

NEW ZEALAND SYNCHROTRON GROUP LIMITED



ANNUAL REPORT 2010

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CHAIRMAN'S REPORT

The New Zealand Synchrotron Group Ltd (NZSG) has now completed its fourth year of operation. This is an important period for the company as we work to expand access to the Australian Synchrotron and support for New Zealand researchers and prepare for possible New Zealand involvement in the next stage of development of the Synchrotron. Maximising access for New Zealand researchers is important and is a principal goal for the company in order to ensure that the country obtains value from the significant investment made in the Synchrotron. It was particularly pleasing that the Prime Minister, Rt Hon John Key, was able to visit the Synchrotron during the year to observe the facility at first hand. While there he attended the launch of Vital Vegetables® which is a collaborative programme between the New Zealand and Australian horticulture industries and looks to develop vegetables with added health benefits. Scientists from Plant and Food Research have used the Synchrotron to identify the how and where selenium is stored in broccoli. In his speech, the Prime Minister emphasised the benefits of trans-Tasman scientific collaboration.

In accordance with the Subscription Agreement signed between the company and the Australian Synchrotron, the second full annual payment of operating costs of A\$780,281 was made in February 2010. Full access arrangements for New Zealand researchers to the Australian Synchrotron are now in place for all beamlines, except the imaging and sensing beamline, and New Zealand researchers have been awarded beamtime through both the Merit and the Preferred Access routes in increasing numbers as is demonstrated later in this report. These arrangements now include considerable financial support for the costs incurred by researchers in travelling to Melbourne or in shipping samples when using the remote access option.

Day to day management of NZSG's activities has been contracted to a secretariat from the Royal Society of New Zealand. The scope of the services provided by the Society includes;

- providing secretariat services to the Board,
- acting on their behalf in governance and access arrangements for the Australian Synchrotron,
- management of the funding support programme,
- promoting the development of synchrotron science,
- processing applications for beamtime as part of New Zealand's preferred access to the Australian Synchrotron,
- maintaining the company's accounts, and
- liaising with the New Zealand government and NZSG shareholders on behalf of the Board.

The company had budgeted for a loss for the year of \$1,142,594 which comprised of an expected surplus of \$156 from trading operating and a loss of \$1,142,750 through the amortisation of the investment in the Australian Synchrotron. The trading result was a surplus of \$26,395, a result that was influenced by the company being able to secure additional unexpected financial support from the Australian Synchrotron for

the costs associated with the protein crystallography workshop held by NZSG at the Australian Synchrotron in July 2009. After providing for the amortisation costs, the overall result was a loss of \$1,116,355.

With the completion of the previous Capability Build contracts, the company has no significant sources of revenue, other than funds received from the Australian Synchrotron and other third parties who provide funding for travel and training and from interest on funds the company holds. It does however have cash reserves in excess of \$300,000. The Directors intend that with modest supplementing from shareholders, that these funds be employed over the coming three years to contract secretariat services and to prepare a case for possible New Zealand investment in the next stage of development of the Australian Synchrotron.

As the commissioning of the initial set of beamlines at the Australian Synchrotron nears completion, there are now plans for a substantial further development of the Australian Synchrotron. A science case and a comprehensive business case have been prepared and are currently being considered by the Commonwealth and Victorian State governments. There is strong interest and a willingness in Australia to include New Zealand in the development. On behalf of its shareholders and the New Zealand research community, NZSG has already expressed an interest in participating in the development. There have not been any substantive discussions yet about what this would mean in practical terms or how such as investment would be funded, but in preliminary discussions with the Australian Synchrotron, NZSG Directors have emphasised that any potential investment would have to be matched by an expansion of the current "Preferred Access" rights given to New Zealand researchers. We will work with the government, existing shareholding institutions and other potential investors to negotiate for ongoing access to the Synchrotron in line with the current arrangements.

The board has been very well supported by the Royal Society of New Zealand who provides secretariat services to NZSG. In particular, I would like to acknowledge the contribution made by Don Smith in assisting the board and administering the New Zealand Synchrotron Support Programme. I would also like to acknowledge the contribution from the members of the Access Committee (chaired by Professor Geoff Jameson with Dr Graeme Gainsford, Associate Professor Mike Reid and Associate Professor Metcalf) who have evaluated all requests for preferred access and for funding support for training.

Finally, I would like to thank my fellow directors.



GA Carnaby
Chair

BUSINESS REVIEW

Investment in the Australian Synchrotron

Through the original investment in the Australian Synchrotron in October 2007, NZSG is both a member of the Australian Synchrotron Company (ASC) and a shareholder in the Australian Synchrotron Holding Company (ASHCo). The shares in ASHCo are fully paid with the final instalment of capital (A\$1.5 million), amounting of 30 cents per share, being paid on 31 October 2008.

The Subscription Agreement signed between NZSG and the two synchrotron companies also provides for an annual contribution until 2013 of A\$750,000, with adjustments for movements in the cost of living, from New Zealand towards the operating costs of the Synchrotron. A payment of (A\$780,281) was made to ASC on 25 February 2010.

The Board has appointed Dr Don Smith to be the company's representative on the Australian Synchrotron Company's Council of Members and at ASHCo shareholder meetings. He attended the annual general meetings of both companies in October 2009. Dr Smith is also the contact person for day-to-day matters associated with access arrangements and user liaison with ASC. Dr Carnaby is a member of the boards of both ASC and ASHCo.

In late 2009 there were some unexpected staff changes at the Australian Synchrotron followed by a short period during which there was a work to rule by some staff. The situation was closely monitored at the time to ensure that the potential impact on New Zealand researchers was minimised. Since that time a number of new appointments have been made to the ASC Board, the Science Advisory Committee and to senior staff positions at the Synchrotron and the company is confident that New Zealand researchers are receiving the expected level of support for their work.

Decisions on Access and Funding Support

The Board has established an Access Committee to make the decisions on applications for preferred time access, funding for synchrotron science or funding support for the costs of travel to synchrotrons. The members of the Committee are:

Professor Geoff Jameson, Massey University (Chair)
Dr Graeme Gainsford, Industrial Research Ltd
Associate Professor Peter Metcalf, University of Auckland
Associate Professor Mike Reid, University of Canterbury

The Committee has not met during the year formally as a group but the individual members have communicated throughout the year on proposals they have been asked to assess. The criteria for selecting proposals were developed and approved by shareholders and is published on the NZSG web site along with other information on accessing support.

The table at the end of this section lists the New Zealand researchers who have gained beamline access to the Australian Synchrotron from July 2009 onwards, and where applicable, the funding support provided to them.

