crystallised in year the risk of material misstatement is low.

## 1.4 Investments

Unlisted investments are stated in accordance with the British Venture Capital Association guidelines for valuation of unlisted investments at amounts considered by the Council to be a fair assessment of their values. Please refer to note 13.b for details of the unlisted investments.

Unlisted investments are stated at amounts considered by the directors to be a fair assessment of their value, subject to overriding requirements of prudence. All investments are valued according to one of the following bases:

- cost (less any provision required);
- third party valuation;
- earning multiple;
- net assets.

Investments are normally valued at cost until the availability of the first set of audited accounts post completion of the investment. Provisions against cost however, will be made as soon as appropriate in the light of adverse circumstances – for example, where an investment performs significantly below expectations.

Gains and losses on realisation of fixed asset investments are dealt with through the realised capital reserve. Fixed asset investments are not held for immediate resale and any gains on realisations are not available for distribution as a dividend. The difference between the market value of fixed asset investments over cost the Company is shown as an unrealised gain or loss.

The STFC Financial Statements are the consolidation of the STFC parent and its wholly owned subsidiary undertaking, STFC Innovations Limited (SIL).

## 1.5 Investments in joint ventures and associates

An associate is an entity over which STFC has significant influence and that is neither a subsidiary nor an interest in a joint venture. A joint venture is a contractual arrangement whereby two or more parties undertake an economic activity that is subject to joint control.

Interests in joint ventures and associates are accounted for under the equity method of accounting in accordance with the principles of IAS 27, IAS 28 and IAS 31.

Under the equity method, the investment in the joint venture or associate is carried in the Statement of Financial Position at cost plus post-acquisition changes in STFC's share of net assets of the joint venture or associate. After application of the equity method, STFC determines whether it is necessary to recognise any additional impairment loss with respect to STFC's net investment in the joint venture or associate.

The joint ventures' and associates' accounting policies generally conform to those used by STFC for like transactions and events in similar circumstances and in those instances where they do not conform, material adjustments are made to the Financial Statements.

STFC holds the majority shareholding in the joint venture company Diamond Light Source Limited (DLSL). Under the terms of the joint venture agreement control is shared jointly with the minority shareholder, the Wellcome Trust. The results of DLSL are therefore accounted for as a joint venture consolidated with those of STFC.

STFC holds a one third shareholding in the joint venture company Institut Laue Langevin (ILL). Under the terms of the joint venture agreement control is shared jointly with 2 other shareholders. The results of ILL are therefore accounted for as a joint venture consolidated with those of STFC.

STFC holds a 20.54% shareholding in the joint venture company RCUK SSC Limited. Under the terms of the joint venture agreement control is shared jointly with 6 other shareholders. The results of RCUK SSC Ltd. are therefore accounted for as a joint venture consolidated with those of STFC.

STFC holds a minority shareholding in the joint venture company Harwell Science and Innovation Campus Public Sector Partnership (PubSP). Under the terms of the joint venture agreement control is shared jointly with the majority shareholder the UK Atomic Energy Authority (UKAEA). The results of HSIC PubSP are therefore accounted for as a joint venture consolidated with those of STFC.

There are no material differences in accounting policies between STFC and its Joint Ventures.

## 1.6 Property, plant and equipment (PPE)

Expenditure on PPE includes the purchase of land, buildings, plant and equipment costing £3,000 or more. Professional valuations are obtained at least every five years and are revised in the intervening years by use of appropriate indices.

The basis for valuation for land and buildings is open market value for existing use where this can be established. Where this basis is not applicable because of the specialised nature of the Council's assets, valuations are carried out on a depreciated replacement cost basis. Items of plant and equipment are included at current replacement cost.

Assets under construction are valued at cost, including directly attributable in-house costs required to bring the asset into working condition for its intended use. In-house costs include directly attributable overheads.

## 1.7 Depreciation

Freehold land is not depreciated. Depreciation is charged on all other PPE at rates calculated to write down the valuation of each asset to its estimated residual value evenly over its expected useful life.

Useful lives are generally as follows:

Freehold buildings	60 years
Long leasehold properties	60 years or term of lease
Other leased assets, including dwellings	Term of lease
Plant and machinery	20 years
Scientific equipment	15 years
Electronic scientific equipment	10 years
Computers and information technology	5 years
Vehicles	4 years
Personal computers	3 years

Assets are depreciated as soon as they are available for use. Increased depreciation charges arising from revaluations are matched by transfers from the revaluation reserve to the income and expenditure reserve. On disposal of a revalued asset, the resulting element of the revaluation reserve that is realised is transferred directly to the income and expenditure reserve.

## 1.8 Ownership of equipment purchased with STFC research grants

Through the Conditions of Grant applied to funded institutions, the Council reserves the right to determine how equipment purchased by an institution with research grant funds is disposed of, and how any disposal proceeds are to be utilised during the period of the research. Once the research has been completed the institution is free to use such equipment without reference to the Council. Such equipment is excluded from these Financial Statements.

## 1.9 Intangible assets

Intangible assets consist of identifiable non-monetary assets without physical substance and include software either developed in-house or by third parties and licences to use applications developed by third parties costing £3,000 or more. Intangible assets are initially recognised at cost.

After initial recognition, an intangible asset is carried at a revalued amount, being its fair value at the date of revaluation less any subsequent accumulated amortisation and any subsequent accumulated impairment losses.

Intangible assets with a finite life are amortised on a straight line basis over their useful lives. The estimated useful lives are as follows:

Software and software licences	5-10 years
--------------------------------	------------

## 1.10 Asset impairment

A minimum of 30% of intangible assets, property, plant and equipment are reviewed at least annually, to ensure that assets are not carried above their recoverable amounts. Where some indication of impairment exists, detailed calculations are made of the discounted cash flows resulting from continued use of the assets (value in use) or from their disposal (fair value less costs to sell). Where these values are less than the carrying amount of the assets, an impairment loss is charged to the Statement of Net Expenditure.

### 1.11 Inventories and long term contract balances

Inventories are valued at the lower of current replacement cost and net realisable value.

Long term contracts, comprising individual pieces of research undertaken for private companies, are valued at the lower of cost, including appropriate overheads, and net realisable value. Full provision is made for all known and expected losses to completion immediately such losses are forecast on each contract.

Recognition of long term contracts is based on expenditure to date. Long term contracts are undertaken at cost and do not make a surplus.

### 1.12 Cash and cash equivalents

Cash and cash equivalents comprise cash at bank and in hand.

### 1.13 Financial instruments

The Council classifies financial instruments, or their component parts, on initial recognition as a financial asset, a financial liability or an equity instrument in accordance with the substance of the contractual arrangement.

Financial instruments are recognised on the balance sheet at fair value when the Council becomes a party to the contractual arrangement.

- a) Trade and other receivables are initially recognised and carried at original invoice amount. Subsequently, an estimate for doubtful debts is made when collection of the full amount is no longer probable and is offset against the original invoice amount. Bad debts are written off when identified.
- b) Trade and other payables are stated at their amortised cost. They are recognised on the trade date of the related transactions.

### 1.14 Derivative financial instruments

The Group applies IAS 39, under which hedge accounting is allowed when certain criteria are met. Under IAS 39, derivative financial instruments are always measured at fair value, with hedge accounting employed in respect of those derivatives fulfilling the stringent requirements for hedge accounting as prescribed under IAS 39.

The Group uses forward exchange contracts as cash flow hedges to manage its exposure to currency fluctuations on its future cash flows. For effective cash flow hedges, changes in the fair value of the hedge are recognised in equity, where they are recycled through the Statement of Net Expenditure (SNE) in the same period during which the hedged item impacts the SNE.

### 1.15 Non-current assets classified as held for sale

Non-current assets held for sale are measured at the lower of carrying amount and fair value less costs to sell and are not depreciated.

Non-current assets are classified as held for sale if their carrying amount will be recovered through a sale transaction rather than through continuing use. This condition is regarded as met only when the sale is highly probable, the asset is available for immediate sale in its present condition, Management are committed to the sale and completion is expected within one year from the date of classification.

## 1.16 Decommissioning costs

Decommissioning costs are recognised in full as soon as the obligation exists i.e. when the technical facility has been commissioned. An asset is set up with depreciation being charged to the Statement of Net Expenditure over its estimated useful life.

A specific provision is established to cover the current value of the expected future costs of decommissioning the asset. A notional interest charge is made on the provision which is charged to the Statement of Net Expenditure over the estimated working life of the asset and credited to the provision.

## 1.17 Government grants receivable and other income

Grant in Aid provided by the Department for Business, Innovation and Skills for revenue and general capital purposes is credited to the income and expenditure reserve. Contributions and grants from other bodies (including other government bodies) are treated as financing and are also credited to the income and expenditure reserve.

Where grants are received from government bodies (UK and EU) for the purchase of specific assets, these are credited to the Government Grant Reserve and released to the Statement of Net Expenditure over the useful life of the asset in amounts equal to the annual depreciation charge.

Other operating income is shown net of trade discounts, value added tax and other taxes. Revenue is recognised when goods are delivered and title has passed, and services in the accounting period in which the service is rendered.

## 1.18 Research and development

As a research organisation the majority of the Council's expenditure on research and development does meet the capitalisation criteria of IAS 38 and is therefore charged to the Statement of Net Expenditure when incurred.

Research and development expenditure that can be directly attributed to bringing a specific asset into production is capitalised as part of that asset and depreciated over the life of the asset.

## 1.19 Contributions to international collaboration projects

Contributions to international collaboration projects, where the Council does not have ownership of technical facilities, have been charged to the Statement of Net Expenditure in the period to which they relate.

## 1.20 Research grants

The majority of research grants and fellowships are paid by the Council on an instalment basis in accordance with an agreed payment profile. Where the profile indicates an unclaimed and/or unpaid amount exists at the balance sheet date, such sums are accrued in the financial statements. Future commitments at the balance sheet date are disclosed in the financial statements.

The majority of studentship payments are paid on an instalment basis in advance. Stipends are paid directly to the student on a quarterly basis and fee payments are made in two equal payments to the institutions.

## 1.21 Pensions

Contributions to the United Kingdom Atomic Energy Authority (UKAEA) Pension Scheme and the Research Councils Pension Scheme (RCPS) are charged to the Consolidated Statement of Net Expenditure in accordance with actuarial recommendations so as to spread the cost of the pensions over the employees' expected working lives.

Liabilities for the payment of future benefits are the responsibility of the UKAEA Pension Scheme and the Research Councils Pension Scheme and accordingly are not included in these financial statements.

Both the UKAEA and RCPS Pension Schemes are multi-employer schemes and the Council is unable to identify its share of the underlying assets and liabilities.

## 1.22 Early departure costs

The costs of early retirement or severance are charged to the Statement of Net Expenditure when the early departures are agreed. These costs are net of the lump sums recoverable from the pension schemes when the individual reaches normal retirement age.

## 1.23 Employee benefits

Salaries, wages and the cost of all employment related benefits, including the liability associated with untaken annual leave, are recognised in the period in which the service is received from employees, with the exception of bonuses earned but not yet awarded. These are not accrued for at the year end on the grounds that they are not material.

## 1.24 Closure and restructuring costs

Where a constructive obligation is made to terminate or radically change one of the Council's operational facilities or to restructure, a provision is set up to cover the direct costs associated with closure or restructuring in accordance with IAS 37.

## 1.25 Value Added Tax

The Council is registered for VAT jointly with six other Research Councils. Expenditure is stated net of recoverable VAT. Irrecoverable VAT is charged to the most appropriate expenditure heading. Non-attributable VAT recovered through the Group arrangement is credited to income when received.

## 1.26 Foreign currency

Transactions denominated in foreign currency are translated at the rate of exchange ruling on the date of the transaction unless covered by a forward contract. Assets and liabilities denominated in foreign currency are translated at the rate of exchange ruling at the balance sheet date.

Transaction and translation gains and losses are credited or charged to the Statement of Net Expenditure except where a hedging relationship is designated and where it qualifies for hedge accounting under IAS 39 Financial Instruments: Recognition and Measurement.

## 1.27 Insurance

As a public body, the Council does not generally insure. However, the Council has decided, with the agreement of BIS, that risks relating to certain commercial contracts entered into by the Council should be commercially insured. Insurance premiums are charged to the Statement of Net Expenditure.

## 1.28 Operating leases

Operating lease rentals are charged to the Statement of Net Expenditure on a straight line basis over the period of the lease.

## 1.29 Notional cost of capital

As directed by the Secretary of State for Business, Innovation and Skills, a capital charge reflecting the cost of capital employed is calculated at 3.5% of average net assets employed during the year and included in operating costs. In accordance with Treasury guidance the notional charge is credited back to the Statement of Net Expenditure before taking the result for the year to the Income and Expenditure reserve.

