

PPARC Annual Report and Accounts 2006-2007

Particle Physics and Astronomy Research Counci

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Design and layout: Ampersand Design Ltd, Ardington (01235 861444)

Produced by: Science and Technology Facilities Council Media Services

Front cover: Saturn image courtesy ESA (NASA/JPL/Space Science Institute)

Particle Physics and Astronomy Research Council (PPARC) Annual Report and Accounts 2006 - 2007

Presented to Parliament by the Secretary of State, and by the Comptroller and Auditor General in pursuance of Schedule 1, Sections 2(2) and 3(3) of the Science and Technology Act 1965.

Mr Peter Warry FREng FIEE FIMechE FCMA – Chairman Professor Keith Mason – Chief Executive

Ordered by the House of Commons to be printed on 24 July 2007

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Mission Statement and Objectives

Mission Statement

The PPARC mission, as given by the Royal Charter, is:

- (a) to promote and support high-quality basic research and related post-graduate training in astronomy, planetary science and particle physics;
- (b) to advance knowledge and technology (including the promotion and support of the exploitation of research outcomes), and provide trained scientists and engineers, which have potential to contribute to the economic competitiveness of the United Kingdom and the quality of life, through meeting the needs of users and beneficiaries (including the communications, electronic and other industries);
- (c) in relation to the activities as engaged in by the Council under (a) and (b) above:
- to generate public awareness;
- to communicate research outcomes;
- to encourage public engagement and dialogue;
- to disseminate knowledge; and
- to provide advice.

Corporate Objectives

The Strategic Plan 2003-2008 set out PPARC's key strategic goals in pursuit of this mission under seven headings: research excellence, people, innovative technologies, knowledge transfer, science and society, working in partnership and operational effectiveness. The corporate objectives against which progress will be measured are as follows:

Research Excellence

We will:

- improve the UK's performance as a world leader in particle physics and astronomy through investment in projects in which the UK can deliver distinctive and high impact contributions;
- position the UK, through international partnerships, to win leadership roles in the construction and exploitation of the next generation of major facilities, for example, a Linear Collider, Extremely Large Telescopes, and cornerstone ESA space missions.

People

We will:

- increase the output of highly trained scientists and engineers to contribute to the nation's needs;
- motivate sufficient high-class postdoctoral students to stay in publicly funded research;
- create opportunities for researchers to win leadership in international projects;
- in partnership with universities, provide better defined career paths for researchers;
- further develop our motivated, skilled and flexible workforce.

Innovative Technologies

We will:

- increase investment in 'blue-skies' technology and in R&D programmes that will underpin the next generation of science facilities;
- develop more effective partnerships with specific industrial sectors to help deliver new technologies.

Knowledge Transfer

We will:

 foster greater awareness in industry of the opportunities to exploit our innovative technologies.

Science and Society

We will:

- increase public awareness and interest in our science through greater exposure in the media;
- work with other agencies to improve the quality of science education in schools and increase the output of scientifically literate school children;
- engage more effectively with the public to improve the quality of public debate on the social impact of science and better inform decision makers and influence policy formulation.

Working in Partnership

We will:

 develop stronger partnerships directly, or through the Research Councils UK partnership, with other funding agencies to ensure more coordinated strategic thinking on how the UK's performance in science, knowledge transfer and public engagement can be improved.

Operational Effectiveness

We will:

 deliver continuous improvement in programme management and administration to ensure the best value for money.

Chairman's Statement

Mr Peter Warry Freng FIEE FIMechE FCMA



I am pleased to present this final Annual Report on PPARC, following the Government's decision in July 2006 that PPARC and the Council for the Central Laboratory of the Research Councils (CCLRC) should be merged into a new Research Council (the Science and Technology Facilities Council) with effect from 1 April 2007.

Much of the year has inevitably focussed on ensuring the merger was achieved successfully with minimum disruption to the PPARC programme, and that the ethos and structures of the new Council, built on what I believe was the very effective stewardship by PPARC of the UK's particle physics, astronomy and space programme. Major milestones were reached during the year in the final construction phases of the Large Hadron Collider (LHC) at CERN. The world's largest superconducting magnet, the ATLAS Barrel Toroid, was powered up to its operating conditions at its first attempt and the heaviest section of the Compact Muon Solenoid (CMS), weighing as much as five jumbo jets, was lowered successfully 100 metres underground into the detector cavern where it will be reassembled with the other components.

Very good progress was made, working with our international partners, both in shaping strategies and planning for the next generation of large-scale facilities. In July 2006 CERN Council agreed a prioritised strategy for European particle physics. This strategy is well aligned with the UK's priorities and will enable a more effective dialogue with the US and the Far East on developing a global strategy.

View of the LHC tunnel. (Courtesy CERN)

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European ground-based astronomy entered a new era with the decision by ESO Council to proceed with detailed design studies for the European Extremely Large Telescope. This 3-year study will prepare the way for construction of the world's largest optical/infrared telescope, which will be a hundred times more powerful than present day telescopes. In parallel, PPARC Council considered a range of options for the future of our telescopes on La Palma and Hawaii and agreed a way forward for discussion with our international partners.

The year was a very important one in terms of Research Council engagement with the broader agenda of knowledge exchange and how we can enable a greater flow of innovative ideas and technologies between universities, public sector funded laboratories and industry. It was pleasing that the House of Commons Science and Technology Committee Report on Knowledge Transfer commended PPARC's approach to enabling engagement between industry and universities and the flexibility of its specific PIPPS scheme, which was redesigned this year in response to positive feedback from industry. We have continued our planned increased investment in brokering collaborations between industry and universities and welcomed the increased support from the PSRE fund to stimulate greater knowledge transfer from CERN, ESO and ESA.



The radio galaxy M87 seen at very high energies by HESS (High Energy Stereoscopic System). (Courtesy HESS Collaboration)



A new planetary nebula discovered using the Wide-Field Camera on the Isaac Newton Telescope. (Courtesy IPHAS)



Jupiter and its two red spots (which appear white because this is a near-infrared image) brushing past one another in the planet's southern hemisphere. (Courtesy Gemini Observatory/AURA)



CMS: front view of the innermost endcap disc. (Courtesy CERN)

As well as engaging more effectively with industry we must continue to find better ways of engaging with the public. This year saw the introduction of our Science and Society Fellowship scheme and our educational programme on the LHC. The first physics from the machine in Spring 2008 will be a unique opportunity to excite a generation about both the adventure and value of particle physics.

PPARC has had a relatively short history, but I believe we have made a substantial difference to the health of particle physics and astronomy in the UK and the engagement of our science for wider economic and social benefit. I would like to take this opportunity to thank the community and PPARC staff and to wish PPARC's successor, the Science and Technology Facilities Council, well.



Chief Executive's Statement

Professor Keith Mason



This, the final year of PPARC, has continued to be one of considerable achievement. Ground-breaking measurements were made by UK particle physicists, working with international colleagues, on the BaBar experiment at the Stanford Linear Accelerator Centre (SLAC). The team observed the transition of the neutral D-meson into its antimatter particle, a process known as 'mixing'. Predicted over three decades ago, this is the first time this elusive phenomenon has been observed and provides another important link to a better understanding of the Standard Model of Particle Physics.



BaBar detector at SLAC. (Photo Courtesy of Stanford Linear Accelerator Center)



Stereo launch. (Courtesy ESA)

British astronomers released the first data from the Infrared Deep Sky Survey, the largest and most sensitive survey ever undertaken at this wavelength using the Wide Field Camera (WFCAM) on the UK Infrared Telescope on Hawaii. The camera, which was built by the UK Astronomy Technology Centre in Edinburgh, is the most powerful infrared camera in the world and will enable us to study very distant, very cool objects, providing new data on the formation of galaxies at their earliest stage of development.

A particular highlight for me was the deployment of the GridPP, developed by PPARC to process data from the LHC, as part of an international computing grid which analysed over 140 million possible docking combinations between drug compounds and target proteins of the malaria parasite. This approach has greatly speeded up the search for effective drugs against this killer disease which claims over 1 million lives each year. It is a powerful demonstration of how technology developed for an application in particle physics can have a real social impact.

In terms of programme delivery significant progress has been made on the construction of Atacama Large Millimetre Array (ALMA), and we have delivered the UK's contributions to the ESA Herschel mission. The year 2006 saw the launch of two space missions in which the UK has had strong bilateral involvement, to study the Sun.

primary mirror. (Courtesy ESA / EADS Astrium / P. Dumas)



NASA Stereo twin spacecraft will provide the first 3D images of the Sun, enabling detailed monitoring of violent solar eruptions that can have a major impact on the Earth's power supplies as well as communication and navigation satellites. The Japanese JAXA Hinode mission, on the other hand, will study the dynamics of the Sun's magnetic storms to establish the first crucial birth signs of Solar flares.



The ExoMars rover will be able to travel a few kilometres over the rocky orange-red surface of Mars. (Courtesy ESA - AOES Medialab)

SMART-1, ESA's highly successful lunar technology demonstrator, finally ended its 3-year mission with a spectacular controlled collision with the Moon. SMART-1 has proven new technologies including a novel ion propulsion system and is helping shape our future plans for planetary exploration. Such programmes will become increasingly international and I was pleased that at the end of the year we concluded a bi-lateral agreement with NASA to explore opportunities for a joint lunar exploration programme.



2.0

The Chairman has highlighted steps we have taken to influence the future strategy for both particle physics and astronomy working particularly through CERN and ESO. Key to our involvement in the next generation of large-scale facilities will be earlier targeted investment in R&D and this year we have made a number of investment decisions consistent with this approach. These investments included the first stage of the Japanese-led T2K neutrino oscillation experiment and further support to develop technologies for ExoMars, the first planned mission in ESA's Aurora programme.



Artist impression of the SMART-1 mission. (Courtesy ESA)

Finally I would like to join with the Chairman in thanking both the community and our staff. I have no doubt that the Science and Technology Facilities Council will offer opportunities for us to increase the impact of UK particle physics and astronomy and to find even smarter ways of enabling this to happen.

Kith O. Ma

Science Overview

Professor Richard Wade, Deputy Chief Executive and Director of Programmes



This year PPARC pursued the science programme priorities and investment strategy agreed by Council in March 2006, following the outcome of the Programmatic Review which was completed in November 2005. A number of important milestones were reached in terms of programme delivery. Significant progress was made in the development of the Council's knowledge transfer and science and society programmes.

Investment Strategy

During the year the Council made a number of significant investments consistent with its priorities. These included funding for: the development of technologies for the vertex detector for an International Linear Collider; UK involvement in the MIXS instrument for the ESA BepiColombo mission to Mercury and in the development of the data centre for ESA's GAIA mission; further development and exploitation of the particle physics grid and AstroGrid; UK participation in the first stage of the Japanese-led T2K neutrino oscillation experiment; and, with European partners, in the development of the instrumentation suite for the ExoMars mission.

Council re-approved its investment in the Clover experiment, which will measure the B-mode polarisation for the Cosmic Microwave Background; this re-approval followed the decision to locate the experiment in Chile rather than the Antarctic. Council also agreed to commit funding for the Gemini 2nd generation instrument (Aspen) programme, the level of commitment contingent on the Wide Field Multi Object Spectrograph (WFMOS) proceeding.

The year saw the first full particle physics rolling grants review since the introduction of revised assessment criteria, the move to full economic cost and the change to a 3+2 review cycle. It also coincided with the transition of the LHC experiments from construction to the exploitation phase, the absorption of the funding for e-science posts and the start up funding for project studentships. It was as a consequence a longer and more difficult process than in the past. The overall impact in terms of support for the community was a fifteen percent reduction after two years in the number of Research Assistant posts primarily as a result of a less than inflation uplift and the impact of moving to full economic cost.

Programme Delivery

Major progress was made with the installation and delivery of the UK components for the Large Hadron Collider (LHC) i.e. the CMS tracker and the ATLAS Semiconductor tracker at CERN. In November 2006 the first 3 of fifteen sections of the CMS detector were lowered into the experiment cavern. The main components of the ATLAS detector have been successfully powered up to operation conditions.

Good progress was made on the VISTA telescope with the delivery of the infrared camera, designed and built by a consortium of UK scientists and engineers. The camera is now undergoing on-site testing. The telescope, the structure, the enclosure and the coating plant have been completed. The ALMA project reached an important milestone with the completion in the UK of the construction of the critical pre-production units including the cryostat vessels, software and data transmission systems. In the next year, 'mass production' will begin on the final fifty elements of the ALMA array in Chile leading to full operation in 2012.

The year also saw the delivery and acceptance of the SPIRE instrument for the Herschel spacecraft, which is due to be launched as part of the ESA Herschel/Planck mission in 2008; the commissioning on the James Clerk Maxwell Telescope on Hawaii on the heterodyne HARP/ACSIS instrument, whose unique imaging capability is already delivering exciting science; the successful launch of NASA's Stereo mission, on which the UK built Heliospheric Imager will enable scientists to track solar storms from the Sun to the Earth for the first time; and the launch of the Japaneseled Hinode on which the UK has provided a key instrument.

Shaping Future Science Strategy

During the year, PPARC continued to work actively with its international partners to develop long-term science strategies which inform the UK's future investments, particularly in large-scale facilities. In July 2006 CERN Council approved a European strategy for particle physics. This strategy is very well-aligned with the priorities of the UK particle physics community. Similarly we have continued to work within ESO and ESA to shape Europe's future ground-based astronomy and space science programmes. In the case of ESO an important milestone was the decision by ESO Council to proceed with detailed studies for the European Extremely Large Telescope (E-ELT).

Council reviewed the options for on-going support on the UK's suite of '4m-class' ground-based telescopes and are working with our partners in the Isaac Newton Group (ING) and the James Clarke Maxwell Telescope (JCMT) to decide how best to manage them in the future, consistent with the UK's priorities. At a national level, strategy reviews have been initiated to take stock of the UK's competitive position and advise on investment choices, for example in the areas of Dark Energy and Dark Matter.

