I am writing this email to personally thank you from the bottom of my heart for organising and ensuring the ISS ran so perfectly. The two weeks at the ISS truly were the greatest two weeks of my life thus far. I remember in the introduction speech you delivered on the very first day you said we would leave this place extremely sad and begging for the ISS to be longer and I think I actually laughed and thought that that could never happen to me and that it would be a joke to become so emotionally attached to a science camp, nevertheless, that was exactly what happened to me.

Brandon Munn ISS2009
Foundation support of School of Physics activities includes:

- Undergraduate Physics Prizes and Scholarships.
- The Julius Sumner Miller Fellow, current incumbent is Dr Karl Kruszelnicki
- The Professor Harry Messel International Science Schools (ISS), which recognise and rewards excellence in senior secondary students showing aptitude for science and leadership and encourage them to pursue further studies in science and as a career.
- Science Teachers’ Workshops for high school physics teachers and MyScience for primary school teachers sharing the latest in science research areas and inspiring best practice in science teaching methods.

**INTRODUCTION**

The 35th Professor Harry Messel International Science School (ISS) Genes to Galaxies ran from 12-25 July 2009. The title theme was selected in recognition of the many anniversaries this year; the United Nations-sanctioned International Year of Astronomy, the 150th anniversary of the publication of Charles Darwin’s ‘On The Origin of Species’ and the 40th Anniversary of the first lunar landing by Apollo 11 astronauts. In 2009 we also celebrated the 55th Year of the Science Foundation for Physics within the University of Sydney, which runs the ISS.

One hundred and thirty-eight Year 11 and 12 secondary school science students representing every state and territory in Australia, and eight participating countries, attended Genes to Galaxies. They were treated to a unique lecture series by leading researchers, participated in hands-on activities provided by Schools within the Faculty of Science, attended formal University and Consular events and social outings. The students were accommodated on the University campus at The Women’s College for the duration of the two-week program, providing a nurturing environment for accelerating friendships, bridging many different cultures and backgrounds, between the ISS scholars.

The emails, letters and cards of thanks we have received to date from the ISS2009 scholars show that, for many scholars, their time at the ISS is remarkable; they attest to the truth in the traditional words of welcome to the International Science School:

**The ISS will be the best two weeks of your lives ...**

**SCIENCE FOUNDATION FOR PHYSICS**

**Aim of the Foundation:**

The Foundation is the primary fundraising arm of the School of Physics at the University of Sydney. The Foundation seeks to generate philanthropy in the community and raise funds in support of activities run by the School of Physics.

**Objectives of the Foundation:**

- To increase the resources of the University (by fundraising or by otherwise securing gifts and grants or by securing the provision of services or other non-financial contributions) to assist the Senate and the Vice-Chancellor in the promotion of the field of physics, through the School of Physics, and

- To co-operate with the School of Physics, the Faculty of Science and the University in promoting the significance of science and developing an understanding of its importance both within Australia and internationally.
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The Professor Harry Messel International Science School could not run without the generous financial backing of our many supporters, including all those who have given to the Messel Endowment – the Science Foundation's campaign to secure the long-term financial future of the International Science Schools. Each ISS costs approximately $450,000 to run and we greatly appreciate the support which ensures we can maintain the high quality of the experience provided to the students at each ISS.

Ongoing ISS funding is provided by the Messel Endowment, the New South Wales Government through the Department of Education and Training, and the Australian Government through the Department of Innovation, Industry, Science and Research, (DIISR). In addition to this support a further $108,000 was raised to meet the funding requirements of ISS2009.

The Science Foundation for Physics warmly thanks the supporters of ISS2009 Genes to Galaxies:

- The Messel Endowment
- Department of Education and Training, NSW Government (DET)
- Department of Innovation, Industry, Science and Research, Australian Government (DIISR)
- The Kirby Foundation
- Adolph Basser Trust
- Faculty of Science, The University of Sydney
- Chancellor’s Committee, The University of Sydney
- The Smithsonian Institution
- Mr Robert Arnott
- Dr Greg Clark through the ANZ Banking Group
- Mr Trevor Danos
- Mr Ron Enestrom
- Associate Professor Robert Hewitt & Mrs Helen Hewitt
- Mr John Hooke CBE
- Associate Professor Brian James & Dr Ferg Brand through Dr Wie Xu
- Dame Leonie Kramer
- Mr Bruce McAdam & Mrs Janice McAdam
- Mr Robert Rich
- Mr Albert Wong
- other individuals through the Foundation's Annual Appeal

Australian students were selected with the support of the NSW Department of Education and Training, and Science Teachers Associations in the Australian Capital Territory, Queensland, the Northern Territory, South Australia, Tasmania, Victoria, and Western Australia. The following institutions assisted in the selection and travel of the overseas students:

- Rivers Collegiate, Canada
- The Affiliated High School of Peking University, China
- Raman Research Institute, India
- Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan
- The Royal Society of New Zealand
- Ministry of Education, Thailand
- The Association for Science Education, UK
- The Royal Institution of Great Britain
- The National Endowment for Science, Technology and the Arts (NESTA), UK
- Department of Energy, USA

The Consulates of Britain, India, Japan and the USA for their support in hosting Consular events for overseas students and their guests.

1 Formerly Department of Education, Science & Training (DEST)
THE MESSEL ENDOWMENT

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In 2005, two prizes for ISS scholars were established: The Len Basser Award for Leadership in Science (awarded by DIISR) and the Mulpha ISS Award for Leadership (awarded by Mulpha). Both prizes are awarded at the ISS Gala Reception.

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Mr Greg and Mrs Gabriella Howard
Mr Sang Huynh
Mr Steven Kambouris
Dr Toni R Kesby
Ms Tomoko Kikuchi
Mrs R Lambert
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Ms Jennifer H F Wanless OAM
Dr David R V Wood
Ms Anne Woods
SCHOLARS

In 2009 scholars represented every state and territory of Australia: Australian Capital Territory (2), New South Wales (63 - 35 from Sydney, 15 from regional NSW, 15 from rural NSW), Northern Territory (3), Queensland (5), South Australia (5), Tasmania (2), Victoria (10) and Western Australia (7). Internationally scholars came from China (5), Japan (8), India (5), New Zealand (5), Thailand (7), the United Kingdom (5) and from the United States of America (4). In addition, by special arrangement, we welcomed two scholars from Canada, representing Rivers Collegiate - in the home town of Professor Harry Messel. We were also very pleased to welcome a full complement of five scholars through the Indigenous Scholars Program. Sadly we were not joined this year by Malaysia and Singapore due to concerns over the Human Swine Flu pandemic. We were also pleased with an equal gender balance of 67 male students and 71 female students attending.

The Australian scholars were selected competitively at the State level. The NSW Department of Education and Training along with the Science Teachers’ Associations of the other States and Territories formed selection committees to judge the students’ applications. The committees were instructed to aim for a mix of male and female, city and country, and public and private schools - their efforts resulted in the scholars forming a reasonable cross-section of the national population. For many of the country scholars it was their first time in a big city, in a tertiary environment and more importantly, the first time they had interacted with peers with a similar passion for science.

Coming from a rural community to a city environment even for two weeks was an enormous step for me and I cannot think of a better time or place to have done this in than ISS. To be able to access the knowledge contained in Sydney University is something I had never dreamed of and certainly did not think I would ever be able to do from Jindabyne.

Nicola Fleming ISS2009

Many students commented, in their evaluations of the program, that the diverse mix of scholars from different backgrounds and cultures was one of the great strengths of the program. One concern for the ISS has always been the need to ensure the scholars have suitable proficiency in English; overall the international scholars participated enthusiastically and were well represented in the question time following each talk, and it was noted by some of the overseas accompanying adult escorts that their students confidence in English developed during the ISS. The book of lectures is sent out as PDF to all scholars providing an opportunity for international scholars to preview the lectures. Also, many of the ISS staff are bilingual which is of great assistance.

INDIGENOUS SCHOLARS PROGRAM

Indigenous Australians are greatly under-represented in Australian scientific, technological and engineering-related fields. In an effort to encourage and enthuse talented Indigenous students with an interest in science, the Science Foundation for Physics and the Federal Government’s Department of Innovation, Industry, Science & Research (DIISR)* created the Indigenous Scholars Program.

For the ISS2009, the Foundation reserved up to five scholarships specifically for applications from indigenous students. The applications were judged by the state selection panels and were also considered by a panel comprising a representative from the University of Sydney’s Koori Centre, the NSW Department of Education’s Aboriginal Programs Unit and Engineering Aid, which runs the Indigenous Australia Engineering Summer School. The scholarships were advertised through the Engineering Summer School and the Koori Centre, and directly to Science Teacher Associations and schools with Aboriginal Education assistants. The Executive Officer also went on Koori radio to communicate and promote the Indigenous Science Scholars program. Image: Her Excellency Professor Marie Bashir AC CVO with the ISP scholars.

Five applications were received from students identifying themselves for the Indigenous Scholars Program. Two students were from Western Australia, one from Northern Territory and three from NSW; all were female. All applicants were deemed of sufficient standard (in fact, very high) by the Indigenous Scholars Program selection panel and awarded scholarships.

* Formerly Department of Education, Science & Training (DEST)
The two-week ISS is an intense mix of lectures, talks, tours of the School of Physics research groups and other parts of the University, hands on experiments and social events. A typical ISS weekday is programmed as follows:

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.00am</td>
<td>Activities: tours, workshops, experiments, talks</td>
</tr>
<tr>
<td>10:30am</td>
<td>Morning tea</td>
</tr>
<tr>
<td>11.00am</td>
<td>Lecture #1</td>
</tr>
<tr>
<td>12:30pm</td>
<td>Lunch at Women’s College</td>
</tr>
<tr>
<td>2.00pm</td>
<td>Lecture #2</td>
</tr>
<tr>
<td>3.30pm</td>
<td>Activities: tours, workshops, experiments, talks</td>
</tr>
<tr>
<td>5.00pm</td>
<td>Finish: back to College for dinner and evening social activities</td>
</tr>
</tbody>
</table>

**PROGRAM**

The lecture series was held in the Slade Lecture Theatre in the School of Physics. Topics focussed on astronomy, astrobiology and gene-based biology and included:

- The search for extra-terrestrial intelligence;
- NASA plans for further manned missions to the Moon and exploration of Mars;
- How a Neolithic diet is perhaps the solution to our obesity epidemic;
- The evolution of the Universe, and those who inhabit it, through the ‘eyes’ of a proton.

Eleven internationally renowned research scientists, selected for their subject area and known to be great communicators, were invited to give one or two lectures each. Each sixty-minute lecture was followed by twenty minutes of question time. As in previous years, lecturers each reported being highly impressed by the perceptive and challenging questions posed by the scholars.

Feedback from the scholars has indicated that the mix of lecture topics was well regarded and although some speakers rated better than others in their presentation style, all were credited highly for the genuine passion and enthusiasm they displayed for their science. Of particular note were University of Sydney Professors Jennie Brand Miller (Neolithic Diet) a renowned nutritionist from the School of Molecular and Microbial Biosciences and Geraint Lewis (Life of Galaxies) an Astronomer based within the School of Physics. From the USA Mr Wayne Lee, assisted by Erisa Hines (NASA’s return) provided a lively account of working on the Mars Mission. Professor Jill Tarter (above), the Director of SETI (Search for Extra-Terrestrial Intelligence), spoke at both the ISS and gave a public talk at Sydney Ideas – a lecture series run by the University of Sydney. Professor Tarter particularly attracted much interest from the media during her time with the ISS.

**THE LECTURE SERIES**

Far left: Professor Jill Tarter, the Director of SETI (Search for Extra-Terrestrial Intelligence) presents her lecture at ISS2009; left Emeritus Professor Harry Messel AC CBE with Associate Professor Charlie Lineweaver who presented a lecture at ISS2009.
In addition to the official ISS lecture series there were several talks and special events:

- ISS2009 opening lecture by the Hon Robert French AC, Chief Justice of Australia (right) and ISS1964 alumnus. A dynamic and humorous talk reflecting the progress of science from ‘his’ ISS in 1964 in *From Light and Life to Genes and Galaxies – 45 years on*. This was a great start to the 2009 lecture series that followed.