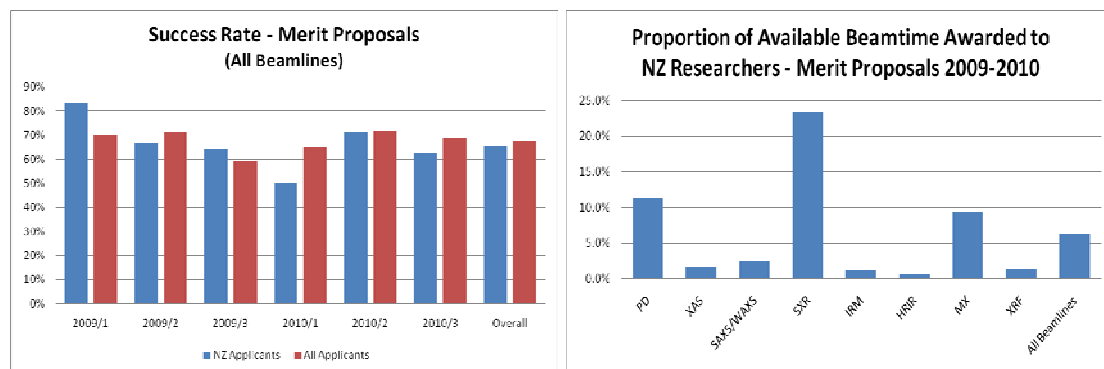
Use of the Australian Synchrotron by New Zealand Researchers

The first of the beamlines was successfully commissioned in mid 2007 and since then all but one of the originally planned beamlines have become operational.

Approximately 50% of the available beamline time is assigned to “merit” access and competitive applications are sought from researchers worldwide, including from New Zealand. The Australian Synchrotron makes calls every four months for merit access to the beamlines. Applications are made directly to the Australian Synchrotron with no direct involvement from NZSG apart from promoting the opportunity to apply via our website.

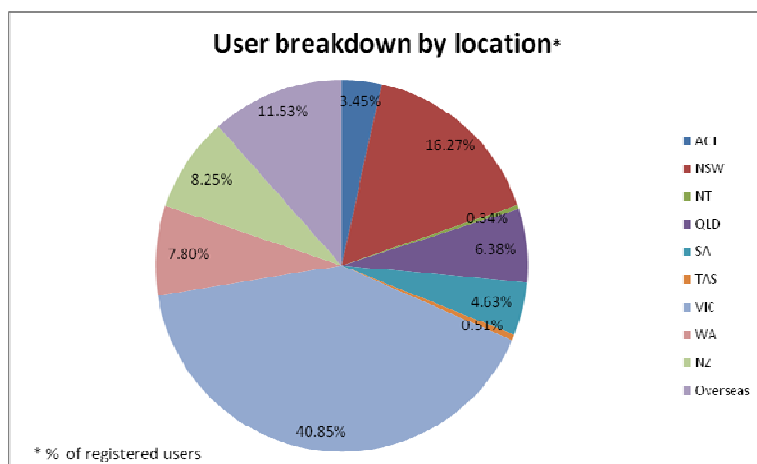
Since late 2008, in recognition of the contribution New Zealand makes to operating costs, the Australian Synchrotron began contributing towards the travel costs for New Zealand researchers who obtained beamtime at the Australian Synchrotron on an equal basis with Australian researchers. These funds are administered through NZSG.

New Zealand researchers have applied for time on all the available beamlines with success as shown in the two following graphs. Although success rates fluctuate from round to round, applications from New Zealand research groups match well with those from elsewhere. In the July 2009 to June 2010 period New Zealand research groups received 6.3% of all merit time, well in excess of the 5% target established for New Zealand researchers in the Subscription Agreement. New Zealand researchers are strong users of the Soft X-ray, Powder Diffraction and Macromolecular Crystallography beamlines.



Approximately 30% of the available beamline time is set aside explicitly for researchers from the Foundation Investors. This arrangement bypasses the “merit” process and ensures that researchers who did not obtain or apply for merit access can gain access directly as a result of their institution being a Foundation Investor. The provision of Foundation Investor time (“preferred access”) will cease in 2013 when the obligation to make payments towards the Australian Synchrotron’s operating costs expires. Researchers from the company’s shareholders apply through NZSG and their proposals are evaluated by an Assessment Committee. There are 10 Foundation Investors in the Synchrotron and each received an equal share of the time made

available through this route. In the July 2009 to June 2010 period researchers from NZSG's shareholding institutions received 11.4% of all the time allocated to Foundation Investors.



When both classes of beamtime are combined, New Zealand researchers have had a strong presence at the Australian Synchrotron, receiving 7.6% of the overall time available, and representing 8.25% of all registered users as shown in the adjacent graph.

The actual numbers of groups involved are given in the table below.

No. NZ groups with scheduled time (merit and preferred) at the AS

Beamline \ Period	2008	2009	2010
Protein Crystallography (MX1 and MX2)	3	7	19
Infrared Microscopy and High Resolution IR	3	2	3
Powder Diffraction	8	10	11
Soft X-ray Spectroscopy	1	7	9
Small & Wide Angle X-ray Scattering		4	7
X-ray Fluorescence Microscopy		2	1
X-ray Absorption Spectroscopy		3	3
Total	15	35	53

Support for Synchrotron Scientists

Until 30 June 2009, the company operated the New Zealand Synchrotron Support Programme (NZSSP) with funds originating from the Tertiary Education Commission. With the cessation of that funding, the formal NZSSP has scaled down, but in a large part has been replaced by travel funding available from the Australian Synchrotron which most groups which are granted merit or Foundation Investor access are entitled. The NZSG administers these funds.

In addition, the company was successful in negotiating places for emerging researchers from New Zealand to join their Australian counterparts and attend a Winter School by the Australian Synchrotron in July 2009. ASC also agreed to provide some funding which was supplemented by funds already set aside by NZSG for the School which enabled 15 researchers to attend.

The company also ran its own training programme by making use of two blocks of Foundation Investor time in July 2009 to hold a Protein Crystallography workshop at

the Australian Synchrotron which 12 young researchers attended. The workshop was conducted by Professor Geoff Jameson (Massey University) and Drs Chris Squire and Richard Bunker (University of Auckland).

The opportunities for training were extended by achieving success in obtaining 2 places at the Cheiron School at the Spring 8 Synchrotron in Japan for New Zealand researchers from the organisers. The offer of places included full funding for travel and accommodation.

The table below provides details of the activities supported.

Researcher	Institution	Activity
Sivakumar Balakrishnan	Massey	AS Winter School
Melissa Basil-Jones	Massey	Cheiron School
Ghader Bashiri	Auckland	AS Winter School and PX Workshop
Domagoj Belic	Canterbury	AS Winter School
Rhesa Budhidarmo	Otago	AS Winter School and PX Workshop
Ruiqun Chen	Auckland	AS Winter School
Alice Clark	Massey	PX Workshop
Penelope Cross	Canterbury	PX Workshop
Mathew Cumming	Waikato	PX Workshop
Roberta Gentile	AgResearch	AS Winter School
Richard Hutton	Canterbury	PX Workshop
Haishun Jin	Auckland	AS Winter School
Stuart Lansley	Canterbury	AS Winter School
David Libich	Massey	AS Winter School
Christian Linke	Auckland	AS Winter School and PX Workshop
Bronwyn Lowe	Otago	AS Winter School
Peter Mace	Otago	PX Workshop
Peter Murmu	GNS Science & VUW	AS Winter School
Muralidharan Muthu	Massey	AS Winter School and PX Workshop
Yoshio Nakatani	Otago	PX Workshop
Grant Pearce	Canterbury	AS Winter School and PX Workshop
Aisyah Mohamed Rehan	Auckland	PX Workshop
Morgan Scott	Auckland	AS Winter School and Cheiron School

D K W Smith
Executive Officer
Secretariat

New Zealand Research Groups Awarded Beamtime (July 2009 – June 2010)

The following New Zealand research groups were awarded time (merit and preferred) at the Australian Synchrotron between July 2009 and June 2010.