Education, Training and Careers

Consistent with Council's strategy, we have continued to fund more PhD students with the aim of achieving a fifty percent increase over a 2005/06 baseline by 2008. During the year Council considered and agreed to adopt Doctoral Training Accounts. As part of the process of integrating nuclear physics into the future STFC programme, PPARC allocated studentships funding to 8 nuclear physics groups to recruit students for the 2007 academic year.

The demand for fellowships from high quality candidates continued. In 2006, PPARC received over two hundred and eighty applications for fellowship awards against the twenty four available. The schemes were open to applicants worldwide and around fifty percent of applications came from candidates outside the UK.

Knowledge Transfer

During the year there was considerable national debate about how best to advance knowledge transfer and a high level of scrutiny of the Knowledge Transfer programmes of the Research Councils. In both the House of Commons Science and Technology Committee Report on Knowledge Transfer and in the Warry Report, PPARC was commended for its efforts in promoting within its research community the importance of knowledge transfer and in developing a single, flexible scheme to enable more effective collaboration between universities and industry.

This year saw a number of specific initiatives to increase the rate of knowledge transfer from PPARC funded science and to engage industry. These initiatives included: participation in the Sensors Knowledge Transfer Network (KTN) and ERID Watch, a programme to map the market created by planned new European research facilities; the start of a 3 year programme to stimulate more knowledge transfer from CERN, ESA and ESO; and an extension to the PIPPS scheme through the introduction of themed calls in collaboration with other funding partners. The Council also increased as planned, its investment in expertise to broker greater contact between university groups and industry.

Science and Society

This year saw the introduction of a 'Science in Society' Fellowships scheme. This scheme is intended to free up the time of some academics to act as public champions for their area of science. Fellowships were awarded to Dr Paul Roche (University of Cardiff) as National Schools Astronomer and to Dr Maggie Aderin (University College London) for a programme to better engage with the black, minority and ethnic community to fully utilise media opportunities and schools activities. We also launched a major programme of public engagement in particle physics, centred around the commissioning of the Large Hadron Collider at CERN. This campaign is already attracting considerable interest in the media.

Background picture courtesy ESA / NASA / JPL / Space Science Institute

Management Commentary

Statutory Basis and History

The Particle Physics and Astronomy Research Council (PPARC) was established by Royal Charter on 24 February 1994 and commenced operations on 1 April 1994, following the dissolution of the Science and Engineering Research Council and as a result of the Government's White Paper *Realising our Potential: A Strategy for Science, Engineering and Technology* (cm 2250). PPARC was a Non-Departmental Public Body and its primary source of funds was the Request for Resources Grant-in-Aid allocated by its sponsoring body, the Office of Science and Innovation (OSI). At 31 March 2007 PPARC ceased to exist as an independent council. On 1 April 2007 assets and liabilities were transferred to the Science and Technology Facilities Council, under 'The Research Councils (Transfer of Property etc) Order 2007', Number 770 laid before Parliament on 9 March 2007, effective 1 April 2007.

These financial statements have been prepared in accordance with the Accounts Direction given by the Secretary of State for Trade and Industry in accordance with section 2(2) of the Science and Technology Act 1965.

Mission

PPARC's mission was:

to pursue a programme of high quality basic research in astronomy, space science and particle physics which furthers our understanding of fundamental questions, trains high quality scientists and engineers, increases UK industry's competitiveness, attracts future generations of scientists and engineers and stimulates the public interest.

Objectives

PPARC promoted its objectives through the support of:

- large-scale research facilities, provided through its observatories, the UK Astronomy Technology Centre and through subscriptions to international organisations such as the European Organisation for Nuclear Research (CERN), the European Southern Observatory (ESO) and the European Space Agency (ESA);
- research undertaken largely in UK universities;
- the education and training of postgraduate students and research fellows; and
- the public understanding of science programmes.

Review of the Year and the Formation of the Science and Technology Facilities Council

The Science and Technology Facilities Council (STFC) was formed on 1 April 2007 from the merger of the Council for the Central Laboratory of the Research Councils (CCLRC) and the Particle Physics and Astronomy Research Council (PPARC). The Council's remit will cover all the programmes, activities and facilities previously operated by CCLRC and PPARC, plus responsibility for research in nuclear physics which has been transferred from the Engineering and Physical Sciences Research Council (EPSRC).

A review of the scientific and research activities undertaken by PPARC during the year is set out in the Director of Programmes foreword which precedes these financial statements.

Corporate Governance

Audit Committee

The Audit Committee, comprising three members of the Council, met four times in the 2006/07 year to review internal and external audit matters and the Council's accounts. Its terms of reference included monitoring of the application of internal controls and oversight of the Council's response to the corporate governance initiative and risk management. The Audit Committee received reports from both internal and external auditors. Minutes of the Audit Committee were forwarded to all members of Council.

Chief Executive

Professor Keith Mason was Chief Executive of PPARC throughout the year.

Council Members

The following persons were members of PPARC Council during the year 2006/07 and up to the date of approval of these accounts unless otherwise indicated:

Chairman

Mr Peter Warry FREng FIEE FIMechE FCMA	Victrex plc
Chief Executive	
Professor Keith Mason	PPARC
Members	
Dr Trevor Cross	e2v technologies
Professor Roger Davies FRAS	University of Oxford
Professor Mike Edmunds FRAS FInstP	University of Cardiff
Dr Jonathan Ellis FRS FInstP	CERN
Professor Tony Hey FREng	Microsoft Corporation
Professor Jim Hough FRS, FRSE, FAPS, FInstP, FRAS	University of Glasgow
Professor John Inkson FinstP	University of Exeter
Dr Philip Kaziewicz	Global Innovation Partners LLC
Dr Jordan Nash	CERN
Mr Colin Paynter	EADS Astrium
Professor Anneila Sargent FRAS	California Institute of Technology
Professor John Zarnecki FRAS, MInstP	Open University

The register of council members' interests can be viewed on the PPARC website: www.scitech.ac.uk.

Auditors

The accounts of PPARC are audited by the Comptroller and Auditor General under the terms of paragraph 3(3) of Schedule 1 of the Science and Technology Act 1965. A fee of £58,000 is due for this service (2005/06: £47,000). A fee of £6,000 is due for non-audit work during the year.

So far as the Accounting Officer is aware, there is no relevant audit information of which the auditors are unaware.

The Accounting Officer has taken all the steps that he ought to have taken to make himself aware of any relevant audit information and to establish that the auditors are aware of that information.

Employee Relations

Equality and Diversity

PPARC was committed to the case for equality and diversity in the workplace and ensured that all staff had equal opportunity in respect of employment, pay and advancement within the organisation on the basis of their abilities, qualifications and fitness for work. PPARC promoted family-friendly employment practices and procedures which did not discriminate on the grounds of disability, gender, ethnicity, age, marital status, religion or belief and sexual orientation. PPARC also followed good employment practice in valuing the diversity of its staff and ensured that they worked in an environment free from illegal or unfair discrimination and harassment.

We enlisted the help of women scientists in monitoring our funding schemes to ensure that there were no barriers in our schemes to the participation of women researchers. We ensured that there were women members on interview panels for research fellowships. We developed links with organisations such as the Institute of Physics and the UK Resource Centre for Women in Science, Engineering and Technology to increase our understanding of how we could improve the retention and participation of women in the areas of science we funded.

Training and Development

PPARC's human resource management policies were designed to provide the Council with a motivated workforce that had the relevant skills capable of adapting to changing working patterns and requirements as they emerged.

The provision of suitable training for all employees was a fundamental part of achieving this objective. Training was regarded as an investment which must yield a return sufficient to justify the resources allocated to it. The return from training was twofold. First, there was the increased competence of employees to do their particular job, which enabled them to contribute more effectively to the attainment of PPARC's corporate objectives in their present or future jobs. Secondly, training enabled employees to develop their potential in order that they contributed fully and effectively and obtained the highest level of job satisfaction throughout their career with the Council.

PPARC Swindon Office was awarded Investors in People accreditation in March 2001 and was successfully reviewed against the Standard in July 2003. It was due to be re-accredited in 2006, however due to the merger it was granted 'Retained Recognition' until April 2008, when a full review of the Science and Technology Facilities Council will be undertaken.

Employee Involvement

Employees were kept informed of matters of interest to them through notices and circulars. Electronic systems were fully utilised which enabled material to be circulated to staff far more easily and immediately. PPARC disseminated information about financial and strategic plans and performance through its Strategic and Delivery Plans and its Annual Report.

Consultation with employees took place at a central level through the PPARC annual Whitley Council meeting and locally, at each PPARC establishment, through Whitley Committees or other mechanisms. The aim was to secure the greatest measure of co-operation between management, in its capacity as employer, and the general body of employees, with a view to increased efficiency within the Council combined with the well-being of those employed. In addition, senior and line managers consulted regularly with staff face-to-face through meetings at Divisional, Group and Section levels.

Health, Safety and Welfare

PPARC complied fully with all legislation and regulations concerning health, safety and welfare at work. Each Establishment Director was responsible for providing and maintaining safe and healthy working conditions, equipment and safe systems of work for all PPARC employees, contractors and visitors. Continuous programmes of risk assessment, inspections and training were carried out to ensure that standards were maintained. In addition, a range of initiatives on health screening and health care were available.

CBI Code of Practice

PPARC's policy was to comply fully with the Better Payment Practice Code for the payment of goods and services. PPARC's policy was to make payments in accordance with the timing stipulated in the contract with suppliers. Where there was no contractual provision, every effort was made to ensure that payment was effected within 30 days of receipt of goods or services, or presentation of a valid invoice or similar demand for payment, whichever was the later. During 2006/07, PPARC paid 95.5% (2005/06: 96.2%) of its valid invoices within the 30 day period.

In November 1998, the Late Payment of Commercial Debts (Interest) Act came into force, providing small businesses with a statutory right to claim interest from large businesses (and all public sector bodies) on payments that are more than 30 days overdue. Amended legislation (the Late Payment of Commercial Debts Regulations 2002) came into force on 7 August 2002 providing all businesses, irrespective of size, with the right to claim statutory interest for the late payment of commercial debts. No such claims were received during the reporting year.

Operating Review

• Operating results for the period

Grant-in-Aid received during the year from the Office of Science and Innovation was £324.500 million (2005/06: £310.000 million). This enabled PPARC to invest in the Government's four key strategic science objectives, primarily research, but also training, knowledge transfer and science and society.

• Net Expenditure for the year, total recognised gains and losses and fundholders perspective

The Statement of Net Expenditure records Net Expenditure for the year of £330.105 million (2005/06: £333.995 million) which has been transferred to reserves.

Total Government Funds at 31 March 2007 amounted to £60.023 million (2005/06: £50.517 million). Other reserve movements are shown in Note 15.

The Statement of Total Recognised Gains and Losses on page 33 indicates that recognised gains relating to the financial year were £9.506 million (2005/06: Loss £18.419 million).

• Dynamics of the organisation

The Statement on Internal Control at pages 25 to 27 outlines the PPARC policy with regard to corporate governance, internal control and risk management. The factors and influences that may have had an effect on present and future performance were listed in risk registers and the most important identified to Council at least annually. The most significant factors underlying the performance and position of PPARC during the financial year under review were associated with timeliness of programme delivery, staff retention during restructuring and successful completion of certain equipment projects.

• Future Investment

Consistent with its mission and the Government's two public service agreement (PSA) targets, PPARC developed the following strategic plans and milestones which will be transferred to the Science and Technology Facilities Council:

- (a) sustain and improve the competitive performance of the UK science and engineering base (health of the discipline);
- (b) increase industrial involvement with knowledge transfer from the science base;
- (c) invest in the current and next generation of large-scale facilities which will underpin the UK's continuing competitiveness in particle physics and astronomy;
- (d) exploit the current suite of facilities and experiments and optimise the science return;
- (e) invest in new medium-sized facilities and experiments in high priority science areas;
- (f) deliver the computing infrastructure (e-science and high performance computing) necessary to support both our experimental and theory communities;
- (g) increase the volume of studentships to maintain the vibrancy of the research community and enhance the skilled knowledge pool in the private sector;
- (h) engage industry more effectively in the delivery of the R&D, in particular for new large scale facilities;
- (i) increase the rate of knowledge transfer into the wider private sector;
- (j) increase the impact and effectiveness of our engagement in the science and society agenda in partnership with other agencies;
- (k) deliver efficiency savings in administration and contribute to the RCUK administration strategy;
- (I) restructure the management of our institutes.

PPARC's science strategy was driven by 3 objectives:

- to provide researchers with access to state-of-the-art world class facilities and facilities development. Most of these facilities are provided through international partnerships;
- to provide sufficient people and infrastructure to enable researchers to contribute to both the design and build of these facilities and their instrumentation and to exploit the data from them, thereby gaining optimal science return from the facilities investment;
- to invest in cutting-edge technologies which deliver step changes in science capability. These technologies are developed in university groups, our Astronomy Technology Centre (UK ATC), at CERN and in industry.

Allocation and Outturn

The following table gives a comparison of outturn against allocation.

	Resource	Capital	Total
	£'000s	£'000s	£'000s
Allocation	281,660	56,601	338,261
Outturn	272,514	56,976	329,490*
In year underspend	9,146	(375)	8,771

*Outturn reconciled as follows:

From the Statement of Net Expenditure and Reserves

Expenditure	337,603
Other Income	(7,634)
Funding from international partners	(4,131)
Grant from Joint Infrastructure Fund (JIF)	(107)
Profit on disposal of fixed assets	(28)
Unwinding of Discount on Decommissioning	164
Notional Cost of Capital	1,737
From Fixed Assets Note 9	
Additions	2,176
Disposals	(290)

Additions	2,176
Disposals	(290)
Total Outturn	329,490

Financial Review

Funds from operating activities and other sources of cash

As reported in the Cash Flow Statement on page 32, there was a net cash inflow of £1.446 million (2005/06: inflow £1.609 million) in the year.

Current liquidity

Cash held at 31 March 2007 was £8.361 million (2005/06: £6.915 million) and Net Current Assets were £10.740 million (2005/06: £7.994 million).