- Meet-and-Greet-a-Physicist – an opportunity for the scholars to meet and chat with members of the School of Physics at a ‘trade-display’-styled environment set up in the Menzies Room of the Women’s College. This event was run by the Physics Science Communication team.

- Dr Karl Kruszelnicki gave two of his ever-popular *Great Moments in Science®* talks, delighting fans and newcomers to his rollercoaster style.

Above: Dr Karl Kruszelnicki; right The Hon. Robert French AC
Next to the lecture series a range of tours, hands-on activities and challenges were organised to give the scholars further exposure to science at the University of Sydney. Both a University and Physics Building tour were provided on day two of the ISS; other activities were staged by Sydney University Museums (Nicholson Museum); the Electron Microscopy Unit and the Schools of Biological Sciences, Chemistry, Geoscience and Physics.

A new Ethics and Leadership in Science module was created in partnership, and sponsored by, the Smithsonian Institution. Two 150 minute sessions held across two days involved pre-reading and overnight reading material, plenary session talks and group discussions led by leaders from across the Faculty of Science. Reports from scholars indicate this to be a well regarded activity which could become a regular activity for future ISSs.

Scholars participated in a special ISS Science & Engineering Challenge presented by the University of Newcastle in which teams of eight competed against each other in a series of activities designed to encourage and reward problem-solving and teamwork.

Summary of Activities:
- Sydney University Tour – provided by expert guides, a one-hour tour covering 150 years of history and culture of the University while visiting the Quadrangle, museums, galleries, halls and gardens.
- Physics Tour – three 25-minute tours to the Centre of Excellence for Ultrahigh-bandwidth Devices for Optical Systems (CUDOS), a Physics Historical Talk and tour of the Sydney Institute for Astronomy.
- Electron Microscope Unit – to see atoms with a High Resolution Transmission Electron Microscope and Atom Probe, 40 million year old fossils in a Scanning Electron Microscope and produce a 3D model of a cell using a Confocal Light Microscope.
- University Museums – a guided tour by the Manager Education and Public Programs of some of the collections from antiquity to modern and from Biology to Physics.
- The Harry Potter Mystery – an investigation activity from the School of Biological Sciences.
- Chemistry Capers – a tour of the School of Chemistry to meet some of the research and teaching staff. An opportunity to learn more about careers in the materials science.
- Jupiter’s Moons – from the School of Physics, an activity replicating the genius of Galileo through computer modelling and application of Kepler’s Laws to determine the mass of Jupiter from observations of Jupiter’s moons.
- Aliens – from the School of Biological Sciences – an examination of the bugs and nasties on scholars’ own clothes and bags, and discussion of the potential havoc these unseen tourists cause when they arrive in new environments.
- Planet Mog from the School of Information Technologies and the School of Physics, an astronomy role play, created by and used with the permission of Dr Paul Francis, ANU, in which the scholars create explanations to account for strange astronomical observations on a mythical planet.
ACTIVITIES

[CONTINUED]

- An Amazing Race – from the School of Geoscience using a Global Positioning System (GPS) device to find spatial clues hidden around the University.

- Simulating Life with Cellular Automata – from the School of Information Technologies and the School of Physics, experience the most famous game in computer science based on fundamental theories of abstract machines and programming languages.

- An all-day Science and Engineering Challenge run in conjunction with the University of Newcastle.

As in several previous years, the University of Newcastle ran a full day Science and Engineering Challenge in which the groups were split into smaller units to compete in eight different science and engineering-based activities. The new Law Building was a tremendous venue for the Challenge. The activities ranged from pure problem solving in a communications game, through to designing hovercraft that had to be navigated by remote control around a set course, through to an engineering game where teams designed a bridge to span a chasm, with points awarded for strength as well as weight to encourage good architectural design principles. The scores from each group were aggregated at the end to find the overall winners of the Challenge. The bridges were tested to destruction at the end of the day as the final deciding contest of the Challenge, in front of a lecture theatre of cheering scholars.

Full Challenge Activities:

- Confounding Communications
- Leprechaun Cannon
- ElectraCity
- Heli-Rescue
- Hover Frenzy (right)
- Eco-Habitech
- Mission to Mars
- Gold Fever (Bridge)

As a whole, the activities described above were very popular with the scholars; they enjoyed the opportunity to make decisions and control the direction of their efforts. Each activity allowed them to use their collaboration and communication abilities and exercise their creativity to solve problems and learn about new concepts. Several activities gave the students valuable communication experience by asking them to present their ideas to a wider group.
The organised social events included a Trivia Relay Race on the first Sunday night to help break the ice, and a bush dance (right) on the first Friday night, both organized by the NSW chapter of the Young Scientists of Australia (YSA). Other activities were: Rock Climbing, Sydney Observatory visit, city tours, Taronga Zoo, movie night (Harry Potter) and theatre night (The Little Dog Laughed). The YSA’s involvement in the Science Schools has been invaluable over the years - their infectious energy and rapport with the scholars, and their enthusiasm to organize social events, are an invaluable contribution to the environment of the ISS. The scholars themselves organized a Talent Night on the last Thursday, with acts ranging from traditional dance and songs from the international students to individuals showing off their musical, comedy and magic skills. The YSA also gave considerable thought on how they might assist those ISS scholars concerned about being distracted from HSC study by running dedicated study sessions in the evenings at the Women’s College.

An ISS tradition is the Harbour Cruise on the middle Saturday night, with lecturers, supporters, Science Foundation members and School of Physics staff invited to join the Scholars for dinner and dancing against a stunning backdrop of the city and bridge by night.

In a change from previous years, the final day was deliberately kept low key with a prize ceremony and thank you session held in Slade in place of the final activity session. Scholars selected a representative from their home state to collect the ISS certificates from the Deputy President of the Science Foundation for Physics. Gifts were also presented to the volunteer staff, Escorts and House Parents. Special tribute was made to Professor Harry Messel who received a spontaneous standing ovation from the scholars (above). A BBQ and disco was then held at the Women’s College for the scholars.
State selection committees provided the names and contact details of both successful and unsuccessful applicants. All applicants received notification letters and successful applicants were requested to complete and return an Information Form and other relevant material. Travel and accommodation was then organised for each scholar. Travel to and from Australia was organised by overseas committees.

All scholars, staffies and overseas Escorts were accommodated at The Women’s College, just five minutes’ walk from the School of Physics. While the accommodation comprises about one third of the cost of the International Science School, the benefits of housing the entire cohort of students in college, compared with accommodating only the visiting scholars, are enormous as the scholars are able to quickly form a cohesive whole. Also, this ensures staffies can organise their group of scholars to leave on time for lectures after breakfast and can muster after dinner for evening functions and return to the college together.

The ISS staff are vital to the smooth running of the ISS. Back for a third time were our two House Parents, Karen and John, in loco parentis for the 138 scholars in addition to the overseas Escorts who provide additional support for their students. We ensured all the overseas Escorts felt very much part of the staff team, invited to participate in all activities as well as having a couple of evening and day-time functions organised just for them.

Each ISS invites previous ISS attendees to come back as volunteer ‘staffies’. Staffies from previous years are also welcomed back as ‘Senior Staffies’. This year, thirteen ISS ‘staffies’ were engaged to assist in the welcoming of the scholars and assigned a group to escort from place to place throughout the ISS. Of special note is an international scholar from 2007 who organised sponsorship to travel back to Australia to be a staffie this year. In addition, the Young Scientists of Australia (YSA) looked after many of the social activities during evenings and weekends. Our senior staffies were exceptional in taking charge of day-to-day logistics, managing the other staffies and dealing with any complications. They are also the conduit for information updates between organisers and scholars.

An innovation for this ISS was the production of a Staff Handbook which detailed the roles and responsibilities of all staff (staffies, House Parents, Escorts, YSA and organisers). A communications hierarchy and contact information page was also provided. Staff training largely involved going through the details in the handbook. Feedback from staff was that this was a very useful document that could be kept on hand throughout the ISS and should be included in all future ISSs.

A second innovation was the introduction of a series of ‘Scholar Update’ newsletters sent out at regular intervals in the lead up to the ISS. The one-page PDF documents included useful information such as what to bring, what to expect at the ISS, heads-up on the hygiene regime and updates on the swine flue pandemic. Scholar feedback was that this information was helpful in building their expectations. Staff feedback was that the scholars were a lot more prepared in areas such as shared accommodation, registration and participation in activities.
The ISS plays host to a number of special events within the program.

The Governor of NSW and Chancellor of the University of Sydney, Her Excellency Professor Marie Bashir AC CVO as Patron of the ISS, formally opened the 35th Professor Harry Messel International Science School during the ISS Opening Ceremony held on Monday 13 July in the new Law Lecture Theatre on Eastern Avenue. Preceding this, a morning tea was held in the nearby lounge room. Following the opening the first ISS2009 lecture was given by the Hon Robert French AC, Chief Justice of Australia.

The ISS Gala Reception was held on Wednesday 22 July and was an opportunity for alumni, donors, friends and senior members of the University of Sydney to meet the ISS scholars first hand. This prestigious event was held in the Great Hall in the presence of Her Excellency Professor Marie Bashir and other distinguished guests. Dr Karl Kruszelnicki was the MC to a gathering of over 360 guests.

Two important awards are made at this event. The Len Basser Award for Leadership in Science and the Mulpha ISS Award for Leadership. Both these awards were established in 2005 in recognition of million dollar donations to the Messel Endowment. The Len Basser Award was created by the Australian Federal Government and is managed through DIISR. The Mulpha Award was created by Mulpha Australia – a multi-national corporation. ISS staffies, House Parents and Escorts select the winners of these special awards.

The Australian Government Len Basser Award for Leadership in Science is presented to the scholar who, in the course of the ISS, demonstrates leadership in science through a combination of originality of thought and a willingness to assist other ISS scholars. Matthew Georgiades (bottom, left) from NSW was this years recipient, with the award presented by Professor Graham Durant representing The Hon Kim Carr MP, Minister for Innovation, Industry, Science & Research.

The Mulpha ISS Award for Leadership recognises the international kinship fostered through the ISS and is awarded to a student who displays diplomacy, friendship, encouragement and understanding of ISS students from all cultures. This year the recipient was Joshua Roberts (top, right) from the UK, with the award presented by Mulpha Executive Chairman, Mr Seng Huang Lee.

The Scholars attended the official opening of Small Step Giant Leap – Celebrating Apollo at 40 on Monday 20 July. This exhibition was conceived by Trevor Danos, President of the Science Foundation for Physics and produced by Sydney University Museums in the SciTech library of the University of Sydney. Scholars designed, built and launched water rockets (outside on the lawns) as part of the official proceedings.

Consulate-General events are another tradition of the ISS. Overseas scholars and Escorts, accompanied by an Australian guest, are invited by the Sydney Consulate-General to attend a function on one of the first evenings of the ISS. Both the Indian and Japanese Consuls-General hosted events on the first Tuesday of the ISS. The US Consul General hosted a function at her private residence on the Wednesday and students from the UK, Canada and New Zealand with their guests attended a ‘Commonwealth’ function at the British Consulate General in the City on the Thursday.
Since 1962 a book has been produced with chapters written by each of the ISS lecturers – the book comprises a cross-section of the cutting-edge of science at that moment in time; it is both an introduction to a wide variety of scientific disciplines and a unique historical document.

The book of lectures is edited by the Director and the Executive Officer and designed & printed by the University Publishing Service. The ISS2009 logo was designed by Peter Thorn Design. The ISS2009 book was highly praised for its look and feel by the ISS scholars and the many ISS supporters who received a copy. Copies, signed by Professor Harry Messel were presented to each lecturer at the conclusion of their talk.

A copy of the Genes to Galaxies book was given to all scholars, lecturers, Escorts, sponsors and guests associated with the International Science School. The book is also made available as a downloadable PDF from the ISS website.

Above: Mr Wayne Lee and Ms Erisa Hines with their copy of the ISS2009 book of lectures

PUBLICITY

Promotion of the ISS is part of the Science Foundation for Physics effort to raise the profile of the science school. Through media releases and contacts with the science reporters in all major media, many stories appear in local, national and international papers, featuring the students who have won a place. There are also media stories about some of the lecturers and the influence of their work.