## 2. Segmental statement on net expenditure

For the year to 31 March 2010

	Science programme and project work £'000	Facilities access and development £'000	Knowledge exchange £'000	Corporate services and affairs £'000	Finance £'000	Total £'000
<b>Income</b>						
Income from operating activities	(7,176)	(46,744)	(1,857)	(3,433)	(894)	(60,104)
<b>Expenditure</b>						
Staff costs	6,809	58,700	2,418	14,213	1,532	83,672
Restructuring	-	-	-	-	(4,276)	(4,276)
Research grants	120,429	-	-	-	-	120,429
Other grants and awards	37,432	-	-	-	-	37,432
International subscriptions	241,521	-	-	-	-	241,521
Equipment and supplies	768	20,035	436	2,980	2	24,221
Services	5,441	22,817	3,814	16,683	937	49,692
Depreciation	-	-	-	-	38,986	38,986
Amortisation	-	-	-	-	191	191
PPE impairments	-	-	-	-	186	186
Intangible impairments	-	-	-	-	3	3
Joint venture funding	25,879	-	-	-	-	25,879
Notional cost of capital	-	-	-	-	31,250	31,250
Other operating costs	2,698	11,157	489	8,217	3,868	26,429
	<b>440,977</b>	<b>112,709</b>	<b>7,157</b>	<b>42,093</b>	<b>72,679</b>	<b>675,615</b>
<b>Net operating costs</b>	<b>433,801</b>	<b>65,965</b>	<b>5,300</b>	<b>38,660</b>	<b>71,785</b>	<b>615,511</b>

For the year to 31 March 2009

	Science programme and project work £'000	Facilities access and development £'000	Knowledge exchange £'000	Corporate services and affairs £'000	Finance £'000	Total £'000
<b>Income</b>						
Income from operating activities	(11,006)	(42,807)	(2,000)	(2,068)	(624)	(58,505)
<b>Expenditure</b>						
Staff costs	8,804	57,873	1,997	12,110	586	81,370
Restructuring	-	-	-	-	(1,356)	(1,356)
Research grants	106,585	-	1,763	-	-	108,348
Other grants and awards	31,170	-	-	-	-	31,170
International subscriptions	215,479	-	-	-	-	215,479
Equipment and supplies	902	24,994	176	2,566	7	28,645
Services	5,752	24,982	1,762	12,466	1,126	46,088
Depreciation	-	-	-	-	36,972	36,972
Amortisation	-	-	-	-	245	245
PPE impairments	-	-	-	-	179	179
Intangible impairments	-	-	-	-	(10)	(10)
Joint venture funding	26,303	-	-	-	-	26,303
Notional cost of capital	-	-	-	-	28,288	28,288
Other operating costs	2,638	10,910	478	8,035	3,784	25,845
	<b>397,633</b>	<b>118,759</b>	<b>6,176</b>	<b>35,177</b>	<b>69,821</b>	<b>627,566</b>
<b>Net operating costs</b>	<b>386,627</b>	<b>75,952</b>	<b>4,176</b>	<b>33,109</b>	<b>69,197</b>	<b>569,061</b>

Depreciation, amortisation and impairments are controlled and managed centrally within the Finance Directorate.

STFC's assets and liabilities are shared across all parts of the organisation. The assets and liabilities have not been split across segments as the management information is not collected or utilised by the business at this level.

## Summary of the Segments:

### Science programme and project work

This segment covers the STFC's science and technology strategy, science operations and planning (including the STFC's processes for peer review) and the international strategy, as well as STFC's programs in education, training and public outreach. It also covers the Isaac Newton group of Telescopes on La Palma, Canary Islands and the Joint Astronomy Centre, Hawaii.

### Facilities access and development

This segment covers the management and operation of STFC's world class research facilities located at the Rutherford Appleton Laboratory, the Daresbury Laboratory, the Chilbolton Observatory and the UK Astronomy Centre and the provision of access to these facilities.

### Knowledge exchange

This segment covers the delivery and development of the effective transfer of knowledge between the STFC, universities, industries and other organisations. It also covers the development of strategies and the coordination of implementation plans for increasing the economic impact of the STFC's investments in universities, its own facilities and the international laboratories.

### Corporate services and affairs

This segment covers STFC's administrative information systems and technology, estates management operations and support services, health, safety and environment, human resources, and security. It also covers the engagement with the STFC's key stakeholders about the processes for shaping an overarching corporate strategy for the organisation, which connects the strategies for the different parts of STFC's business. Additionally, the development and implementation of a strong and effective communication strategy and programme, which encompasses STFC's activities in marketing communications, public affairs, media relations, events management, corporate web services, corporate publications and internal communication fall within this part of the organisation.

### Finance

This segment covers STFC's overall budgeting and associated financial planning and for the financial and management accounting processes within the Council.

## 3. Income from operating activities

	STFC Total 2010	Consolidated Total 2010	Consolidated Total 2009
<b>UK Research Councils</b>	11,378	11,378	14,202
<b>Government organisations</b>			
Department for Business, Innovation and Skills	632	632	820
Other	3,542	3,542	4,570
	<b>4,174</b>	<b>4,174</b>	<b>5,390</b>
<b>External bodies</b>			
Higher Education Institutes	8,388	8,388	9,681
European Commission	5,236	5,236	3,525
Other overseas	20,469	20,469	16,642
Private sector	7,472	7,472	6,150
Domestic	2,774	2,774	1,671
	<b>44,339</b>	<b>44,339</b>	<b>37,669</b>
<b>Release of deferred income from income and expenditure reserve</b>	213	213	1,244
	<b>213</b>	<b>213</b>	<b>1,244</b>
<b>Total</b>	<b>60,104</b>	<b>60,104</b>	<b>58,505</b>

- Operating income includes amounts received from European Commission and other bodies for asset construction/repayment work and access to facilities. Facilities are offered to European Union users, commercial users and external users. Users are charged a unit cost based on direct operating costs and annual quantity of access with an allowance for overheads.
- STFC acts as a co-ordinator on European Union framework agreements. Funding that is received for redistribution to other partners is not recognised as income but treated as a liability on the Statement of Financial Position.
- The Council has complied with the cost allocation and charging requirements set out in HM Treasury and Office of Public Sector Information guidance, where they are appropriate. However, the information they hold is exempt from the requirements of 'The Re-use of Public Sector Information Regulations 2005' as specified in paragraph 5 (3) of the regulations.
- The release of deferred income relates to funding received in 2008-2009 but brought to account in 2009-2010.

Income by purpose	UK	Foreign	Consolidated	UK	Foreign	Consolidated
	2010	2010	Total	2009	2009	Total
	£'000	£'000	£'000	£'000	£'000	£'000
Facilities access and development	40,909	5,835	46,744	28,172	14,635	42,807
Science programme and project work	1,919	5,258	7,177	5,474	5,532	11,006
Other services	5,923	260	6,183	4,692	-	4,692
<b>Total operating income</b>	<b>48,751</b>	<b>11,353</b>	<b>60,104</b>	<b>38,338</b>	<b>20,167</b>	<b>58,505</b>
<b>Non-current assets</b>	<b>924,248</b>	<b>37,790</b>	<b>962,038</b>	<b>877,360</b>	<b>42,571</b>	<b>919,931</b>

The Council receives substantial funding from the Science Budget through its sponsor department BIS (see Statement of Changes in Reserves for details). In addition, Science Budget funding accounts for a further £11.4m (2008-2009: £14.2m) of the £60.104m Income from Operating Activities being income from the other UK Research Councils.

There are no major customers accounting for 10% or more of the remaining £48.7m. Revenue is allocated based on the country in which the customer is located.

## 4. Staff numbers and related costs

(See also the Remuneration Report on pages 67 to 72)

### Staff costs

	STFC	Consolidated	Consolidated
	Total	Total	Total
	2010	2010	2009
	£'000	£'000	£'000
Salaries and wages	67,996	67,996	66,556
Social security costs	5,903	5,903	5,778
Superannuation	13,187	13,187	13,160
Temporary staff – seconded staff (SSC)	775	775	1,961
Council Members	72	72	61
<b>Total payroll costs</b>	<b>87,933</b>	<b>87,933</b>	<b>87,516</b>
Capitalised pay costs	(4,261)	(4,261)	(6,146)
<b>Staff costs charged to the Statement of Net Expenditure</b>	<b>83,672</b>	<b>83,672</b>	<b>81,370</b>

- Included in salaries and wages is an amount of £1,174,741 (2008-2009: £1,299,973) in respect of agency staff.
- Included in salaries and wages is an amount of £1,308,610 (2008-2009: £985,932) in respect of locally engaged staff overseas.
- Temporary staff are those that have been transferred to the RCUK Shared Services Centre but seconded back to the Council.
- The capitalised pay costs are accounted for in the Statement of Financial Position as part of assets under construction (Note 12). Staff costs are capitalised based upon consideration of effort: there are no staff fully capitalised.

## Superannuation

The employees of the Council are members of either the Principal Non-Industrial Superannuation Scheme of the United Kingdom Atomic Energy Authority (the PNISS) or the Research Councils' Pension Scheme (the RCPS).

The PNISS is a notionally funded, contributory, defined benefit scheme. Employees who are members of the PNISS make pensions contribution at the rate of 7.5% of pensionable pay. The Council makes employer's contributions at a rate determined from time to time after actuarial assessment of assets and liabilities. In 2009-2010 the employer's contribution rate was 15.8% of pensionable pay.

The PNISS is a defined benefit scheme and a separate PNISS Scheme account is produced by the United Kingdom Atomic Energy Authority that recognises the scheme liability in accordance with IAS 19 as interpreted by the FRoM for use in the public sector.

The RCPS is in all respects 'by-analogy' with the Principal Civil Service Pension Scheme, except that the employer's contribution is determined separately. It is a notionally funded, contributory, defined benefit scheme, and is administered by the Research Councils' Joint Superannuation Services. The Scheme's accounts are prepared by the Biotechnology and Biological Sciences Research Council (BBSRC) on behalf of the Chief Executive of BBSRC as Accounting Officer for the RCPS, and contain the further disclosure information required under IAS 19 as interpreted by the FRoM for use in the public sector. The employer's contribution is agreed by the RCPS Board of Management on the recommendation of the Government Actuary's Department (GAD) and in 2009-2010 was 21.3% of pensionable pay.

## Staff numbers

The Council counts the number of staff in post to include all permanent, fixed term and temporary staff of all types who are paid as employees through the payroll. On this basis the average number of whole-time equivalent persons (including senior management) employed during the year was 1,895 (2008:2009: 1,927). The current year figure includes 42 (2008-2009: 69) SSC Limited employees seconded back to the Council and 39 (2008-2009: 41) locally engaged staff overseas.

Additionally there are a number of temporary staff that are charged to the payroll including students, Council and Audit Committee members. The average number of whole-time equivalent persons in this category for the year was 50 (2008-2009: 39).

The average number of agency staff (whole-time equivalents) employed during the year was 32 (2008-2009: 32).

## 5. Restructuring costs

	STFC Total 2010 £'000	Consolidated Total 2010 £'000	Consolidated Total 2009 £'000
Annual compensation payments	1,846	1,846	2,027
Redundancy compensation payments	743	743	2,150
Early retirement lump sums	132	132	(5)
Provision for restructuring	(8,600)	(8,600)	(7,203)
Non pay costs restructuring	1,603	1,603	1,675
	<b>(4,276)</b>	<b>(4,276)</b>	<b>(1,356)</b>

The restructuring costs incurred during the year are off set by a utilisation of the restructuring provision where those costs have previously been provided for. In 2009-2010 this utilisation was £3,531k. In addition there was an overall reduction in the restructuring provision of £5,069k that is released to the SNE against the restructuring costs. See note 19.

## 6. Research grants

	STFC Total 2010 £'000	Consolidated Total 2010 £'000	Consolidated Total 2009 £'000
Astronomy	58,799	58,799	60,710
Particle Physics	41,171	41,171	37,848
e-Science	11,600	11,600	171
Nuclear Physics	6,408	6,408	6,456
Industrial Programme Support Scheme (PIPSS)	1,806	1,806	1,755
Neutron and Light Sources	645	645	1,370
Joint Infrastructure Fund (JIF)	-	-	38
	<b>120,429</b>	<b>120,429</b>	<b>108,348</b>

All research grants are paid to private sector recipients.

## 7. Other grants and awards

	STFC Total 2010 £'000	Consolidated Total 2010 £'000	Consolidated Total 2009 £'000
Postgraduate Training Awards, Fellowships	25,119	25,119	23,088
Research and Research Support	*12,313	*12,313	8,082
	<b>37,432</b>	<b>37,432</b>	<b>31,170</b>

\*Includes £500,000 paid to the Engineering and Physical Services Research Council (EPSRC) for co-funded grants administered by EPSRC.

All other grants and awards are paid to private sector recipients.

## 8. International collaboration agreements

Amounts payable under subscription agreements:	STFC Total 2010 £'000	Consolidated Total 2010 £'000	Consolidated Total 2009 £'000
European Space Agency (ESA)	98,341	98,341	83,947
European Organisation for Nuclear Research (CERN)	86,833	86,833	80,066
European Southern Observatory (ESO)	28,317	28,317	25,753
Institut Laue Langevin (ILL)	16,981	16,981	16,631
European Synchrotron Radiation Facility (ESRF)	10,250	10,250	8,505
Anglo-Australian Telescope (AAT)	359	359	110
European Incoherent Scatter Facility (EISCAT)	246	246	322
European Science Foundation (ESF)	194	194	145
	<b>241,521</b>	<b>241,521</b>	<b>215,479</b>

- The Council's research objectives are shared with other major scientific nations and as such the Council collaborates with other nations in order to mitigate the high capital costs of facilities. Various agreements are in place to regulate annual contributions and the management of the various facilities. These include a period of notice of withdrawal from each arrangement. Of the most significant arrangements, CERN and ESA require notice periods of 12 months after the end of the current calendar year. On behalf of the UK, STFC joined ESO on 1 July 2002. ESO requires a notice period of 12 months with effect from 1 July 2013.
- In the case of ESRF and ILL the UK has signed up to International Conventions which are periodically reviewed. The current ESRF Convention runs until the end of 2013 and has a notice period of 3 years. For ILL the 4th protocol of the Intergovernmental Convention was signed at the end 2002 and will remain in force until 31 December 2013. Thereafter it shall be tacitly extended from year to year unless any of the Governments gives written notification to the other Governments of its intention to withdraw from the Convention. Any such withdrawal will take effect upon the expiry of two years from the date of receipt of the notification by any of the other Governments or on such later date as may be specified in the notification. It should be noted that it is the current intention of the Associates to negotiate a 5th Protocol to the Convention to run from 01 Jan 2014 to 31 Dec 2023.
- Whilst the above collaborations are regulated by agreement, the political nature of the arrangements is such that any withdrawal would be on a negotiated basis at government level. The Council has no current intentions to withdraw from these arrangements and in all cases would wish to honour research commitments made.
- In the above arrangements, the facilities are not owned by the Council. Additionally, the Council collaborates with Dutch and Canadian partners in respect of the James Clerk Maxwell Telescope, Hawaii, and with Dutch and Spanish partners in respect of the operation of telescopes on La Palma. Contributions are received from the International Partners towards the cost of running the facilities. The James Clerk Maxwell and La Palma telescopes are owned by the Council. The Council currently jointly owns the Anglo-Australian Telescope (AAT) and wholly owns the UK Schmidt Telescope sited in Australia but has concluded an agreement with the Government of Australia to hand over STFC ownership of the AAT from 1 July 2010 at no cost to the UK. It is expected that ownership of the UK Schmidt will be passed to the Australian National University during 2010. These telescopes are included within plant and equipment in Note 12.