Going concern

PPARC ceased to operate after 31 March 2007. On 1 April 2007 assets and liabilities were transferred to the Science and Technology Facilities Council, under 'The Research Councils (Transfer of Property etc) Order 2007', Number 770 laid before Parliament on 9 March 2007, effective 1 April 2007.

• Currency Risk and International Collaborations

Subscriptions to CERN, ESA and ESO were paid using a variety of means ranging from forward buying of currency to spot purchase. PPARC's policy was to forward purchase a significant amount of its foreign currency requirements. The benefit is that it gave certainty over the sterling price to be paid.

PPARC was compensated for changes in foreign exchange rates and Net National Income indicators through a budgetary contingencies fund operated by OSI. At the instigation of OSI, the compensation arrangements are to continue under the new arrangements for the Science and Technology Facilities Coiuncil until the end of the current spending review period on 31 March 2008.

Negotiations with OSI are in progress, to agree an acceptable method to manage the currency risk implications detailed above, with effect from 1 April 2008.

Further details on financial risk are set out in Note 20 to the Accounts.

• Pension Liabilities

Details of pension arrangements are set out in Note 3 Staff Costs within the accounts.

• Fixed Assets

The movements in fixed assets for the year are set out in Note 9 to the financial statements, the most significant being the revaluation of plant and machinery.

The Council's capital structure is shown in the Balance Sheet and in Notes 9 and 15. Capital funds are provided as a part of Grant-in-Aid, to be repaid out of future years' resource budget allocations.

• Shared Services Centre (SSC)

As part of the Comprehensive Spending Review 2007, HM Treasury is looking for a step change in the number of Research Councils' back office activities provided on a common basis. The Director General of Science and Innovation (DGSI) requested Chief Executives to prepare a roadmap for achieving full harmonisation of back office activities. Following approval of the recommendations, a Project Director was appointed to take the project forward, with a remit for implementation by March 2009.

The SSC will serve all the Research Councils (headquarters and institutes), providing an integrated, efficient and responsive single organisation administrative support service; giving greater value for money; and a clearer, consistent customer focus.

The SSC is planned to be a separate legal entity, wholly owned by Council members, providing services to multiple customers, and organised and run on a commercial basis. It will incorporate the following business areas:

- Human resources;
- Finance;
- Procurement;
- IT and telecommunications (HQs and SSC);
- Grants processing, including fellowships and studentships.

The Shared Service Centre represents the continuation of plans to increase operational efficiency and effectiveness through joint services.

Environmental Report

PPARC was a member of the Research Councils Environmental Management Group. There was a Joint Environmental Strategy and Policy Statement in operation for the Swindon Office Polaris House Site, and as part of the continuing commitment to addressing the issues around energy and environment, the Research Councils are currently working towards attaining ISO140001 accreditation.

Issues which were addressed during the period of this report include the following:

- installation of energy efficient lighting and controls, and water monitoring equipment;
- commissioning of a site survey by The Carbon Trust in respect of installing a combined heating and power unit. The detailed report is currently under consideration;
- investment in the provision of solar panels for generating electricity;
- allocation of funding for the provision of a composting and waste compound, together with a baler to compact waste paper;
- increased use of video conferencing facilities to reduce the need for travel.

PPARC's observatories were operated in environmentally sensitive sites and PPARC complied with the various regulatory requirements in respect of their operation.

Social and Community Report

A full description of the Council's public engagement programme is provided on the STFC web page (www.scitech.ac.uk). The main activities included a wide range of colourful publications for schools and the public, describing the science and technology programmes. There was emphasis on public engagement with the Large Hadron Collider project through a website, an exhibition, media releases, and discussions with the public. These events provided new opportunities for scientists to actively engage with the public and were co-organised with national newspapers, radio and television to build a high media profile targeting even wider audiences. In addition, at each geographical site (Swindon Office, ATC Edinburgh, overseas telescopes, CERN, etc) there was at least one event for local citizens to hear about the work of the Council.

Presentational Changes

As a result of new guidance received from HM Treasury, the 2006/07 Annual Report and Accounts includes a number of presentational and format changes compared to previous reports. Detailed below is a summary of the changes:

- 1) the Directors' report has been replaced by the Management Commentary;
- 2) the Income and Expenditure Account has been replaced by the Statement of Net Expenditure, which no longer shows Grant-in-Aid (GIA)* as income. GIA is now credited to the Income and Expenditure Reserve in the Balance Sheet. The same treatment has been adopted for other sources of finance. The details for PPARC are shown in the reserves note (15);
- 3) the Cash Flow Statement also reflects this change and now shows GIA and other sources of finance under Financing;
- 4) the Statement of Total Recognised Gains and Losses has also been altered to reflect the net expenditure.

The main reasons for adopting the new presentation are:

- a) the Statement of Net Expenditure gives a more meaningful representation of the cost to the taxpayer of the Council's activities;
- b) the raison d'etre of many Non Departmental Public Bodies (NDPBs) is not to make a surplus, and the ability to see a trend of net expenditure is more helpful than a result based on comparing cash-based receipts with accruals based expenditure.
- * GIA is a term used for funding received from Government.

Kuth O. Man -

Keith Mason Accounting Officer 28 June 2007

Remuneration Report

General

In establishing and implementing appropriate employment and remuneration policies for its staff, the PPARC's aim was to maintain a motivated, skilled and flexible workforce to meet business needs in the foreseen employment market. The particular arrangements developed to manage and reward senior managers are summarised below.

The Chief Executive

The performance management and remuneration arrangements for the Council's Chief Executive are established and managed by the Council's sponsor department, the Department of Trade and Industry, through the Office of Science and Innovation. In summary, Research Council Chief Executives are paid both a basic salary and performance pay comprising an annual and an appointment term bonus. 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 of Science and Innovation (DGSI) and the relevant Council Chair agree with the Chief Executive a set of annual performance objectives for the year. In addition a set of appointment term objectives are agreed early in the appointment and 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 DGSI, with advice from colleagues, agrees an OSI assessment of overall performance and specific achievements against objectives for annual and appointment term objectives.

A Remuneration Committee comprising the DGSI, the Chairs of all the Research Councils and two independent members, then meets to review Chief Executives' performance and agree pay 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.

Directors

In line with its overall employment and remuneration policies, PPARC wished to ensure that its Director-level staff were provided with appropriate incentives to encourage good performance and were, in a fair and reasonable manner, rewarded for their individual contributions to PPARC's business. In this context PPARC decided that the arrangements established for the Senior Civil Service (SCS), with which the job weights of PPARC Director posts were directly comparable, provided an appropriate basis for the performance management and remuneration of these posts. PPARC's reward policy for its Directors therefore took into account affordability, comparability with other Research Councils and relevant, published, national benchmarks and, in particular, the annual Senior Salary Review Board (SSRB) report to Government which draws on a wider evidence base.

A Remuneration Committee was established as a sub-committee of Council to oversee PPARC's policy regarding Directors' remuneration, to review the performance of Directors against agreed objectives and to determine the level of awards to individuals. This mechanism provided greater transparency and Council influence over the annual processes designed to maintain alignment between PPARC's goals and the objectives to which individual directors were working, in the context of assessing performance and reward.

The members of the Directors Remuneration Committee during 2006/07 were:

- Mr Colin Paynter Chair (PPARC Council Member)
- Professor John Inkson
 (PPARC Council Member)
- Professor Keith Mason
 (PPARC Chief Executive)

Individual performance awards were informed by the Annual Staff Appraisal where, in individual reports, performance was expected to be summarised either as 'fully acceptable' or 'exceptional'. Directors were expected to be performing at a 'Fully Acceptable' level to be awarded an increase. The Committee was also provided with a structured self assessment report from each Director which provided more detail on the objectives agreed for the reporting year and progress towards achieving them. Objectives were currently classified as follows: 'Business Fundamental', 'Value Added' and 'Breakthrough'.

The Committee was also made aware of the facts concerning current, individual pay rates in order to take account of internal relativities and reminded of relevant SCS benchmarks and any particularly sharply focused issues of comparability in relation to job holders with similar roles and experience in other Research Councils.

In line with the SCS, a pay budget was constructed to cater for the full range of awards recommended by the SSRB which for 2006 were as follows:

- revalorisation of pay points by 2.0%;
- individual base pay awards to range from 0% to 9% depending on performance and position in the pay range (base pay awards to average 3.25%);
- non-consolidated bonus payments to be provided from a bonus pot of 6.5% of pay bill, with a minimum bonus of £3,000.

Service Contracts

Appointments to PPARC were made in accordance with the Civil Service Commissioners' Recruitment Code that requires posts to be filled on merit on the basis of fair and open competition. All PPARC Directors held appointments which were open-ended with a contractual retirement age of 60. Early termination, other than for misconduct, would result in the individual receiving compensation on terms analogous to those in the Civil Service Compensation Scheme. A notice period of 6 months was required.

Amounts Payable to Third Parties for Senior Manager Services

PPARC did not make any payments to third parties for the provision of senior manager services.

Audited Information

Details of 2006/07 remuneration for the PPARC Chief Executive and Directors

Remuneration of Senior Employees

The combined code on corporate governance requires the disclosure of information on salary and pension entitlements of each Company Director. Central Government is committed to adopting best commercial practice and therefore requires Non-Departmental Government Bodies to report in accordance with modified combined code principles. There is a requirement to disclose the remuneration and pension entitlements of the Chief Executive and the most senior managers. The following disclosures were considered appropriate for PPARC:

	Chief Executive	Director	Director	Director	Director	Director from (01/04/06)	Director (IM) (from 23/05/06)	Site Director	Site Director
	Prof K Mason	Prof R Wade	Mr J Down	Mr J Love (Deceased Feb 07)	Mr J Sadlier	Mr G Brooks	Dr R Innes	Prof G Davis	Prof I Robson
	£′000	£'000	£′000	£'000	£'000	£'000	£'000	£'000	£'000
Salary and allowances (excluding bonus) banded	100 - 105	85 - 90	75 - 80	70 - 75	75 - 80	65 - 70	50 - 55	75 - 80	75 - 80
Non-consolidated bonus	0 - 5	5 -10	5 - 10	5 - 10	5 - 10	0 - 5	0 - 5	0 - 5	0 - 5
Benefits in kind (cash equivalent)	2.0	1	ı	T	ı	ı	1	ı	
Real increase of pension and related	5 – 7.5	0 - 2.5 plus 0 - 2.5	2.5 - 5 plus 10 - 12.5	N/A	2.5 - 5 plus 10 - 12.5	0 - 2.5 plus 0 - 2.5	0 - 2.5 plus 2.5 - 5.00	0 - 2.5 plus 2.5 - 5	0 - 2.5 plus 2.5 - 5
		lump sum	lump sum		lump sum	lump sum	lump sum	lump sum	lump sum
Total of accrued pension at age 60* and related lump sum	60 - 62.5	27.5 - 30 plus 85 - 87.5	32.5 - 35 plus 102.5 - 105	N/A	32.5 - 35 plus 100 - 102.5	27.5 - 30 plus 85 - 87.5	15 - 17.5 plus 47.5 - 50	5 - 7.5 plus 20 - 22.5	32.5 - 35 plus 97.5 - 100
Cash Equivalent Transfer Value (CETV) at 31/03/06 **	928	1ump sum 525	e96	N/A	673	1ump sum 597	1ump sum 204	116	1ump sum 741
CETV at 31/03/07	1058	544	806	N/A	781	634	228	136	797
Real increase in CETV after adjustment for inflation and changes in market investment factors	92	2	77	N/A	76	15	22	16	20

Benefits in kind above relate to interest free loans in respect of relocation.

- *or at retirement age.
- ** The factors used to calculate the CETV were revised on 1 April 2006, on the advice of the scheme actuary. The CETV figure for March 2006 has been restated using the new factors, so that it is calculated on the same basis as the CETV figure for March 2007 •

Dr R Rutten is also a Site Director. No amounts are charged in these accounts for his emoluments, which are borne entirely by an international partner.

Average salary increase for Directors was 8.1%.

	2007 £000	2006 £000
The aggregate of salary costs, bonus and benefits in kind for Senior Employees was	730	522

Salary and Allowances, Including Bonus

Salary and allowances, including bonus, covers both pensionable and non-pensionable amounts and includes: gross salaries; performance pay or bonuses; overtime; allowances and any ex-gratia payments. It does not include amounts which are a reimbursement of expenses directly incurred in the performance of an individual's duties.

Benefits in Kind

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

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 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 details include the value of any pension benefit in another scheme and the other pension details include the value of any pension benefit in another scheme scheme or arrangement to the Research Councils' Pension Schemes and for which the schemes have 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 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 takes account of 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.

Remuneration of Council Members

The standard honorarium paid to Council Members increased to £6,410 (2005/06: £6,280) with effect from 1 October 2006. Council Members who are also Committee Chairmen receive an annual fee which also increased to £8,540 (2005/06: £8,370) with effect from 1 October 2006.

The emoluments of the Chairman Mr Peter Warry were £15,255 (2005/06: £14,900).

Non-consolidated bonus, benefits in kind and pension arrangements do not apply to Council Members.

Total remuneration paid to Council Members is as follows:

Council Members Annual Honoraria	2007 £000	2006 £000
Dr Trevor Cross	5-10	5-10
Prof Roger Davies FRAS	5-10	-
Prof Mike Edmunds FRAS FinstP	5-10	5-10
Dr Jonathan Ellis FRS FinstP	5-10	5-10
Professor Brian Foster FinstP	-	5-10
Professor Tony Hey FREng	-	-
Professor Jim Hough FRS, FRSE, FInstP, FAPS, FRAS	5-10	5-10
Professor John Inkson FinstP	5-10	5-10
Dr Philip Kaziewicz	5-10	-
Professor Dewi Lewis	-	5-10
Professor Keith Mason	-	0-5
Dr Jordan Nash	5-10	-
Mr Colin Paynter	5-10	5-10
Professor Anneila Sargent FRAS	5-10	5-10
Mrs Judith Scott CEng FBCS	-	5-10
Mr David Steeds	0-5	5-10
Professor John Zarnecki FRAS, MInstP	5-10	5-10
Total Council Members Annual Honoraria	76	85

Keith O. Man -

Keith Mason Accounting Officer 28 June 2007

Statement of the Responsibilities of the Particle Physics and Astronomy Research Council and of its Chief Executive with Respect to the Financial Statements

Under the Science and Technology Act 1965, the Secretary of State for Trade and Industry (with the consent of the Treasury) has directed the Particle Physics and Astronomy Research Council to prepare for each financial year a statement of accounts in the form and on the basis set out in the Accounts Direction. The accounts are prepared on an accruals basis and must give a true and fair view of the state of affairs of the Particle Physics and Astronomy Research Council 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 Trade and Industry (with the consent of the Treasury), 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 accounts; and
- prepare the accounts on a going concern basis.