Researchers	Institution	Cycle	Beamline	Access/Duration/ Funding Support
Prof Richard Haverkamp Melissa Basil-Jones Isabel Beattie	Massey University	2009-2	Small and wide angle scattering Structural Studies of Ovine Leather - Microstructure Informing Macrostructure	Preferred access 2 days \$3,715
Dr Bridget Ingham Dr Sean Hendy Dr Richard Tilley Teck Lim Khadijah Kamarudin	IRL VUW	2009-2	Powder Diffraction In situ coalescence of Au nanoparticles	Merit and Preferred access 1 day \$2,481
Dr Bridget Ingham Prof David Williams Dr Gareth Kear Nick Laycock Monika Ko Nick Biribilis Peter Kappen	IRL Auckland Quest Reliability Monash Univ La Trobe Univ	2009-2	Powder Diffraction In situ monitoring of FeCO ₃ scale nucleation and growth	Merit access 3 days \$2,181
Dr Marion McKenzie Peter Beech Ronan Chen Dr Rod Jones	Plant & Food ? Plant & Food DPI, Australia	2009-2	X-ray Fluorescence Tissue-specific localisation of high-health organic selenium compounds in intact broccoli (Brassica oleraceae) and competition with local sulphur balance.	Preferred access 2 days \$1,865
Prof Richard Haverkamp Isabel Beattie	Massey University	2009-2	Powder diffraction “In-situ reactions monitored by analysis of total scattering	Preferred access 3 days \$1,723
Prof Ted Baker Richard Bunker Dr Chris Squire Dr Alina Castell	Auckland	2009-2	Protein Crystallography (PX1 & PX2) “Structure of pili and other bacterial surface proteins”	Merit access 2 days \$1,286
Dr Gregory Giles Bevan Gang Sidharth Patel	Otago	2009-2	Infrared Microscope Pharmacology of Superoxide Dismutase Mimics	Preferred access 2 days \$3,294
Prof Kurt Krause Dr Rafael Counago Prof Andrew Mercer Dr Stephen Fleming Emma Dixon	Otago	2009-2	Protein crystallography “Structural characterization of the chemokine binding protein from the ORF virus (Poxviridae)”	Merit access 1 day \$2,801

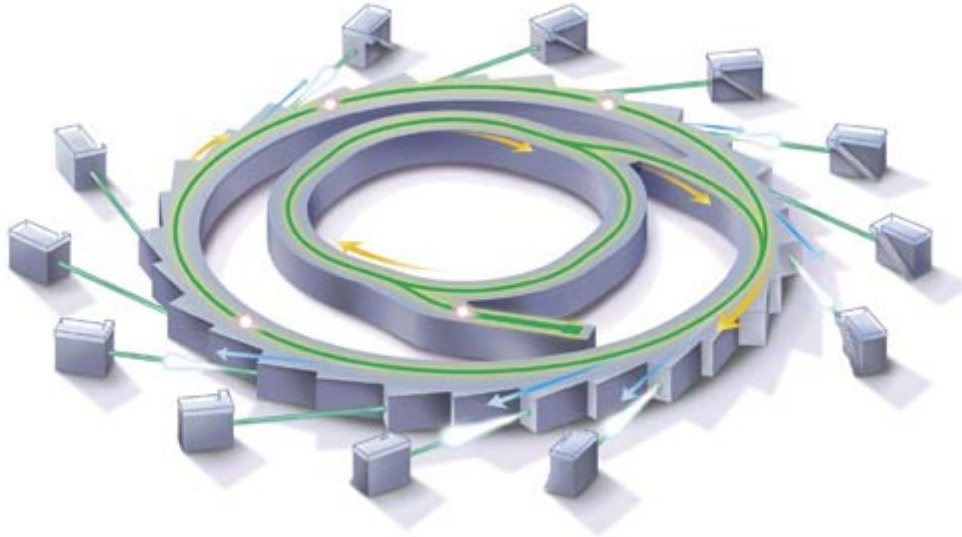
Researchers	Institution	Cycle	Beamline	Access/Duration/ Funding Support
Dr Geoff Waterhouse Professor Jim Metson Haishun Jin Vedran Jovic Akihiro Shimamura Prof. Toshihiro Moriga	Auckland Tokushima University (Japan)	2009-3	Soft X-ray Spectroscopy “Local structure of perovskite-type oxynitride pigments (LaTiO ₂ N) and Fe-doped titania from XANES measurements”	Merit access 5 days \$1,663
Dr Chongwen Zou Xiaodong Yan Ruquin Chen Prof Wei Gao	Auckland	2009-3	Soft X-ray Spectroscopy “Electronic structure study of vanadium pentoxide across the phase transition range and crystallization process by X-ray absorption and photoelectron spectroscopy”	Merit access 5 days \$1,833
Dr Richard Tilley Dr Bridget Ingham Khadijah Kamarudin	VUW IRL VUW	2009-3	Powder Diffraction “Phase transitions of indium nanoparticles at temperatures close to the melting point”	Merit Access 3 days \$1,887
Professor Ted Baker Dr Alina Castell Dr Jodie Johnston Richard Bunker	Auckland	2009-3	Protein Crystallography “Structure of pili and other bacterial surface proteins”	Merit Access 2 days
Dr Alina Castell Dr Neil Paterson	Auckland	2009-3	Protein Crystallography “Fragment screening of M. tuberculosis TrpD”	Rapid Access 1 day \$2,309
Dr Bridget Ingham Dr Shaun Hendy Amada Parker Dr Mary Ryan	IRL IRL/VUW VUW Imperial College	2009-3	Powder Diffraction “Formation of nanoporous metallic materials, observed in situ”	Merit Access 2 days \$1,558
Dr Aaron Marshall Chris Penniall Prof Richard Haverkamp	Canterbury Canterbury Massey	2009-3	X-ray Absorption Spectroscopy “Structural analysis of IrO ₂ clusters on Sb-doped SnO ₂ nanoparticles”	Merit Access 2 days \$4,644
Linus Perander Dr Geoff Waterhouse Professor Jim Metson	Auckland	2009-3	Soft X-ray Spectroscopy “XANES characterization of aluminium oxides and hydroxides”	Merit Access 4 days \$2,790
Dr Chris Squire	Auckland	2009-3	Small and Wide Angle Scattering “Protein SAXS applied to dynamics of LeuA from M. tuberculosis and characterisation of a cell- cycle complex”	Preferred Access 1 day \$820