It is very much part of the philosophy of the ISS that, wherever possible, science stories about the ISS scholars, the lectures or science at the University of Sydney are shared with the public through the media. The organisers work with the Faculty and University media office to prepare media releases, organise interviews and provide background about the ISS. Again, this year, public events featuring ISS lectures Professor Jill Tarter and Wayne Lee were supported by the Foundation. Full listing of media stories is in Appendix E.
EDUCATIONAL OUTCOMES

Students attending the International Science Schools have the opportunity to benefit from a wide range of experiences, both social and academic. Educational outcomes depend on each particular student; the effect of the ISS on a student from a small rural town might be very different from that on a student from a large inner-city school, and Australian students will take away a different set of experiences from the overseas scholars. ISS scholars leave after the two weeks having made new friends, explored different cultures, discovered new fields of knowledge and encountered new intellectual and emotional challenges. The educational outcomes can be broadly grouped into scientific, cultural and generic attribute outcomes, as described below.

SCIENTIFIC UNDERSTANDING AND APPLICATION
The scholars learn about several important and relevant areas of science. The lectures that are presented, and many of the other experiences of the International Science School, deal with modern science in significant breadth and depth. Many students comment on the breadth of the topics, noting that prior to the International Science School they had had no idea that science was so diverse. The information gained through attending the ISS is truly beneficial for the scholars’ overall scientific development.

Scholars have contact with acknowledged experts in many different fields, through the lectures, direct one-to-one conversations and other interactions with staff of the School of Physics and elsewhere within the University. Through these contacts the scholars observe scientists in their working environment. Scientists provide role models for scholars that aid them in making decisions about future career directions.

Through the tours of cutting-edge research laboratories and other activities during the International Science Schools, scholars see modern scientific equipment and instrumentation techniques and gain some familiarity with the way in which science is undertaken.

Scholars at the International Science School participate in formal and informal projects. Some of these projects teach them about experimental design and, importantly, about the trade-offs necessary between design and performance of equipment, and the costs of such equipment.

CULTURAL AWARENESS AND INTERPERSONAL RELATIONSHIPS
The International Science Schools provide a rich cultural environment. Contact with peers from other parts of the world and from different parts of Australia broadens the scholars’ perspective. They develop an appreciation of learning environments elsewhere, and obtain insights about the nature and validity of approaches taken in their own educational system.

Activities, such as the Ethics and Leadership Workshop are an opportunity for students to learn about the impacts of scientific research in the context of their own culture and that of other cultures. They gain an appreciation that while scientific investigation may follow the same ‘rules’ wherever it is undertaken, the application of technologies (e.g. nuclear power), or indeed some lines of enquiry (e.g. stem cell research) are strongly influenced by cultural settings.

The scholars spend their two weeks living in college at the University and this provides an unique opportunity for socialising at meals – often with that day’s lecturer, attending planned social outings or just meeting casually within the college. Scholars report that this environment accelerates friendships and bonding far beyond what any expect from just two weeks. The scholars’ this year remain in active contact through Facebook and other social media.

GENERIC ATTRIBUTES
Through many of the activities run during the ISS, the scholars gain experience and confidence in expressing their ideas, working in groups, critically analysing new ideas and using a range of techniques to solve problems. At various times over the two weeks, they are challenged to present and defend original ideas to the larger group, to build effective teams and negotiate group dynamics, to take a leadership role or encourage others to do the same. In short, the ISS gives opportunities for the scholars to practice many of the ‘generic attributes’ that have been identified as a crucial aspect of education by schools, universities and employers.

OTHER EDUCATIONAL OUTCOMES
The Science Foundation continues to maintain the practice of producing a book of the lectures for each ISS. The Genes to Galaxies (ISS2009) book is available as a PDF on the web and formatted as an educational tool to science teachers. It is therefore accessible to many more educators and will enhance the diversity of topics that they cover. ISS webcasts and podcasts have a similar impact as the books, making the lectures available to many who would not otherwise have been able to attend. They have the added advantage of being more generally available to both a national and international audience.

Extracts from ISS books continue to appear in educational material produced around the world. A recent example is an image, reproduced with our permission, in Understanding Science for Years 9 & 10 by Cathie Odlum (Odlum & Garner 2009 ISBN 978-1-875918-06-5).
The immediate benefits of the International Science Schools are obvious to anyone who has spoken with the scholars: the ISS adds fuel to their enthusiasm, their passion for science and their self-confidence. The greatest impact, however, will be seen years from now as this new generation finds their own paths through their personal and professional lives. They join a growing list of more than 4,000 ISS alumni whose collective achievements and impact – both within and outside the fields of science – are profound.

The Science Foundation for Physics continues to collect updated data on its ISS alumni. Recent statistics show that over half of the ISS scholars end up in scientific, technical or medical fields (see image right).

The Foundation aims to build a stronger ISS alumni association, as a global network for scholars and as a source of information, feedback and support for Foundation activities. Twice a year ISS alumni receive the hard copy School of Physics newsletter Alumni News as well as the monthly e-newsletter Alumni Update.

### FINANCIAL STATEMENT

The Science Foundation for Physics could not run the International Science School without its generous supporters, some of who helped fund the ISS for many years. We are very grateful to all whom contributed to make the 2009 International Science School possible, including the many donors to the Messel Endowment.

Appendix C gives a statement of the finances of the ISS2009 as at 31 December 2009.

### IN CONCLUSION

**THE TWO WEEKS AT THE ISS TRULY WERE THE GREATEST TWO WEEKS OF MY LIFE THUS FAR.**

**ISS2009 SCHOLAR**

The Professor Harry Messel International Science School is a wonderful and unique experience that honours scientific excellence. The ISS scholars are brought together from all over the globe to experience two weeks of lectures and activities run by leading researchers from varied scientific disciplines. The ISS2009 scholars were challenged to think about issues relating to the world they live in whilst also being given the opportunity to meet and interact with other promising young minds from diverse cultures and backgrounds. These scholars have been given an insight into the world of scientific research and its unlimited possibilities and are now challenged to take this knowledge and experience further by aiming to reach their full potential and making an impact on the world around them.

With the goal of a fully-funded Messel Endowment in sight, guaranteeing the continuation in perpetuity of the ISS, the Science Foundation for Physics looks forward to the next celebration of excellence at the ISS2011 – Faster, Further, Smarter – Science and the Mastery of Light.

Mr Adam Selinger
Executive Officer
Science Foundation for Physics
April 2010
## APPENDIX A: ISS2009 SCHOLARS

### The Australian Scholars

#### Australian Capital Territory
- Victor Lu    Marist College Canberra
- Yong-Shen Han Narrabundah College

#### New South Wales
- Michael Celona    Kinross Wolaroi
- Scott Murphy    Colo High School
- Sneha Vidyasagar Cherrybrook Technology High School
- Myles Harris-Ayling Katoomba High School
- Kara Altman Fort Street High School
- Sean Czuczman St John’s Park High School
- William Wilhelm Barker College
- Grace Cham North Sydney Girls High School
- Alexa Thompson Hornsby Girls High School
- Yuem Park Sydney Grammar School
- Teresa Santona Staso Frensham School
- Apoorva Tiku St George Girls High School
- Anna Kosmynina Fort Street High School
- Kwei Jun Tong Randwick Boys High School
- Miles Ma Fort Street High School
- Linda Ting Hui Mei St George Girls High School
- Alan Huynh Fort Street High School
- Caitlin Mangan Gosford High School
- Virginia Wong Baulkham Hills High School
- Joshua Mortimer Oxley High School
- Naomi Truscott Greystanes High School
- Jessica Dunn Bowral High School
- Gerry Shen Fort Street High School
- Sharon Yu James Ruse Agricultural High School
- Isobel James Fort Street High School
- Teresa Nguyen Mary Mackillop College Wakely
- Sheree Venter Barker College
- Ruben Arulnathan Baulkham Hills High School
- Kawisha Arander Tara Anglican School for Girls
- Kate Johnson Wingham High School
- Stephen Butler Kooringal High School
Rohit Ghosh    Baulkham Hills High School  
Kevin Phan    James Ruse Agricultural High School  
Stephanie Floyd    Mackillip College  
Alwin So    Baulkham Hills High School  
Liang-Yu Chen    St Joseph’s Catholic College  
Nicola Fleming    Snowy Mountains Grammar School  
Grace Wei Zhou    Sydney Girls High School  
Annabelle O’Regan    Roseville College  
Joshua Small    Hunter Sports High School  
Eugene Holdenson Kimura    Sydney Grammar School  
Joshua Eagles    Wingham High School  
Marian Prasad    Delany College  
Stefanie Vaccher    Santa Sabina College  
Louise Koller-Smith    Merewether High School  
Donald Zhang    Merewether High School  
Emma Watson    Abbotsleigh  
Maixi Cai    St Scholastica’s College  
Pamela Karas    St George Girls High School  
Tsong-Ping Chiu    Ravenswood School for Girls  
Liam Dobbie    Tomaree High School  
Emily Smith    Dubbo College Senior Campus  
Jack Elliott    Hennessy Catholic College  
Daniel Akrawi    Sydney Adventist College  
Debbie Pun    Baulkham Hills High School  
Jordan Hoban    Nambucca Heads High School  
Claire Pollock    Murray High School  
Shannon Dowton    Wellington High School  
Paige Miller    Great Lakes College, Tuncurry Senior Campus  
Marymajella Dubbelaar    Carroll College  
Charlotte Fletcher    Caringbah Selective High School  
Ellen-May Forder Simpson    SCEGGS Darlinghurst  
Matthew Georgiades    William Clarke College  

**Northern Territory**  
Emily Treagust    St Philip’s College  
Clare Paynter    Kormilda College
Queensland
Simon Ahmadpour          William Ross State High School
Brittany Burberry        Ingham State High School
Gavin Ong                MacGregor State High School
Stephen                  Sherratt Gilroy Santa Maria College
Andrew Perryman          Beerwah State High School

South Australia
Esther Chung             St Mary’s College
Michael Genockey         Cardijn College
Rebecca Lewis            St Peters Girls School
Brandon Munn             St Michael’s College
Katelyn Wright           Cummins Area School

Tasmania
Christopher Ryba         The Hutchins School
Duncan Watson             Marist Regional College

Victoria
Miriam Lim               The MacRobertson Girls High School
Kevin Wu                 Haileybury College
Laura Snyders             Woodleigh School
Francesco Iannello       Northcote High School
Edward Cliff              Scotch College
Danielle Grant           Loreto Mandeville Hall
Natalie Yu               Presbyterian Ladies College
Laura Driessen           Tintern Girls Grammar School
Neil Shepperd            Bairnsdale Secondary College
Kaitlin Clinch           Shelford Girls’ Grammar School

Western Australia
Yasmin Soliman           St Mary’s Anglican Girls School
Nicholas Dyer             Shenton College
Kayla Mizzi               St Mary’s Anglican Girls’ School
Tynan Stuart              Kelmscott Senior High School
Tinlok Pang               Duncraig Senior High School
Atteya Thomas             Presbyterian Ladies College
Kirsty McLean             Presbyterian Ladies College
The Overseas Scholars

**Canada**
Cassandra Mae Pryzner  Rivers College Institute  
Josie Leah  Paddock  Rivers College Institute

**India**
Ashwath Rabindranath Vidya  Mandir Senior Secondary School  
Sriram Vilayanur Jayaraman  National Public School  
Anurag Tiwari  Rishikkul Vidyapeeth  
Shreya  CMR National Public School  
Mitesh Agrawal  Lokhit Junior Science College

**Japan**
Kenta Koga  Nada Junior and Senior High School  
Tomoyuki Mano  Gunma Prefectural Chuo Secondary School  
Homare Saeki  Nagoya University, Affiliated Upper Secondary School  
Kaito Abe  Osaka Prefectural Neyagawa Senior High School  
Junki Morimoto  Ritsumeikan Senior High School  
Aiko Hayashi  Ritsumeikan Moriyma Senior High School  
Keisuke Terada  Hiroshima Kokutaiji High School  
Haruka Kawakami  Kanazawa University Senior High School