The Secretary of State has appointed the Chief Executive as Accounting Officer of the Particle Physics and Astronomy Research Council. 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 keeping proper records and for safeguarding the Particle Physics and Astronomy Research Council's assets, are set out in the Accounting Officers' Memorandum issued by the Treasury and published in *"Government Accounting"*.

Statement on Internal Control

1. Scope of Responsibility

As Accounting Officer, I had responsibility for maintaining a sound system of internal control that supported the achievement of PPARC's policies, aims and objectives, whilst safeguarding the public funds and assets for which I was personally responsible, in accordance with the responsibilities assigned to me in Government Accounting.

As Accounting Officer, I took ultimate responsibility for the implementation and maintenance of the risk management process. The strategy was endorsed by the Council, Audit Committee and Risk Policy Group, all of whom discussed the results of the review of the effectiveness of internal control. The Council comprised external independent members, representatives of the parent body, the Department of Trade and Industry, and the Chief Executive. Senior members of the executive were also in attendance.

2. The Purpose of the System of Internal Control

The system of internal control was designed to manage risk to a reasonable level, rather than to eliminate all risk of failure to achieve policies, aims and objectives; it could therefore only provide reasonable and not absolute assurance of effectiveness. The system of internal control was based on an ongoing process designed to identify and prioritise the risks to the achievement of PPARC's policies, aims and objectives, to evaluate the likelihood of these being realised and the impact should they be realised, and to manage them efficiently, effectively and economically. The system of internal control was in place in PPARC for the year ended 31 March 2007 and was in accordance with Treasury guidance.

3. Capacity to Handle Risk

As Chief Executive I was responsible and accountable for the risk management process. The internal control process ensured that all risk procedures and activities were reviewed by the management and staff delegated to do so. All members of staff were aware of their responsibility to embed risk management in their activities.

The risk management process was fully documented and widely publicised. Induction courses included risk management and there was widespread access to information via the PPARC intranet.

Risk management training was carried out using a series of workshops and seminars. Where the need for more formal training was identified, a selection of training courses in risk management techniques was available. External experts were involved from an early stage of development and they remained available for further consultation if required.

I authorised the Risk Policy Group to investigate any aspect of risk management within their stated terms of reference. The Group was authorised to seek any information it required from any employee. All employees were directed to co-operate with any request made by the Group.

As part of the policy of allocating risk management to senior management, delegation letters were issued to PPARC Directors setting out their responsibilities and giving policy guidance. These detailed the individual's accountability, reiterated their Corporate Governance, including risk management, responsibilities and also their primary personal responsibilities. PPARC Directors were also required to sign an annual assurance statement on internal control to confirm that they were satisfied that the control processes they had in place were both adequate and appropriate.

4. The Risk and Control Framework

A Risk Policy Group was formed to monitor, advise and recommend appropriate action on any changes necessary following the introduction of the risk policy. The Group met three times in the year to review the Council's risk registers, to ensure that recommendations had been implemented and to give guidance on the risk management aspects of internal control arrangements.

A number of committees and groups were formed to implement, review and monitor the effectiveness of the various internal control processes throughout the organisation.

The creation of risk registers, both at local and corporate level, provided the basis for continual review of risk priorities. Each risk was identified and evaluated according to its perceived likelihood and effect upon the organisation's ability to fulfil its obligations. Local risk registers were regularly reviewed by each risk management group and regular updates were provided to the federal Risk Policy Group. All groups monitored any increase or reduction in risk caused either by change in activities or by circumstances. Risk appetites were determined by the nature of the risk. Council had a high tolerance for risk associated with research work, but a much lower tolerance where other issues such as health and safety were involved.

Following a RCIAS review of Corporate Governance in the year 2005/06, work progressed on formulating a statement of Business Risk Environment and proposals for further defining risk appetite. Work was carried out comparing the PPARC scorecard against the PPARC high risk register, to ensure that all key areas had been considered.

From PPARC's high level risk register, the following were identified as being business critical:

- external funding shortfall arising from:
 - the 2007/08 cessation of the international subscriptions compensation arrangements;
 - the outcome of the HM Treasury consultation process; and
 - the Comprehensive Spending Review (CSR2007) in respect of non-cash costs and funding for the Aurora project;
- the Sub-millimetre Common User Bolometer Array (SCUBA2) project;
- the Visible Infrared Survey Telescope for Astronomy (VISTA–see Note 17 for further details) project;
- the Atacama Large Millimeter Array (ALMA) project;
- the Large Hadron Collider (LHC);
- restructuring of the Observatories;
- the merger of PPARC with the Council for the Central Laboratory of the Research Councils (CCLRC) on 1 April 2007 to form The Science and Technology Facilities Council.

Such risks were reviewed centrally through the executive's monthly finance committee meetings, the quarterly reviews of local risk registers and reports on progress to Council. In addition, formal review and management of projects was undertaken at the level of individual project management boards and within the oversight committee structure.

In addition to the regular project and committee reviews noted above, each risk was assessed for the need to undertake action to contain the risk within an acceptable level. This was done through a variety of mechanisms that included the existing control framework such as the delegation process, separation of duties, contingency planning, Health and Safety training and post implementation reviews. The need for specific action plans to provide further assurance, to reduce or tolerate risk were also identified and where relevant such plans were monitored and reviewed regularly. In some instances, the use of certain events such as exit interviews provided a 'trigger' point to review the controls and identify potential changes in the risk environment which could have been relevant to the amount of risk tolerated.

Work was undertaken throughout PPARC to further embed risk management into control systems. Where appropriate, risk was also being incorporated into individuals' Personal Work Plans. Decision papers for all major projects now contain a risk assessment.

The Research Councils' Internal Audit Services (RCIAS) conducted regular reviews of PPARC's risk management. Their reports, and the Council's responses, were reviewed by the Audit Committee on behalf of Council.

5. Review of Effectiveness

As Accounting Officer, I had responsibility for reviewing the effectiveness of the system of internal control. My review of the effectiveness of the system of internal control was informed by the work of the internal auditors and the executive managers within PPARC, who had 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 was advised on the implications of the review of the effectiveness of the system of internal control by the Council, the Audit Committee and the Risk Policy Group. A plan to address weaknesses and ensure continuous improvement of the system was in place.

The main processes applied in reviewing the effectiveness of the system of internal control are noted below:

- the Council was required to meet at least four times per annum in order to consider PPARC plans, strategic direction, performance reports and corporate governance issues;
- the Audit Committee was required to meet at least three times a year to discuss all aspects of corporate governance, including risk management, and internal control. The Chairman of the Committee periodically reported to the Council on the work and findings of the committee. The minutes of audit committee meetings were routinely provided to Council;
- Directors and senior managers' meetings occurred on a monthly basis to oversee the implementation of Council's plans;
- regular reports by Internal Audit were provided to the Executive along with the annual report on assurance;
- there was a programme of visits and office-based tests which sought assurance that research grant funds were used for the purpose for which they were given, and that grants were managed in accordance with the terms and conditions under which they were awarded;
- a research award validation procedure provided assurance on the regularity of research project expenditure at universities and other research bodies.

Kuth D. Man -

Keith Mason Accounting Officer 28 June 2007

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

The Particle Physics and Astronomy Research Council

I certify that I have audited the financial statements of the Particle Physics and Astronomy Research Council for the year ended 31 March 2007 under the Science and Technology Act 1965. These comprise the Statement of Net Expenditure, the Balance Sheet, the Cashflow Statement, the Statement of Total Recognised Gains and Losses 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 being audited.

Respective Responsibilities of the Council, Chief Executive and Auditor

The Council and Chief Executive as Accounting Officer are responsible for preparing the Annual Report, the Remuneration Report and the financial statements, in accordance with the Science and Technology Act 1965 and Secretary of State for Trade and Industry directions made thereunder and for ensuring the regularity of financial transactions. These responsibilities are set out in the Statement of Council and Chief Executive's Responsibilities.

My responsibility is to audit the financial statements and the part of the remuneration report to be audited in accordance with relevant legal and regulatory requirements, and with International Standards on Auditing (UK and Ireland).

I report to you my opinion as to whether the financial statements give a true and fair view and whether the financial statements and the part of the Remuneration Report to be audited have been properly prepared in accordance with the Science and Technology Act 1965 and Secretary of State for Trade and Industry directions made thereunder. I report to you whether, in my opinion, certain information given in the Annual Report, which comprises the Management Commentary is consistent with the financial statements. I also report whether 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.

In addition, I report to you if the Particle Physics and Astronomy Research Council has not kept proper accounting records, if I have not received all the information and explanations I require for my audit, or if information specified by HM Treasury regarding remuneration and other transactions is not disclosed.

I review whether the Statement on Internal Control reflects the Particle Physics and Astronomy Research Council's compliance with HM Treasury's guidance, and I report if it does not. I am not required to consider whether this statement covers all risks and controls, or form an opinion on the effectiveness of Particle Physics and Astronomy Research Council's corporate governance procedures or its risk and control procedures.

I read the other information contained in the Annual Report and consider whether it is consistent with the audited financial statements. I consider the implications for my report if I become aware of any apparent misstatements or material inconsistencies with the financial statements. My responsibilities do not extend to any other information.

Basis of Audit Opinion

I conducted my audit in accordance with International Standards on Auditing (UK and Ireland) issued by the Auditing Practices Board. My audit includes examination, on a test basis, of evidence relevant to the amounts, disclosures and regularity of financial transactions included in the financial statements and the part of the Remuneration Report to be audited. It also includes an assessment of the significant estimates and judgments made by the Council and Chief Executive Officer in the preparation of the financial statements, and of whether the accounting policies are most appropriate to the Particle Physics and Astronomy Research Council's circumstances, consistently applied and adequately disclosed.

I planned and performed my audit so as to obtain all the information and explanations which I considered necessary in order to provide me with sufficient evidence to give reasonable assurance that the financial statements and the part of the Remuneration Report to be audited are free from material misstatement, whether caused by fraud or error, and that 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. In forming my opinion I also evaluated the overall adequacy of the presentation of information in the financial statements and the part of the Remuneration Report to be audited.

Opinions

Audit Opinion

In my opinion:

- the financial statements give a true and fair view, in accordance with the Science and Technology Act 1965 and directions made thereunder by the Secretary of State for Trade and Industry, of the state of the Particle Physics and Astronomy Research Council's affairs as at 31 March 2007 and of its net expenditure for the year then ended;
- the financial statements and the part of the Remuneration Report to be audited have been properly prepared in accordance with the Science and Technology Act 1965 and Secretary of State for Trade and Industry directions made thereunder; and
- information given within the Annual Report, which comprises the Management Commentary, is consistent with the financial statements.

Audit 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.

Report

I have no observations to make on these financial statements.

John Bourn Comptroller and Auditor General National Audit Office 157-197 Buckingham Palace Road Victoria, London SWIW 9SP

4 July 2007

Statement of Net Expenditure

for the year ended 31 March 2007

	Notes	2007 £000	2006 £000
			Restated (Note 1a)
Expenditure			
Staff costs	3b	15,111	13,474
Research grants	5	78,991	71,455
Other grants and awards	6	60,198	54,804
International collaboration agreements	7	157,093	168,629
Equipment and supplies		5,808	5,212
Services		7,904	6,865
Impairment in Value of Tangible Fixed Assets	9	420	49
Other operating costs	8	5,113	8,156
Depreciation	9	6,965	10,407
Closure and restructuring costs	4	-	(1,280)
Total Operating Expenditure		337,603	337,771
(Profit) / Loss on disposal of fixed assets		(28)	12
Interest receivable	2b	(10)	(15)
Notional Cost of Capital	1j	1,737	1,903
Unwinding of Discount on Decommissioning	14b	164	828
Amounts payable to the Consolidated Fund	2b	10	15
Total Expenditure for the year		339,476	340,514
Reversal of notional cost of capital	1j	(1,737)	(1,903)
Expenditure for the year after reversal of notional cost of capital		337,739	338,611
Income			
Operating Income	2a	(7,634)	(4,616)
Net Expenditure for the year after reversal of notional cost of capita		330,105	333,995

All activities will continue as part of the Science and Technology Facilities Council (see note 1b).