Researchers	Institution	Cycle	Beamline	Access/Duration/ Funding Support
Prof Richard Haverkamp Melissa Basil-Jones	Massey University	2009-3	Small and Wide Angle Scattering “Structural Changes in Ovine Leather Under Applied Stress”	Preferred Access 2 days \$649
Dr Tito Soehnel Morgan Scott Eric Rey	Auckland	2009-3	X-ray Absorption Spectroscopy “XANES studies of oxidation states in mixed transition metal tin clusters”	Merit Access 1 day \$4,504
Professor Jim Metson Linus Perander Rainer Grupp Akihiro Shimamura	Auckland	2009-3	Powder Diffraction “In-situ XRD studies on the thermal behaviour of intercalated layered double hydroxides”	Preferred Access 2 days \$2,398
Professor Jim Metson	Auckland	2009-3	Soft X-Ray Spectroscopy “An XPS and XANES study of phosphate intercalated layered double hydroxides”	Preferred Access 5 days \$2,341
Dr Alina Castell Prof Ted Baker Dr Christopher Squire Richard Bunker Dr Neil Paterson Dr Esther Bulloch	Auckland Auckland Auckland Auckland Auckland	2010-1	Crystallography (MX2) “Fragment screening M. tuberculosis TrpD”	Preferred access 3 days \$1,908
Prof Ted Baker Dr Chris Squire Dr Ghader Bashiri Dr Richard Payne Dr Esther Bulloch Jason Busby	Auckland Auckland Auckland Univ of Sydney Auckland Auckland	2010-1	MX2 “Structure of pili and other bacterial surface proteins”	PPR 4 days \$1,274
Prof Kurt Krause Rafael Counago A/P Catherine Day Dr Sigurd Willibanks Tracy Joseph	Otago Otago Otago Otago	2010-1	Crystallography (MX1) “Three projects from the University of Otago Structural Biology Group”	Merit access 1 day Preferred access 2 days \$4,809
Dr Pawel Kowalcysk Mr Domajoc Belich Assoc Prof Simon Brown Dr Bridget Ingham Zbigniew Klusek Witold Kozlowski Ojas Mahapatra David McCarthy	Canterbury Canterbury Canterbury IRL Northumbria, UK Lodz, Poland Canterbury Canterbury	2010-1	Soft X-ray “Investigations of oxidation of Bi nanostructures deposited on graphite using XPS”	Preferred access 5 days \$2,370
Dr Bridget Ingham Dr Peter Kappen Monika Ko Prof David Williams	IRL La Trobe Univ. Quest Reliability Univ of Auckland	2010-1	Powder diffraction “In situ monitoring of FeCO ₃ scale nucleation and growth”	Preferred access 3 days \$3,140

Researchers	Institution	Cycle	Beamline	Access/Duration/ Funding Support
Dr Emily Parker Dr Renwick Dobson Prof Juliet Gerrard Prof Geoff Jameson Andrew Muscroft-Taylor Dr Grant Pearce Prof Ian Shaw Penelope Cross Tim Allen	Canterbury Canterbury Canterbury Massey Canterbury Canterbury Canterbury Canterbury Canterbury	2010-1	Crystallography (MX2)	Merit access 1 day \$2,814
Dr Grant Pearce Dr Renwick Dobson Prof Juliet Gerrard Dr Emily Parker Prof Ian Shaw Moritz Lasse Dr Mudhu Vasudevamurthy	Canterbury Canterbury Canterbury Canterbury Canterbury Canterbury Plant & Food	2010-1	Small angle X-ray scattering	Preferred access 1 day \$3,008
Dr Simon Hinkley Dr Bridget Ingham	IRL IRL	2010-1	Small angle X-ray scattering "Observation of the amorphous state changes and film forming behaviour of a novel polymer series."	Preferred access 1 day \$970
Dr Jan Richter	VUW	2010-1	Soft X-ray "Electronic structure of europium nitride"	Merit access 4 days
Dr Shane Telfer Dr Sivakumar Balakrishnan	Massey Massey	2010-2	High Resolution Infra-red (HRIR) "The Characterisation of Metal-Organic Framework Thin Films"	Merit access 1 day
Dr Vladimir Golovko David Anderson	Canterbury Canterbury	2010-2	Soft X-ray (SXR)	Merit access 4 days \$1,318
Prof Kurt Krause Rafael Counago Dr Catherine Day Sigurd Wilbanks	Otago Otago Otago Otago	2010-2	Crystallography (MX2) "University of Otago Structural Biology Group Programme"	Preferred access 1 day
Dr Shane Telfer Dr Sivakumar Balakrishnan	Massey Massey	2010-2	Powder Diffraction (PD) "Characterisation of Metal- Organic Framework (MOF) Thin Films"	Preferred access 2 days \$1,767
Dr Geoff Waterhouse Shaneel Sharma Nor Azieda Azahari Zakiya Al-Azri	Auckland Auckland Auckland Auckland	2010-2	Soft X-ray (SXR) "Electronic structure of supported gold nanoparticle catalysts: A combined high resolution XPS and NEXAFS investigation"	Merit access 4 days \$1.656

Australian Synchrotron

A synchrotron is a large research facility that generates an extremely intense beam of electromagnetic radiation ('light') that can be used for scientific experiments. The radiation is produced by taking a stream of electrons travelling at close to the speed of light, and deflecting them with magnetic fields. The light covers the electromagnetic spectrum from the infrared to the hard x-ray region.



Electrons are generated in the linear accelerator (linac), and progress into the smaller 'booster' ring, where they are further accelerated up to their final velocity (99.99% of the speed of light, a kinetic energy of 3.0 GeV). At this point they are 'injected' into the larger storage ring, where they circulate for a period of hours to days. The electron beam is steered and focused by magnetic fields. At each point where the beam is deflected, electromagnetic radiation is produced tangential to the beam path. 'Insertion devices', undulators and wigglers, are periodic magnet structures that serve to increase the radiation flux by up to five orders of magnitude. The radiation produced can be used in many different experiments and techniques. The light is channelled from the ring down a number of 'beam lines', each of which is optimised for a particular experimental technique.

The status of the various beam lines at the Australian Synchrotron can be summarised as follows:

- Protein crystallography (PX1) was the first beam line to become operational and began accepting general users in January 2008. This technique uses x-ray diffraction to determine the structure of proteins, used in drug design and understanding biochemical interactions.
- Infrared spectroscopy and microscopy (IR) also came online in early 2008. The beam line features two endstations: an FTIR spectrometer and an infrared microscope.
- Powder diffraction (PD) began taking general users in February 2008 and was fully operational by May 2008. This beam line is a general purpose diffraction beam line with several sample environments for observing changes in materials structure as a function of temperature, pressure, time, etc.

- The soft x-ray absorption spectroscopy (SXR) beamline was available for general users from the September-December 2008 cycle. It operates at low x-ray energies and is most useful for surface studies.
- Final commissioning of the X-ray absorption spectroscopy (XAS) beam line was completed at the end of 2008 and became available to general users from January 2009. This technique is useful for probing elemental valence states and determining the local structure around an atomic species of interest.
- Small-angle x-ray scattering (SAXS), combined with wide-angle x-ray scattering (WAXS) is a useful technique for determining large scale (1-100 nm), short-range order in materials. This beam line came online at the beginning of 2009.
- The commissioning of the second protein crystallography and small-molecule crystallography beamline (PX2) was completed in mid 2009. It complements the existing protein crystallography beam line and is able to measure micron-sized crystals and other weakly-scattering or hard to crystallise systems.
- The microspectroscopy beam line (XFM) construction was also completed in early 2009. This beamline combines the high spatial resolution of a microscope with the information that can be gleaned through x-ray fluorescence spectroscopy.
- The medical imaging and therapy beam line is currently under construction. This involves a 150 m long enclosure being built which extends well outside the synchrotron building.