**New Zealand**
Bridget Gordon  Hamilton Girls’ High School  
Nina Luo  Waikato Diocesan School for Girls  
Kent Teague  Rangitoto College  
Jenny Wong  Palmerton North Girls’ High School  
Taehwan Shin  Auckland International College

**People’s Republic of China**
Wangshu Tan  High School of Peking University  
Wangke Wu  High School of Peking University  
Hao Cui  High School of Peking University  
Guochao Sun  High School of Peking University  
Bingfei Fu  High School of Peking University
Thailand
Yosapol Harnvanichvech        Sriboonyanon School
Worapan Homsomboon            Phrapathom Witthayalai School
Akkarawat Mansap              Khaennakhonwittayalai School
Aurapat Ngamnithiporn         Samsenwittayalai School
Apichayaporn Ratkata          Yupparaj Wittayalai School
Prueksacha Maneepruek         Bodindecha (Sing Singhasanee)
Suphitsuara Khamdej            Hatyaiwittayalai

United Kingdom
Roxann Holder                 Diss High School
Jessica Whiting               Bury Grammar School for Girls
Paul Bramley                  Bishop’s Stortford College
Stephen Cox                   The King’s Academy
Joshua Roberts                Trinity Catholic High School

United States of America
Andrew Chen                    Mira Loma High School
Rishikesh Upendra Kulkarni    Mira Loma High School
Edward Hyosuk Lee              Mira Loma High School
Sriram Venkat Pendyala         Mira Loma High School
## APPENDIX B: ISS2009 LECTURE PROGRAM

### Speaker Program Week 1

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Topic</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday 13 July</td>
<td>11am-12:30pm</td>
<td>From Light and Life to Genes and Galaxies - 45 Years On</td>
<td>The Hon Robert French AC Chief Justice of Australia (and ISS1964 alumnus)</td>
</tr>
<tr>
<td>Monday 13 July</td>
<td>2pm-3:30pm</td>
<td>The Earliest Evidence of Life on Earth</td>
<td>Professor Malcolm Walter Director, Australian Centre for Astrobiology, University of New South Wales</td>
</tr>
<tr>
<td>Tuesday 14 July</td>
<td>11am-12:30pm</td>
<td>The Search for Life on Mars</td>
<td>Professor Malcolm Walter Director, Australian Centre for Astrobiology, University of New South Wales</td>
</tr>
<tr>
<td>Tuesday 14 July</td>
<td>2pm-3:30pm</td>
<td>Paleolithic nutrition- what did our ancestors eat?</td>
<td>Professor Jennie Brand-Miller Human Nutrition, The University of Sydney</td>
</tr>
<tr>
<td>Wednesday 15 July</td>
<td>11am-12:30pm</td>
<td>A Walk Around the Neighbourhood: the Milky Way</td>
<td>Dr Naomi McClure-Griffiths Australian National Telescope Facility, CSIRO</td>
</tr>
<tr>
<td>Wednesday 15 July</td>
<td>2pm-3:30pm</td>
<td>Gene Silencing I – A virus defense pathway and a technology</td>
<td>Professor Peter Waterhouse Molecular and Microbial Biosciences, The University of Sydney</td>
</tr>
<tr>
<td>Friday 17 July</td>
<td>11am-12:30pm</td>
<td>Why is it important to read On the origin of species in 2009?</td>
<td>Professor Michel Morange Ecole normale supérieure, Paris</td>
</tr>
<tr>
<td>Friday 17 July</td>
<td>2pm-3:30pm</td>
<td>The Frontiers of Present Biological Research</td>
<td>Professor Michel Morange Ecole normale supérieure, Paris</td>
</tr>
</tbody>
</table>

### Speaker Program Week 2

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Topic</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday 20 July</td>
<td>2pm-3:30pm</td>
<td>The Evolution of Galaxies</td>
<td>Professor Geraint Lewis The School of Physics, The University of Sydney</td>
</tr>
<tr>
<td>Tuesday 21 July</td>
<td>11am-12:30pm</td>
<td>SETI: Planning for Success. Who will speak for Earth?</td>
<td>Professor Jill Tarter Director, SETI Institute</td>
</tr>
<tr>
<td>Tuesday 21 July</td>
<td>2pm-3:30pm</td>
<td>Six Minutes of Terror: Stories from the landing rovers on Mars</td>
<td>Wayne Lee Altair Vehicle Systems Manager, NASA</td>
</tr>
<tr>
<td>Wednesday 22 July</td>
<td>11am-12:30pm</td>
<td>NASA's new initiative to land astronauts on the Moon</td>
<td>Wayne Lee and Erisa Hines NASA</td>
</tr>
<tr>
<td>Wednesday 22 July</td>
<td>2pm-3:30pm</td>
<td>Expanding the Potentially Habitable Real Estate in the Galaxy</td>
<td>Professor Jill Tarter Director, SETI Institute</td>
</tr>
<tr>
<td>Thursday 23 July</td>
<td>11am-12:30pm</td>
<td>Gene Silencing II – Gene regulation</td>
<td>Professor Peter Waterhouse Molecular and Microbial Biosciences, The University of Sydney</td>
</tr>
<tr>
<td>Thursday 23 July</td>
<td>2pm-3:30pm</td>
<td>Asthma and Airway Remodelling</td>
<td>Associate Professor Alaina Ammit Faculty of Pharmacy, The University of Sydney</td>
</tr>
<tr>
<td>Friday 24 July</td>
<td>11am-12:30am</td>
<td>Cosmobiology: Our Place in the Universe</td>
<td>Associate Professor Charley Lineweaver Senior Fellow, Planetary Science Institute, Australian National University</td>
</tr>
<tr>
<td>Friday 24 July</td>
<td>2pm-3:30pm</td>
<td>The Secret Life of Protons</td>
<td>Dr Helen Johnston (ISS1981) School of Physics, The University of Sydney</td>
</tr>
</tbody>
</table>
Guest speakers and Special Events

Monday 13 July
3:30pm-5pm
Meet-and-Greet-a-Physicist
Academics and students from the School of Physics, The University of Sydney

Wednesday 15 July
3:30pm-5pm
Great Moments in Science
Dr Karl Kruszelnicki Julius Sumner Miller Fellow, The University of Sydney

Monday 20 July
11am-12pm
Apollo exhibition opening small step, giant leap – celebrating Apollo at 40
Water Rocket launch by ISS2009 scholars

Wednesday 22 July
3:30-5pm
Great Moments in Science
Dr Karl Kruszelnicki Julius Sumner Miller Fellow, The University of Sydney

Professor Geraint Lewis gives his lecture at ISS2009
The Earliest Evidence of Life on Earth

The oldest convincing evidence of life is in 3.5 Ga rocks in the Pilbara region of WA and the Barberton Mountainland of South Africa. Already by then it seems that diverse microbial communities lived in environments ranging from volcanic calderas to open marine settings. There is tenuous evidence for life in 3.8-3.9 Ga rocks of Greenland, but the record is obscured by the pervasive alteration of all known rock successions of this age and older. As a result of this alteration there are no known well preserved rocks older than 3.5 Ga, and thus no convincing fossil record. The best we can do at present is to infer the earliest stages of life from studies of extant organisms and from theoretical and experimental approaches to the origin of life.

The Search for Life on Mars

It is almost inevitable that there once was and probably still is life on Mars. There is a traffic of meteorites between Earth and Mars, and given the fact that microbes live at depths of up to several thousand metres in the Earth’s crust (the source of some meteorites) microbes are likely to have been transported from one planet to the other. However, far more significant is the possibility of a second origin of life on Mars.

Paleolithic nutrition: what did our ancestors eat?

There is growing awareness that the profound changes in diet and lifestyle that began with the introduction of agriculture and animal husbandry 10,000 years ago occurred too recently in an evolutionary sense for the human genome to adjust. The evolutionary ‘collision’ of our ancient genome with the nutritional qualities of recently introduced foods (cereals, dairy products, refined sugars and oils) may underlie many of the diseases of Western civilization.

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Opening Lecture: From Light and Life to Genes and Galaxies – 45 Years On

Justice Robert French attended the ISS in 1964 as one of two secondary school students from Western Australia, where he sat in the Physics lecture theatre with 159 fellow students to hear lectures from James D. “double-helix” Watson. Justice French looks back on the past 45 years in his experience of matter of science, law and society.

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**Professor Geraint Lewis**

Professor of Astrophysics, School of Physics, The University of Sydney

The Evolution of Galaxies

Geraint’s research focuses upon Galactic cannibalism, where small dwarf galaxies are torn apart by the much more massive Milky Way and Andromeda Galaxy. Using telescopes from around the world, including the 10-m Keck telescope in Hawaii, he has mapped the tell-tale signs of tidal disruption and destruction, providing important clues to how large galaxies have grown over time.

**Professor Jill Tarter**

Director, Search for Extraterrestrial Intelligence (SETI) Institute

SETI - Planning for Success: Who will speak for Earth? What will they say?

Would the detection of another intelligent society disrupt our own? Would it provoke hope, or fear? Would there be apprehension or defensiveness? Could we expect a harmonizing effect on our own society?

The long-term effects are difficult to predict. Analogy is often made to Copernicus’ dramatic new cosmology, which deposed Earth from its throne at the center of the universe. To the extent that such analogies are applicable, they suggest more of a gradual change in world view than a dramatic upset in the day-to-day conduct of society.

Extremophiles and Exoplanets: Expanding the Potentially Habitable Real Estate in the Galaxy

How did life begin on Earth? How many stars have planets and how many of these planets might support life? Scientists in the SETI Institute’s Carl Sagan Center for the Study of Life in the Universe explores these and other fundamental questions through a research program consisting of more than 30 externally funded, peer-reviewed projects. Sagan Center principal investigators conduct basic research into a field often known as astrobiology.

**Mr Wayne Lee**

Altair Vehicle Systems Manager, National Aeronautics and Space Administration (NASA)

Six Minutes of Terror: Stories from the landing rovers on Mars

Confidence was not high. It was just after New Year’s Day 2004 and 800 million dollars of hardware in the form of two rovers were hurtling toward Mars at a speed 25 times faster than a speeding bullet. This talk will discuss how a team of engineers, responsible for the landing system of the rover’s Spirit and Opportunity, overcame multitudes of test failures over four years to assemble a system of heatshields, parachutes, retrorockets, and airbags to survive the six terrifying minutes of decelerating two rovers from fantastic speeds to a safe landing.

**New Stars in NASA’s Constellation**

“As we shall return with peace and hope for all mankind.” Back in 1972, nobody would have imagined that over 35 years would pass with that message from Apollo 17 commander Gene Cernan still standing as the last words transmitted from the surface of the Moon. Today, NASA is working to fulfill its pledge to return astronauts to the Moon as a follow-on to perhaps the great achievement in aviation and exploration.

This talk will describe NASA’s current lunar exploration plans as well as the gigantic machines currently under design to make it possible.

**Associate Professor Alaina Ammit**

Respiratory Research Group, Faculty of Pharmacy, The University of Sydney

Asthma and Airway Remodelling: Targeting Mitogen-activated Protein Kinases as Future Therapeutics

Asthma is a chronic disorder of the airways affecting millions of people worldwide. Airways are remodelled, or thickened, resulting in airway obstruction and a decline in lung function. We focus on the development of novel anti-inflammatory strategies designed to regulate proteins.

**Associate Professor Charles H. Lineweaver**

Planetary Science Institute, Australian National University

Cosmobiology: Our Place in the Universe

Here we sit on a ball of silicate with beating hearts, opposable thumbs and curious minds. How did we get here? How did the evolution of non-living things, such as galaxies, stars and planets, create the ingredients and the conditions for the emergence of life? Which aspects of this evolution are unique to the Earth and which are common in the universe? Are we alone? These cosmobiological questions will be sharpened and partially answered.