Balance Sheet

as at 31 March 2007

	Notes	2007 £000	2006 £000
First state			Restated (Note 1a)
Fixed assets	0	57 507	F2 122
Tangible assets	9	57,507	52,133
Current assets			
Debtors	11	22,318	27,891
Cash at bank and in hand	16	8,361	6,915
		30,679	34,806
Creditors: amounts falling due within one year	12	(19,939)	(26,812)
Net Current Assets		10,740	7,994
Total Assets less Current Liabilities		68,247	60,127
Creditors: amounts falling due after more than one year	13	(555)	(617)
Provisions for liabilities and charges	14	(7,669)	(8,993)
Total Assets less Liabilities		60,023	50,517
Reserves			
Revaluation reserve	15	27,190	17,143
Income and Expenditure reserve	15	32,833	33,374
Government Funds	15	60,023	50,517

Kuth O. Man -

Keith Mason Accounting Officer 28 June 2007

Cash Flow Statement

for the year ended 31 March 2007

	Notes	2007 £000	2006 £000
			Restated (Note 1a)
Net Cash Flow From Operating Activities		(325,330)	(310,501)
Returns on Investments and Servicing of Finance			
Interest received in year	2b	10	15
Interest surrendered to Consolidated Fund	2b	(10)	(15)
Capital Expenditure			
Payments to acquire tangible fixed assets		(2,280)	(2,292)
Receipts from sale of tangible fixed assets		318	365
Net Cash Outflow Before Financing		(327,292)	(312,428)
Financing			
Funding from International Partners	15	4,131	3,918
Grant from Joint Infrastructure Fund (JIF)	15	107	119
Grant-in-Aid received	15	324,500	310,000
Increase in Cash	16	1,446	1,609

Reconciliation of the Net Operating Expenditure to Net Cash Flow from Operating Activities

	Notes	2007 £000	2006 £000
Net Operating Expenditure		(329,969)	(333,155)
Depreciation charge	9	6,965	10,407
Impairment in value of Assets	9	420	49
(Decrease)/increase in provisions (net)	14	(1,000)	1,220
Payments against restructuring provision	14	(488)	(440)
Decrease/(increase) in Debtors	11	5,573	(5,389)
(Decrease)/increase in Creditors	12, 13	(6,831)	16,807
Net Cash Flow from operating activities		(325,330)	(310,501)

Accounts

Statement of Total Recognised Gains and Losses

for the year ended 31 March 2007

	Notes	2007 £000	2006 £000
			Restated (Note 1a)
Net Expenditure for the year before reversal of notional cost of capital		(331,842)	(335,898)
Reversal of notional cost of capital		1,737	1,903
Net Expenditure for the year after reversal of notional cost of capital		(330,105)	(333,995)
Net surplus on revaluation of tangible fixed assets	15	10,873	1,539
Grant-in-Aid Financing	15	324,500	310,000
Funding from International Partners	15	4,131	3,918
Grant from Joint Infrastructure Fund (JIF)	15	107	119
Total recognised gains and losses relating to the financial year		9,506	(18,419)

There is no cumulative effect on the total value of reserves as a result of the prior year adjustment.

Accounts

Notes to the Accounts

1. Accounting Policies

a. Basis of Accounting

These accounts have been prepared under the historical cost convention, adjusted by the revaluation of certain fixed assets, complying with the Accounts Direction issued by the Secretary of State for Trade and Industry on 27 November 2001 in accordance with section 2(2) of the Science and Technology Act 1965. The accounts also comply with the requirements of the *Government Financial Reporting Manual*.

Without limiting the information given, the accounts meet the accounting and disclosure requirements of the Companies Act 1985, the accounting standards issued by the Accounting Standards Board and specific Treasury guidance so far as appropriate. The particular accounting policies adopted by the Council are described below:

- the accounting policies have been applied consistently, except for the change in treatment of Grant-in-Aid for revenue and general capital purposes, which is now being treated as a Financing inflow and credited directly to reserves rather than being recognised as income for the year (see Note 1f). The same treatment has been adopted for other sources of financing;
- in addition, certain balances in the accounts have been reclassified in order to align the presentation of the PPARC accounts with those of CCLRC (see Note 1b). Details of reclassifications are shown in the notes to the accounts; there is no overall impact on reserves.

b. Going Concern

PPARC will not continue to operate from 1 April 2007. As all of its activities were transferred to another Council, the Science and Technology Facilities Council on that date, these Financial Statements have been drawn up on a going concern basis.

c. Fixed Assets and Depreciation

Capital expenditure includes the purchase of land and/or buildings, construction and services, projects, equipment and major computer software developments valued at £3,000 or more. Individual items valued at less than the threshold are capitalised if they constitute integral parts of a composite asset that is in total valued at more than the threshold. Individual items valued at less than the threshold and not forming part of a composite asset have not been capitalised. Normal PC software valued at less than the threshold has been treated as recurrent expenditure.

Tangible fixed assets have been included at cost or valuation. The basis of valuation is Open Market Value for Existing Use or Current Depreciated Replacement Cost. Professional valuations have been obtained approximately every five years and modified in the intervening years by the use of appropriate indices. A surplus or deficit on revaluation has been taken to the Revaluation Reserve, except that any impairment in value has been charged to the Statement of Net Expenditure in the year in which it has arisen. Increased depreciation charges arising from the revaluation have been matched by annual transfers from the Revaluation Reserve to the Income and Expenditure Reserve. Provision has been made for depreciation on all tangible fixed assets, except freehold land, at rates calculated to write off the carrying value of each asset evenly over its expected useful life, as follows:

- up to 60 years
- over 60 years or over the terms of lease
- over the terms of the lease
- 3 to 30 years
- 3 to 5 years
- up to 5 years

*This heading includes a substantial amount of scientific and observatory equipment.

d. Fixed Assets Under Construction

These represented the accumulated expenditure, including appropriate overhead costs, incurred in constructing items that enhanced PPARC's own infrastructure. Assets under construction were not depreciated until brought into use.

e. Ownership of Equipment Purchased with PPARC Research Grants

Through the Conditions of Grant applied to funded institutions, PPARC reserved the right to determine how equipment purchased by an institution with research grant funds was disposed of, and how any disposal proceeds were to be utilised, during the period of the research. Once the research had been completed the institution was free to use such equipment without reference to PPARC. Such equipment is excluded from these financial statements.

f. Grant-in-Aid

In 2006/07 there was a change in the treatment of Grant-in-Aid (GIA). This has arisen due to a change in the Financial Reporting Manual. Revenue GIA is now regarded as a contribution from a controlling entity thereby giving rise to a financial interest in the organisation. Hence it is no longer accounted for as income but as financing. This has resulted in GIA income no longer being shown on the face of the Income and Expenditure Account, but is credited to the Income and Expenditure Reserve in the Balance Sheet. The same treatment has been adopted for other sources of financing. As a result, the Income and Expenditure Account now shows net expenditure'. In addition, capital GIA received is no longer credited to the Government Grants Reserve and released to income over the life of the asset unless it is GIA provided for a specific capital purchase (for which there are no such cases within PPARC). The comparative figures for 2005/06 have been restated as a result and a prior year adjustment made to transfer capital GIA for general purposes from the Government Grants reserve to the Income and Expenditure Reserve. The same treatment has been adopted for the Capital Land Reserve, which is similar in nature (see Note 15).

The changes are presentational and do not affect the level of Government Funds available to PPARC.

g. Research and Development

As a research organisation, all of PPARC's research and development expenditure was charged to the Statement of Net Expenditure when it was incurred.

Intellectual property rights arising from PPARC research and development are not capitalised in the financial statements as income arising from this was not normally material.

h. Work-in-Progress

Work-In-Progress in respect of repayment contracts was valued at the lower of cost and net realisable value. Cost includes appropriate overheads. From 2006/07 WIP has been classified as amounts recoverable on long term contracts and included within Debtors. This was part of the process of aligning the PPARC Accounts with those of CCLRC. The comparative figure for 2005/06 of £119,000 has been adjusted.

i. Contributions to International Collaboration Projects

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

j. Notional Cost of Capital

As required by HM Treasury the notional capital charge which reflects the cost of financing capital employed is calculated at 3.5% of average net assets employed, less cash held at the Paymaster General bank during the year and less Donated Assets. In accordance with Treasury guidance the notional charge is credited back to the Statement of Net Expenditure.

k. Insurance

Other than as required by law, insurance was not purchased to protect against losses and other liabilities. Under the terms of Financial Reporting Standard (FRS) 12: *Provisions, Contingent Liabilities and Contingent Assets*, self-insurance provisions are not permissible. As such all claims in respect of uninsured risks were recognised in the accounts as and when they arose.

I. Foreign Currencies

Assets and liabilities denominated in foreign currencies were translated using the rates of exchange ruling at the balance sheet date. Transactions in foreign currencies were recorded at the rate ruling at the time of the transaction. Gains and losses arising from movements in foreign exchange rates were taken to the Statement of Net Expenditure.

m. Value Added Tax

PPARC was partially exempt for VAT purposes. Accordingly expenditure and fixed asset purchases on non-business and partially-recoverable activities are shown inclusive of VAT, where applicable. Residual input tax reclaimable by the application of the partial exemption formula was taken to the Statement of Net Expenditure as a sundry item.

n. Decommissioning Technical Facilities

Where it was considered probable that there would be a future requirement to decommission technical facilities then a provision was established to meet the anticipated future costs. The full amount of the decommissioning cost was recognised on the date that the technical facility was commissioned and capitalised. The capital cost was depreciated over the life of the asset and charged to the Statement of Net Expenditure. Costs of decommissioning were charged to the Statement of Net Expenditure on the basis of the estimated liability in the year of decommissioning assuming an inflation rate of 2.0% (2005/06: 2.0%), discounted at a present value of 2.2% (2005/06: 2.2%). Where the decommissioning provision was adjusted at a later date based on updated information, the movement was charged to the Statement of Net Expenditure to the extent that no further economic benefits had arisen.

o. Research Grants

The majority of research grants were paid by PPARC on an instalment basis in accordance with an agreed payment profile. Where the profile indicated an unclaimed and/or unpaid amount existed at the balance sheet date, such sums were accrued in the accounts. Future commitments at the balance sheet date are disclosed in the accounts.

p. Pension Costs

Employees of the Council are members of the Research Councils' Pension Scheme, which is funded on a pay-as-yougo basis. The amount charged in the Statement of Net Expenditure represents the contributions payable to the scheme in respect of current employees in the accounting period. Contributions were charged on a year-by-year basis in accordance with the requirements of the scheme administrators.

q. Closure and Restructuring Costs

Where a constructive obligation was made to terminate or radically change one of PPARC's operational facilities a provision was set up to cover the direct costs associated with closing or restructuring the facility. A provision was established in the financial statements to cover the estimated costs associated with the closure of the Royal Greenwich Observatory site in Cambridge. A provision was also established in respect of the ground based astronomy restructuring programme to cover the costs associated with the restructuring of the Joint Astronomy Centre in Hawaii and the Isaac Newton Group in La Palma and a provision was created for restructuring at the Astronomy Technology Centre in Edinburgh.

r. Staff Restructuring Costs

A limited number of early departures took place during the year. Staff under 50 years of age left on Early Severance terms, and were paid a compensation lump sum, their pension rights being preserved until normal retiring age. Staff over 50 years of age left on Early Retirement terms and were paid a compensation lump sum in addition to immediate payment of pension benefits. 'Pension benefits' consist of a pension lump sum and a monthly payment equivalent to the pension which would be payable at normal retirement age. Costs of early departures are charged to the Statement of Net Expenditure when decisions are taken to proceed.

All costs were borne initially by PPARC, but when an individual reached normal retirement age the pension lump sum was refunded by the relevant pension scheme (less any proportion relating to enhancements of service), and the pension scheme bore the cost of the monthly pension payment. PPARC was also responsible for the ongoing costs associated with early departures of ex-PPARC Principal Non-Industrial Superannuation Scheme members in that the liability for that part of the pension which is attributable to enhancement of service continued to be borne by PPARC until the individual's death.

s. Contingent Liabilities

The disclosure of contingent liabilities in the notes to the accounts has been prepared in accordance with Financial Reporting Standard (FRS)12: *Provisions, Contingent Liabilities and Contingent Assets*. No disclosure is made for those contingencies where crystallisation is considered to be remote or the amounts involved are immaterial.

t. Operating Leases

Operating Lease rental charges are included in the category Rent, Rates and Maintenance within the expenditure heading Other Operating Costs which is shown in Note 8.

2. Income

a. Income

	2007 £000	2006 £000
		Restated
Repayment Work	7,372	3,998
Miscellaneous Income	262	618
	7,634	4,616

There has been a change in the treatment of Grant-in-Aid, which is now being treated as Financing inflow and credited directly to reserves rather than being regarded as income for the year. The impact is explained in Notes 1f and 15. In 2005/06 a category of Income "Information Technology Centre" was included in the note above. This has now been reclassified as Repayment Work or Miscellaneous Income as appropriate.

b. Amounts Payable to Consolidated Fund

	2007 £000	2006 £000
Interest Receivable	10	15

3. Staff Costs

a. Remuneration of Senior Employees

Remuneration of senior employees can be found in the Remuneration Report on pages 19-23.

b. Staff Costs

	2007 £000	2006 £000
Salaries and wages	11,456	10,687
Social Security costs	1,030	988
Superannuation costs	1,958	1,874
Council and Committee Members' fees and honoraria	290	320
Current Staff Costs	14,734	13,869
Less Capitalised Staff Costs (see Note 9d)	(395)	(595)
Net Staff Restructuring Costs (see Note 3f)	772	200
Total Staff Costs included in the Statement of Net Expenditure	15,111	13,474

Included in salaries and wages is an amount of £1,064,000 (2005/06: £728,000) in respect of agency and contract staff.

c. Staff Numbers

The average number of employees during the year was 335 (2005/06: 326) excluding Council and Committee members, and comprised the following:

	2007 Number	2006 Number
Science: Programme development and management	185	198
Promotion of Science	16	12
Administrative Support	134	116
Total	335	326

Included within this figure are 11 agency staff (2005/06: 5), 7 Fixed Term Temporary Appointments (2005/06: 2) and 2 on inward secondment (2005/06: 1).

d. Remuneration of Council and Committee Members

Remuneration of Council Members details can be found in the Remuneration Report on pages 19-23.

The standard daily attendance allowance paid to Committee Members is £160 (2005/06: £160) and £215 (2005/06: £215) for Committee Chairmen.

Total remuneration paid to Council and Committee Members is as follows:

	No	2007 £000	No	2006 £000
Council Members Annual Honoraria				
£0 to £5,000	1	2	1	2
£5,001 to £10,000	11	74	12	83
Committee Members Daily Attendance Fees		192		213
		268		298
Social Security Costs		7		7
		275		305
Chairman's Emoluments		15		15
Total		290		320

e. Pension Arrangements

The Biotechnology and Biological Sciences Research Council (BBSRC) has responsibility for the Research Councils' Pension Schemes (RCPS) and the Chief Executive of the BBSRC is the Accounting Officer for the pension schemes. Employees of the Council were eligible to either join the RCPS or open a partnership pension account which is a stakeholder pension with an employer contribution. The RCPS is funded on a pay-as-you-go basis principally through employer and employee contributions and annual Grant-in-Aid.