The New Zealand Synchrotron Group is one of ten foundation investors, each of whom has contributed A\$5 million towards the initial suite of beam lines. This investment secures preferred (as-of-right) access for each foundation investor, spread over all the beam lines. For NZSG this typically amounts to approximately 3 days per beam line per four-month cycle. Proposals for preferred access are submitted at the same time as general access and undergo an internal selection process. The criteria the NZSG access committee has adopted seeks to favour new users to obtain beam time.

With the completion of the initial suite of nine beamlines, plans are now underway to add new beamlines to expand the facilities capabilities. The Australian Synchrotron has consulted with the research communities in Australia and New Zealand and a Science Case to add a further 10 beamlines and make other upgrades to the facility was published in July 2010. An Investment Case to fund the expansion has also been developed and has been presented to the Australian Commonwealth and the Victorian State Governments. New Zealand has been offered the opportunity to contribute to the development and secure ongoing access for New Zealand researchers to the enhanced facility. Discussions will commence once the way in which the Australian investment is to be structure has been clarified.



CORPORATE GOVERNANCE

Board Composition

The company operates with a board comprising of 5 directors, including an independent chairman. Interim directors were appointed initially. These were replaced by a permanent board following elections which were held in April 2007.

The Directors during the period up to 30 June 2010 were:

Dr Garth Carnaby, Chair
Dr Desmond Darby, GNS Science
Professor Geoffrey Jameson, Massey University
Professor James Metson, The University of Auckland
Professor Ian Shaw, University of Canterbury

Indemnities and Insurance

The Board has taken Directors and Officers Liability Insurance with Lumley General Insurance Limited. Coverage of up to \$5 million has been obtained.

Attendance at Board Meetings

The following table shows the attendance at meetings of the Board for each director and the fees paid.

Director	No. meetings held during the year	No. meetings attended	Fees paid
Dr Garth Carnaby	6	6	\$6,000
Dr Desmond Darby	6	6	-
Professor Geoffrey Jameson	6	5	-
Professor James Metson	6	5	-
Professor Ian Shaw	6	4	-

Donations

The company did not make any donations during the period from establishment up to 30 June 2010.

Interests Register

During the course of undertaking its normal business activities in supporting the development of synchrotron science, the company provides assistance towards the travel costs for research staff from its shareholders. The practice at meetings of the board is for directors from organisations who are receiving financial support to declare an interest and to refrain from voting on that particular matter. During the period up to 30 June 2010 support was provided to staff from The University of Auckland, Massey University and the University of Canterbury.

The following significant entries relating to the directors were recorded in the Interests Register during the period.

Director	Organisation/Entity	Nature of Interest
Dr GA Carnaby		
Shares Held	GA Carnaby & Associates Ltd	Controlling majority
Beneficiary of Trusts	Carnaby Trust	Trustee and discretionary beneficiary
Offices Held	National Provident Fund	Annuity/Defined benefit
	Institute of Environmental Science and Research Ltd	Deputy Chair
	Royal Society of New Zealand	President
	Canterbury Development Corporation	Chair
	Canterbury Economic Development Trustee Ltd	Chair
	Australian Synchrotron Co Ltd	Director
	Australian Synchrotron Holding Co Pty Ltd	Director
Other Interests	Lincoln University	Entrepreneur in Residence
	High Performance Computing Committee	Chairman
Dr D Darby		
Shares Held	Vector Ltd	Minority shareholder
	MEM Music Ltd	Majority shareholder
Offices Held	MEM Music Ltd	Director
	NZ Centre for Advanced Engineering	Director
	GNS Science	Senior manager
Other Interests	FRST	Chair Postdoc Fellowship Committee
Prof GB Jameson		
Shares Held	Tower Ltd	Minority shareholder
Beneficiary of Trusts	Estate of MEB Jameson	Discretionary beneficiary
Offices Held	Massey University	Employee
Prof JB Metson		
Shares Held	Vector Energy	Minority shareholder
	Pacific Lithium	Minority shareholder
Offices Held	University of Auckland	Employee
Other Interests	RIAG	Chair
Prof IC Shaw		
Offices Held	University of Canterbury	Employee
Other Interests	Sandoz GmbH, Austria	Consultant

**New Zealand Synchrotron Group
Limited
Financial statements
for the year ended 30 June 2010**

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**New Zealand Synchrotron Group Limited
Board Report
for the year ended 30 June 2010**

The Board has pleasure in presenting the annual report of the New Zealand Synchrotron Group Limited ("NZSG") incorporating the financial statements and the auditor's report, for the year ended 30 June 2010.

NZSG administers the investment in Australian Synchrotron Holding Company (ASHC).

The Company has taken advantage of the reporting concessions available to it under sections 211(3) of the Companies Act 1993.

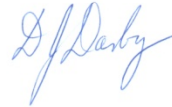
The Board of NZSG have authorised these financial statements presented on pages 6 to 20 for issue on 20 August 2010.

For and on behalf of the Board



.....
Garth Carnaby
Chairperson

20 August 2010



.....
Desmond Darby
Director

20 August 2010



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Auditors' report

To the readers of the New Zealand Synchrotron Group Limited's Financial Statements for the year ended 30 June 2010

The Auditor-General is the auditor of the New Zealand Synchrotron Group Limited (the 'Company'). The Auditor-General has appointed me, John Meehan, using the staff and resources of PricewaterhouseCoopers, to carry out the audit of the financial statements of the Company, on her behalf, for the year ended 30 June 2010.

Unqualified Opinion

In our opinion:

- the financial statements of the New Zealand Synchrotron Group Limited on pages 6 to 20:
 - comply with generally accepted accounting practice in New Zealand; and
 - give a true and fair view of:
 - the New Zealand Synchrotron Group Limited's financial position as at 30 June 2010; and
 - the results of its operations and cash flows for the year ended on that date.
- Based on our examination the Company kept proper accounting records.

The audit was completed on 20 August 2010 and is the date at which our opinion is expressed.

The basis of the opinion is explained below. In addition, we outline the responsibilities of the Board of Directors and the Auditor, and explain our independence.

Basis of Opinion

We carried out the audit in accordance with the Auditor-General's Auditing Standards, which incorporate the New Zealand Auditing Standards.

We planned and performed the audit to obtain all the information and explanations we considered necessary in order to obtain reasonable assurance that the financial statements did not have material misstatements, whether caused by fraud or error.

Material misstatements are differences or omissions of amounts and disclosures that would affect a reader's overall understanding of the financial statements. If we had found material misstatements that were not corrected, we would have referred to them in our opinion.

The audit involved performing procedures to test the information presented in the financial statements. We assessed the results of those procedures in forming our opinion.