**Dr Helen Johnston**

Research Fellow, Sydney Institute for Astronomy, The University of Sydney

The Secret Life of Protons

Very few things are forever. Molecules re-arrange and re-make themselves constantly, in countless chemical reactions; and even atoms can be made and destroyed in the interiors of stars, forging entirely new chemical elements. Only protons are truly unchanging: every proton in every atom in the universe has been there since the very beginning... witnessing the creation of interstellar gasses, the birth and death of stars and even the evolution of life on Earth. If one of those protons could tell its story, what a story that would be...
APPENDIX C: FINANCIAL STATEMENTS

Craig Prosser
Director, Audit and Risk Management

18 February 2010

Hon Verity Firth MP
Minister for Education and Training,
The NSW Department of Education and Training
Level 4, 35 Bridge Street
SYDNEY NSW 2000

Cc: Glen Sawle
CEO Science,
NSW Department of Education and Training

Science Foundation for Physics
The University of Sydney
International Science School
Statement of Income and Expenditure for the period
1 January 2008 to 31 December 2009

An audit has been conducted of the attached Statement of Income and Expenditure which covers the International Science School for the period 1 January 2008 to 31 December 2009.

The statement presents fairly the receipts (including DET grant of $91,700) and expenditures for the period, dissected under relevant income and expenditure categories. Additional notes are provided to explain several items.

The statement provides a true and fair representation of the operation of the 2009 International Science School.

Yours Sincerely,

Craig Prosser, CPA
Director
Audit and Risk Management
Craig Prosser  
Director, Audit and Risk Management

18 February 2010

Professor Graham Durant  
Manager  
Science Awareness Section (Location 320)  
Department of Innovation, Industry, Science and Research  
GPO Box 9839, CANBERRA ACT 2601

Report on the 2009  
Harry Messel International Science School

In 2004 the University received a $1 million grant from your department, for the biannual Professor Harry Messel International Science School (ISS). The Funding Agreement dated 28 June 2004 requires that the University invests the capital contribution ($1m) for the purposes of generating an income stream to assist the ISS operations.

On the 15th of June in 2007, another Funding Agreement was signed between your department and the University, which specifies your department will fund $90,000 (excluding GST) in 2007, 2009 and 2011 to assist in meeting all running costs of ISS.

Section 12.6 of both Funding Agreements requires the University to provide:

- a detailed statement of income and expenditure plus a definitive statement as to whether the financial accounts are true and fair;
- a statement of the balance of the account containing the grant/funding; and
- a statement that the funding was expended for the ISS and in accordance with the funding agreements.

As the University is audited by the NSW Auditor-General, Section 12.7 of both Funding Agreements permits the statements to be certified by the University’s Chief Executive Officer and chief internal auditor.

The following Statement of Income and Expenditure is prepared in accordance with Sections 12.6 and 12.7 of both the 2004 and 2007 Funding Agreements.

The attached Statement of Income and Expenditure has been examined by me as the University’s Internal Auditor. Based on my examination I can report that the Statement, which is prepared on a cash accounting basis, is consistent with the information contained in the University’s General Ledger and provides a true and fair representation of the operations of the 2009 ISS. Through expenditure transaction testing, I have found that all expenditure from the 1st of January, 2008 to the 31st December, 2009 relate directly to the “running costs of the biannual Professor Harry Messel International Science School.”
Through income testing, I have concluded that all income allocated to the ISS is correctly allocated and recorded in the ISS accounts and within the University’s general ledger.

Also find attached, is a statement of the balance of the University account containing the grant. The DIISR funding agreement requires the $1 million funded by the department in 2004 to be reported separately and to ensure that the real value of the monies is preserved. The money is held in a separate account and through internal investment policies $250,000 is invested in the University growth pool. According to the Growth Pool report for the quarter ending the 31st December 2009, the book value of that investment is $250,000 and has a market value of $181,357. The balance of the funding stands at $1,192,340 (this is inclusive of the book value amount invested in the University’s growth pool) as at the 31/12/2009. I can confirm that the statement is an accurate reflection of the account as at 31 December 2009.

Yours sincerely,

Craig Proser, CPA
Director, Audit and Risk Management
The University of Sydney

Mark Easson
Chief Financial Officer
The University of Sydney
### Notes: 2008 / 2009

#### INCOME

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grants (NSW Department of Education)</td>
<td>91,700</td>
</tr>
<tr>
<td>Grants - DEST</td>
<td>90,000</td>
</tr>
<tr>
<td>Scholarships/Donations/Bequests</td>
<td>85,250</td>
</tr>
<tr>
<td>Business &amp; Investment Income</td>
<td>24,812</td>
</tr>
<tr>
<td>Messel Endowment contribution</td>
<td>139,454</td>
</tr>
<tr>
<td>Internal Income</td>
<td>(8,873)</td>
</tr>
<tr>
<td><strong>Total Revenue</strong></td>
<td><strong>422,343</strong></td>
</tr>
</tbody>
</table>

#### EXPENDITURE

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries / consultants</td>
<td>142,727</td>
</tr>
<tr>
<td>Equip Purchases &amp; Lease&lt;$10,000</td>
<td>129</td>
</tr>
<tr>
<td>Utilities and Communications</td>
<td>13,621</td>
</tr>
<tr>
<td>Travel expenses &amp; Accommodation</td>
<td>191,496</td>
</tr>
<tr>
<td>Entertainment/Advertising</td>
<td>2,012</td>
</tr>
<tr>
<td>Printing &amp; Postage</td>
<td>33,954</td>
</tr>
<tr>
<td>Other expenses</td>
<td>12,999</td>
</tr>
<tr>
<td>Student costs</td>
<td>16,960</td>
</tr>
<tr>
<td><strong>Total Non Salary Expenditure</strong></td>
<td><strong>413,898</strong></td>
</tr>
</tbody>
</table>

#### OPERATING MARGIN

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating Margin</strong></td>
<td>8,445</td>
</tr>
</tbody>
</table>

#### Accumulated Funds as at 1st January 2008

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Accumulated Funds</strong></td>
<td>2,453</td>
</tr>
</tbody>
</table>

#### CLOSING BALANCE at 31st December 2009

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CLOSING BALANCE</strong></td>
<td>10,898</td>
</tr>
</tbody>
</table>

---

Notes:

1. Net result of movement of funds between Foundation and ISS accounts. A $21,000 surplus in ISS operating account transferred to the Messel Endowment.

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Adam Selinger  
for  
Professor Clive Baldock  
Head, School of Physics  
**Director, Science Foundation for Physics**  
3rd February 2010
I remember...On the first night when John and Karen first spoke to us, they said that we’d all have such a great time and that we’d all be sad when ISS came to an end. I thought to myself “Yeah right, as if that’s gonna happen in two weeks”. But when it came to the last night and we were all saying goodbyes, hugging each other, crying, and being told to “go to bed” about a million times by the houseparents and the staffs, I guess they were right all along.

Bridget Gordon (Hamilton Girls’ High School, NEW ZEALAND) wrote on July 28, 2009 at 5:47pm
It’s soo crazy that you can miss people so much after such a short period of time... I truly can’t bring myself to believe I have only known everyone for 2 weeks

Brandon Munn wrote on July 28, 2009 at 6:35pm
oh and i so agree... that first afternoon when they said some ppl say it is the most amazing 2 weeks of their life and all i thought was what losers, now i can’t stop saying it was the most amazing 2 weeks of my life.

Stephanie Momsen (YSA) (Australia) wrote on July 28, 2009 at 9:20pm
It’s been 4 years and 3 ISS’s for me and I still miss people from mine! ISS changed my life, it’s the reason I live in Sydney, do Physics, help run science camps... it really is amazing

Natalie Yu (NSW, Australia) wrote on July 29, 2009 at 10:07pm
I remember on the very first night at ISS, I was rather upset over the fact that I was allocated to the back alley (To those who don’t know, it’s a small area where there are only 4 people), and I thought to myself “why did I come here again?”

I can’t exactly remember when I stopped asking myself that question, but before I knew it, the whole thing was drawing to a close.

Like most other people, I didn’t really believe it when we were told on the first that it would be one of the experience of our lifetime. I don’t know about other people, but to me, it truly was.
EMAIL MESSAGE

From: Brandon Munn  
Date: 1 August 2009 3:39:06 PM  
To: <adamlphysics.usyd.edu.au>  
Subject: ISS 09

Dear Adam Selinger,

I am writing this email to personally thank you from the bottom of my heart for organising and ensuring the ISS ran so perfectly. The two weeks at the ISS truly were the greatest two weeks of my life thus far. I remember in the introduction speech you delivered on the very first day you said we would leave this place extremely sad and begging for the ISS to be longer and I think I actually laughed and thought that that could never happen to me and that it would be a joke to become so emotionally attached to a science camp, nevertheless, that was exactly what happened to me.

Each day there would be amazing activities around the Uni, two amazing lectures and these would be spent with amazing people. I have made lifelong friends with people from across the world and I feel privileged to have had the opportunity to meet these people, partake in the ISS and to be an ISS alumni.

So I want you to thank everybody involved for me from the great Harry Messel himself too the cook who made rice each day and even though I am unable to look at rice and cannot imagine eating it for a few more weeks, that disgusting smell of cooked rice, still transports me back to the dining room and lining up to get some lunch or dinner with my amazing friends.

I will definitely be writing back in late 2010 and early 2011 to find out how the ‘staffies’ roles are going as will many other ISS students that I have talked to, as we are all adamant we will be coming back as staffies in 2011. I cannot wait for the next reunion and we are already organising one now, because I truly never believed I would find it as hard as I have to assimilate back into regular life, a feat I believe I will be unable to achieve since being a part of the ISS, which has changed me into a better person.

So I thank you again for this opportunity and I hope you can continue to deliver the brilliant program that is the ISS to thousands of more students, to continue to change people’s lives into the future and that hopefully I can participate in this brilliant program in 2011.

Kind regards, Brandon Munn ISS09
Dear Adam, Alison, Alex and Anne,

Two weeks on I have still not been able to comprehend the enormity of ISS, yet I can now fully appreciate the wonderful opportunity which you have given me. For this you have my wholehearted thanks. My time at ISS was more than I can possibly describe however I am sure you know the amazing insight into university and science that it offers.

Coming from a rural community to a city environment even for two weeks was an enormous step for me and I cannot think of a better time or place to have done this in than ISS. To be able to access the knowledge contained in Sydney University is something I had never dreamed of and certainly did not think I would ever be able to do from Jindabyne.

As part of such a small community, with my senior school number equaling that of the ISS scholars, to find such acceptance and a sense of fellowship as that I found within ISS is one of the greatest gifts that I have ever received. To meet people with interests so similar to my own is an experience I have never encountered and this has inspired me to move forward with my dreams without the fear of being alone in the undertaking. I now know that when I step out into the world there are others on a similar path who are kind and wonderful people.

It is for this and more that I cannot possibly express that I thank you, so much, for your dedication to ISS and the inspiration that the experience as a whole provides to a country girl such as myself.