The pension schemes provide retirement and related benefits on final emoluments by analogy to the Principal Civil Service Pension Scheme (PCSPS). The RCPS are administered by the Research Councils' Joint Superannuation Services, a unit within BBSRC. Separate RCPS Accounts are published and contain the further disclosure of information required under the relevant accounting standards.

As the RCPS are unfunded multi-employer defined benefit schemes, PPARC is unable to identify its share of the underlying assets and liabilities. Details can be found in the accounts of the Research Councils Pension Scheme at www.bbsrc.ac.uk.

Employer contributions are to be reviewed every four years following a full scheme valuation by the Government Actuary's Department (GAD). The last full actuarial valuation was carried out by GAD as at 31 March 2002. The report for the full actuarial valuation as at 31 March 2006 is expected to be available from GAD during August 2007. The contribution rate reflects benefits as they are accrued, not when the costs are actually incurred, and reflect the past experience of the scheme.

For 2006/07, employer's contributions of £1,950,000 were payable to the RCPS (2005/06: £1,865,000) at 21.3% of pensionable pay (2005/06: 21.3%). £8,000 was also paid to other organisations making £1,958,000 in total. Employer's contributions to stakeholder pensions are age-related and range from 3 to 12.5% of pensionable pay; during the year employers' contributions were negligible.

During 2006/07 there was one retirement on ill-health grounds.

f. Staff Restructuring Costs

Staff Restructuring Costs of £1,258,000 (2005/06: £633,000) includes charges to the restructuring provision of £486,000 (2005/06: £433,000) with the balance of £772,000 (2005/06: £200,000) being charged to the Statement of Net Expenditure.

4. Closure and Restructuring Costs

	2007 £000	2006 £000
Change to Provision for restructuring (see note 14)	-	(1,280)

5. Research Grants

	2007 £000	2006 £000
Astronomy	42,873	38,600
Particle Physics	27,841	24,812
e-Science	7,029	7,090
PPARC Industrial Programme Support Scheme (PIPSS)	1,122	835
Joint Infrastructure Fund (JIF)	126	118
	78,991	71,455

6. Other Grants and Awards

	2007 £000	2006 £000
Research and Research Support	42,778	38,329
Postgraduate Training Awards, Fellowships	17,420	16,475
	60,198	54,804

7. International Collaboration Agreements

Amounts payable under subscription agreements:

	2007 £000	2006 £000
European Incoherent Scatter Facility (EISCAT)	461	502
Anglo-Australian Telescope (AAT)	942	1,883
European Space Agency (ESA)	59,170	54,182
European Organisation for Nuclear Research (CERN)	78,301	79,088
European Science Foundation (ESF)	89	91
European Southern Observatory (ESO)	18,130	32,883
	157,093	168,629

The PPARC research objectives were shared with other major scientific nations, and as such the Council collaborated 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, PPARC joined ESO on 1 July 2002. ESO requires a notice period of 12 months with effect from 1 July 2013.

Whilst the above collaborations are regulated by agreement, the political nature of the arrangements are such that any withdrawal would be on a negotiated basis at government level. Council had 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 PPARC. In addition, PPARC collaborated with Dutch and Canadian partners in respect of the James Clerk Maxwell Telescope, Hawaii, and with Dutch partners in respect of the operation of telescopes on La Palma. The James Clerk Maxwell and La Palma telescopes were owned by PPARC.

8. Other Operating Costs

	2007 £000	2006 £000
		Restated
Travel, Subsistence and Hospitality	1,595	1,799
Utilities	676	631
Rent, Rates and Maintenance	3,144	2,315
Decommissioning Costs (Note 14)	(1,000)	2,500
General Administration	640	864
Auditors' Remuneration	58	47
	5,113	8,156

The net amount of foreign exchange losses debited to the Statement of Net Expenditure and included in General Administration was £37,000 (2005/06: gain £100,000).

The amount charged in the year for Operating Leases was £284,000 (2005/06: £206,000). This charge was included within Rent, Rates and Maintenance.

For 2006/07 Equipment and supplies, Services and Impairment in Value of Tangible Fixed Assets have been removed from Other operating costs and included as separate items within the Statement of Net Expenditure. The comparative adjustment for 2005/06 is reflected above. This is part of the process of aligning the PPARC accounts with those of CCLRC.

9. Tangible Fixed Assets

	Land and Buildings	Dwellings	Plant and Machinery	Information Technology	Assets Under Construction	Total
	£000	£000	£000	£000	£000	£000
Cost or Valuation						
At 1 April 2006	85,899	2,680	80,709	1,725	6,045	177,058
Additions	-	-	296	285	1,595	2,176
Revaluation	4,532	138	12,990	112	-	17,772
Impairment	-	-	(242)	(178)	-	(420)
Disposals	-	(300)	(4,308)	(99)	-	(4,707)
Transfers	-	-	1,304	-	(1,304)	-
At 31 March 2007	90,431	2,518	90,749	1,845	6,336	191,879
Depreciation						
At 1 April 2006	55,262	217	68,360	1,086	-	124,925
Charge for the year	4,525	55	2,167	218	-	6,965
Revaluation	3,031	14	3,993	(139)	-	6,899
Impairment	-	-	-	-	-	-
Disposals	-	(26)	(4,294)	(97)	-	(4,417)
At 31 March 2007	62,818	260	70,226	1,068	-	134,372
Net Book Value						
At 31 March 2007	27,613	2,258	20,523	777	6,336	57,507
At 1 April 2006	30,637	2,463	12,349	639	6,045	52,133

Notes:

- Plant and Machinery were professionally re-valued on a depreciated replacement cost basis as at 31 March 2007, by Mr Philip Davies (FRICS) of Hickman-Shearer (Asset Valuers) in accordance with the RICS Appraisal and Valuation manual.
- b. The value of Land and Buildings includes £2,385,000 (2005/06: £2,385,000) in respect of decommissioning costs. This was depreciated by £246,000 in the year. Accumulated depreciation at 31 March 2007 amounted to £1,366,000 (2005/06: £1,120,000). In accordance with FRS12: Provisions, Contingent Liabilities and Contingent Assets, 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 at the same time with depreciation being charged over its useful life.
- c. Land and Buildings relating to technical facilities were professionally re-valued on a depreciated replacement cost basis as at 1 April 2002 by James Barr (Chartered Surveyors). Residential Land and Buildings at the Isaac Newton Group were professionally re-valued on an open market basis as at 1 April 2002 by Messrs Martin and Cruz (Technical Architects). 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 (Chartered Surveyors), at £2,475,000. The valuation was made in accordance with the RICS Appraisal and Valuation Manual
- d. Additions to Assets Under Construction comprised £1,122,000 for materials, £395,000 in respect of staff costs (see Note 3b) and £78,000 for production overheads.
- e. The net book value of PPARC's Land and Buildings and Dwellings was derived from the following classes of asset:

	2007 £000	2006 £000
Freehold	12,848	10,251
Short leasehold	17,023	22,849
	29,871	33,100

The net book value of short leasehold property includes decommissioning costs.

10 Work-in-Progress

For 2006/07 WIP has been classified as amounts recoverable on long term contracts and included within Debtors. The comparative adjustment for 2005/06 of £119,000 is reflected below and on the face of the Balance Sheet. This is part of the process of aligning the PPARC accounts with those of CCLRC.

11. Debtors

	2007 £000	2006 £000
		Restated
Amounts falling due within one year		
Debtors		
Trade debtors	1,835	2,018
Amounts recoverable on long term contracts	147	119
Other debtors	537	2,012
Other Central Government Bodies	1,147	3,473
Public Corporations and Trading Funds		66
Early retirement lump sums recoverable from Research Councils' Pension Scheme	209	140
Prepayments and accrued income		
Other Central Government Bodies	100	4
Other prepayments and accrued income	17,495	19,217
	21,470	27,049
Amounts falling due after one year		
Loans to staff	158	149
Early retirement lump sums recoverable from Research Councils' Pension Scheme	690	693
	848	842
Total Debtors	22,318	27,891
	2007 Number	2006 Number
Number of staff in receipt of loans	89	93

For 2006/07 WIP has been classified as amounts recoverable on long term contracts and included within Debtors. The comparative adjustment for 2005/06 is reflected above (see Note 10).

For 2006/07 Early retirement lump sums, recoverable from Research Councils' Pension Scheme, falling due within one year have been shown separately above (previously included within Other Central Government Bodies). The comparative adjustment for 2005/06 is reflected above. This is part of the process of aligning the PPARC accounts with those of CCLRC.

Early retirement lump sums are recoverable from the Research Councils' Pension Scheme on the sixtieth birthday of those former employees subject to early retirement arrangements.

12. Creditors: amounts falling due within one year

	2007 £000	2006 £000
		Restated
Creditors		
Trade creditors	4,299	2,533
Other creditors	1,043	2,225
Other Central Government Bodies	2,066	41
Early retirement compensation payments	241	225
Deferred income	458	194
Accruals		
Other Central Government Bodies	108	-
Other Accruals	11,724	21,594
	19,939	26,812

For 2006/07 Early retirement compensation payments have been shown separately above (previously included within Other Creditors). The comparative adjustment for 2005/06 is reflected above. Included within the creditors is £10,000 (2005/06: £114,000) relating to the purchase of tangible fixed assets. Other Central Government Bodies creditor includes tax and social security of £39,000 (2005/06: £45,000).

13. Creditors: amounts falling due after more than one year

	2007 £000	2006 £000
Early retirement compensation payments	555	617

14. Provisions for Liabilities and Charges

	Restructuring £000	Decommissioning £000	Total £000
At 1 April 2006	1,525	7,468	8,993
Unwinding of discount on decommissioning	-	164	164
Reduction of Provision	-	(1,000)	(1,000)
Provision utilised - other costs	(2)	-	(2)
- Staff costs (See Note 3f)	(486)	-	(486)
At 31 March 2007	1,037	6,632	7,669

a. Restructuring

Of the closing balance of £1,037,000, £758,000 is provided for restructuring at the UKATC in Edinburgh, £199,000 is for closure of the Cambridge site, with the balance of £80,000 being provided for the Ground Based Astronomy programme of restructuring.

The provision utilised includes £486,000 for staff restructuring costs (Note 3f).

b. Decommissioning of Technical Facilities

PPARC's technical facilities were long term in nature and estimated to have a thirty year operating life. It was deemed probable that at the end of that life span, or PPARC's earlier withdrawal, there would be a requirement to decommission existing facilities, and as such a provision for this purpose was established. The decommissioning costs for the island sites were professionally re-valued in March 2007 by Gabriel Henriquez Perez for ING and North West Demolition and Dismantling for JAC. Management then considered the valuations obtained and a range of possible outcomes, and concluded that a reduction of £1,000,000 in the provision was appropriate.

The cost of decommissioning the technical facilities between 2009/10 and 2012/13 is currently estimated at £7.4 million, after allowing for inflation at 2%. This amount is discounted at 2.2% representing the Treasury's notional cost of capital to arrive at a current provision of £6.6 million. The charge of £164,000 in the year represents the unwinding of this discount up to 31 March 2007 when the provision was adjusted following the professional revaluations.

	Income and Expenditure Reserve 2007	Government Grant Reserve 2007	Revaluation Reserve 2007	Capital Land Reserve 2007	Total Government Funds 2007
	£000	£000	£000	£000	£000
Opening Balance	(351)	31,897	17,143	1,828	50,517
Prior year adjustment	33,725	(31,897)	-	(1,828)	-
Opening Balance restated	33,374	-	17,143	-	50,517
Grant in Aid financing	324,500	-	-	-	324,500
Funding from International Partners	4,131	-	-	-	4,131
Grant from Joint Infrastructure Fund (JIF)	107	-	-	-	107
Net expenditure for the year after reversal of cost of capital	(330,105)	-	-	-	(330,105)
Transfer from Revaluation Reserve to Income and Expenditure Reserve	826	-	(826)	-	-
Net surplus on revaluation of tangible fixed assets	ı -	-	10,873	-	10,873
Closing Balance	32,833	-	27,190	-	60,023

15. Reconciliation of Movements in Government Funds

From 2006/07 there has been a policy change regarding the presentation in the accounts of Grant-in-Aid (GIA) necessitating in a prior year adjustment. The new policy is set out in Note 1f above.

16. Movement in Cash and Net Funds

	2007 £000	2006 £000
Net Funds at 1 April	6,915	5,306
Net cash inflow	1,446	1,609
Net Funds at 31 March	8,361	6,915

Of the Net Funds at 31 March, £5,908,000 (2005/06: £5,389,000) was held by the Office of the Paymaster General (OPG). The balance was held by commercial banks.

17. Contingent Liabilities

As set out under Note 7 the Council collaborated with a number of international partners, in the funding, management and operation of technical facilities which were not owned by PPARC. In the event of a decision to withdraw from any of these arrangements, it is likely that PPARC would have assisted in the search for a replacement partner to ensure that technical commitments were met. The most significant international collaborations are in respect of CERN, ESO, and ESA. In addition, PPARC was a member of the Gemini collaboration. For each of these four facilities, there was the possibility that PPARC would be obliged to contribute to decommissioning costs arising from a decision taken to discontinue operations. The decisions to decommission were not wholly within PPARC's control. There were no current plans for decommissioning nor were there any plans for PPARC to withdraw from these facilities.

The latest information available for the CERN long term debt was at 31 December 2006 which stood at £393 million. During the year ending 31 March 2007, PPARC was a 17.36% (2005/06: 17.8%) contributor to CERN, and its share of CERN's long term debt would amount to £68 million.

The Visable and Infrared Survey Telescope for Astronomy (VISTA)

As part of the accession to ESO, PPARC entered into an undertaking to make contributions both in cash and in kind. The in kind contribution included the VISTA telescope, at a value of \in 46M. VISTA was originally scheduled to have been delivered in August 2006. Contained within the agreement was a clause detailing potential penalties, which would accrue if VISTA was delivered later than August 2007. It is now known that VISTA will be delivered after August 2007.