Audit procedures generally include:

- determining whether significant financial and management controls are working and can be relied on to produce complete and accurate data;
- verifying samples of transactions and account balances;
- performing analyses to identify anomalies in the reported data;
- reviewing significant estimates and judgements made by the Directors;
- confirming year-end balances;
- determining whether accounting policies are appropriate and consistently applied; and
- determining whether all financial statement disclosures are adequate.

We did not examine every transaction, nor do we guarantee complete accuracy of the financial statements.

We evaluated the overall adequacy of the presentation of information in the financial statements. We obtained all the information and explanations we required to support our opinion above.

Responsibilities of the Board of Directors and the Auditor

The Board of Directors is responsible for preparing financial statements in accordance with generally accepted accounting practice in New Zealand. Those financial statements must give a true and fair view of the financial position of the Company as at 30 June 2010 and the results of operations and cash flows for the year ended on that date. The Board of Directors' responsibilities arise from the Financial Reporting Act 1993.

We are responsible for expressing an independent opinion on the financial statements and reporting that opinion to you. This responsibility arises from section 15 of the Public Audit Act 2001.


Independence

When carrying out the audit we followed the independence requirements of the Auditor-General, which incorporate the independence requirements of the New Zealand Institute of Chartered Accountants.

In addition to the audit we have carried out assignments in the area of taxation services which are compatible with those independence requirements. Other than the audit and these assignments, we have no relationship with or interests in the Company.



John Meehan
On behalf of the Auditor-General
Wellington, New Zealand



PricewaterhouseCoopers

New Zealand Synchrotron Group Limited
Statement of Comprehensive Income
for the year ended 30 June 2010

		2010	2010	2009
		Actual	Unaudited Budget	Actual
		\$	\$	\$
Income	Note			
Income for Australian Operations	3	991,841	985,577	969,138
Income for NZ Operations	4	202,584	151,306	424,278
Total Income		1,194,425	1,136,883	1,393,416
Expenditure				
Amortisation	10	1,142,750	1,142,750	1,142,750
Australian Synchrotron costs	5	991,841	985,577	969,138
Other operating costs	6	176,189	151,150	440,073
Operating Expenditure		2,310,780	2,279,477	2,551,961
Net surplus (loss) before taxes		(1,116,355)	(1,142,594)	(1,158,545)
Income tax expense	7	-	-	-
Net surplus / (loss) after taxes		(1,116,355)	(1,142,594)	(1,158,545)
Other Comprehensive Income		-	-	-
Total Comprehensive Income		(1,116,355)	(1,142,594)	(1,158,545)

The above Statement of Comprehensive Income should be read in conjunction with the accompanying notes on pages 10 -20

New Zealand Synchrotron Group Limited
Statement of Changes in Equity
for the year ended 30 June 2010

	2010	2010	2009
	Actual	Unaudited Budget	Actual
	\$	\$	\$
Equity at the beginning of the year	4,904,791	4,904,797	6,063,336
Capital paid in by shareholders	-	-	-
Net (loss) for the year	(1,116,355)	(1,142,594)	(1,158,545)
Other Comprehensive Income	-	-	-
Total Comprehensive Income	(1,116,355)	(1,142,594)	(1,158,545)
Total equity at the end of the year	<u>3,788,436</u>	<u>3,762,197</u>	<u>4,904,791</u>

The above Statement of Changes in Equity should be read in conjunction with the accompanying notes on pages 10 - 20

New Zealand Synchrotron Group Limited
Balance Sheet
as at 30 June 2010

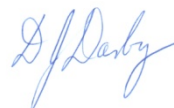
	Note	2010 \$	2009 \$
<i>Current assets</i>			
Cash and cash equivalents	8	337,071	370,022
Trade and other receivables	9	37,297	115,353
Total current assets		374,368	485,375
<i>Non-current assets</i>			
Investment in ASHC	10	3,428,249	4,571,000
Total non-current assets		3,428,249	4,571,000
TOTAL ASSETS		3,802,617	5,056,375
<i>Current liabilities</i>			
Trade and other payables	11	14,181	94,584
Current tax liability	7	-	-
Deferred income	12	-	57,000
Total current liabilities		14,181	151,584
TOTAL LIABILITIES		14,181	151,584
Net assets		3,788,436	4,904,791
Equity			
Share capital	13	2,824,036	2,824,036
Retained earnings		964,400	2,080,755
TOTAL EQUITY		3,788,436	4,904,791

The above Balance Sheet should be read in conjunction with the accompanying notes on pages 10 - 20
For and on behalf of the Board



.....
Garth Carnaby
Chair Person

20 August 2010



.....
Desmond Darby
Director

20 August 2010

New Zealand Synchrotron Group Limited
Cashflow
for the year ended 30 June 2010

	Notes	2010	2009
Cash flows from operating activities	18		
Cash was provided from:			
Interest	4	14,200	44,491
MoRST Grants for Australian Synchrotron and New Zealand Synchrotron Group Costs		713,326	1,096,205
Shareholders Grants for Australian Synchrotron and New Zealand Synchrotron Group Costs and Contribution from Australian Synchrotron for Travel Cost		464,277	286,397
Goods and Service Tax (Net)		12,599	
Withholding Tax (Net)		16,010	
Total cash provided		1,220,412	1,427,093
Cash was applied to:			
Australian Synchrotron Costs		(991,841)	(972,486)
Other expenses		(261,522)	(663,997)
Total cash applied		(1,253,363)	(1,636,483)
Net cash outflow from operating activities		(32,951)	(209,390)
Cash flows from investing activities			
Cash was provided from:			
Shareholders		-	1,210,807
Cash was applied to:			
Payment of Shareholding		-	(1,790,846)
Net cash outflow from investing activities		-	(580,039)
Net (decrease) in cash held		(32,951)	(789,429)
Cash balance at the beginning of the year	8	370,022	1,159,451
Cash balance at the end of the year	8	337,071	370,022

Note 1. General information

New Zealand Synchrotron Group (“the Company”) was formed on 13 September 2006. The purpose of the Company is to invest in the Australian Synchrotron by subscribing to shares in the Australian Synchrotron Holding Company Pty Limited (“ASHC”) and being a member of the Australian Synchrotron Company Limited. In addition, the Company also promotes synchrotron science, assists the development of capability of New Zealand researchers in synchrotron science and manages the access of New Zealand researchers to the Australian Synchrotron. It has eleven shareholders who are all either New Zealand universities or Crown Research Institutes. The company is managed by a five person board elected by the shareholders, including an independent Chair. The Chair receives remuneration; the other directors do not. The Royal Society of New Zealand has been contracted to provide secretariat services to the Board.

The Company’s revenue consists of grants from government agencies to build awareness and capability in synchrotron science and investment income. Its registered office is 4 Halswell Street, Thorndon, Wellington.

Note 2. Summary of significant accounting policies

These financial statements have been prepared in accordance with Generally Accepted Accounting Practice in New Zealand. They comply with the New Zealand Equivalents to International Financial Reporting Standards (NZ IFRS) and other applicable Financial Reporting Standards, as appropriate for public benefit entities.