Yours sincerely,

Nicola Fleming.
APPENDIX E: ISS2009 IN THE MEDIA

NEWS STORIES ON ISS2009 STUDENTS

“Young produces the winner” – story in Young Witness 04/03/2009

“Rivers students set for trip Down Under” story in Brandon Sun 04/05/2009

“Scholarship winner” – story in Young Witness 25/05/2009

“Young Einstein” – story in Central Western Daily 26/05/2009

“India’s brightest find science, opportunity and friendship in Sydney” – story in India Link 02/06/2009

“Science scholarships a Wingham High first” – story in Wingham Chronicle 03/06/2009

“Chance to study at international science school” – story in Port Lincoln Times 04/06/2009

“Looking into her future” – story in Frankston Standard Leader 11/06/2009

“Beam me up Scott” – story in Hawkesbury Courier 11/06/2009

“Local student selected for international science school” – story in Summit Sun 11/06/2009

“Science student dabbles with best” – story in The Advocate 14/06/2009

“Honour for Ingham in student’s success” - story in Herbert River Express 18/06/2009

“Andrew hits right note” – story in Glasshouse Country News 24/06/2009

“Science standard high by Ingham students” – story in Herbert River Express 27/06/2009

“UK students win scholarships to study at International Science School in Sydney” – UK FCO online 08/07/2009

“Scientific skill” – story in Southern Star 08/07/2009

“Lunar tunes: that’s not all folks” – story in Sydney Morning Herald 17/07/2009

“Small Step, Giant Leap: Celebrating Apollo at 40” – story in the Southern Courier 18/07/2009

“Hailing the role of Sydney’s alumni” – story in Sydney Morning Herald 21/07/2009

“Students changed by Aussie experience” – story in Brandon Sun 30/07/2009

PROFESSOR JILL TARTER AT SYDNEY IDEAS/ ISS – 21 JULY, 2009

Radio interview with Adam Spencer for “Breakfasts with Adam Spencer” on ABC Local Radio 702, aired on Tuesday, 21 July, 2009. Website: http://blogs.abc.net.au/nsw/702_breakfast/


Interview with Stuart Gary from ABC’s “Star Stuff”. Website: www.abc.net.au/science/starstuff <http://www.abc.net.au/science/starstuff>


Interview with Red Symons Breakfast, ABC Local Radio 774 Melbourne. Website: http://blogs.abc.net.au/victoria/melbourne_breakfast/index.html


Feature interview with Australian popular science magazine Cosmos Magazine, Website: http://www.cosmosmagazine.com/

Interview with ABC Kimberley local radio on Wednesday, 22 July, Website: http://blogs.abc.net.au/wa/kimberley_mornings/

Interview with ABC Darwin’s Leon Compton on Wednesday, 22 July, Website: http://blogs.abc.net.au/nt/darwin_mornings/index.html

Jill Tarter on Dr Karl’s science show on Triple J, ABC’s youth network on Thursday, 23 July, 2009. Podcast of interview: http://www.abc.net.au/science/dk/ki/scienceontriplej/


Sydney Ideas/Jill Tarter event news story on ABC Newcastle, 21 July, 2009
ISS2009: Local Media
– Overseas students

Newspapers

CHINESE
21st Century Chinese Newspaper
Published every Wednesday
Level 5, 260 La Trobe Street
Melbourne VIC 3000
Phone 03 9663 6200
Fax 03 9521 3436
auschin@bigpond.net.au

ACCA News
Published quarterly.
2 Mary Street
Surry Hills NSW 2010
Editor: Anthony Ng
Phone 02 9281 1377
Fax 02 9281 1603
accacity@kdbnet.net.au
www.acca.org.au

Australian Chinese Daily
Published daily, Monday to Saturday
PO Box K525
Haymarket NSW 1240
Editor: Wilson Ng
Phone 02 9261 3033
Fax 02 9261 3525
info@auccd.com.au

Chinese Melbourne Daily
Published daily.
300 Wellington Street
Collingwood NSW 3066
Editor: Rita Li
Phone 03 9416 3838
ruang3@bigpond.net.au

Chinese Times
Published every Thursday.
PO Box K1168
Haymarket NSW 2000
22.2F, 647-649 George Street
Sydney NSW 2000
Editor: Mr David Ni
Phone 02 9212 1479
Fax 02 9211 3575
acnews@yahoo.com

Chinese Weekly
Published every Friday.
Level 1, 346 Bell Street
Preston VIC 3072
Editor: Simon Xiang
Phone 03 9480 1919
Fax 03 9480 1958
c.weekly@bigpond.net.au

Daily Chinese Herald
Published daily, Monday to Saturday
PO Box K65
Haymarket NSW 2000
83-85 Foveaux Street
Surry Hills NSW 2010
Editor: Mr Derek Chan
Phone 02 9281 2988
Fax 02 9281 8328
info@ausdaily.com.au
www.ausdaily.net.au

Melbourne Chinese Post
Published every second Friday.
Suite 21, Paramount Centre, 108 Bourke Street
Melbourne VIC 3000
Editor: Eddie Lei
Phone 03 9663 8455
Fax 03 9663 8209
www.chinesepost.com.au

Oriental Post
Published every second Friday.
PO Box 563
Lee derville WA 6903
29 Monger Street
Perth WA 6000
Editor: Dr Sandra Liu
Phone 08 9328 6898
Fax 08 9227 6668
info@orientalpost.com.au
www.orientalpost.com.au

Pacific Times
Published every Thursday.
1st floor, 320 Victoria Street
North Melbourne VIC 3051
Editor: Sam Feng
Phone 03 9326 6466
Fax 03 9326 7499
news@pacifictimes.com.au

Queensland Asian Business Weekly
Published weekly.
Shop 7, Fortuneland Centre, 8 Duncan Street
Fortitude Valley QLD 4006
Phone 07 3852 2360
Fax 07 3252 8778
qabw@bigpond.net.au

Sing Tao Jih Pao
Published daily, Monday to Saturday.
Level 1, 545 Kent Street
Sydney NSW 2000
Editor: KC Wong
Phone 02 9261 4466
Fax 02 9267 1474
editorial@singtao.com.au
www.singtao.com.au

The Australian New Express
1st Floor
22-26 Goulburn Street
Sydney<
P.O. Box K1200
Haymarket NSW 1240
Tel (02) 9280 2283
The Indian Sub-continent Times
6/13-17 Hill Street
WENTWORTHVILLE NSW 2145
Editor: Ashok Kumar
Phone: 0425 296742
Fax: (02) 9896 2993
editor@theistime.com

Indo Times
Published monthly.
PO Box 51
Thomastown VIC 3074
Unit 4, 14 Caroline Street
Thomastown VIC 3074
Chief-Editor: Tarswinder Singh
Phone: 03 9466 4884
Fax: 03 9464 6884
indotimes@yahoo.com

Indian Voice
Published monthly.
20 Bent Street
Bentleigh VIC 3204
Phone: 03 9576 5767
Fax: 03 9557 7157
editor@indianvoice.net
www.indianvoice.net

Indian Media Group
Publications: Punjabi Express
Published monthly. Distributed in Sydney, Melbourne, Brisbane
95 WIGRAM STREET
HARRIS PARK NSW 2150
PH: +61 2 9635 5041
FAX: +61 2 0635 5045
MOB: 0403 088 247
Email: info@indianmediagroup.com
Website: www.indianmediagroup.com

India Week
Published Weekly
95 Wigram Street
HARRIS PARK
NSW 2150
Editor: Raj Singh
PHONE: (02) 9635 5041
FAX: (02) 9635 5045
Email: info@indianmediagroup.com

Masala Times
Published monthly.
223 Quakers Hill
NSW 2763
P.O. Box 4177 Marayong NSW 2148
Editor: Surinder Singh
Tel: (02) 9626 6972 Fax: (02) 9626 5943
Website: www.masalatimes.com.au

Punjabi Times
Published monthly.
P.O. Box 8055
Sydney NSW 2745
Editor: Harpeet Singh Tel (02) 4737 9250 Fax (02) 4737 9250
harpreet_20022003@yahoo.com.au
Radio and TV

2CR China Radio Network
1st floor, 592-594 Harris Street
Ultimo NSW 2007
Program manager: Ronald Chan
Phone 02 9211 5611
Fax 9212 3218
2cr@2cr.com.au, www.2cr.com.au
Languages broadcast: Cantonese and Mandarin

Chinese Radio 2AC
Level 2, 22-26 Goulburn Street
Sydney NSW 2000
Station Manager: Mr KC Chan
Phone 02 9267 7533
Fax 02 9267 7532
chineseradio2ac@yahoo.com
Language broadcast: Chinese

Radio Navtarang
PO Box 744 Liverpool NSW 1871
Director: Prakash Chandra
Phone 02 9734 6666
Fax 02 9734 8888
email: info@navtarang.com.au
Website: www.navtarang.com.au
Language broadcast: Hindi

2000 FM Radio
2/ 25 Belmore Street
Burwood NSW 2134
Manager: Inoke Futu Huakau
Phone 02 9715 5422
Fax 02 9715 5433
info@radio2000fm.com
Language broadcast: 30 various languages

Radio 2RRR
PO Box 644
Gladesville NSW 1675
Station Manager: Natalie Pozdeev
Phone 02 9816 2988 Fax 02 9817 1048
office@2rrr.org.au www.2rrr.org.au
Languages broadcast: German, French, Hindi, Hungarian, Macedonian, Japanese, Flemish, Sri Lankan, Polish, Fijian, Urdu, Armenian, Spanish (Chilean)

Channel 31 Community Television
PO Box 849
Broadway NSW 2007
Ground Floor, South Sydney Leagues Club, 265 Chalmers St
Redfern NSW 2016
Phone 02 9319 4668
Email slice-tv@slice.tv.org.au
Website www.slice.tv.org.au

TVB (Australia) Pty Ltd.
Level 2, 338 Pitt Street
Sydney NSW 2000
Executive Producer: Suet Yee Cheung
Phone 02 9283 0188
Fax 02 9283 0199
Language Broadcast: Chinese.

New Tang Dynasty Television
PO Box 1959
Strawberry Hills NSW 2012
Fax 02 9792 1055
www.ntdtv.com
Language Broadcast: Chinese

SBS RADIO & TELEVISION
Locked Bag 028
Crows Nest NSW 2065
4 Herbert Street
Artarmon NSW 2064
TV Chief of Staff: Annette Young
Head of Radio: Paula Masselos
Radio News Editor: Daivd Herbert
Phone 02 9430 2828
Fax 02 9438 1114
www.sbs.com.au
MEDIA RELEASE
SEARCH IS ON NOW FOR FIVE INDIGENOUS AUSTRALIAN
SCIENCE STUDENTS TO
BE A PART OF THE PROFESSOR HARRY MESSEL
INTERNATIONAL SCIENCE SCHOOL (ISS)

If you're good at science (or even just like it a lot), you're in Year 11 or 12 and you're an
Aboriginal and/or Torres Strait Islander then we want to hear from you now. The search
is on to find five Indigenous Australian science students who will travel to the University
of Sydney to explore everything from biology to astronomy as part of the 35th Professor
Harry Messel International Science School (ISS): Genes to Galaxies running from 12-25
July 2009. But you have to hurry as applications close on Friday 3 April!

Indigenous science students are encouraged to attend the ISS as part of its Indigenous
Scholars Program. The program is designed to encourage indigenous students to
participate in the ISS, which opens up the world of science and its potential as a career
to Year 11 and 12 students. There's loads of science and social activities as well as ISS
speakers including Dr Karl Kruszelnicki, nutritionist Dr Jennie Brand-Miller and
astronomer, Professor Jill Tarter, just to name a few.

This is a great opportunity for students to live on campus for the two week-long duration
of the ISS with 140 other like minded kids from all over Australia, Canada, China, India,
Japan, Malaysia, New Zealand, Singapore, Thailand, the UK and the USA to be taught
by leading research scientists from across the world and have some fun at the same
time! There five places to be won.

All expenses are covered – you just have to bring some warm clothes and your science-
loving mind! We have house parents and volunteer ISS Staffies who can help you with
everything from understanding science to going on a harbour cruise. So if two weeks of
science, making new friends, visiting new places and challenging yourself sounds like
the kind of thing you’d like to do then go the website now and download the application –
www.physics.usyd.edu.au/foundation/ - get your teacher or an adult to help you. We
hope to see you at the ISS in July 2009.

The ISS is a free science education program run by the Science Foundation for Physics
and created by Professor Harry Messel in 1962.

- END -

For more information contact:
Alison Muir - t: (02) 9036 5194 or m: 0413 289 811
e: a.muir@physics.usyd.edu.au
RADIO ANNOUNCEMENT

The search is on to find FIVE Indigenous Australian science students who will travel to the University of Sydney to explore science from every angle as part of the 35th Professor Harry Messel International Science School or ISS.

The ISS is free. It runs for two weeks. You’ll get to meet 140 kids from all over Australia and 10 other countries. You’ll get to do tons of science and social stuff and you’ll even have Dr Karl Kruszelnicki as one of your teachers!

If you’re good at science (or even just like it a lot), you’re in Year 11 or 12 and you’re an Aboriginal and/or Torres Strait Islander then call Adam on (02) 9351 3622 or visit the website: www.physics.usyd.edu.au to get your application form

There are FIVE places open right now so hurry and apply. Applications are closing on Friday 3 April.

So call Adam on (02) 9351 3622 or visit the website: www.physics.usyd.edu.au.
MEDIA RELEASE

INDIAN SCIENCE STUDENTS WIN SCHOLARSHIPS TO PROFESSIONAL HARRY MESSEL INTERNATIONAL SCIENCE SCHOOL

The top five secondary school science students in India have won scholarships to the prestigious Professor Harry Messel International Science School (ISS) 2009. The students, selected by the Raman Research Institute, competed with 80 other top Indian students for their place at the free science school to be held at The University of Sydney.