## 9. Other operating costs

	STFC Total 2010 £'000	Consolidated Total 2010 £'000	Consolidated Total 2009 £'000
Travel, subsistence and allowances	7,662	7,695	8,481
Utilities	8,381	8,381	9,839
Rent, rates and maintenance	3,559	3,559	5,737
Administration expenses	2,292	2,292	2,647
Auditors remuneration*	180	147	148
Increase/(decrease) in bad debt provision	(131)	(131)	40
Insurance premiums	393	393	316
Exchange rate (gains)/losses	1,593	1,593	(1,363)
Decommissioning provision	2,500	2,500	-
<b>Total</b>	<b>26,429</b>	<b>26,429</b>	<b>25,845</b>

\*The £180,000 is made up of STFC audit fee of £147,000 (£10,000 relating to the IFRS restated Financial Statements), ILL special topic assignment: Budgetary Review £16,000, ILL audit fee for 2010 through the Audit Commission of £9,000 and SIL audit fee of £8,975 (£3,100 for non audit work).

## 10. Interest

	STFC Total 2010 £'000	Consolidated Total 2010 £'000	Consolidated Total 2009 £'000
Interest receivable	15	15	256
Amounts payable to the consolidated fund	(1)	(1)	(28)
	<b>14</b>	<b>14</b>	<b>228</b>

## 11. Intangible assets

	Software	Software licences	STFC and Consolidated Total*
	£'000	£'000	£'000
<b>Valuation</b>			
At 1 April 2008	2,185	135	2,320
Additions	18	227	245
Disposals	(29)	(22)	(51)
Revaluation	(76)	(1)	(77)
<b>At 31 March 2009</b>	<b>2,098</b>	<b>339</b>	<b>2,437</b>
Additions	130	34	164
Reclassification	4	-	4
Disposals	(557)	(18)	(575)
Revaluation	14	3	17
<b>At 31 March 2010</b>	<b>1,689</b>	<b>358</b>	<b>2,047</b>
<b>Amortisation and impairment</b>			
At 1 April 2008	1,589	96	1,685
Charged in year	230	15	245
Disposals	(22)	(1)	(23)
Impairments	(7)	(3)	(10)
Revaluation	(44)	(1)	(45)
<b>At 31 March 2009</b>	<b>1,746</b>	<b>106</b>	<b>1,852</b>
Charged in year	141	50	191
Disposals	(560)	(18)	(578)
Impairments	3	-	3
Reclassification	3	-	3
Revaluation	5	4	9
<b>At 31 March 2010</b>	<b>1,338</b>	<b>142</b>	<b>1,480</b>
<b>Net book value</b>			
At 1 April 2008	596	39	635
At 31 March 2009	352	233	585
At 31 March 2010	351	216	567

- a. Independent qualified professional valuations are obtained for all intangible assets every five years and are revised in the intervening years by use of appropriate indices.
- b. Intangible assets were professionally re-valued on a depreciated replacement cost basis as at 1 April 2006 by Hickman-Shearer in accordance with the RICS Appraisal and Valuation manual.

\*There is no difference in intangible assets between STFC and the consolidated position

## 12. Property, plant and equipment

	Freehold land	Freehold buildings	Buildings on leased land	Plant and equipment	Assets under construction	STFC and consolidated Total
	£'000	£'000	£'000	£'000	£'000	£'000
<b>Cost or valuation</b>						
At 1 April 2008	44,423	185,952	79,194	641,411	204,974	1,155,954
Migration adjustment	-	58,162	-	-	-	58,162
Additions	-	5,760	-	19,601	64,375	89,736
Reclassification	-	43,235	-	18,921	(62,156)	-
Disposals	(6)	(1,799)	-	(4,364)	-	(6,169)
Impairments	-	-	-	(186)	-	(186)
Write offs	-	(126)	-	(102)	(332)	(560)
Revaluations	(153)	(4,431)	-	9,626	-	5,042
<b>At 31 March 2009</b>	<b>44,264</b>	<b>286,753</b>	<b>79,194</b>	<b>684,907</b>	<b>206,861</b>	<b>1,301,979</b>
Additions	-	24,427	-	6,994	26,271	57,692
Reclassification	-	5,257	-	113,178	(118,439)	(4)
Disposals	-	(230)	-	(8,527)	(22)	(8,779)
Write on	-	-	-	-	151	151
Revaluations	-	(215)	-	14,430	-	14,215
<b>At 31 March 2010</b>	<b>44,264</b>	<b>315,992</b>	<b>79,194</b>	<b>810,982</b>	<b>114,822</b>	<b>1,365,254</b>
<b>Depreciation</b>						
At 1 April 2008	-	45,269	73,743	489,833	-	608,845
Migration adjustment	-	56,730	-	-	-	56,730
Charged in year	-	7,369	2,260	27,343	-	36,972
Disposals	-	(438)	-	(3,738)	-	(4,176)
Impairments	-	-	-	(7)	-	(7)
Revaluations	-	(288)	(1)	6,712	-	6,423
<b>At 31 March 2009</b>	<b>-</b>	<b>108,642</b>	<b>76,002</b>	<b>520,143</b>	<b>-</b>	<b>704,787</b>
Charged in year	-	8,627	1,556	28,803	-	38,986
Disposals	-	(256)	-	(8,504)	-	(8,760)
Impairments	-	22	-	164	-	186
Write on	-	(6)	-	(164)	-	(170)
Reclassification	-	-	-	(3)	-	(3)
Revaluations	-	(27)	-	7,293	-	7,266
<b>At 31 March 2010</b>	<b>-</b>	<b>117,002</b>	<b>77,558</b>	<b>547,732</b>	<b>-</b>	<b>742,292</b>
<b>Net book value</b>						
At 1 April 2008	44,423	140,683	5,451	151,578	204,974	547,109
At 31 March 2009	44,264	178,111	3,192	164,764	206,861	597,192
<b>At 31 March 2010</b>	<b>44,264</b>	<b>198,990</b>	<b>1,636</b>	<b>263,250</b>	<b>114,822</b>	<b>622,962</b>

\*There is no difference in property plant and equipment between STFC and the consolidated position

**Notes:**

- a. The assets under construction (AUC) balance includes £9.7m (2008:2009: £7.7m, 2007-2008: £3.2m) that represents the Council's individual share of the Shared Services Centre currently being developed by the seven Research Councils. AUCs are not depreciated until they are brought into use.
- b. The reclassification from AUC to land and buildings predominantly relates to the capitalisation of ISIS Target Station 2 (TS2) - £102.0m (2008:2009: TS2 - £30.7m).
- c. In accordance with IAS 37 decommissioning costs are recognised in full as soon as the obligation exists i.e. when the technical facility has been commissioned. A corresponding asset in respect of the provision is set up in the balance sheet and depreciated over the useful life of the asset. The value of land and buildings and plant and equipment include £2.4 m (2008-2009: £2.4m, 2007-2008: £2.4m) and £14.6m (2008-2009: £14.3m, 2007-2008: £7.2m) of decommissioning costs respectively. Accumulated depreciation at 31 March 2010 amounted to £2.1m (2008-2009: £1.9m, 2007-2008 £1.6m) on the land and building decommissioning asset and £3.3m (2008-2009: £2.9m, 2007-2008 £2.6m) for the plant and equipment decommissioning assets.
- d. Tenancy agreements are in place with a number of tenants in STFC buildings at Daresbury and Rutherford. The total value of the tenancy agreements is immaterial.
- e. With the exception of Polaris House, independent qualified professional valuations are obtained for all property, plant and equipment every five years and are revised in the intervening years by use of appropriate indices. Polaris House is owned jointly by a number of the Research Councils and is professionally valued every four years and modified in the intervening years by the use of appropriate indices.

All valuations were performed in accordance with guidance notes issued by the Royal Institution of Chartered Surveyors.

The interest in the Polaris House property was valued on an open market value for existing use basis as at 31 March 2006 by Powis Hughes and Associates.

Land and buildings were professionally valued by James Barr Limited as at 31 March 2008. For properties that are owner-occupied and of a non-specialised nature the basis of valuation is Existing Use Value. For those properties which are either owned but not occupied or have been declared surplus then these are valued on the basis of Market Value. For properties which are owner-occupied but are of a specialist nature where few, if any, open market transactions involving a continuation of the existing use occur, then the Depreciated Replacement Cost method of valuation is appropriate.

Plant and equipment assets were professionally re-valued on a depreciated replacement cost basis as at 1 April 2006 by Hickman-Shearer in accordance with the RICS Appraisal and Valuation manual.

- f. The migration adjustment relates to the transfer of the land and building assets from an off line system onto the fixed asset register. Net impact on the net book value at 31 March 2009 is £1.4 million. See also the statement of changes in taxpayers' equity.

## 13. Interests in joint ventures and other investments

### Consolidated

	Invest' in SIL £'000	Invest' in DLSL £'000	Invest' in SSC £'000	Invest' in ILL* £'000	Invest'* in HSIC £'000	Unlisted invest' £'000	Consol' Total £'000
<b>Cost</b>							
At 1 April 2008	-	285,370	-	19,541	-	136	305,047
Additions	-	29,468	1,623	-	-	-	31,091
Revaluations	-	-	-	5,874	-	-	5,874
<b>At 1 April 2009</b>	<b>-</b>	<b>314,838</b>	<b>1,623</b>	<b>25,415</b>	<b>-</b>	<b>136</b>	<b>342,012</b>
Additions	-	35,421	-	-	58	-	35,479
Revaluations	-	-	-	1,325	-	-	1,325
<b>At 31 March 2010</b>	<b>-</b>	<b>350,259</b>	<b>1,623</b>	<b>26,740</b>	<b>58</b>	<b>136</b>	<b>378,816</b>
<b>Impairment</b>							
At 1 April 2008	-	13,761	-	-	-	75	13,836
Impairment	-	13,469	283	-	-	-	13,752
Revaluation	-	-	-	-	-	61	61
<b>At 1 April 2009</b>	<b>-</b>	<b>27,230</b>	<b>283</b>	<b>-</b>	<b>-</b>	<b>136</b>	<b>27,649</b>
Impairment	-	19,572	100	-	41	-	19,713
<b>At 31 March 2010</b>	<b>-</b>	<b>46,802</b>	<b>383</b>	<b>-</b>	<b>41</b>	<b>136</b>	<b>47,362</b>
<b>Net book value</b>							
At 1 April 2008	-	271,609	-	19,541	-	61	291,211
At 31 March 2009	-	287,608	1,340	25,415	-	-	314,363
<b>At 31 March 2010</b>	<b>-</b>	<b>303,457</b>	<b>1,240</b>	<b>26,740</b>	<b>17</b>	<b>-</b>	<b>331,454</b>

**STFC**

	Invest' in SIL £'000	Invest' in DLSL £'000	Invest' in SSC £'000	Invest' in ILL £'000	Invest' <sup>**</sup> in HSIC £'000	Unlisted invest' £'000	Consol' Total £'000
<b>Cost</b>							
At 1 April 2008	- 285,370	-	-	1	-	136	285,507
Additions	- 29,468	1,623	-	-	-	-	31,091
<b>At 1 April 2009</b>	<b>- 314,838</b>	<b>1,623</b>	<b>-</b>	<b>1</b>	<b>-</b>	<b>136</b>	<b>316,598</b>
Additions	- 35,421	-	-	-	58	-	35,479
<b>At 31 March 2010</b>	<b>- 350,259</b>	<b>1,623</b>	<b>-</b>	<b>1</b>	<b>58</b>	<b>136</b>	<b>352,077</b>
<b>Impairment</b>							
At 1 April 2008	-	-	-	-	-	75	75
Revaluation	-	-	-	-	-	61	61
<b>At 1 April 2009</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>136</b>	<b>136</b>
<b>At 31 March 2010</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>136</b>	<b>136</b>
<b>Net book value</b>							
At 1 April 2008	- 285,370	-	-	1	-	61	285,432
At 31 March 2009	- 314,838	1,623	-	1	-	-	316,462
<b>At 31 March 2010</b>	<b>- 350,259</b>	<b>1,623</b>	<b>-</b>	<b>1</b>	<b>58</b>	<b>-</b>	<b>351,941</b>

\*The revaluation of ILL relates to an increase of the value of the joint venture in excess of the initial capital investment this gain is held in the revaluation reserve and is not charged to the SNE.

The HSIC additions since the joint venture was established total £58k of which £25k was charged through the income and expenditure statement in 2008-2009. The impairment required for 2008-2009 was also £25k. Due to the immaterial nature of these amounts as the net impact of zero these have been adjusted for through reserves in 2009-2010. The in year additions are reflected on the cashflow statement is therefore £35,453k in total and in year impairments charged through the SNE is £19,689k.

**a. STFC Innovations Limited (SIL) (registered in England, registration number 4361684)**

On 4 April 2002, the Council established its own wholly owned subsidiary company STFC Innovations Limited. The Council's current shareholding in SIL is 1 ordinary share of £1. This company was established to manage and commercially exploit the intellectual property owned by STFC and seek to ensure the optimum exploitation of such property in the United Kingdom economy in accordance with HM Government policy. Throughout 2009-2010 SIL has continued to establish and expand its exploitation of the intellectual property rights of STFC.