Subsequently, ESO agreed to review the project's history and the latest status report, and to make a judgement on what, if any, measures might, in due course be appropriate if the agreed date is not met. PPARC has been informed that it is ESO's current practice to resolve issues related to penalties for late delivery, only after delivery has taken place. ESO have confirmed no penalties will be invoked before 31 March 2008.

After due consideration of all available information and in light of the requirements of FRS12 (Provisions, contingent liabilities and assets), it was decided that, as it is more likely than not that no transfer of economic benefits will be required, it is not appropriate to make a provision, instead a Contingent Liability of \in 4M should be noted.

For a contingent liability to be disclosed the following conditions apply:

- a) a possible obligation arising from past events whose existence will be confirmed only by the occurrence of one or more uncertain events not wholly within the entity's control or;
- b) a present obligation that arises from past events, but it is not recognised because it is not probable that a transfer of economic benefit will be required to settle the obligation.

All of the above Contingent Liabilities will now rest with the Science and Technology Facilities Council.

18. Commitments

a. Research Grants

At 31 March 2007, the Council had made commitments in respect of Research Grants as follows:

Total commitment	258,745
Payable in 2 to 5 years	173,591
Payable within 1 year	85,154
	£000

b. Capital Expenditure

	2007 £000	2006 £000
Contracted but not provided for	865	982

c. Operating Lease Commitments

	Land and	Land and Buildings		r Leases
	2007	2006	2007	2006
	£000	£000	£000	£000
Annual commitments at 31 March				
Expiring within one year	124	128	6	96
Expiring in the second to fifth years	89	96	36	42
	213	224	42	138

d. Foreign Exchange Commitments

Contracts to the value of £46.5 million (2005/6: £48.8 million) were in place with the Bank of England at 31 March 2007 for the forward purchasing of Foreign Currency in April 2007. These were to facilitate the payment of contributions to CERN.

19. Related Party Transactions

a. PPARC is a Non-Departmental Public Body (NDPB) sponsored by the Department of Trade and Industry (DTI) which is regarded as a related party.

During the year, PPARC had a number of transactions with the DTI and with other entities for which the DTI is regarded as the parent Department, viz: the Biotechnology and Biological Sciences Research Council (BBSRC); the Council for the Central Laboratory of the Research Councils (CCLRC); the Engineering and Physical Sciences Research Council (EPSRC); the Economic and Social Research Council (ESRC); and the Natural Environment Research Council (NERC). In addition, PPARC had material transactions with other Government departments and with other central government bodies, viz: the Ministry of Defence.

b. During the year, there were no material transactions with Council members in respect of payments under grants and awards funded by PPARC.

c. During 2006/07, PPARC authorised grants and awards to organisations where Council members or directors are also senior members of staff, as follows:

Organisation	Number of grants	Amount	Number of awards	Amount
		£000		£000
University of Cardiff Professor Mike Edmunds	4	4,757	6	289
CERN Dr Jonathan Ellis/Dr Jordan Nash	1	13	-	-
The Open University Professor John Zarnecki	12	1,512	3	108
University College London Professor Keith Mason Professor Jennifer Thomas	28	12,562	13	877
University of Exeter Professor John Inkson	2	260	2	100
University of Glasgow Professor Jim Hough	3	478	8	466
University of Oxford Professor Roger Davies	19	7,833	20	1,280
University of Wales, Aberystwyth Professor Richard Wade	2	2345	-	-
University of Warwick Mr Peter Warry	1	36	4	205

None of the above mentioned related parties were involved in the authorisation of grants or awards to the institution where the Council member is a senior member of staff. Professor Wade and Professor Thomas have regularly attended Council in their respective roles within PPARC's senior advisory body, Science Committee, and have been included above for completeness.

d. PPARC operated internal procedures designed to remove any staff member from any decision-making process under which they or any of their close family may have benefitted.

During the year, PPARC identified those members of staff who could be regarded as being in positions of financial influence, and required a declaration from each of any financial transaction with PPARC under which the staff member or a member of his/her immediate family was in receipt of a significant amount of money from PPARC, and where the staff member was able to exercise any influence over the transaction. No such transactions were identified during this exercise.

20. Financial Instruments

FRS 13, *Derivatives and Other Financial Instruments*, requires disclosure of the role which financial instruments have had during the year 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 PPARC is financed, PPARC 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 FRS 13 mainly applies. The Council's financial assets and liabilities were generated by day-to-day operational activities and were not held to change the risks facing the Council in undertaking its activities.

Liquidity Risk

The Council's net revenue resource requirements were financed by resources voted annually by Parliament, as was its capital expenditure. PPARC was not therefore exposed to significant liquidity risks. PPARC was dependent on funding from the Department of Trade and Industry to meet liabilities falling due in future years, but there was no reason to believe that this funding would not be forthcoming.

Interest-Rate Risk

The Council was not exposed to significant interest-rate risk.

Foreign Currency Risk

Exposure to foreign currency risk was not significant because the risk exposure on PPARC's principal international subscriptions was covered by the Office of Science and Innovation, whereby PPARC was compensated for variances from a base position. At the instigation of OSI, the compensation arrangements are to end with effect from the end of the current spending review period on 31 March 2008.

Further information relating to the forward purchase of Swiss francs as agreed with the Office of Science and Innovation, is in Note 18d. Other exchange risk was related to smaller international subscriptions and funding of PPARC's international sites, and was processed at the prevailing rate at the time of the transaction.

21. Events Since the End of the Financial Year

On 1 April 2007 the activities of PPARC were transferred to a new council, The Science and Technology Facilities Council.

There were no other post Balance Sheet events between the Balance Sheet date and the 4 July 2007, the date when the Accounting Officer dispatched the accounts to the Office of Science and Innovation. The Financial Statements do not reflect events after this date.

Appendix 1

Membership of Council and Advisory Bodies

Council

Mr Peter Warry FREng FIEE FIMechE FCMA (C	hair)	Victrex plc
Professor Keith Mason (Chief Executive)		PPARC
Dr Trevor Cross		e2v
Professor Roger Davies		University of Oxford
Professor Mike Edmunds	(until 31/03/07)	University of Cardiff
Professor Jonathan Ellis FRS FInstP	(until 31/03/07)	CERN
Professor Tony Hey FREng		Microsoft Corporation
Professor Jim Hough FRS		University of Glasgow
Professor John Inkson FinstP		University of Exeter
Dr Phil Kaziewicz		GI Partners
Dr Jordan Nash		CERN
Mr Colin Paynter		EADS Astrium Limited
Professor Anneila Sargent	(until 31/03/07)	California Institute of Technology
Professor John Zarnecki		Open University
Mr Paul Williams		Office of Science And Innovation

Science Committee

Professor Jenny Thomas (Chair)	University College London
Professor Walter Gear (Deputy Chair)	University of Cardiff
Professor Roger Davies	University of Oxford
Professor Jonathan Ellis FRS FInstP	CERN
Professor Brian Foster FInstP	University of Oxford
Professor Monica Grady	Open University
Professor Richard Hills	University of Cambridge
Dr Jordan Nash	CERN
Dr John Wormersley	CCLRC
Professor Diana Worrall	University of Bristol

Audit Committee

Professor John Inkson FinstP (Chair)	University of Exeter
Dr Trevor Cross	e2v
Professor John Zarnecki	Open University
Mr Richard Piper ма FCA	

Education, Training and Careers Committee

Professor Graham Shore (Chair)	(until 30/09/06)	University of Wales, Swansea
Professor Jim Hough FRS (Chair)	(from 01/10/06)	University of Glasgow
Dr Matthew Bate	(until 31/08/06)	University of Exeter
Professor Ian Bonnell	(from 01/09/06)	University of St Andrews
Professor Philip Burrows	(from 01/09/06)	University of Oxford
Dr Susan Cartwright	(from 01/09/06)	University of Sheffield
Dr Chris Chaloner	(from 01/09/06)	Systems Engineering and Assessment Ltd
Dr Glen Cowan	(until 31/08/06)	Royal Holloway, University of London
Professor Christine Davies OBE		University of Glasgow
Dr Sarah Dunkin		CCLRC
Professor Stephen Anthony Eales		University of Cardiff
Professor Yvonne Elsworth		University of Birmingham

Astronomy Advisory Panel

Professor Peter Coles (Chair)		University of Nottingham
Dr Richard Bower		University of Durham
Dr Cathie Clarke	(until 31/07/06)	University of Cambridge
Professor Mark Cropper		Mullard Space Science Laboratory
Dr Melvin Hoare		University of Leeds
Professor Mark McCaughrean		University of Exeter
Dr Sebastian Oliver	(until 31/07/06)	University of Sussex
Professor Trevor Ponman		University of Birmingham
Dr Stephen Smartt		Queens University of Belfast
Professor Bruce Swinyard		CCLRC
Professor Peter Wilkinson		University of Manchester

Particle Astrophysics Advisory Panel

Professor Albert Vecchio (Chair)	University of Birmingham
Professor Robert Bingham	CCLRC
Dr Paula Chadwick	University of Durham
Professor Anthony Lasenby	University of Cambridge
Professor Roy Maartens	University of Portsmouth
Dr Paul Shellard	University of Cambridge
Professor Tim Sumner	Imperial College London
Dr Kai Zuber	University of Sussex

Solar System Advisory Panel

Professor Steven Miller (Chair)		University College London
Dr Philippa Browning	(until 31/12/06)	University of Manchester
Dr Alan Fitzsimmons	(until 31/12/06)	Queen's University Belfast
Dr Lyndsay Fletcher		University of Glasgow
Dr Tim Horbury	(until 31/12/06)	Imperial College London
Dr Martin Jarvis	(from 01/01/07)	British Antarctic Survey
Dr Ingo Mueller-Wodarg	(from 01/01/07)	Imperial College London
Dr Dave Rothery		Open University
Professor Steve Schwartz	(from 01/01/07)	Imperial College London
Dr Steven Tobias	(from 01/01/07)	University of Leeds
Dr Tim Yeoman	(until 31/12/06)	University of Leicester

Particle Physics Advisory Panel

Professor Peter Dornan FRS (Chair)	Imperial College London
Dr Giles Barr	University of Oxford
Professor John Dainton FRS	University of Liverpool/Cockcroft Institute
Professor Edward Glover	University of Durham
Professor Tim Morris	University of Southampton
Dr Franz Muheim	University of Edinburgh
Dr Peter Sharp	CERN
Dr Dan Tovey	University of Sheffield

Astronomy Grants Panel

Professor Mark Lester (Chair)	University of Leicester
Professor James Binney	University of Oxford
Dr Phil Bland	Imperial College London
Professor Peter Coles	University of Nottingham
Professor Gerry Doyle	Armagh Observatory
Professor Robert Fender	University of Southampton
Professor Paul Hewett	University of Cambridge
Dr Patrick Irwin	University of Oxford
Professor Andrew Longmore	UK ATC
Dr Ian McCrea	CCLRC
Dr Richard Nelson	Queen Mary, University of London
Dr Christopher Owen	University College London
Dr Jonathan Rawlings	University College London
Professor Ian Smail	University of Durham
Dr lan Stevens	University of Birmingham
Dr Nial Tanvir	University of Leicester
Professor Michael Thompson	University of Sheffield
Professor Kinwah Wu	University College London

Projects Peer Review Panel

Dr Jon Butterworth (Chair)	(until 31/12/06)	University College London
Dr Mark Smith (Chair)	(from 01/01/07)	University of Leicester
Dr Iain Steele (Deputy Chair)	(until 31/12/06)	Liverpool John Moores University
Dr Craig Buttar (Deputy Chair)	(from 01/01/07)	University of Glasgow
Dr Brian Cox		University of Manchester
Dr Richard Batley		University of Cambridge
Dr Steve Boyd		University of Warwick
Dr Nick Brook		University of Bristol
Dr Phil Burrows	(until 31/12/06)	Queen Mary, University of London
Mr Colin Cunningham	(until 07/03/07)	UK ATC
Dr Antonella De Santo		Royal Holloway, University of London
Professor Gerry Doyle		Armagh Observatory
Dr Robertus von Fay-Siebenburgen		University of Sheffield
Professor Geoff Hall		Imperial College London
Professor Andrew Holland		Brunel University
Dr Hans Kraus		University of Oxford
Dr Simon Morris		University of Durham
Professor Mike Seymour		University of Manchester/CERN
Professor Alan Smith		Mullard Space Science Laboratory
Professor Glen White		Open University
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Particle Physics Grant Panel

-		
Professor Dave Charlton (Chair – Experiment)		University of Birmingham
Professor Steve King (Chair – Theory)	(until 31/08/06)	University of Southampton
Professor John March-Russell (Chair – Theory)	(from 01/09/06)	University of Oxford
Dr Iain Bertram		Lancaster University
Professor Janet Carter	(until 31/08/06)	University of Cambridge
Professor Christine Davies OBE	(from 01/09/06)	University of Glasgow
Dr Costas Foudas		Imperial College London
Professor Mike Green		Royal Holloway, University of London
Dr Stephen Haywood	(until 31/08/06)	CCLRC
Professor Tim Hollowood		University College of Wales, Swansea
Dr Michael Kraemer	(until 31/08/06)	University of Edinburgh
Dr Mark Lancaster		University College London
Dr Chris Parkes	(from 01/09/06)	University of Glasgow
Dr Fernando Quevedo	(from 01/09/06)	University of Cambridge
Professor Steven Lloyd	(from 01/09/06)	Queen Mary, University of London
Dr Adrian Singer		University of Durham
Dr Stefan Soldner-Rembold	(from 01/09/06)	University of Manchester
Professor William Spence	(from 01/09/06)	Queen Mary, University of London
Dr Mike Teper	(until 31/08/06)	University of Oxford
Dr Christos Touramanis		University of Liverpool
Dr Guy Wilkinson	(until 31/08/06)	University of Oxford
Dr Steve Worm	(from 01/09/06)	CCLRC