(a) Basis of preparation

The principal accounting policies adopted in the preparation of the financial statements are set out below. These policies have been consistently applied to all the periods presented, unless otherwise stated.

Statutory base

New Zealand Synchrotron Group Limited (“NZSG” or the “Company”) is a company registered under the Companies Act 1993.

The financial statements have been prepared in accordance with the requirements of the Financial Reporting Act 1993.

Differential reporting

NZSG is a qualifying entity within the Framework of Differential Reporting. NZSG qualifies on the basis that it has less than 50 employees and total income below \$20 million. NZSG has taken advantage of all differential reporting concessions available to them except for NZIAS 18 Revenue paragraph NZ6.1, NZ IAS 12 Income Taxes and NZ IAS 7 Statement of Cash Flows with which it has complied with fully.

Historical cost convention

These financial statements have been prepared under the historical cost convention, as modified by the revaluation of certain assets as identified in specific accounting policies below.

(c) Foreign currency translation

(i) Functional and presentation currency

The financial statements are presented in New Zealand dollars, which is the Company's functional and presentation currency.

(ii) Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the income statement.

(d) Revenue recognition

Revenue comprises the fair value for the sale of goods and services, excluding Goods and Services Tax, rebates and discounts and after eliminating sales within the Company. Revenue is recognised as follows:

(i) Interest income

Interest income is recognised on a time-proportion basis using the effective interest method. When a receivable is impaired, NZSG reduces the carrying amount to its recoverable amount, being the estimated future cash flow discounted at original effective interest rate of the instrument, and continues unwinding the discount as interest income. Interest income on impaired loans is recognised using the rate of interest used to discount the future cash flows for the purpose of measuring the impairment loss.

(ii) Government grants, sponsorships and donations

Government grants, sponsorships and donations received are recognised in the income statement when the requirements under the grant agreement have been met. Any grants for which the requirement under the grant agreement have not been completed are carried as deferred Income until the conditions have been fulfilled.

(e) Income Tax

From the 1 July 2009 the NZSG has been granted a Tax Exemption under Section CW49 of the Income Tax Act 2007. As a consequence NZSG will have no ongoing liability for Income Tax.

In prior years the income tax expense was calculated on the basis of the tax laws enacted at the balance date. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate on the basis of amounts expected to be paid to the Inland Revenue Department.

Deferred income tax was provided in full, using the liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the financial statements. However, deferred income tax is not accounted for if it arises from the initial recognition of an asset or liability in a transaction that at the time of the transaction affects either accounting nor taxable profit or loss.

(f) Goods and Services Tax (GST)

The income statement has been prepared so that all components are stated exclusive of GST. All items in the balance sheet are stated net of GST, with the exception of receivables and payables, which include GST invoiced.

(g) Cash and cash equivalents

Cash and cash equivalents includes cash on hand, deposits held at call with financial institutions, other short-term, highly liquid investments with original maturities of three months or less that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value.

(h) Trade receivables

Trade receivables are recognised initially at fair value and subsequently measured at amortised cost, less provision for doubtful debts.

The recoverability of trade receivables is reviewed on an ongoing basis. Debts which are known to be uncollectible are written off. A provision for doubtful receivables is established when there is objective evidence that NZSG will not be able to collect all amounts due according to the original terms of receivables. The amount of the provision is the difference between the asset's carrying amount and the present value of estimated future cash flows, discounted at the effective interest rate. The amount of the provision is recognised in the income statement.

(i) Investments and other financial assets

NZSG classifies its investments in the following categories: financial assets at fair value through profit or loss, loans and receivables, held to maturity investments and available for sale financial assets. The classification depends on the purpose for which the investments were acquired. Management determines the classification of its investments at the initial recognition and re-evaluates this designation at every reporting date. Currently NZSG only has financial assets classified in two categories.

(i) Loans and receivables

Loans and receivables are non derivative financial assets with fixed or determinable payments that are not quoted in an active market. They arise when NZSG provides money, goods or services directly to a debtor with no intention of selling the receivable. They are included in current assets, except for those with maturities greater than 12 months after the balance sheet date which are classified as non-current assets. Loans and receivables are classified as 'trade and other receivables' in the balance sheet.

(ii) Available for sale financial assets

The investment in the Australian Synchrotron Company Limited is classified as an asset that is available for sale. As there are no active markets for this investment, it is stated at cost less impairment. Impairment is assessed annually at the balance sheet date and is primarily determined as the equivalent of the original cost of the investment on amortised on a straight line basis over the remaining useful life of the underlying asset (investment), to be determined once it is commissioned. The current beam line access agreement provides benefits from the investment until June 2013. The investment is therefore being amortised over the 5 year period commencing 1 July 2008.

(j) Trade and other payables

These amounts represent liabilities for goods and services provided to NZSG prior to the end of financial year which are unpaid. The amounts are unsecured and are usually paid within 30 days of recognition.

(j) Sponsorship and donations expense

Through the ordinary course of its activities the Company provides sponsorships and makes donations to advance its stated objectives. The Company recognises a liability for this expenditure when the recipient meets any eligibility criteria attached to a sponsorship or donation agreement.

(k) Statement of Cash Flows

The following are the definitions of the terms used in the Statement of Cash Flow:

(i) cash is considered to be cash on hand, cash in transit, bank accounts and deposits with a maturity of no more than 3 months from date of acquisition;

(ii) investing activities are those relating to acquisition, holding and disposal of investment in ASHC and investments not falling within the definition of cash;

(iii) financing activities are those activities which result in changes in the size and composition of the capital structure of the Company. This includes equity, debt not falling within the definition of cash.

(l) Changes to accounting policies

The Company has adopted NZ IAS 1 Revised (Presentation of Financial Statements) for the year ended 30 June 2010. NZ IAS 1 Revised requires that recognised income and expenses are presented separately from owner changes in equity, either in a single statement (a statement of comprehensive income) or two statements (an income statement and a statement of comprehensive income)

The company has presented a single statement of comprehensive income for the year ended 30 June 2010. The change in accounting police impacts only the presentation of the financial statement and has not resulted in any adjustments to financial information.

Note 3. Income for Australian Operations

The Company receives support from the Government and shareholders for Australian Synchrotron costs.

	2010	2009
	\$	\$
MoRST grants	706,502	871,561
Shareholder grants	285,339	97,577
	991,841	969,138

Note 4. Other income

	30 June 2010	30 June 2009
	\$	\$
Capability build grant	63,824	355,565
Grants from shareholders for operating costs of NZSG	25,000	-
Contribution from the ASCH of incurred travel costs	99,560	24,222
Interest	14,200	44,491
	202,584	424,278

Note 5. Australian Synchrotron costs

As detailed in note 14 the Company makes an annual contribution to the ongoing operating costs of the Australian Synchrotron.

Note 6. Other operating costs

(a) Remuneration of Auditor

During the year the following fees were paid or payable for services provided by the OAG appointed auditor – John Meehan with assistance from PricewaterhouseCoopers.

	2010	2009
	\$	\$
Statutory audit services	6,991	7,862
Taxation compliance services	3,600	28,675
	10,591	36,537
	10,591	36,537

(b) Foreign exchange losses / (gains)

During the year the following exchange losses (gains) were made on transactions between New Zealand and Australia.