SIL is currently managing 58 patent families, 4 new patent applications have been filed during 2009-2010.

Of the 58 live patent families 22 are currently licensed. SIL is currently involved in 13 spin out companies with 3 more being developed.

As is to be expected with a venture of this nature SIL incurred a trading deficit of £1,326,713 – the trading deficit is underwritten in full by STFC.

The operating results, assets and liabilities of SIL are reflected in STFC's Financial Statements in accordance with IAS 27. The aggregate amount of capital and reserves at 31 March 2010 was £(3,333,284) (2008-2009: £(2,006,571)) and the loss for the year was £(1,326,713) (2008-2009: £(810,956)).

## b. Unlisted investments held by SIL

At 31 March 2010, SIL held interests in the following undertakings:

	Country of incorporation	Class of shares held	Proportion held %	Aggregate of capital and reserves £,000	Profit/(loss) for the year £,000
Oxsensis Limited	England and Wales	Ordinary	5	932	(1,899)
L3 Technology Limited	England and Wales	Ordinary	6	268	(1,060)
Microvisk Limited	England and Wales	Ordinary	6	86	(1,237)
Petra Limited	England and Wales	Ordinary	18	33	(60)
LaserThor Limited	England and Wales	Ordinary	8	(327)	(2)
Dsoft Limited	England and Wales	Ordinary	15	8	1
Constellation Technologies Ltd	England and Wales	Ordinary	33	4	(16)
Cobalt Light Systems Limited (formerly LiteThru Limited)	England and Wales	Ordinary	33	468	(100)
Quantum Detectors Limited	England and Wales	Ordinary	90	40	46
Cryox Limited	England and Wales	Ordinary	59	-	-
Electrospinning Limited	England and Wales	Ordinary	48	-	-
Scitech Precision Limited	England and Wales	Ordinary	100	21	21

At 31 March 2009, SIL held interests in the following undertakings:

	Country of incorporation	Class of shares held	Proportion held %	Aggregate of capital and reserves £,000	Profit/(loss) for the year £,000
Oxsensis Limited	England and Wales	Ordinary	5	2831	(1,084)
L3 Technology Limited	England and Wales	Ordinary	7	621	(185)
Microvisk Limited	England and Wales	Ordinary	8	188	(406)
ThruVision Limited	England and Wales	Ordinary	9	(618)	(3,908)
Petra Limited	England and Wales	Ordinary	15	93	(487)
Orbital Optics Limited	England and Wales	Ordinary	29	91	(14)
LaserThor Limited	England and Wales	Ordinary	8	(325)	(9)
Cobalt Light Systems Limited (formerly LiteThru Limited)	England and Wales	Ordinary	33	209	(222)
Quantum Detectors Limited	England and Wales	Ordinary	100	39	45

Aggregate of capital and reserves and profit / (loss) for the year are derived from the unaudited management accounts of the individual investee companies. All the above investments are currently held at a value of £nil.

On 30 June 2009 ThruVision went into administration.

In July 2009, the investment in Orbital Optics Limited was sold, and SIL received £1 future completion of the sale and a share in deferred consideration, the level of which is contingent upon levels of sales.

**c. Diamond Light Source Limited (DLSL) (registered in England, registration number 4375679)**

On 27 March 2002, BIS transferred their 86% interest in the joint venture DLSL to the Council. The remaining 14% is held by Wellcome Trust Limited (registered in England). The joint venture was established for the construction and operation of the Diamond facility, a third generation, medium energy, synchrotron radiation source.

The first phase of the facility, which provided 7 beamlines, became operational in 2007. During 2009-2010 the business continued to expand and to improve the operational performance of the facility. A further 4 beamlines became operational during the year bringing the total number of operational beamlines to 17 by the financial year end. Work continues on the design, construction, and commissioning of the remainder of the second phase beamlines which are due to be completed by 2012. This will bring the total number of beamlines to 22.

The Council's shareholding in DLSL at 31 March 2010 is 328,498,500 ordinary shares of £1 each and 21,760,476 redeemable preference shares of £1 each. The purpose of the redeemable shares was to provide for the funding of irrecoverable VAT incurred during the construction and operation of the Synchrotron facility. Shares may be redeemed at par only to the extent that any VAT previously deemed to be irrecoverable is refunded to the company or upon the winding up of the company.

STFC received £8.1m of DLSL funding in 2009-2010 from the other Research Councils.

The operating results, assets and liabilities of DLSL are reflected in STFC's Financial Statements in accordance with IAS 31. The aggregate amount of capital and reserves at 31 March 2010 was £349.8m (2008-2009: £332.2m) and the loss for the year was £22.5m (2008-2009 – £15.5m).

**d. RCUK Shared Services Centres Limited (SSC) (registered in England, registration number 6330639)**

The Council's share ownership in RCUK Shared Services Centre Limited (SSC) is one (2009: one, 2008: one) 'A' ordinary share of £1 and 1,622,660 (2009: 1,622,660, 2008: nil) 'B' shares of £1 each. The 'A' shares carry a voting right per share. Each of the seven Research Councils are joint investors in the project and each Council's individual share is 14%. The 'B' shares convey ownership rights to the holder, including any distributions or proceeds from sale of the SSC. The 'B' shares are apportioned in accordance with the agreed share of the implementation costs – the Council's share ownership is therefore 20.54% (2009: 20.54%).

The operating results, assets and liabilities of SSC Ltd. are reflected in STFC's Financial Statements in accordance with IAS 31. The aggregate amount of capital and reserves at 31 March 2010 was £6.033m (2008-2009 £6.522m ) and the loss for the year was £0.489m (2008:2009: £1.378m).

**e. ILL**

STFC, as the UK representative, is one of three associate members of the ILL alongside the French and German Foreign Ministries. STFC holds 50 shares in ILL (33%) and contributes 33% of ILL's funding. The remainder of the shares are evenly distributed between the Foreign Ministries of Germany and France. The shares are not publicly traded and currently have no open market value.

The operating results, assets and liabilities of ILL are reflected in STFC's Financial Statements in accordance with IAS 31. The aggregate amount of capital and reserves at 31 March 2010 was £105m (2008-2009 £102m, and the loss for the year was £nil (2008:2009: £nil).

**f. HSIC PubSP**

The Harwell Science and Innovation Campus Limited Partnership (HSIC LP) was created in 2008 for the purpose of developing the campus as a world-leading centre for science, technology and innovation. The partners in HSIC LP are Goodman, an international property group (via a special purpose vehicle) and Harwell Science and Innovation Campus Public Sector Partnership (PubSP), which was established in February 2008 to hold the public sector's interest in the HSIC JV.

STFC holds a nominal share (0.04%) in PubSP with the UKAEA being the majority shareholder. This reflects respective capital contributions of the partners. Management and control of PubSP is shared jointly between STFC and UKAEA.

The operating results, assets and liabilities of HSIC PubSP are reflected in STFC's Financial Statements in accordance with IAS 31. The aggregate amount of capital and reserves at 31 March 2010 was £2.802m (2008-2009 £2.915m), and the loss for the year was £0.167m (2008:2009: £0.084m).

## g. Other

### International collaborations

As detailed in Note 8 STFC makes significant contributions to a number of European organisations in addition to ILL: EISCAT, AAT, ESA, CERN, ESF, ESO, and ESRF. STFC holds voting powers in each of these organisations and also holds 1,400 common shares in ESRF (14%).

With the exception of ILL, STFC does not have the ability or power to exercise significant influence over any of these organisations. The financial results of these organisations are not reflected in STFC's Financial Statements and the contributions to these organisations are shown as expenditure through the Statement of Net Expenditure.

### Spectrum (General Partner) Limited (registration number 4409886)

The Council holds 21,875 ordinary shares of 0.01p (21.875% interest) in Spectrum (General Partner) Limited. This company was set up to act as the Advisory Board for the Rainbow Seed Fund (RSF) and its purpose is to ensure that the RSF operates within the parameters set out by BIS and to monitor the performance of the Fund and the Fund Manager.

The RSF is a limited partnership comprised of four core partners (STFC, the Biology and Biological Science Research Council (BBSRC), the Natural Environment Research Council (NERC) and the Defence Science and Technology Laboratory (Dstl)) and seven associate partners (the United Kingdom Atomic Energy Authority, Culham, The Food and Environment Research Laboratory (FERA, formerly Central Science Laboratory), The Health Protection Agency (HPA), The Veterinary Laboratories Agency (VLA), The National Physical Laboratory (NPL), The Scottish Crop Research Institute (SCRI) and The Macaulay Land Use Research Institute).

The Fund provides seed capital investment to commercialise the outcomes of science research in the publicly funded partner organisations' Government facilities. Midven Limited manages the Fund under contract.

No entry is made in the Statement of Financial Position as the value of the holdings and the trading position of this company is not material to the accounts.

### Daresbury Science and Innovation Campus (DSIC)

Throughout the year STFC has continued to pursue the development of DSIC through Daresbury Science and Innovation Campus Ltd (DSIC Ltd). DSIC Ltd, a company limited by guarantee, was established in 2006 to develop the vision and plans for the campus and coordinate its management and promotion. STFC is one of six members of DSIC Ltd, alongside the Northwest Regional Development Agency (NWDA), Halton Borough Council, University of Lancaster, University of Liverpool and The University of Manchester. NWDA and STFC each have two seats on the Board.

As well STFC's Daresbury Laboratory, the Campus currently includes the Cockcroft Institute (National Centre for Accelerator Science) and the Daresbury Innovation Centre, which provides accommodation and business facilities for over 80 technology-focused companies/organisations, The Cockcroft Institute and Innovation Centre buildings are both owned by NWDA, which is also funding the construction of Vanguard House, a new 3,300 sq m office, laboratory and workshop facility.

DSIC is now engaged in a procurement process to select a commercial sector partner with whom to form a joint venture as a sustainable vehicle for fulfilling the potential of the Campus over the next 15-20 years. Under the proposed joint venture arrangements, NWDA will contribute its campus assets to the new entity and certain STFC and Halton Borough Council property assets will be available for the joint venture to draw-down for development in the future, on achievement of pre-agreed conditions. The procurement process is at an advanced stage and it is anticipated that the new joint venture will be established during 2010.

No entry is made in the Statement of Financial Position in respect of DSIC as the value of the holding and the trading position of this organisation is not material to the Financial Statements.

### Neos Interactive Limited (registration number 3564252)

The Council is a minority shareholder (<1%) in Neos Interactive Limited (registered in England).

No entry is made in the Statement of Financial Position as the value of the holdings and the trading position of this company is not material to the Financial Statements.

## 14. Trade receivables and other current assets

	STFC Total 2010 £'000	Consolidated Total 2010 £'000	Consolidated Total 2009 £'000	Consolidated Total 2008 £'000
<b>(a) Analysis by type</b>				
<b>Amounts falling due within one year</b>				
Trade receivables	10,309	10,309	13,066	10,263
Deposits and advances	590	590	341	220
Other receivables	141	141	3,088	590
Prepayments and accrued income	17,286	17,286	33,157	26,123
Amounts recoverable on long term contracts	7,583	7,583	8,084	9,402
Early retirements - amounts recoverable	830	830	750	1,023
<b>Total</b>	<b>36,739</b>	<b>36,739</b>	<b>58,486</b>	<b>47,621</b>
<b>Amounts falling due after more than one year</b>				
Early retirements – amounts recoverable	3,558	3,558	4,163	4,325
Prepayments	3,419	3,419	3,501	3,583
Loans to staff	78	78	127	160
<b>Total</b>	<b>7,055</b>	<b>7,055</b>	<b>7,791</b>	<b>8,068</b>

Included within accrued income is £1.1m (2008-2009: £0.6m) of income relating to EU funding.

In consideration of a one off payment of £4.095m the Council has leased land from the United Kingdom Atomic Energy Authority for a period of 50 years from 1 January 2003. In accordance with IAS 17 this lease has been recognised as a current and non current prepayment – £0.082m and £3.4m respectively.

	STFC Total 2010 £'000	Consolidated Total 2010 £'000	Consolidated Total 2009 £'000	Consolidated Total 2008 £'000
<b>(b) Analysis by source</b>				
<b>Amounts falling due within one year</b>				
Other central government bodies	7,461	7,461	14,428	10,075
Local authorities	80	80	62	-
NHS bodies	2	2	6	-
Public corporations and trading funds	-	-	93	146
Bodies external to government	29,196	29,196	43,897	37,400
<b>Total</b>	<b>36,739</b>	<b>36,739</b>	<b>58,486</b>	<b>47,621</b>
<b>Amounts falling due after more than one year</b>				
Other central government bodies	6,977	6,977	7,664	7,908
Bodies external to government	78	78	127	160
<b>Total</b>	<b>7,055</b>	<b>7,055</b>	<b>7,791</b>	<b>8,068</b>

An analysis of the provision held against trade receivables for doubtful debts is shown below:

	STFC Total 2010 £'000	Consolidated Total 2010 £'000	Consolidated Total 2009 £'000
Provision for doubtful debts at beginning of period charged to Statement of Net Expenditure	378	378	732
Utilised during the period	(204)	(204)	(429)
Released/(increased) during the period	9	9	75
<b>Provision for doubtful debts at the end of period</b>	<b>183</b>	<b>183</b>	<b>378</b>

The ageing of trade receivables at the balance sheet date, net of the doubtful debt provision, is as follows:

	STFC Total 2010 £'000	Consolidated Total 2010 £'000	Consolidated Total 2009 £'000
Current	5,694	5,694	11,091
0-60 days past due	3,440	3,440	946
61-360 days past due	1,170	1,170	788
Over 360 days past due	5	5	241
	<b>10,309</b>	<b>10,309</b>	<b>13,066</b>

There are no indicators at 31 March 2010 that debtors will not meet their payment obligations in respect of the net amount of trade receivables recognised in the Statement of Financial Position.