Science and Society Advisory Panel

Professor Mike Edmunds (Chair)	University of Cardiff
Professor Malcolm Coe	University of Southampton
Mr Peter Cooper	London Mathematical Society
Dr Graham Farmelo	Science Museum, London
Professor Mike Green	Royal Holloway, University of London
Professor Tim Greenshaw	University of Liverpool
Mr Martin Ince	
Mr Colin Johnson	
Dr Helen Mason	University of Cambridge
Mr Daniel Sandford Smith	Institute of Physics
Professor John Zarnecki	Open University

Appendix 2

Statistical Performance Indicators

Science Programme

Particle Physics

Comparative data on UK Presentations at major conferences

Speakers and convenors (Normalised to UK):

Year/Country	UK	France	Germany	Italy
2006	18 (1.0)	19 (1.1)	19 (1.1)	17 (0.9)
2005	15 (1.0)	23 (1.5)	20 (1.3)	24 (1.6)
2004	24 (1.0)	10 (0.5)	14 (0.7)	14 (0.7)

Positions of responsibility (Normalised to UK):

Year/Country	UK	France	Germany	Italy
2006	5 (1.0)	5 (1.0)	12 (2.4)	5 (1.0)
2005	8 (1.0)	10 (1.2)	10 (1.2)	7 (0.9)
2004	8 (1.0)	6 (0.7)	12 (1.5)	7 (0.9)

Particle physics papers published in seven leading physics journals (normalised to UK)

A paper is attributed to a country when at least one co-author is based in that country:

Year/Country	USA	Germany	Italy	Japan	UK	Russia	France	Switzerland (includes CERN)
2006	2087 (2.7)	1087 (1.4)	909 (1.2)	710 (0.9)	767 (1.0)	582 (0.8)	616 (0.8)	558 (0.7)
2005	2025 (2.8)	1000 (1.4)	773 (1.1)	680 (0.9)	707 (1.0)	591 (0.8)	530 (0.7)	476 (0.7)
2004	2217 (3.1)	1100 (1.5)	998 (1.4)	861 (1.2)	704 (1.0)	618 (0.9)	581 (0.8)	559 (0.8)

Astronomy and Planetary Science

Number of publications by year (Normalised to UK) and Citations impact – the average number of references for each paper in the most recent five year period:

Year/Country		USA		UK	Ge	rmany	F	rance	lt	aly
	No.	Citations								
2006	6,201 (2.4)	10.20	2,539 (1.0)	9.61	2,213 (0.9)	10.14	1,267 (0.5)	8.46	1,362 (0.5)	8.62
2005	5,116 (2.9)	10.19	1,754 (1.0)	9.88	1,570 (0.9)	9.51	1,194 (0.7)	8.24	1.183 (0.7)	8.98
2004	4,871 (3.1)	9.62	1,585 (1.0)	9.33	1,502 (1.0)	8.60	1,081 (0.7)	7.73	1,040 (0.7)	8.46

Note: The data was provided by the Institute for Scientific Information.

Selectivity of spending

Deployment of PPARC funding in comparison with RAE ratings 5 (and 5*):

Year	Number of HEIs	Value of Grants %	Value of Student/ Fellowship awards %	Total value of all awards %
2006/07	22 (5)	60 (22)	59 (34)	60 (23)
2005/06	22 (5)	65 (28)	57 (32)	65 (29)
2004/05	22 (5)	70 (24)	58 (32)	68 (25)

Annual infrastructure investment

Year	Investment in PPARC establishments (ATC, La Palma and JAC)	Investment via international subscriptions (AAT, CERN, Gemini, ESA and ESO)	Investment via grants
	£M	£M	£M
2006/07	1.7	45.1	10.0
2005/06*	1.5	36.2	7.7
2004/05*	2.5	33.0	5.6

*Figures restated for the Financial Years 2004/05 and 2005/06

Percentage of grant final reports with each rating (5 high, 1 low):

Rating/Year	2006	2005	2004
	%	%	%
5	49	47	55
4	35	41	28
3	5	9	15
2	10	3	2
1	1	0	0

Total number of research grant applications (number of female Principle Investigators):

Year	Number of applications received	Number of grants awarded
2006/07	388 (45)	188 (16)
2005/06	316 (37)	235 (23)
2004/05	385 (37)	273 (24)

Summary of research grant cash payments made to universities in the financial year ending 31 March 2007

Institution Ast	ronomy	Particle Physics	Faraday, PIPSS & ITF	e Science	Totals
	£k	£k	£k	£k	£k
OXFORD	3,433	4,410	32	275	8,150
CAMBRIDGE	4,588	1,594	126	1,163	7,471
MANCHESTER	4,767	1,579	7	808	7,161
UNIVERSITY COLLEGE LONDON	4,935	1,504	87	436	6,962
IMPERIAL COLLEGE LONDON	2,376	2,492	-5	750	5,613
DURHAM	3,752	1,419	131	109	5,411
LEICESTER	3,420	-	177	1,007	4,604
LIVERPOOL	-	2,770	2	199	2,971
GLASGOW	219	2,165	25	430	2,839
BIRMINGHAM	872	1,575	23	236	2,706
CARDIFF	1,420	418		94	1,932
QUEEN MARY	443	736	15	305	1,499
OPEN	1,496	750	15	505	1,496
SHEFFIELD	850	- 385	77	158	1,490
EDINBURGH	401	385	12	641	1,470
SOUTHAMPTON	1,005	265	-	58	1,434
		724	- 25		
LANCASTER CCLRC	309 969	27	25	239	1,297 1,170
		۷.		1/4	
	911	-	-	-	911
SUSSEX	352	528	-	-	880
BRISTOL	181	479	-	191	851
LIVERPOOL JOHN MOORES	801	-	-	37	838
ROYAL HOLLOWAY	-	738	-	66	804
LEEDS	522	273	-	-	795
WARWICK	279	404	2	-	685
QUEEN'S BELFAST	556	-	76	-	632
HERTFORDSHIRE	521	-	-	-	521
ANGLO AUSTRALIAN OBSERVATORY	312	-	8	-	320
KEELE	299	-	-	-	299
NOTTINGHAM	234	36	14	-	284
BRUNEL	73	86	25	70	254
ВАТН	150	-	92	-	242
EXETER	196	-	-	33	229
UW, SWANSEA	-	228	-	-	228
UW, ABERYSTWYTH	213	-	-	-	213
PORTSMOUTH	200	-	-	-	200
CENTRAL LANCASHIRE	184	-	-	-	184
ARMAGH OBSERVATORY	162	-	-	-	162
KINGS COLLEGE LONDON	-	123	-	-	123
SURREY	15	-	94	-	109
KENT	89	-1	-	-	88
STRATHCLYDE	48	-	21	-	69
HERIOT-WATT	43	19	4	-	66
PLYMOUTH	-	56	-	-	56
SALFORD	-	-	52	-	52
NATURAL HISTORY MUSEUM	18	-	-	-	18
YORK	-	16	-	-	16
DUNDEE	12	_	-	-	12
CERN	-	-	4	-	4
CITY	-	-	2	-	2
Totals	41,626	25,428	1,128	7,479	75,661

Education and Training

PhD Submission Rates

Year	Students starting PhD in:	Proportion completing PhD within 4 years
2005*	2001	81%
2004	2000	81%
2003	1999	78%

Research studentships - Number of Awards (excludes CASE and other schemes)

Year	Particle physics	Astronomy	Total new awards
2006/07	96	160	256
2005/06	81	108	189
2004/05	78	103	181

Fellowship statistics (P = Postdoctoral / A = Advanced)

Year/Fellowship		No. of applicants (women)	No. awarded (women)	Success rate % (women)
2006/07	Р	117 (22)	12 (4)	10.26 (18.18)
	А	169 (37)	12 (4)	7.10 (10.81)
2005/06	Р	162 (40)	12 (5)	7.41 (12.50)
	А	150 (26)	11 (2)	7.33 (7.69)
2004/05	Р	175 (52)	14 (4)	8.00 (7.69)
	А	155 (21)	13 (1)	8.39 (4.76)

* Restated to incorporate late data relating to the 2001 round of PhDs completed within four years

Industrial Competitiveness

Number of PIPSS Projects (co-funded research projects)

Year	Number	Value £k
2006/07	9	908.0
2005/06	9	1,128.5
2004/05	5	485.3

Number of UK companies on PPARC Unit for CERN database (actively participating in the PPARC industry advice programme)

Year	Number
2006/07	235
2005/06	215*
2004/05	545

*Only UK companies that re-registered during the year have been included on the database. A similar review of active UK companies had shown a total of 451 at 31 March 2003.

Number of new patents filed*

Year	Number
2005	22
2004	22
2003	20

*Through PPARC and international subscription based research centres.

Science and Society (Public Understanding of Science)

Number of Public Understanding of Science (PUS) Small Awards

Year	Number	Value £k
2006/07	33	212
2005/06	28	161
2004/05	47	188

Number of UK schools visiting CERN

Year	Number
2006/07	96
2005/06	43
2004/05	37

Administration

PPARC Staff (average full-time equivalent) at year end 31 March 2007

	Number by establishment	
Isaac Newton Group of Telescopes, La Palma	50.0	(see Note 1)
Joint Astronomy Centre, Hawaii	55.4	(see Note 2)
Swindon Office	185.6	(see Note 3)
UK Astronomy Technology Centre, Edinburgh	95.7	
Total	386.7	

Note 1: 34 f.t.e. employed as Locally Engaged Staff.

Note 2: 51.4 f.t.e. employed through the Research Corporation of the University of Hawaii.

Note 3: 63.9 f.t.e. employed on cross-Council services which other Councils were paying their share.

Appendix 3

Acronyms and Abbreviations

ALMAAtacama Large Millimetre ArrayATLASA Toroidal LHC ApparatusBaBarB/B-bar experimentBNSCBritish National Space CentreCERNConseil European pour la Recherche Nucleaire (European Laboratory for Particle Physics)CCLRCCouncil for the Central Laboratory of the Research CouncilsE-ELTEuropean - Extremely Large TelescopeERIDEuropean Space AgencyESOEuropean Space AgencyESOEuropean Southern ObservatoryFECFull Economic CostHARPHetrodyne Array Receiver ProgrammeINGIsaac Newton GroupJACJoint Astronomy CentreJCMTJames Clerk Maxwell TelescopeLCGLHC Computing GridLHCLarge Hadron ColliderOSIOffice of Science and InnovationPIPSSPPARC Industrial Programmes Support SchemePSRAPublic Sector Research ExploitationRCUKEGResearch Council UK Executive GroupSLACStahord Unieral Accelerator CentreSPIRESpectral and Photometric Imaging ReciverSTEREOSolar Terrestrial Relations ObservatoryUK ATCUK Astronomy Technology CentreUKIDSSUK Infrared Deep Sky SurveyUKIRTUK Infrared TelescopeVisible and Infrared Survey Telescope for AstronomyVirEAMWide Field CameraWHTWilliam Herschel Telescope	ACSIS	Auto-Correlation Spectrometer and Imaging System
BaBarB/B-bar experimentBNSCBritish National Space CentreCCERNConseil European pour la Recherche Nucleaire (European Laboratory for Particle Physics)CCLRCCouncil for the Central Laboratory of the Research CouncilsE-ELTEuropean - Extremely Large TelescopeERIDEuropean Research Infrastructure Development (Watch)ESAEuropean Space AgencyESOEuropean Southern ObservatoryFECFull Economic CostHARPHetrodyne Array Receiver ProgrammeINGIsaac Newton GroupJACJoint Astronomy CentreJCMTJames Clerk Maxwell TelescopeLCGLHC Computing GridLHCLarge Hadron ColliderOSIOffice of Science and InnovationPIPSSPPARC Industrial Programmes Support SchemePSRAPublic Sector Research ExploitationRCUK Research Council UKKecutive GroupSLACStanford Linear Accelerator CentreSPIRESpectral and Photometric Imaging ReceiverSTEREOSolar Terrestrial Relations ObservatoryUK ATCUK Astronomy Technology CentreUKIRTUK Infrared TelescopeUKIRTUK Infrared TelescopeVISTAVisibe and Infrared Survey Telescope for AstronomyWFCAMWide Field Camera	ALMA	Atacama Large Millimetre Array
BNSCBritish National Space CentreCERNConseil European pour la Recherche Nucleaire (European Laboratory for Particle Physics)CCLRCCouncil for the Central Laboratory of the Research CouncilsE-ELTEuropean - Extremely Large TelescopeERIDEuropean Research Infrastructure Development (Watch)ESAEuropean Space AgencyESOEuropean Southern ObservatoryFECFull Economic CostHARPHetrodyne Array Receiver ProgrammeINGIsaac Newton GroupJACJoint Astronomy CentreJCMTJames Clerk Maxwell TelescopeLCGLHC Computing GridLHCLarge Hadron ColliderOSIOffice of Science and InnovationPIPSSPPARC Industrial Programmes Support SchemePPSAPublic Sector Research ExploitationRCUK Research Councils UKResearch Councils UKRCUKEGResearch Councils UKSCUBASub-millimetre Common User Bolometer ArraySLACStanford Linear Accelerator CentreSPIRESpectral and Photometric Imaging ReceiverSTEREOSolar Terrestrial Relations ObservatoryUK ATCUK Astronomy Technology CentreUKIRTUK Infrared TelescopeVISTAVisibe and Infrared Survey Telescope for AstronomyVFCAMWide Field Camera	ATLAS	A Toroidal LHC Apparatus
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UKIRTUK Infrared TelescopeVISTAVisible and Infrared Survey Telescope for AstronomyWFCAMWide Field Camera	UK ATC	UK Astronomy Technology Centre
VISTA Visible and Infrared Survey Telescope for Astronomy WFCAM Wide Field Camera	UKIDSS	UK Infrared Deep Sky Survey
WFCAM Wide Field Camera	UKIRT	UK Infrared Telescope
	VISTA	
WHT William Herschel Telescope	WFCAM	Wide Field Camera
	WHT	William Herschel Telescope

Printed in the UK for The Stationery Office Limited on behalf of the Controller of Her Majesty's Stationery Office ID5596863 07/07

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