The students, one girl and four boys, come from as far afield as Bangalore to Jodhpur to Pusad and will explore everything from biology to astronomy as part of the 35th Professor Harry Messel International Science School (ISS): Genes to Galaxies running from 12-25 July 2009. The ISS aims to encourage the scholars to pursue careers in all areas of science.

The group are very excited about winning the places and looking forward to spending two weeks on the University of Sydney campus, learning about the diversity of science while making new like-minded friends from different cultures and countries.

On hearing she was one of the five scholarship winners, Miss Vidi Hathi from Jodhpur said, "I am very honoured to be the only female student selected this year. I am very excited about the prospect of visiting Sydney and studying science for two whole weeks." Miss Nruytha Madappa, the only female ISS Indian student in 2007, won the Australia Government ISS Science Prize – the Len Basser Prize. Nruytha now studies engineering at Stanford University and will return as an ‘ISS Staffie’ or science mentor in 2009.

Director of the Science Foundation for Physics, Professor Anne Green, said, “It is imperative that we continue to encourage our talented youth to pursue careers in science as surely it will be the answer to potential challenges our world might face in the future. The students that attend the ISS today are the future leaders of tomorrow." One hundred and forty ISS scholars will attend from all over Australia, Canada, China, India, Japan, New Zealand, Thailand, the UK and the USA and live on campus for the School’s two-week long duration.

The ISS also invites brilliant scientists who donate their time to lecture to these outstanding students. Some of the ISS 2009 speakers include Julius Sumner Miller Fellow, Dr Karl Kruszelnicki, nutritionist Dr Jennie Brand-Miller and Director of SETI, Professor Jill Tarter and Mr Wayne Lee from NASA’s Mars Mission. A podcast of the ISS lectures will be available in August 2009.

The ISS, created in 1962 by Professor Harry Messel, is a free science education program run by the Science Foundation for Physics within the University of Sydney. For more information visit: www.physics.usyd.edu.au/foundation

- END -

For more information contact: Alison Muir, Community Relations Manager, Science Foundation for Physics within the University of Sydney Tel: (02) 9036 5914 E: a.muir@physics.usyd.edu.au
India’s brightest find science, opportunity and friendship in Sydney

The International School of Science in Sydney sends a potent message to those fostering racist motives, writes SHIVANGI AMBANI-GANDHI

ON JULY 20, exactly 40 years ago, Neil Armstrong, made a small step on man, off the Apollo 11, but it was, as he famously said, a giant leap for mankind.

The 45th Professor Harry Messel International Science School (ISS) in Sydney is bringing the brightest science students from around the world for a two week residential program that celebrates the 450th anniversary of Galileo’s first use of the telescope and the 150th anniversary of the publication of Charles Darwin’s On The Origin of Species. The theme for the school this year then, is ‘Genes to Galaxies’.

The students, who come to the annual ISS, may not often know it at first, but they could just be making a giant leap in their careers and their lives.

“Students often describe it as a life changing experience,” says Trevor Darras, President of the Science Foundation of Physics, which is run by the University of Sydney.

And the school gets a glowing review from a student as well. Indian student, Nriya Madappa, who was a scholar (participant) at the school last year, has come back this year as volunteer, in charge of 25 scholars.

“ISS taught me to dream,” says Nriya.

“Once I went back to India, I considered applying to universities that I had not imagined approaching earlier.”

The 17-year-old has been accepted into the prestigious Stanford University - with complete scholarship, and will be pursuing electrical engineering and economics.

“One of the first things that Harry (Messel) taught us at the ISS last year was to ask a lot of questions,” says Nriya. “He

prestigious schools, and has even included some Nobel laureates.

“It makes you realize that the problems of the world are much bigger than you. And yet, as an individual, you have the power to change all of that.”

“Last year was the first time that India was represented at the school, that made it even more special,” says Nriya who has come to the school twice in the Indian Consulate in Sydney dressed proudly in a bright blue salwar-kurta. “Being among people from around the world made me really proud of India. I realized I had something special. I have decided that after my studies, I want to come back to India.”

Yet there is something else at the heart of the school that makes it special for these teenagers. “It seems unbelievable, but I made 140 friends in the two weeks here. If you ever thought science wasn’t fun, then come here and prepare to have the most fun in your life,” she says.

Yes, the ISS is no congregation of the geeks. The youngest minds of the scientific world also know how to have fun. For many students, this is their first overseas visit. As part of the school, the students will go on a harbour cruise, dress up for the gala ball night and have some fun trivia nights.

The lectures often include fun games that incorporate learning.

There are five Indian students participating as scholars this year - Shreyas Kumar, Anurag Thareja, Mihir Aiyerwal, Sourav Jaiswam and Ashwath Rubindram. They had only been at the school for two days when Indian Link spoke with them, but their excitement was palpable.

Scrum from Bangalore says, “It gives you a lot of things to think about.”

Meanwhile, Ashwath calls it a great opportunity.

“The ISS is a great experience; it is unforgettable,” says Ashwath, who is here from Nagpur. “With the theme of ‘Genes to Galaxies’, we are learning about issues ranging from the molecular level to the astronomical level,” he says. “It is great to see how many scientists and students who are interested in science - it broadens your mind. I am even getting better at interviews,” laughs the teenager, who is also a state-level tennis player.

The Indian participants were selected by Indian astrophysicist Dr. Lakshmi Sarpalli, who hands from the Ramon Research Institute in Bangalore - she accompanied the students to Sydney.

Dr. Sarpalli was instrumental in initiating Indian participation at the ISS last year. She worked at the Australian telescope at Narrabri - SKym from Sydney - from 1998 to 2006. Prof. Anne Green, Head of School of Physics at the University of Sydney and Head of the ISS, who knew Dr Sarpalli from her time in Sydney, approached her about an Indian participation.

Dr Sarpalli devised a gruelling selection process for the Indian students. “We were looking for academic excellence and so we approached the list of Khosla Viswagyan Foundation Yojana (KVF) scholarship awarded by the Indian Institute of Science,” she says.

“Once academic excellence was out of the way, we were looking for students who could think maturely, answer lateral thinking questions and support their answers with reasons,” she says. The four-month long process required students to answer an exam, write an essay, a personal statement and provide recommendations.

It was all worth their while, she believes.

“The topics at the ISS are different from the books that are required in my work,” says Dr Sarpalli, who is an observational astronomer researching and mapping the origin of Radio Galaxies and the intergalactic medium. “For the students, it is great exposure; for me it is an education, it is uplifting.”

The ISS this year also comes at a crucial time of Indo-Australian relationship following the ongoing controversy around treatment of international, and particularly Indian students, in Australia.

In a strategic move by the Indian Consulate, the Consul General Amit Dasgupta invited the Indian participants and their friends from the ISS, as well as Maia Mehra OAM and her Hindi School students into the consulate offices to meet and mingle with each other and the media.

The joyous celebration on that rainy evening in the Indian Consulate office in Sydney, was a potent message to all those fostering racist and exploitative motives.
The University of Sydney
School of Physics

MEDIA RELEASE
INDIGENOUS GIRL POWER RULES

Five Indigenous Australian Science Students – all girls – have won scholarships to the prestigious Professor Harry Messel International Science School (ISS) 2009. The Year 11 and 12 students, ranging from Western Australia, through to Northern Territory and outback New South Wales, are set to travel for the first time to The University of Sydney to explore everything from biology to astronomy as part of the 35th Professor Harry Messel International Science School (ISS): Genes to Galaxies running from 12-25 July 2009.

The ISS Indigenous Scholars Program is designed to encourage indigenous students to participate in the ISS, which opens up the world of science and its potential as a career to Year 11 and 12 students.

The selection committee stated that the girls’ applications were of the highest standard. The girls are very excited about winning the places and looking forward to spending two weeks on the University of Sydney campus, learning about the diversity of science while making new like-minded friends from different cultures and countries.

On hearing she was one of the five scholarship winners, Rebekah Raymond from Humpty Doo in the Northern Territory said, "I am proud to be the first student selected from my school for the ISS and to be an indigenous female student selected makes me even prouder."

There will be 140 ISS scholars from all over Australia, Canada, China, India, Japan, Malaysia, New Zealand, Singapore, Thailand, the UK and the USA living on campus for the School’s two-week long duration.

The ISS invites brilliant scientists who donate their time to lecture to these outstanding students. Some of the ISS 2009 speakers include Julius Sumner Miller Fellow, Dr Karl Kruszelnicki, nutritionist Dr Jennie Brand-Miller and Director of SETI, Professor Jill Tarter and Mr Wayne Lee from NASA’s Mars Mission, just to name a few.

The ISS, created by Professor Harry Messel, is a free science education program run by the Science Foundation for Physics within the University of Sydney. Run since 1962 this will be the 35th International Science School.

- END -

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ANZ supports the next generation of science leaders

ANZ today announced that it has donated $10,000 towards scholarships for India’s top secondary school science students to participate in the Professor Harry Messel International Science School (ISS) at The University of Sydney in Australia from 12-25 July 2009.

In its 35th year, the ISS brings together 140 of the brightest and most highly motivated Year 11 & 12 students from all over Australia and 10 other countries to develop their knowledge and passion for science, with the aim of encouraging the pursuit of careers in all areas of science.

The decision to support the ISS and the Indian students participation reflects ANZ’s strategy to become a super regional bank throughout Asia including India, and Australia’s growing economic relationship with India, including ANZ’s investment in its technology and operations centre located in Bangalore where ANZ has around 3,500 employees.

The donation was presented to the ISS by ANZ Director Dr Greg Clark, who has an international career in micro-electronics, computing and communications.

Dr Clark said: “India is an important part of ANZ’s super regional strategy. From a business perspective it’s important that we help foster a passion for science and technology in the next generation, as well as finding ways to work with colleagues from different cultures and perspectives.

“This donation will contribute to the scholarships being provided to the five Indian students participating in the ISS, allowing them to take part in this once in a lifetime experience and to develop knowledge and learning that will benefit them and their communities for years to come.”

The successful science students were selected by the Raman Research Institute, India and are: Mr Ashwath Rabindranath from Alwarpet, Chennai, Tamilnadu; Mr Sriram Vilayanur from Jayaraman, Bangalore; Mr Anurag Tiwari from Murthal, Sorepat, Haryana; Miss Vidi Hathi from Jodphur; Mr Mitesh Agrawal from Pusad Maharashtra.

Joining India’s top science students will be Nruytha Madappa, an ISS alumna from Bangalore who is now studying Engineering at Stanford University in the USA. Ms Madappa is returning as a science mentor after winning the ISS “Len Basser Prize for Scientific Leadership” in 2007.

The ISS invites leaders in their scientific fields who donate their time to lecture ISS students. 2009 speakers include Dr Karl Kruszelnicki, Prof Jennie Brand-Miller, Prof Jill Tarter, and Wayne Lee from NASA’s Mars Mission.

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Supporting our next generation

ANZ recently supported scholarships for five of India’s top high school science students to participate in this year’s International Science School (ISS) at the University of Sydney.

In its 35th year, the ISS brings together 140 of the brightest and most highly motivated Year 11 & 12 students from 11 different countries to develop their knowledge and passion for science, with the aim of encouraging the pursuit of careers in all areas of science. The School runs from July 19 to 26.

One of these students was Nitesh Agrawal, who told ANZ of how he now sees a “new horizon” ahead of him as a result of attending the Science School.

Nitesh, along with four other top science students from across India, were able to attend with the help of a $20,000 donation towards their scholarships made on behalf of ANZ by board member Dr Greg Clark. The students were selected to attend the Science School by India’s Raman Research Institute.

The decision to support the ISS and the Indian students’ participation reflects ANZ’s strategy to become a super regional bank throughout Asia including India, and Australia’s growing economic relationship with India, including ANZ’s investment in its Bangalore-based technology and operations centre.

Among the many lectures from leaders in their fields were sessions held by scientist Dr Karl Kruszelnicki and The Hon. Justice Robert French, Chief Justice of Australia.
Supporting our next generation

Audience All | Date 23 July 2009

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Among the many lectures from leaders in their fields were sessions held by scientist Dr Karl Kruszelnicki and The Hon. Justice Robert French, Chief Justice of Australia.