## 15. Derivatives and other financial instruments

IAS 39 Financial Instruments: Recognition and measurement and IAS 32 Financial Instruments: Disclosures have been adopted by STFC with effect from 1 April 2008. IAS 32 requires disclosure of the role which financial instruments have had during the period in creating or changing the risks an entity faces in undertaking its activities. Because of the largely non-trading nature of its activities and the way in which government bodies are financed, the Council is not exposed to the degree of financial risk faced by business entities. Moreover, financial instruments play a much more limited role in creating or changing risk than would be typical of the listed companies to which IAS 39 and IAS 32 mainly apply. The Council has very limited powers to borrow or invest surplus funds and except for forward purchases of foreign currency, financial assets and liabilities are generated by day-to-day operational activities and are not held to change the risks facing the Council in undertaking its activities.

### Liquidity risk

The Council's net revenue resource requirements are financed by resources voted annually by Parliament, and administered as grant-in-aid through BIS just as its capital expenditure largely is. The Council is not therefore exposed to significant liquidity risks.

### Interest-rate risk

All of the Council's financial assets and liabilities carry nil or fixed rates of interest and the Council is not therefore exposed to interest-rate risk.

## Currency risk

The Council's exposure to foreign currency risk is not significant because the risk exposure on the Council's principal international subscriptions is covered by the BIS whereby the Council is compensated for variances from a base position. At the instigation of BIS, the compensation arrangements are subject to change before the end of the current spending review period (31 March 2011).

*Cash flow hedge.* Through the use of forward contracts, the Council seeks to mitigate its risk of foreign exchange rate movements on its annual subscription commitment to CERN. This subscription is payable in Swiss Francs at set points throughout the year.

For 2009-2010, three contracts with an agreed cost of £62,312,318 have been fair valued (using the spot rate ruling on 31 March 2010) at £63,965,885 with the difference being credited to the income and expenditure reserve. All of these forward contracts completed on the 8 April 2010 at their contracted cost.

### Purchase of Swiss Francs in 2009-2010:

Date contract placed	Settlement date	Cost £'000	Fair value as at 31 March 2010 £'000	Credit to reserves £'000
16 December 2009	8 April 2010	20,295	21,322	1,027
16 December 2009	8 April 2010	21,202	21,322	120
30 October 2009	8 April 2010	20,815	21,322	507
		<b>62,312</b>	<b>63,966</b>	<b>1,654</b>

For both prior years forward contracts were agreed at a cost as detailed below and were fair valued (using the spot rate ruling at the year end) with the difference being credited to the income and expenditure reserve. All contracts were completed on the agreed date at their contract costs, as detailed below.

### Purchase of Swiss Francs in prior years:

Date contract placed	Settlement date	Cost £'000	Fair value as at 31 March £'000	Credit to reserves £'000
30 Sept 2008	8 April 2009	27,996	32,959	4,963
31 Oct 2008	8 April 2009	24,499	26,967	2,468
		<b>52,495</b>	<b>59,926</b>	<b>7,431</b>
5 Nov 2007	7 April 2008	23,231	27,309	4,078
10 Dec 2007	7 April 2008	25,764	29,791	4,027
		<b>48,995</b>	<b>57,100</b>	<b>8,105</b>

## 16. Cash and cash equivalents

	STFC Total 2010 £'000	Consolidated Total 2010 £'000	Consolidated Total 2009 £'000	Consolidated Total 2008 £'000
Balance at 1 April	7,211	7,211	30,765	21,160
(Decrease)/increase in cash and cash equivalents	(2,832)	(2,832)	(23,554)	9,605
<b>Balance at 31 March</b>	<b>4,379</b>	<b>4,379</b>	<b>7,211</b>	<b>30,765</b>

At 31 March 2010 £1.9m (2009: £1.1m, 2008: £17.8m) was held by the Office of the Paymaster General (OPG). The balance was held in commercial bank accounts.

## 17. Assets classified as held for sale

	STFC Total 2010 £'000	Consolidated Total 2010 £'000	Consolidated Total 2009 £'000	Consolidated Total 2008 £'000
Balance at 31 March	861	861	1,504	2,366

At the current period end, assets classified as held for sale represent freehold and leasehold houses that are being actively marketed for sale and the completion dates are expected to occur before 31 March 2011. The value of assets classified as held for sale represents the expected net disposal proceeds.

## 18. Trade payables and other current liabilities

	STFC Total 2010 £'000	Consolidated Total 2010 £'000	Consolidated Total 2009 £'000	Consolidated Total 2008 £'000
<b>(a) Analysis by type</b>				
Amounts falling due within one year				
Trade payables	14,756	14,756	10,192	15,884
Other payables	868	868	2,774	6,390
Accruals and deferred income	49,246	49,246	61,720	64,390
Early retirement costs	2,196	2,196	2,138	2,013
Social security and other taxes	1,737	1,737	1,432	2,783
<b>Total</b>	<b>68,803</b>	<b>68,803</b>	<b>78,256</b>	<b>91,460</b>
Amounts falling due after more than one year				
Early retirement costs	9,037	9,037	9,293	9,514

### (b) Analysis by source

Amounts falling due within one year				
Other central government bodies	13,897	13,897	15,645	10,107
Local authorities	-	-	3	3
NHS bodies	-	-	-	3
Public corporations and trading funds	-	-	-	35
Bodies external to government	54,906	54,906	62,608	81,312
<b>Total</b>	<b>68,803</b>	<b>68,803</b>	<b>78,256</b>	<b>91,460</b>
Amounts falling due after more than one year				
Other central government bodies	9,037	9,037	9,293	9,514

## 19. Provisions for liabilities and charges

	STFC Total 2010 £'000	Consolidated Total 2010 £'000	Consolidated Total 2009 £'000	Consolidated Total 2008 £'000
<b>Decommissioning</b>				
Balance at 1 April	26,446	26,446	16,979	16,768
Increase in provision	2,500	2,500	6,845	-
Reduction in provision	-	-	-	(151)
Unwinding of discount	686	686	2,623	362
<b>Balance at 31 March</b>	<b>29,632</b>	<b>29,632</b>	<b>26,447</b>	<b>16,979</b>
<b>Restructuring</b>				
Balance at 1 April	744	744	938	1,997
Utilisation of provision	(744)	(744)	(194)	(952)
Reduction in provision	-	-	-	(307)
Increase in provision	-	-	-	200
<b>Balance at 31 March</b>	<b>-</b>	<b>-</b>	<b>744</b>	<b>938</b>
<b>Restructuring: SRS closure</b>				
Balance at 1 April	9,030	9,030	16,065	26,062
Utilisation of provision	(2,472)	(2,472)	(4,016)	(3,162)
Reduction in provision	(5,155)	(5,155)	(3,020)	(6,835)
<b>Balance at 31 March</b>	<b>1,403</b>	<b>1,403</b>	<b>9,029</b>	<b>16,065</b>
<b>Restructuring: Shared Services Centre</b>				
Balance at 1 April	813	813	789	-
Utilisation of provision	(315)	(315)	-	-
Increase in provision	86	86	24	789
<b>Balance at 31 March</b>	<b>584</b>	<b>584</b>	<b>813</b>	<b>789</b>
<b>Total provisions</b>	<b>31,619</b>	<b>31,619</b>	<b>37,033</b>	<b>34,771</b>

### Analysis of expected timing of discounted flows

	STFC Total 2010 £'000	Consolidated Total 2010 £'000	Consolidated Total 2009 £'000
Within 12 months	1,988	1,988	5,744
In the remainder of the Spending Review period (to 2011)	-	-	4,387
Between 2012 and 2016	9,689	9,689	7,379
Between 2017 and 2021	-	-	10
Thereafter	19,942	19,942	19,513
<b>Balance at 31 March</b>	<b>31,619</b>	<b>31,619</b>	<b>37,033</b>

The discount rate used is 1.8% for pension provisions and 2.2% for all other provisions (2008-2009: 3.2% for pension provisions and 2.2% for all other provisions, 2007-2008).

## Decommissioning of technical facilities

In accordance with: IAS 37: Provisions, Contingent Liabilities and Contingent Assets decommissioning costs are recognised in full as soon as the obligation exists. A corresponding asset is set up in the Statement of Financial Position at the same time with depreciation being charged to the Statement of Net Expenditure over its useful life.

The Council has in place plans for the decommissioning of the ISIS pulsed neutron source and the associated Second Target Station at the Rutherford Appleton Laboratory at the end of its anticipated operating life in 2040. The Council's technical facilities at the island sites (JAC and ING) are long term in nature and estimated to have a thirty year operating life. It is deemed probable that at the end of this life span, or STFC's earlier withdrawal, there would be a requirement to decommission existing facilities. A provision has been created to cover the identified decommissioning costs. This provision was reviewed in 2009-2010 and increased by £2.5m based on the latest estimate of expected costs.

## Restructuring

The opening balance was utilised in full during the year. Liabilities relating to future years are recognised as long term creditors.

### Restructuring: SRS Closure

On 7 March 2005, Lord Sainsbury, the then DTI Minister for Science and Innovation, announced that the Daresbury Synchrotron Radiation Source (SRS) would cease operations on 31 December 2008. The Council estimated the costs of discontinuing the operation of this facility, including the minor decommissioning of the facility, as £27.6 million, after allowing for inflation.

A decision was made in 2009-2010 not to demolish some of the buildings but to utilise them for future income generation. This has resulted in a release of the provision to the Statement of Net Expenditure.

### Restructuring: Research Council Shared Services Centre

The Research Councils and the Research Council Shared Services Ltd. are in the process of developing a Shared Services Centre to carry out the central functions of HR, Finance and IT across the Councils. As a result some Research Councils will incur redundancy costs, particularly where existing staff live a distance away from Swindon where the Centre will be located.

The Research Councils have collectively agreed that they will be jointly liable for all necessary redundancies. The Councils calculated their likely redundancy liabilities in order to make the 2008-2009 provision, this has now been updated for movements during 2009-2010. A funding allocation model was developed and agreed by all the Research Councils and this identified the proportion of SSC project spend and liability that each individual Council would incur. The total provision for redundancies has been apportioned using this model.

The first table below shows the Council position only – that is the amount the Council needs to provide for its own redundancies arising out of the development of the SSC. The second table shows the individual Council provisions for redundancies and system termination costs. The table then shows the proportion of the total liability each Council will incur and the amount of provision that that represents – this is the figure that has been recorded in the accounts of each Council.

Council's individual provision	Redundancies £'000	System termination £'000	Total £'000
Balance at 1 April 2008	-	-	-
Increase in provision	520	-	520
Balance at 1 April 2009	520	-	520
Utilisation of provision	(600)	-	(600)
Increase in provision	80	-	80
<b>Balance at 31 March 2010</b>	<b>-</b>	<b>-</b>	<b>-</b>

Provision allocation	AHRC £'000	BBSRC £'000	EPSRC £'000	ESRC £'000	MRC £'000	NERC £'000	STFC £'000	SSC £'000	TOTAL £'000
Opening provision required for Council's own redundancies	68	431	-	-	1,276	909	520	-	3,204
Opening provision required for system termination fee	-	-	-	-	754	-	-	-	754
Opening total provision	68	431	-	-	2,030	909	520	-	3,958
Net movement in provisions	15	23	-	-	(469)	(337)	(520)	174	(1,114)
Closing total provision	83	454	-	-	1,561	572	-	174	2,844
% of total liability to be borne by the Council	1.33	20.54	8.24	1.83	26.98	20.54	20.54	-	100%
<b>Provision to be borne by each Council</b>	<b>38</b>	<b>584</b>	<b>234</b>	<b>52</b>	<b>768</b>	<b>584</b>	<b>584</b>	<b>-</b>	<b>2,844</b>

This note is replicated across all the Research Council annual financial statements.

## 20. Contingent liabilities

From 1 April 2007, the STFC took over responsibility for the United Kingdom's (UK's) subscriptions to ILL and ESRF. As a consequence of this the STFC inherited the UK's share of the likely decommissioning and other costs of these facilities to be met in future years. As there has been no past obligating event (STFC does not have singular control over the decommissioning and other costs of these facilities) and as the timing and amount of the decommissioning and other costs cannot be known with any certainty these decommissioning costs have been treated as a contingent liability in accordance with IAS37. The estimated value of the contingent liability at 31 March 2010 is £31.4m (ILL £29.1m and ESRF £2.3m), (2009: £23.1m (ILL £20.7m and ESRF £2.4m), 2008; £40.0m (ILL £38.0m and ESRF £2.0m)). The ILL contingent liability has increased by £8.4m (from £20.7m to £29.1m) as the costs associated with reprocessing fuel elements and staff related commitments have been recognised in 2009-2010.

As set out under note 8 the Council collaborated with a number of other international partners in the funding, management and operation of technical facilities which were not owned by STFC. In the event of a decision to withdraw from any of these arrangements, it is likely that STFC would assist in the search for a replacement partner to ensure that technical commitments were met. The most significant international collaborations are in respect of the CERN, ESO and ESA. In addition, STFC was a member of the Gemini collaboration. For each of these four facilities there was the possibility that STFC would be obliged to contribute to decommissioning costs arising from a decision taken to discontinue operations. The decisions to decommission were not wholly within STFC's control. There were no current plans for decommissioning nor were there any plans for STFC to withdraw from these facilities.

On the basis of legal advice sought during the year, the Council is not deemed to have a liability in respect of the Visible and Infrared Survey Telescope for Astronomy (VISTA).