	2010	2009
	\$	\$
Foreign exchange losses / (gains)	6,782	(71,736)
	6,782	(71,736)

(c) Support for Synchrotron Science

During the year the following fees were paid or payable for services provided.

	2010	2009
	\$	\$
Travel costs reimbursed to related parties	70,200	84,760
Travel costs reimbursed to researchers and other entities	11,370	19,935
Meetings, workshops, summer school costs	21,802	8,335
Grants	-	104,039
	103,372	217,069
	103,372	217,069

(d) Secretariat and other operating costs

During the year the following fees were paid or payable for services provided.

	2010	2009
	\$	\$
Secretariat services from the Royal Society and Board costs	51,460	103,516
Insurance	3,415	2,848
Other	570	8,367
	<hr/>	<hr/>
	55,444	114,731
	<hr/>	<hr/>
Total other operating costs	176,189	440,073

Note 7. Income Tax

	2010	2009
	\$	\$
(a) Reconciliation of effective tax rate		
Profit (Loss) before tax	(1,116,355)	(1,158,545)
Income tax @ 30%	-	(347,564)
Non assessable income	-	-
Losses not recognised	-	347,564
Expenses not deductible for tax purposes	-	-
Prior period adjustment	-	-
	<hr/>	<hr/>
Tax expense	-	-

From the 1 July 2009 the NZSG has been granted a Tax Exemption under Section CW49 of the Income Tax Act 2007. As a consequence NZSG will have no ongoing liability for Income Tax.

Note 8. Cash and cash equivalents

	2010	2010	2009	2009
	\$	Interest Rate	\$	Interest Rate
Cash	201,101	3.15%	317,347	3.15%
Foreign Currency - AUD	13,210	2.13%	52,675	1.68%
Term Deposit – AUD	122,760	3.39%		
	<u>337,071</u>	<u>3.20%</u>	<u>370,022</u>	<u>2.94%</u>

All the bank balances are held with the Bank of New Zealand.

Note 9. Trade and other receivables

	2010	2009
	\$	\$
Trade receivables	20,334	83,418
Sundry Receivables	8,706	-
Prepayments	6,530	1,600
Withholding tax paid	-	16,010
Goods and Services Tax receivable	1,726	14,325
Total trade and other receivables	<u>37,297</u>	<u>115,353</u>

Note 10. Investment in the ASHC

	2010	2009
	\$	\$
Investments in ASHC	5,713,750	5,713,750
Prior year amortisation	(1,142,750)	
Current Year Amortisation	(1,142,750)	(1,142,750)
Net Investment in ASHC	<u>3,428,250</u>	<u>4,571,000</u>

The investment in the ASHC is being amortised on a straight line bases over a period of five years as this is management's best estimate of the impairment of this assets.

New Zealand Synchrotron Group Limited
Notes to the Financial Statements
for the year ended 30 June 2010

Note 11. Trade and other payables

	2010	2009
	\$	\$
Creditors	-	49,328
Accruals	14,181	45,256
Total trade and other payables	<u>14,181</u>	<u>94,584</u>

The amount owed to related parties as at 30 June 2010 \$4,136 (2009: \$63,201).

Note 12. Deferred Income

Where revenue has been received and not yet earned, it has been classed as deferred income for the purposes of these accounts.

	2010	2009
	\$	\$
Government grants	-	57,000
	<u>-</u>	<u>57,000</u>

New Zealand Synchrotron Group Limited
Notes to the Financial Statements
for the year ended 30 June 2010

Note 13. Share Capital

	2010	2009
	\$	\$
The 11 shareholders of NZSG at 30 June are		
University of Auckland	509,217	509,217
University of Waikato	190,357	190,357
Massey University	428,317	428,317
Victoria University of Wellington	237,966	237,966
University of Canterbury	285,546	285,546
Lincoln University	28,557	28,557
Otago University	285,546	285,546
AgResearch Ltd	285,546	285,546
Institute of Geological and Nuclear Sciences Ltd	190,357	190,357
The New Zealand Institute for Plant and Food Research Ltd	190,357	190,357
Industrial Research Ltd	192,270	192,270
	<u>2,824,036</u>	<u>2,824,036</u>

	2010	2009
	# of shares held	# of shares held
The shares held at 30 June are:		
University of Auckland	436,319	436,319
University of Waikato	163,104	163,104
Massey University	367,001	367,001
Victoria University of Wellington	203,897	203,897
University of Canterbury	244,668	244,668
Lincoln University	24,467	24,467
Otago University	244,668	244,668
AgResearch Ltd	244,668	244,668
Institute of Geological and Nuclear Sciences Ltd	163,104	163,104
The New Zealand Institute for Plant and Food Research Ltd	163,104	163,104
Industrial Research Ltd	163,104	163,104
	<u>2,418,104</u>	<u>2,418,104</u>

The amount recognised in the balance sheet as paid in capital is the New Zealand dollar equivalent at the date of issuance.

Note 14. Commitments

Since 1 January 2008 the Company has been contractually committed to provide ongoing operational funding of \$2.097m for the Australian Synchrotron project over a five year period. As part of the Participant's agreement entered into with the 11 shareholders these funds will be received directly from the Shareholders or MoRST on their behalf when required to fulfil these obligations. The result is a net nil outflow of funds from the Company.

Note 15. Contingent liabilities

There were no contingent liabilities at 30 June 2010. (2009: nil)

Note 16. Financial Instruments

Classification of financial assets by category

	Available for sale	Receivables & Loans
	\$	\$
30 June 2010		
Investment in ASHC	3,428,250	-
Trade & other receivables	-	29,040
Total	3,428,250	29,040
30 June 2009		
Investment in ASHC	4,571,000	
Trade & other receivables	-	83,418
Total	4,571,000	83,418

Classification of financial liabilities by category

	2010	2009
	\$	\$
Measured at amortised cost		
Trade & other payables	14,181	94,584
Total	14,181	94,584

New Zealand Synchrotron Group Limited
Notes to the Financial Statements
for the year ended 30 June 2010

Note 17. Related Parties

Related parties comprise of the Shareholders identified in Note 13. There have been a number of related parties transactions during the year ended 30 June 2010.

These transactions include grants from Shareholders to operating costs as per Note 3 and 4 and the travel costs reimbursed as per note 6

The amount outstanding as at 30 June 2010 is travel costs of \$4,136 (2009: 63,201).

Note 18. Reconciliation of profit with cash flows from operating activities

	2010	2009
	\$	\$
Profit /(Loss) after tax	(1,116,355)	(1,158,545)
Add/(Less) non-cash items		
Amortisation of Australian Synchrotron	1,142,750	1,142,750
Non-Cash FX Gains/(Losses)		103,557
Add/(Less) movements in working capital		
Trade and other receivables - excluding investing activities	25,897	44,960
Trade and other payables - excluding investing activities	(85,332)	(342,112)
Net Cash flow from operating activities	(32,951)	(209,390)

Note 19. Events occurring after balance date

There are no significant events subsequent to balance date.