## 21. Commitments

The Group had the following commitments at the balance sheet date:

<b>a. Research grants</b>	STFC Total	2010 Consolidated Total	2009 Consolidated Total	2008 Consolidated Total
	£'000	£'000	£'000	£'000
Payable within 1 year	110,114	110,114	118,686	106,499
Payable in 2 to 5 years	153,680	153,680	205,020	175,242
Payable beyond 5 years	10,485	10,485	8,010	499
<b>Total commitment</b>	<b>274,279</b>	<b>274,279</b>	<b>331,716</b>	<b>282,240</b>

<b>b. Capital expenditure</b>	STFC Total	2010 Consolidated Total	2009 Consolidated Total	2008 Consolidated Total
	£'000	£'000	£'000	£'000
<b>Contracted but not provided for:</b>				
Property, plant and equipment	6,154	6,154	17,239	19,917
Intangible assets	-	-	-	-
	<b>6,154</b>	<b>6,154*</b>	<b>17,239</b>	<b>19,917</b>

\* Figure includes £1.3m that represents the Council's individual share of the future committed spend on the Shared Services Centre. Costs incurred to 31 March 2010 have been recognised through the Statement of Net Expenditure and the Asset under Construction.

<b>c. ESO capital contribution</b>	STFC Total	2010 Consolidated Total	2009 Consolidated Total	2008 Consolidated Total
	£'000	£'000	£'000	£'000
Payable within 1 year	10,357	10,357	10,612	6,976
Payable in 2 to 5 years	11,370	11,370	22,752	26,572
<b>Total commitment</b>	<b>21,727</b>	<b>21,727</b>	<b>33,364</b>	<b>33,548</b>

Represents the UK's contribution to ESO's capital base.

### **d. Operating leases**

Total future minimum lease payments under non-cancellable operating leases are given below:

<b>Land and buildings</b>	STFC Total	2010 Consolidated Total	2009 Consolidated Total	2008 Consolidated Total
	£'000	£'000	£'000	£'000
Not later than one year	162	471	199	151
Later than one year and not later than five years	95	1,428	751	101
Later than five years	-	828	242	-
	<b>257</b>	<b>2,727</b>	<b>1,192</b>	<b>252</b>
<b>Other leases</b>				
Not later than one year	29	29	-	5
Later than one year and not later than five years	45	45	-	31
Later than five years	-	-	2	-
	<b>74</b>	<b>74</b>	<b>2</b>	<b>36</b>

- a. STFC has granted an operating lease to DLSL. The lease is for a peppercorn rent for a period of 40 years from 31 January 2003. The lease covers part of the land leased to STFC from the UKAEA and part of the Council's own land.
- b. The STFC facilities at the JAC in Hawaii are located on land owned by the University of Hawaii. There are operating leases in place in respect of the land on which the JCMT telescope and base office are based – these leases are for a peppercorn rent and expire in December 2033 and July 2047 respectively. There is a further lease in place for the land on which the UKIRT telescope is based, this is also for a peppercorn rent and STFC grants the University of Hawaii exclusive use of 15% facility time in lieu of land rental. This lease expires in December 2033.
- c. The STFC facility at ING is located on Spanish land. There is an operating lease in place between the Spanish host, Instituto de Astrofísica de Canarias (IAC) and STFC for a peppercorn rent. STFC gives 20% of telescope time to IAC in lieu of land rental. The current lease expires in May 2012 but is expected to be renewed for a further 10 year.
- d. In consideration of a one off payment of £4.095m the Council has leased land from the United Kingdom Atomic Energy Authority for a period of 50 years from 1 January 2003. In accordance with IAS 17 this lease has been recognised as a current and non current prepayment in Note 14.

## 22. Related party transactions

The Council is a NDPB sponsored by BIS; BIS is regarded as a related party. During the year, the Council had various material transactions with BIS and with other entities for which BIS is the sponsoring or parent body: Biotechnology and Biological Sciences Research Council, Engineering and Physical Sciences Research Council, Economic and Social Research Council, Medical Research Council and the Natural Environment Research Council and the income generated from these bodies is set out in Note 3.

In addition the Council had various material transactions with other Government Departments and other central government bodies and the income generated from these bodies is set out in Note 3.

Transactions have taken place between the Council and the RCUK Shared Services Centre Ltd in respect of the HR, strategic procurement and IT services being supplied in the year.

As set out in Note 13 above, the Council holds the major interest in DLSL. Related party transactions with DLSL for the period ending 31 March 2010 were as follows:

	2010 £'000	2009 £'000
Provision of technical and scientific manpower, costs collected on behalf of DLSL, accommodation and site services	2,175	2,064
Purchase of goods and services from DLSL	97	44
Amounts owing to DLSL	791	735
Amounts owing by DLSL	(154)	(266)
<b>Outstanding balance at 31 March</b>	<b>637</b>	<b>469</b>

The related party transactions disclosed above exclude funding of the joint venture which is disclosed on the face of the Consolidated Statement of Net Expenditure.

As set out in Note 13 above, the Council holds a 20.54% interest in RCUK SSC Limited. Related party transactions with RCUK SSC Limited for the period ending 31 March 2009 were as follows:

	2010 £'000	2009 £'000
Administrative expenses charged to RCUK SCC Limited	3,711	4,301
Chargess incurred from RCUK SCC Limited	13,369	4,879
Amounts owing to RCUK SSC	685	266
Amounts owing by RCUK SSC	(649)	(2,658)
Outstanding balance at 31 March	36	(2,392)
<b>Amounts owing to RCUK SCC in relation to unpaid share capital</b>	<b>-</b>	<b>431</b>

As set out in Note 13 above, the Council holds a one-third interest in Institut Laue Langevin. Related party transactions with ILL for the period ending 31 March 2010 were as follows:

	2010 £'000	2009 £'000
Subscription to ILL	16,981	16,631
<b>Total</b>	<b>16,981</b>	<b>16,631</b>
Amounts owing to ILL	-	-
Amounts owing by ILL	-	-
<b>Outstanding balance at 31 March</b>	<b>-</b>	<b>-</b>

As set out in Note 13 above, the Council holds a minority interest in Harwell Science and Innovation Campus Public Sector (PubSP) and 50% management control. Related party transactions with PubSP for the period ending 31 March 2010 are that of the £58,000 of capital introduced to the partnership £40,490 related to partnership expenses (2008-2009: nil).

PubSP has in turn 50% management control over HSIC Limited Partnership. Related party transactions between STFC (via HSIC PubSP) and HSIC LP for year ended 31 March 2010 are as follows:

	2010 £'000	2009 £'000
Purchases from HSIC	406	187
Amounts owing to HSIC	82	-
<b>Outstanding balance at 31 March</b>	<b>82</b>	<b>-</b>

During the year, the Council authorised grants and awards and entered into contracts for goods and services with institutions or other bodies where Council members hold senior positions and where employees of the Council hold honorary or part-time teaching positions or undertake work in a private consultancy capacity. The numbers and aggregate values of such contracts, grants and awards were as follows:

Name and Related Party	Number of grants	Aggregate value £'000	Number of contracts	Aggregate value £'000
<b>Council members</b>				
<b>Professor Keith Mason*</b> University of Wales, Aberystwyth	1	658	1	23
<b>Professor Martin Barstow</b> University of Leicester	17	9,873	1	1
<b>Professor Keith Burnett</b> University of Sheffield	8	3,159	2	5
<b>Professor Mike Edmunds</b> University of Cardiff	3	112	1	8
<b>Professor Peter Knight</b> Imperial College	21	12,686	11	1,178
<b>Professor James Stirling</b> University of Cambridge	17	12,359	1	2
University of Durham	7	5,619	-	-
University of Oxford	17	14,009	19	1,206

\*Also a member of staff

Name and Related Party	Number of grants	Aggregate value £'000	Number of contracts	Aggregate value £'000
<b>Members of staff</b>				
<b>Professor Mike Dunne</b> Imperial College, London	21	12,686	11	1,178
<b>Mr Richard Holdaway</b> University of Southampton	2	1,255	1	1
<b>Professor Keith Jeffrey</b> University of Cardiff	3	112	1	8
<b>Professor Richard Wade</b> University of Oxford University of Wales, Aberystwyth	17 1	14,009 658	19 1	1,206 23
<b>Professor Colin Whitehouse</b> University of Birmingham University of Oxford	7 17	7,034 14,009	3 19	29 1,206
<b>Doctor Peter Allan</b> University of Southampton	2	1,255	1	1
<b>Doctor Neil Geddes</b> University of Oxford	17	14,009	19	1,206
<b>Professor John Simpson</b> University of Liverpool	7	8,294	1	69

None of the above named persons were involved in the authorisation of grants or awards or was involved in the placing of contracts with the institutions or bodies where they hold senior positions or, in the case of employees of the Council, hold honorary or part-time teaching positions.

The Council also provided time on its scientific facilities, either paid for directly by users, or funded by grant-giving bodies (principally the other UK Research Councils), to researchers at institutions where Council members hold senior positions and where employees of the Council hold honorary or part-time teaching positions. The related parties using the Council's facilities were as follows:

Name	Related Party
<b>Council members</b>	
Professor Keith Mason	University of Wales, Aberystwyth
Professor Martin Barstow	University of Leicester
Professor Keith Burnett	University of Sheffield
Professor Mike Edmunds	University of Cardiff
Professor Peter Knight	Imperial College
Professor James Stirling	University of Cambridge University of Durham University of Oxford
<b>Members of staff</b>	
Doctor Peter Allan	University of Southampton
Professor Richard Holdaway	University of Southampton
Professor Mike Dunne	Imperial College, London Scitech Precision Ltd
Doctor Neil Geddes	University of Oxford
Professor Keith Jeffery	University of Cardiff Heriot Watt University
Professor Pavel Matousek	Cobalt Light Systems Ltd
Professor Richard Wade	University of Oxford University of Wales, Aberystwyth
Professor Colin Whitehouse	University of Birmingham University of Oxford
Professor John Womersley	University of Oxford
Professor John Simpson	University of Liverpool

None of the above named persons was involved in the award of facility time to the institutions or bodies where they hold senior positions or, in the case of employees of the Council, hold honorary or part-time teaching positions.

Three STFC senior employees hold immaterial shareholdings in a number of SIL spin out companies.

No board member, STFC member of staff or other related parties has undertaken any material transactions with the Council during the year.

## 23. Events after the reporting period

From 1 April 2010 the Government has created a new UK Space Agency to take over responsibility for policy and key Government budgets for space, including the European Space Agency (ESA) subscriptions currently funded by the Research Councils, including STFC. As a result, a service level agreement has been signed between STFC and the UK Space Agency to allow the Agency to manage the programme. This includes transfer of the subscription (£103.0m), the space development and post-launch programme (£21.0m) and access to associated STFC staff. Grants for exploitation continue to be awarded and administered by STFC.

Since the issue of the grant letter by BIS notifying STFC of its 2010-2011 allocation BIS has advised that a £0.2m saving on STFC's budget will be required during 2010-2011. We expect to accommodate this reduction whilst still meeting our liabilities as they fall due.

At the date of issue of this report we remain satisfied that the preparation of the Financial Statements on a going concern basis remains appropriate.

It was announced in the Budget on 22 June 2010 that the Government intends to adopt the Consumer Price Index (CPI) for the indexation of public service pensions from April 2011. This will have an impact upon the future operation of the pension schemes that STFC provides to employees.

IAS 10: Events after the Balance Sheet Date, requires the disclosure of the date on which the Financial Statements were 'authorised for issue' and who gave that authorisation. The Financial Statements were authorised for issue on 8 December 2010 by Keith Mason, STFC Accounting Officer.

## 24. Losses and special payments

During the year there were 32 (2008-2009: 84) losses and special payments totalling £373,206 (2008-2009: £1,006,136) including 6 (2008-2009: 47) bad debt write offs of £204,093 (2008-2009: £487,479), 13 (2008-2009: 4) accounting write offs of £140,554 (2008-2009: £240,205), 13 (2008-2009: nil) other payments of £28,559.

## 25. Capital management

As a NDPB the Council is required to remain within its specific budgeted limits agreed with BIS under the governance of Resource Accounting and Budgeting (RAB); the regime by which HM Treasury, on behalf of Central Government, ensures Public Sector spending is satisfactorily controlled. In compliance with this regime, the Council was required throughout the year to advise the BIS of its total forecast net expenditure for the year end, based on the requirement from HM Treasury to adhere as closely as possible to the forecast.

Adherence to this forecast required detailed and robust financial management, both in forecasting the annual outcome and ensuring rapid responses to the changing circumstances of the Council's substantial programme.

## 26. Additional statements on financial instruments

There are no material differences between the carrying value of non-derivative financial assets and financial liabilities and their fair values at the balance sheet date.

Financial instruments are, in principle, measured at fair value when first recognised.

Investments in equity instruments, for which no listed price or an active market exists and whose fair values cannot be reliably determined with justifiable expense, are measured at cost less impairment.

Receivables are measured at amortised cost. In principle, the amortised cost in the case of short term receivables corresponds to the nominal value or the repayment sum. If there is any evidence of impairment, impairment losses are recognised through the use of a provision for doubtful debts account in the Statement of Net Expenditure.

Derivative financial instruments are measured at fair value, which always corresponds to the carrying value.

Trade payables are measured at amortised cost.

## 27. Transition to IFRS

This is the first year that the Council has presented its Financial Statements under IFRS.

The accounting policies set out in note 1 have been applied in preparing the Financial Statements for the year ended 31 March 2010, the comparative information presented in these Financial Statements for the year ended 31 March 2009 and in the preparation of the opening IFRS balance sheet at 1 April 2008.

In preparing its opening IFRS Statement of Financial Position, the Council has adjusted amounts previously reported in the Financial Statements prepared in accordance with UK GAAP. An explanation of how the transition from UK GAAP to IFRS has affected the group's financial position, financial performance and cash flows is set out in the following tables and notes:

### Reconciliation of Consolidated Statement of Financial Position as at 1 April 2008

	Consolidated 2007-2008 under UK GAAP	IAS 31 £'000	IAS 16, IAS 17 £'000	IAS 1 £'000	IAS 19, IAS 38 £'000	IAS 39 £'000	IFRS 5 £'000	Consolidated 2007-2008 under IFRS £'000
<b>Non-current assets</b>								
Intangible assets	-	-	-	-	635	-	-	635
Property, plant and equipment	857,248	(303,450)	(3,665)	-	(635)	-	(2,389)	547,109
Investments	61	-	-	-	-	-	-	61
Trade and other receivables	-	-	3,583	4,485	-	-	-	8,068
Investments under equity method	-	291,150	-	-	-	-	-	291,150
<b>Total non-current assets</b>	<b>857,309</b>	<b>(12,300)</b>	<b>(82)</b>	<b>4,485</b>	<b>-</b>	<b>-</b>	<b>(2,389)</b>	<b>847,023</b>
<b>Current assets</b>								
Inventories	24	-	-	-	-	-	-	24
Trade and other receivables	53,277	(1,253)	82	(4,485)	-	-	-	47,621
Derivative financial instruments	-	-	-	-	-	8,105	-	8,105
Cash and cash equivalents	47,485	(16,720)	-	-	-	-	-	30,765
<b>Total current assets</b>	<b>100,786</b>	<b>(17,973)</b>	<b>82</b>	<b>(4,485)</b>	<b>-</b>	<b>8,105</b>	<b>-</b>	<b>86,515</b>
Assets classified as held for resale	-	-	-	-	-	-	2,366	2,366
<b>Total assets</b>	<b>958,095</b>	<b>(30,273)</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>8,105</b>	<b>(23)</b>	<b>935,904</b>
<b>Current liabilities</b>								
Trade and other payables	(101,779)	13,735	-	-	(3,416)	-	-	(91,460)
Provisions	-	-	-	(4,210)	-	-	-	(4,210)
Current tax payable	(69)	69	-	-	-	-	-	-
<b>Total current liabilities</b>	<b>(101,848)</b>	<b>13,804</b>	<b>-</b>	<b>(4,210)</b>	<b>(3,416)</b>	<b>-</b>	<b>-</b>	<b>(95,670)</b>
<b>Non-current assets less net current liabilities</b>	<b>856,247</b>	<b>(16,469)</b>	<b>-</b>	<b>(4,210)</b>	<b>(3,416)</b>	<b>8,105</b>	<b>(23)</b>	<b>840,234</b>
<b>Non-current liabilities</b>								
Provisions	(45,972)	11,201	-	4,210	-	-	-	(30,561)
Trade and other payables	(33,947)	24,433	-	-	-	-	-	(9,514)
<b>Total non-current liabilities</b>	<b>(79,919)</b>	<b>35,634</b>	<b>-</b>	<b>4,210</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>(40,075)</b>
<b>Assets less liabilities</b>	<b>776,328</b>	<b>19,165</b>	<b>-</b>	<b>-</b>	<b>(3,416)</b>	<b>8,105</b>	<b>(23)</b>	<b>800,159</b>
<b>Reserves</b>								
Income and expenditure reserve	639,781	(375)	(2,944)	-	(3,416)	8,105	(23)	641,128
Revaluation reserve	136,547	19,540	2,944	-	-	-	-	159,031
Government grant reserve	-	-	-	-	-	-	-	-
<b>Government funds</b>	<b>776,328</b>	<b>19,165</b>	<b>-</b>	<b>-</b>	<b>(3,416)</b>	<b>8,105</b>	<b>(23)</b>	<b>800,159</b>

## Reconciliation of Consolidated Statement of Financial Position as at 31 March 2009

	Consolidated IAS 31 2008-2009 under UK GAAP		IAS 16, IAS 17	IAS 1	IAS 19, IAS 38	IAS 39	IFRS 5	Consolidated 2008-2009 under IFRS
	£'000	£'000	£'000	£'000	£'000	£'000	£'000	£'000
<b>Non-current assets</b>								
Intangible assets	-	-	-	-	585	-	-	585
Property, plant and equipment	920,865	(318,031)	(3,583)	-	(585)	-	(1,474)	597,192
Investments	1,623	(1,623)	-	-	-	-	-	-
Trade and other receivables	-	-	3,501	4,290	-	-	-	7,791
Investments under equity method	-	314,363	-	-	-	-	-	314,363
<b>Total non-current assets</b>	<b>922,488</b>	<b>(5,291)</b>	<b>(82)</b>	<b>4,290</b>	<b>-</b>	<b>-</b>	<b>(1,474)</b>	<b>919,931</b>
<b>Current assets</b>								
Inventories	-	-	-	-	-	-	-	-
Trade and other receivables	63,623	(929)	82	(4,290)	-	-	-	58,486
Derivative financial instruments	7,431	-	-	-	-	-	-	7,431
Cash and cash equivalents	19,476	(12,265)	-	-	-	-	-	7,211
<b>Total current assets</b>	<b>90,530</b>	<b>(13,194)</b>	<b>82</b>	<b>(4,290)</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>73,128</b>
Assets classified as held for resale	-	-	-	-	-	-	1,504	1,504
<b>Total assets</b>	<b>1,013,018</b>	<b>(18,485)</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>30</b>	<b>994,563</b>
<b>Current liabilities</b>								
Trade and other payables	(86,035)	10,308	-	-	(2,529)	-	-	(78,256)
Provisions	-	-	-	(5,744)	-	-	-	(5,744)
Current tax payable	-	-	-	-	-	-	-	-
<b>Total current liabilities</b>	<b>(86,035)</b>	<b>10,308</b>	<b>-</b>	<b>(5,744)</b>	<b>(2,529)</b>	<b>-</b>	<b>-</b>	<b>(84,000)</b>
<b>Non-current assets less net current liabilities</b>	<b>926,983</b>	<b>(8,177)</b>	<b>-</b>	<b>(5,744)</b>	<b>(2,529)</b>	<b>-</b>	<b>30</b>	<b>910,563</b>
<b>Non-current liabilities</b>								
Provisions	(48,248)	11,215	-	5,744	-	-	-	(31,289)
Trade and other payables	(30,913)	21,620	-	-	-	-	-	(9,293)
<b>Total non-current liabilities</b>	<b>(79,161)</b>	<b>32,835</b>	<b>-</b>	<b>5,744</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>(40,582)</b>
<b>Assets less liabilities</b>	<b>847,822</b>	<b>24,658</b>	<b>-</b>	<b>-</b>	<b>(2,529)</b>	<b>-</b>	<b>30</b>	<b>869,981</b>
<b>Reserves</b>								
Income and expenditure reserve	704,107	(756)	-	-	(2,529)	-	30	700,852
Revaluation reserve	128,758	25,414	-	-	-	-	-	154,172
Government grant reserve	14,957	-	-	-	-	-	-	14,957
<b>Government funds</b>	<b>847,822</b>	<b>24,658</b>	<b>-</b>	<b>-</b>	<b>(2,529)</b>	<b>-</b>	<b>30</b>	<b>869,981</b>

## Reconciliation of Consolidated Statement of Net Expenditure for the year ended 31 March 2009

	Consolidated 2008-2009 under UK GAAP	IAS 31	IAS 16, IAS 17	IAS 1	IAS 19, IAS 38	IAS 39	IFRS 5	Consolidated 2008-2009 under IFRS
	£'000	£'000	£'000	£'000	£'000	£'000	£'000	£'000
<b>Income</b>								
Income from operating activities	87,887	(29,382)	-	-	-	-	-	58,505
<b>Total income</b>	<b>87,887</b>	<b>(29,382)</b>	-	-	-	-	-	<b>58,505</b>
<b>Expenditure</b>								
Staff costs	97,612	(15,355)	-	-	(887)	-	-	81,370
Restructuring	(1,356)	-	-	-	-	-	-	(1,356)
Research grants	108,348	-	-	-	-	-	-	108,348
Other grants and awards	31,170	-	-	-	-	-	-	31,170
International subscriptions	215,479	-	-	-	-	-	-	215,479
Equipment and supplies	30,585	(1,940)	-	-	-	-	-	28,645
Services	53,003	(6,915)	-	-	-	-	-	46,088
Amortisation	-	-	-	-	245	-	-	245
Intangible impairments	-	-	-	-	(10)	-	-	(10)
Depreciation	53,349	(16,004)	(82)	-	(245)	-	(46)	36,972
Fixed asset impairments	169	-	-	-	10	-	-	179
Joint venture funding	26,303	-	-	-	-	-	-	26,303
Notional cost of capital	28,288	-	-	-	-	-	-	28,288
Other operating costs	28,849	(3,086)	82	-	-	-	-	25,845
Write down of investment in DLSL	-	-	-	-	-	-	-	-
<b>Total expenditure</b>	<b>671,799</b>	<b>(43,300)</b>	-	-	<b>(887)</b>	-	<b>(46)</b>	<b>627,566</b>
<b>Net operating costs</b>	<b>(583,912)</b>	<b>13,918</b>	-	-	<b>887</b>	-	<b>46</b>	<b>(569,061)</b>
Interest	988	(760)	-	-	-	-	-	228
Unwinding of discount on provisions	(2,637)	14	-	-	-	-	-	(2,623)
Share of post tax losses of JVs	-	(13,752)	-	-	-	-	-	(13,752)
<b>Net operating costs before tax</b>	<b>(585,561)</b>	<b>(580)</b>	-	-	<b>887</b>	-	<b>46</b>	<b>(585,208)</b>
Tax on operating activities	(199)	199	-	-	-	-	-	-
<b>Net operating costs after tax</b>	<b>(585,760)</b>	<b>(381)</b>	-	-	<b>887</b>	-	<b>46</b>	<b>(585,208)</b>
Loss on disposal of tangible assets	(1,624)	-	-	-	-	-	67	(1,557)
Loss on disposal of intangible assets	-	-	-	-	-	-	-	-
Loss on disposal of assets held for sale	-	-	-	-	-	-	(60)	(60)
<b>Net expenditure for the year</b>	<b>(587,384)</b>	<b>(381)</b>	-	-	<b>887</b>	-	<b>53</b>	<b>(586,825)</b>
Reversal of cost of capital	28,288	-	-	-	-	-	-	28,288
<b>Net expenditure for the year after reversal of cost of capital</b>	<b>(559,096)</b>	<b>(381)</b>	-	-	<b>887</b>	-	<b>53</b>	<b>(558,537)</b>
<b>Income and expenditure reserve</b>								
Balance at 31 March 2008	639,781	(375)	(2,944)	-	(3,416)	8,105	(23)	641,128
<b>Changes in reserves 2008-2009</b>								
Funding from international partners	8,231	-	-	-	-	-	-	8,231
Reversal of cost of capital	28,288	-	-	-	-	-	-	28,288
Transfer from revaluation reserve	7,840	-	2,944	-	-	-	-	10,784
Transfer to government grant reserve	(1,535)	-	-	-	-	-	-	(1,535)
Release to SNE	(1,244)	-	-	-	-	-	-	(1,244)
Cash flow hedge	7,431	-	-	-	-	(8,105)	-	(674)
Net expenditure for the year	(587,384)	(381)	-	-	887	-	53	(586,825)
<b>Total recognised income and expense for 2008-2009</b>	<b>(538,373)</b>	<b>(381)</b>	<b>2,944</b>	-	<b>887</b>	<b>(8,105)</b>	<b>53</b>	<b>(542,975)</b>
Grant in aid financing	602,699	-	-	-	-	-	-	602,699
<b>Balance at 31 March 2009</b>	<b>704,107</b>	<b>(756)</b>	-	-	<b>(2,529)</b>	-	<b>30</b>	<b>700,852</b>

## Reconciliation of consolidated net expenditure for the year ended 31 March 2009

Net expenditure for the year under UK GAAP	(587,384)
IFRS 5 adjustment	53
IAS 19 adjustment	887
IAS 31 adjustment	(381)
Net expenditure for the period under IFRS	<u>(586,825)</u>

## Restatement of total reserves on transition to IFRS

	Income and expenditure reserve £'000	Revaluation reserve £'000	Government grant reserve £'000	Total reserves £'000
<b>UK GAAP as at 1 April 2008</b>	639,781	136,547	-	776,328
<b>IFRS adjustments:</b>				
IAS 16	(2,944)	2,944	-	-
IAS 19	(3,416)	-	-	(3,416)
IAS 31	(375)	19,540	-	19,165
IAS 39	8,105	-	-	8,105
IFRS 5	(23)	-	-	(23)
<b>Total IFRS adjustments</b>	<u>1,347</u>	<u>22,484</u>	<u>-</u>	<u>23,831</u>
<b>IFRS as at 1 April 2008</b>	<u>641,128</u>	<u>159,031</u>	<u>-</u>	<u>800,159</u>
<b>UK GAAP as at 31 March 2009</b>	704,107	128,758	14,957	847,822
<b>IFRS adjustments:</b>				
IAS 19	(2,529)	-	-	(2,529)
IAS 31	(756)	25,414	-	24,658
IFRS 5	30	-	-	30
<b>Total IFRS adjustments</b>	<u>(3,255)</u>	<u>25,414</u>	<u>-</u>	<u>22,159</u>
<b>IFRS as at 31 March 2009</b>	<u>700,852</u>	<u>154,172</u>	<u>14,957</u>	<u>869,981</u>

## Reconciliation of Consolidated Statement of Cash Flows for year ended 31 March 2009

	Consolidated 2008-2009 under UK GAAP	IAS 31 £'000	IAS 16, IAS 17 £'000	IAS 1 £'000	IAS 19, IAS 38 £'000	IAS 39 £'000	IFRS 5 £'000	Consolidated 2008-2009 under IFRS £'000
<b>Cash flows from operating activities</b>								
Net surplus after cost of capital and interest	(587,384)	(381)	-	-	887	-	53	(586,825)
Adjustment for cost of capital charge	28,288	-	-	-	-	-	-	28,288
Interest	(228)	-	-	-	-	-	-	(228)
Amortisation	-	-	-	-	245	-	-	245
Impairment of intangibles	-	-	-	-	(10)	-	-	(10)
Depreciation	37,345	-	(82)	-	(245)	-	(46)	36,972
Loss on disposal of assets	1,624	-	-	-	-	-	(67)	1,557
Loss on disposal of intangibles	-	-	-	-	-	-	-	-
Loss on disposal of assets held for sale	-	-	-	-	-	-	60	60
Impairment of property, plant and equipment	169	-	-	-	10	-	-	179
Write down of investment	13,371	381	-	-	-	-	-	13,752
Increase in trade and other receivables	(10,670)	-	82	-	-	-	-	(10,588)
Decrease in inventories	24	-	-	-	-	-	-	24
Decrease in trade and other payables	(12,538)	-	-	-	(887)	-	-	(13,425)
Use of restructuring provision	(4,210)	-	-	-	-	-	-	(4,210)
Increase in provisions	3,849	-	-	-	-	-	-	3,849
Unwinding of discount on provisions	2,623	-	-	-	-	-	-	2,623
<b>Net cash outflow from operating activities</b>	<b>(527,737)</b>	-	-	-	-	-	-	<b>(527,737)</b>
<b>Returns on investment and servicing of finance</b>								
Interest	228	-	-	-	-	-	-	228
<b>Cash flows from investing activities</b>								
Purchase of property, plant and equipment	(89,311)	-	-	-	245	-	-	(89,066)
Purchase of intangibles	-	-	-	-	(245)	-	-	(245)
Proceeds of disposal of property, plant and equipment	1,249	-	-	-	(28)	-	(734)	487
Proceeds of disposal of assets held for sale	-	-	-	-	-	-	734	734
Proceeds of disposal of intangibles	-	-	-	-	28	-	-	28
Payments to joint venture	(29,468)	-	-	-	-	-	-	(29,468)
Payments to other investments	(1,623)	-	-	-	-	-	-	(1,623)
<b>Net cash outflow from investing activities</b>	<b>(119,153)</b>	-	-	-	-	-	-	<b>(119,153)</b>
<b>Cash flows from financing activities</b>								
Grant in aid	602,699	-	-	-	-	-	-	602,699
Other capital funding	13,422	-	-	-	-	-	-	13,422
Funding from international partners	8,231	-	-	-	-	-	-	8,231
Release from income and expenditure reserve	(1,244)	-	-	-	-	-	-	(1,244)
<b>Net cash inflow from financing activities</b>	<b>623,108</b>	-	-	-	-	-	-	<b>623,108</b>
Net decrease in cash and cash equivalents in the period	(23,554)	-	-	-	-	-	-	(23,554)
<b>Cash and cash equivalents at the beginning of the period</b>	<b>30,765</b>	-	-	-	-	-	-	<b>30,765</b>
<b>Cash and cash equivalents at the end of the period</b>	<b>7,211</b>	-	-	-	-	-	-	<b>7,211</b>

## Explanation of IFRS adjustments

### IAS 1 Presentation of financial statements

IFRS requires the elements of provisions which are expected to be paid within one year of the Statement of Financial Position date to be presented on the Statement of Financial Position within current liabilities as short term provisions. This resulted in £4,210,000 of provisions, relating principally to SR closure, at 1 April 2008 and £5,744,000 at 31 March 2009 being reclassified as short term liabilities in the Statement of Financial Position.

IFRS requires debtors falling due after more than one year to be presented on the Statement of Financial Position as non-current assets. This resulted in a reclassification of £4,485,000 at 1 April 2008 and £4,290,000 at 31 March 2008, relating principally to recoverable early retirement costs, from current to non-current debtors.

There is no net impact on the Consolidated Statement of Net Expenditure or net assets.

### IAS 16 Property, plant and equipment

Under IFRS, if an asset's carrying amount is decreased as a result of a revaluation, the decrease shall be recognised in profit or loss. However, the decrease shall be recognised in other comprehensive income to the extent of any credit balance existing in the revaluation surplus in respect of that asset. The decrease recognised in other comprehensive income reduces the amount accumulated in equity under the heading of revaluation surplus. Previously under UK GAAP, decreases had been taken to the revaluation reserve.

At 1 April 2008 revaluation reserves were adjusted by £2,944,000 being revaluation decreases previously taken to revaluation reserves.

There is no net impact on the Consolidated Statement of Net Expenditure or net assets.

### IAS 17 Leases

In consideration of a one off payment of £4,095,000, the Council has leased land from the United Kingdom Atomic Energy Authority (UKAEA) for a period of 50 years from 31 January 2003. Under UK GAAP, this land had been capitalised and was being depreciated over the term of the lease.

Under IFRS, this lease is reclassified as current and non-current prepayments and the 2008-2009 payments reclassified from depreciation to operating lease costs in the Consolidated Statement of Net Expenditure.

At 1 April 2008, this resulted in a reclassification as an operating lease and non-current prepayments of £3,583,000, to current prepayments of £82,000 and £82,000 from depreciation costs to operating lease costs in the Consolidated Statement of Net Expenditure.

At 31 March 2009, this resulted in a reclassification as an operating lease and non-current prepayments of £3,501,000, to current prepayments of £82,000 and £82,000 from depreciation costs to operating lease costs in the Consolidated Statement of Net Expenditure.

There is no net impact on the Consolidated Statement of Net Expenditure or net assets.

### IAS 19 Employee benefits

The Council has made a provision for accrued holiday pay of £3,416,000 as at 1 April 2008, as required by IAS 19. This provision has been recognised at the transition date and has reduced net assets by £3,416,000 at 1 April 2008. At 31 March 2009 the provision has been reduced to £2,529,000, reducing the net expenditure for 2008-2009 and increasing the net assets at 31 March 2009 by £887,000.

### IAS 31 Joint ventures

Diamond Light Source Limited (DLSL) was previously consolidated using proportionate consolidation in the UK GAAP Financial Statements. Under IFRS, STFC has chosen to consolidate its joint ventures in DLSL, RCUK SSC Limited, Harwell Science and Innovation Campus Public Sector Partnership (HSIC PubSP) and Institut Laue Langevin (ILL) using the equity method.

At 1 April 2008, this resulted in a reclassification to most balance sheet items with a net asset increase of £19,165,000, being the IFRS increase in net assets of DLSL and ILL. £374,000 relates to a net asset decrease in DLSL. £19,541,000 being the net asset increase in ILL due to the excess of value over the initial capital contribution.

At 31 March 2009, this resulted in a reclassification to most balance sheet items with a net asset increase of £24,658,000, being the IFRS reduction in net assets of DLSL £435,000 and the impairment of the investment in joint ventures of £321,000 and the revaluation of ILL of £25,414,000. The impact on the Consolidated Statement of Net Expenditure is a charge of £381,000, being the movement in the net assets of DLSL of £60,000 and the impairment of the investments in joint ventures of £321,000.

### IAS 38 Intangible assets

Under UK GAAP, software costs were carried as tangible assets within property, plant and equipment. Under IFRS, software costs of £635,000 have been reclassified as intangible assets at 1 April 2008 and £585,000 at 31 March 2009 and £245,000 of depreciation has been reclassified as amortisation and £10,000 of fixed asset impairments have been reclassified as intangible impairments for the year ended 31 March 2009. In addition, £32,000 of tangible revaluation losses have been reclassified as intangible revaluation losses in the 2008-9 movement on the Revaluation Reserve.

There is no net impact on the Consolidated Statement of Net Expenditure or net assets.

### IAS 39

Net assets were increased by £8,105,000 at 1 April 2008 and total recognised income and expense was reduced by £8,105,000 in 2008-2009. Consequently there was no impact on net assets as at 31 March 2009.

In accordance with the Financial Reporting Manual, STFC adopted the UK financial instrument standards in 2008-2009 (FRS 25, 26 and 29). However, the relevant requirements with regards to accounting for cash flow hedges (recognising the fair value of the hedging instrument in the Statement of Financial Position, with changes recorded through equity) were not retrospectively applied to the 2007-2008 UK GAAP comparatives. The adjustment for the impact on the balance sheet was accounted directly through the 2008-2009 reserves. With the introduction of IFRS (IFRS 1) there is a requirement to provide 3 years of restated Financial Position and thus the restatement of the cash flow hedge in 2007-2008 has been treated in the reconciliation as an IFRS adjustment.

### IFRS 5 Disposal of non-current assets

Under IFRS non-current assets held for resale are reclassified in the balance sheet resulting in a reduction in property, plant and equipment of £2,389,000 at 1 April 2008 and £1,504,000 at 31 March 2009. Estimated costs of disposal of £23,000 were recognised at the transition date which reduced net assets as at 1 April 2008, these were reduced to £16,000 at 31 March 2009.

Under UK GAAP, depreciation of £46,000 had been charged to the 2008-2009 Consolidated Statement of Net Expenditure. This has been reversed under IFRS.

The effect of the two adjustments above resulted in a net increase to net assets as at 31 March 2009 of £30,000.

# Statistics

## Grants, fellowships and awards (unaudited)

### Research Grants

Summary of successful proposals received and awarded during the financial year 2009 -2010

Institution universities and colleges	No. of awards	Astronomy and space science	Particle physics	Nuclear physics	Industrial partnership scheme	Strategic HPC	Particle astrophysics	Fellowships	Total £'000
Aberystwyth	1	11							11
Birmingham	9	3,353	1,022	458					4,833
Bradford	1	100							100
Brighton	2			475					475
Bristol	3	77	694		119				890
Brunel	3		566						566
Cambridge	19	5,200	3,019			1,309		183	9,711
Cardiff	4	2,331					79		2,410
Central Lancashire	2	277							277
Cranfield	2	447							447
Durham	11	2,751	559		160	1,581		411	5,462
Edinburgh	15	3,174	798	874		3,167	93	406	8,512
Exeter	4	316				191		239	746
Glasgow	9	55	3,668	170	88	530	1,830		6,342
Imperial College, London	29	3,663	5,061				441	1,195	10,360
Kent	2	317							317
Lancaster	3		935		117				1,052
Leeds	5	713				843	30	234	1,820
Leicester	24	6,530			349	305		398	7,582
Liverpool	11		21,915	2,028		1,015		435	25,393
Liverpool John Moores	1	2,321							2,321
Manchester	12	377	1,672	372			1,093	678	4,192
Nottingham	2	29						213	242
Nottingham Trent	1	1							1
Open University	6	404							404
Oxford	22	2,612	8,469		60	614	184	487	12,425
Plymouth	1					271			271
Portsmouth	1	1,432							1,432
Queen Mary, Univ of Lon	8	817	1,322						2,139
Queen's Univ of Belfast	5	498						222	720
Royal Holloway, Univ of London	2		1,615						1,615
Sheffield	9	159	1,033					229	1,421
Southampton	2	425				724			1,149
St Andrews	2	1,658				968			2,626
Surrey	5			1,761	109				1,870
Sussex	4	4	532						536
Swansea	1					1,204			1,204
University College London	29	3,898	1,411			557	1,248	225	7,339
Warwick	2		411			868			1,279
West of Scotland	7			338	167				505
York	5			1,411					1,411

**Research Facilities**

Armagh Observatory	2	31							31
Scottish Universities Env Research Centre	1	371							371
STFC - Laboratories	4				66				66
UK ATC	3	286			90				376

**Other**

Shakespeare Eng Comps	1				47				47
Natural History Museum	1	291							291

<b>Totals</b>	<b>298</b>	<b>44,929</b>	<b>54,702</b>	<b>7,887</b>	<b>1,372</b>	<b>14,147</b>	<b>4,997</b>	<b>5,555</b>	<b>133,587</b>
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Note: these statistics are based on grants awarded rather than grants paid in 2009-2010 so will not be consistent with Note 5 of the Accounts.

## Facility development grants/Facility Research and Development Scheme

The Facility Research and Development scheme intends to develop the current UK based facilities to ensure that they remain world-leading and agile enough to address new scientific priorities. This funding scheme replaces the previous Facility Development Project Grant scheme.

In 2008-2009 an initial call for outline proposals was made. 18 applications out of a total of 33 were shortlisted and 3 grants were funded to the total value of £1.1M over 24 months.

More details can be found at <http://www.stfc.ac.uk/About/Strat/Council/AdCom/oth/FRDP/FRD.aspx>

## Knowledge exchange

IPS (Industry Partnership Scheme) grants awarded during 2009-2010:

Grant type	Number	Value £'000
IPS awards	4	573.45
Mini IPS	7	629.64
Follow-on fund	3	231.01
<b>Total</b>	<b>14</b>	<b>1,434.10</b>

Notes: IPS awards support the development of effective, long term collaborations between UK universities, CERN, ESO, ESA, UK industry and research sector organisations.

PNPAS awards (Particle and Nuclear Physics Applied Systems) made during 2009-2010:

	Number	Value £'000
	5	2,909.66

## Education and training

Research studentships – quota allocation 2009 and 2010

Institution	No of Studentships	
	2009	2010
<b>Universities and Colleges</b>		
Aberystwyth	1	2
Birmingham	9	6
Bristol	3	3
Brunel	1	2
Cambridge	21	22
Cardiff	6	5
Central Lancashire	2	2
Durham	18	15
Edinburgh	12	9
Exeter	2	2
Glasgow	12	9
Hertfordshire	5	3
Imperial College London	19	16
Keele	3	2
Kent	0	1
Kings College London	1	1
Lancaster	3	4
Leeds	4	4
Leicester	8	9
Liverpool	15	11
Liverpool John Moores	5	3
Manchester	17	15
Newcastle upon Tyne	1	0
Nottingham	3	3
Open University	3	5
Oxford	20	18
Portsmouth	3	2
Queen Mary, University of London	6	7
Royal Holloway, University of London	2	2
Sheffield	5	7
Southampton	7	5
St Andrews	6	4
Surrey	3	2
Sussex	4	4
Swansea	3	3
University College London	12	14
Warwick	3	3
West of Scotland	1	1
York	2	1
<b>Other</b>		
Armagh Observatory	2	1
STFC Daresbury	0	1
STFC Particle Physics	3	4
STFC Space Physics	0	2
Natural History Museum	0	0
<b>Total</b>	<b>256</b>	<b>235</b>



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