“Dr Karl was interesting and entertaining across a wide range of scientific topics, and Chief Justice French gave some good advice on how to deal with all types of challenges in life,” Mitesh said.

Mitesh said that his special interest is in biomedical engineering and stem cell research and he was particularly excited by the opportunity to take part in an international course with world class scientists and students.

"My family are very proud and very happy about this opportunity. When the news came in I was on cloud nine. This is my first time to Australia and it is a great country and the people are very friendly.”

ANZ board member Dr Greg Clark said that the decision to support the scholarships and the Science School was aligned with the bank’s strategic direction.

"India is an important part of ANZ’s super regional strategy. From a business perspective it’s important that we help foster a passion for science and technology in the next generation, as well as finding ways to work with colleagues from different cultures and perspectives,” Dr Clark said.

Photo caption: International Science School student Mitesh Agrawal from Pusad in Maharashtra with Dr Karl Kruszelnicki in Sydney.
FOR IMMEDIATE RELEASE
Monday, May 4, 2009

NEWS MEDIA CONTACT:
Jeff Sherwood: (202) 586-4826

Mira Loma High School and Hopkins Junior High School
from California Win U.S. Department of Energy National Science Bowl®

WASHINGTON, DC – High school and middle school teams from California won the 2009 U.S. Department of Energy (DOE) National Science Bowl® today at the National Building Museum in Washington.

Mira Loma High School from Sacramento beat Lexington High School from Lexington, Massachusetts in the high school national championship match. Hopkins Junior High School from Fremont, California beat Jonas Clarke Middle School from Lexington, Massachusetts in the middle school national championship match.

Members of the winning high school team include Edward Lee, Andrew Chen, Heather Yee, Rishi Kulkarni, and Sriram Pendyala and coach James Hill. Members of the winning middle school team include Raghu Dhara, Audrey Huang, Margaret Shen, Hairuo Guo, and Aditya Jung and coaches Paul Ricks and Lorie Anderson.

The high school national champion will receive an all-expense-paid science research trip to attend the International Science School at the University of Sydney, Australia. The top 16 high school and 16 middle school teams received a cash prize for their school science department — $1,000 for the high school teams and $500 for the middle school teams.

“I congratulate the teams for their victories in the Department of Energy’s National Science Bowl,” U.S. Secretary of Energy Steven Chu said. “The students in this competition displayed an impressive level of skill in a variety of scientific and technical subjects. We’re witnessing a resurgence of enthusiasm among our nation’s young people for finding solutions to our climate crisis, and these students embody the excitement and dedication to science that will be a critical factor in transforming the way we use and produce energy. Engaging our young students in activities like the National Science Bowl will help produce the next generation of leaders who will help the U.S. reduce its carbon footprint and remain the world’s leader in science, engineering and discovery.”
More than 500 students from 42 states, the District of Columbia, Puerto Rico and the U.S. Virgin Islands competed in this weekend’s National Finals of the 19th annual DOE National Science Bowl. Earlier this spring, more than 20,000 students from across the country participated in regional Science Bowls. Sixty-seven high school and 36 middle school regional Science Bowl champions received all-expense paid trips to compete in the National Finals in Washington, D.C.

DOE created the National Science Bowl in 1991 to encourage students to excel in mathematics and science and to pursue careers in these fields. DOE supports mathematics and science education to help provide a technically trained and diverse workforce for the nation. More than 150,000 students have participated in the National Science Bowl throughout its 19 year history.

High School Results

Placing second in the DOE National Science Bowl was the Lexington High School from Lexington, Massachusetts. Team members include: Jaeyoon Lee, Noah Arbesfeld, Joshua Leung, Christopher Teng, and Kyumin Lee and coaches Nicholas Gould and Ryan Grams.

The third place team was Oak Ridge High School from Oak Ridge, Tennessee. Team members include: Xinran Liu, Rowan Chakoumakos, Katherine Xue, Alborz Bejnoood, and Leon Zhang and coach Anita Ganguly.

The fourth place team was Santa Monica High School from Santa Monica, California. Team members include: Toni Rubell, Christina Tsai, Marino Di Franco, and Aaron Friedman, and coach Ingo Gaida.

Syracuse University STEP from Syracuse, New York won the high school Science Bowl Civility Award for outstanding sportsmanship. Team members are Hadjer Sahraoui, Iryonna Scruggs, Devante Watson, Melquea Smith, and Nour El-Houda Sahraoui and coach Sarah Sahraoui. They won a trip to the Crow Canyon Archaeological Center in Southwestern Colorado.

Middle School Results

Placing second in the DOE National Science Bowl was the Jonas Clarke Middle School from Lexington, Massachusetts. Team members include: Darwin Ding, Zarouj Jaleel, William Lockwood, Alan Zhou, and James Lung and coach Dr. Mohammed Jaleel.

The third place team was Challenger School from Sunnyvale, California. Team members include: Tanay Nandgaonkar, Prayuj Pushkarna, Kai Xiao, Debnil Sur, Kshitij Shrinath and coaches Sumana Sur and Lakshmi Shrinath.

The fourth place team was Albuquerque Academy from Albuquerque, New Mexico. Team members include: Simon Mattsson, Robert Chen, Geelon So, Drew Brost, and Eric Li and coach Barbara Gilbert.
Sierra Science Magnet Middle School Las Cruces, New Mexico won the middle school Science Bowl Civility Award for outstanding sportsmanship. Team members are Dustin Hadfield, Fionna McCrossin, Jeongmin Lee, Alex Antholzner, and Jesse Gioannini and coach David Wibe.

Each member of the top four high school and top three middle school teams received a Nspire calculator provided by Texas Instruments. The top three high school and top three middle schools teams won Computer Based Laboratories/2.

The other 12 high school and 12 middle school teams receiving the $1000 and $500 respective cash awards include:

**High School**

Albany High School, Albany, California
Brophy College Preparatory, Phoenix, Arizona
Central Academy, Des Moines, Iowa
Homestead High School, Cupertino, California
Mission San Jose High School, Fremont, California
North Hollywood High School, North Hollywood, California
Punahou School, Honolulu, Hawaii
St. Paul Central High School, St. Paul, Minnesota
Terre Haute South Vigo High School, Terre Haute, Indiana
Ward Melville High School, East Setauket, New York
West Windsor-Plainsboro High School North, Plainsboro, New Jersey
Woodrow Wilson High School, Beckley, West Virginia

**Middle School**

Abraham Lincoln Middle School, Gainesville, Florida
Honey Creek Middle School, Terre Haute, Indiana
Lincoln Middle School, Pullman, Washington
Lux Middle School, Lincoln, Nebraska
Madison Park School, Phoenix, Arizona
Northern Virginia Homeschoolers, Herndon, Virginia
Robert Cushman Murphy Junior High School, Stony Brook, New York
Saginaw Arts and Sciences Academy, Saginaw, Michigan
Summa Academy South, Beaverton, Oregon
Takoma Park Middle School, Silver Spring, Maryland
Thomas Grover Middle School, Princeton Junction, New Jersey
Van Antwerp Middle School, Niskayuna, New York

St. Andrews Episcopal School from Amarillo, Texas won $750 for the fastest car in the Hydrogen Fuel Cell Model Car Challenge, where all the National Science Bowl middle school teams designed, built and raced hydrogen-fueled model cars. The Van Antwerp Middle School from Niskayuna, New York placed second in the model car race and won $500. The Abraham Lincoln Middle School from Gainesville, Florida placed third in the model car race winning
$250. Will James Middle School from Billings, Montana won the design portion of the car competition and a $500 prize.

This year’s corporate sponsors were AREVA, Inc, Bechtel, General Motors, IBM, SAIC, Shell, Southwest Airlines and Texas Instruments.

The DOE Office of Science manages the DOE National Science Bowl. The Office of Science is the principal supporter of DOE’s world-class national laboratory system that will lead the way in innovations including high-end computing, nanotechnology, biotechnology, energy sources, and other material science research.

Photos of the winning teams, biographical information about the teams and more information about the DOE National Science Bowl are available at http://nationalsciencebowl.energy.gov.

-DOE-
Science student dabbles with best

WHEN it comes to science, Duncan Watson certainly has the genes for success.
Selected as one of two Tasmanians to receive a scholarship to attend the 38th Professor Harry Messel International Science School conference, which will run until July 26, Duncan has joined about 146 of the brightest and most highly motivated Grade 11 and 12 students from around Australia and nine other countries for a series of lectures, workshops and special activities.

Organised by the Science Foundation for Physics, within the University of Sydney, this year’s theme titled Genes to Galaxies will feature a range of topics including biology and astrophysics with yesterday’s opening lecture delivered by the Honourable Justice Robert French, Chief Justice of Australia, who spoke to the students about his experience of studying science and law to the career that took him to the top of his field.

Looking forward to a new and exciting realm of learning at the conference, Mr Watson said he had always had a fascination with science.

“I enjoy seeing how ideas you learn about manifest themselves in reality,” the Grade 12 Marist Regional College student said. 

“It will certainly be an eye-opening and beneficial experience and I’m looking forward to learning new concepts and hearing what the guest lecturers have to offer.”

Currently studying chemistry and physics, Duncan said he was yet to decide on a career path.

“I certainly hope to pursue a career in the field of science, perhaps in engineering or medicine,” he said.

“But there are a lot of options out there and hopefully (attending the science school) will help me figure out some of my options beyond this year.”

With his talents not just confined to the field of science, Duncan is also a keen sportsman, making the state under 18 rugby squad last year.

“It’s good to have other interests outside of school and I enjoy playing rugby and I have dabbled in a bit of music as well,” he said.

“But science is definitely where my future lies.”
Chance to study at international science school

CUMMINS Area Year 11 student Katelyn Wright has won a scholarship to the Professor Harry Messel International Science School (ISS).

Katelyn is one of only five students from South Australia to be selected to attend the ISS, which runs from July 12 to 25 in Sydney.

The scholarship covers travel to Sydney, two weeks’ accommodation and meals at Sydney University. She will stay on campus with around 140 students from around Australia and nine other countries, participate in two weeks worth of lectures, workshops and science related activities.

Cummins Area School acting principal Teelah Wilson said this was a fantastic opportunity for Katelyn.

“The chance to spend two weeks studying science in a university with students from all over our country and other countries will be life changing personally and academically,” Ms Wilson said.
RIVERS — A trip to the world renowned Harry Messel International Science School in Australia in July has suddenly become very real for Rivers Collegiate students Josie Paddock and Cassandra Pryzner.

As the Sun first reported in March, the girls have each received full scholarships to the prestigious, two-week school held each summer on the University of Sydney campus.

Yesterday, the pair officially received their scholarships from Trevor Danos, the president of the Science Foundation for Physics at the University of Sydney, and say it has now finally sunk in that they have truly received an opportunity of a lifetime.

"All the emotion just came out today for me," Pryzner said following the presentation, which included a few nervous tears from the overwhelmed pair. "It wasn't as real before, but now it is."

"I didn't really think I would cry trying to make my speech that I wrote out to say, none of which I actually said," Paddock added, giggling. "I'm very excited, but I'm a little nervous actually. It's going to be a totally different country and an environment with totally new people, but I think it will be a lot of fun."

The school welcomes students from Australia, as well as Japan, Malaysia, India, New Zealand, Singapore, Thailand, the United Kingdom and the United States.

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The school welcomes students from Australia, as well as Japan, Malaysia, India, New Zealand, Singapore, Thailand, the United Kingdom and the United States.
Student changed by Aussie experience

BY ALLISON DOWD

Recent Rivers Collegiate graduate Josie Paddock says she has returned from the International Harry Messel Science School in Australia “forever changed.”

Paddock, along with her classmate, Cassandra Pryzner, travelled to attend the prestigious, two-week school on the University of Sydney campus earlier this month — the first Canadians to do so in the school’s 35-year history.

While Pryzner opted to extend her Australia experience by a few more days to do some sightseeing, Paddock returned to the Keystone province this past weekend and tells the Sun she still can’t truly grasp the importance of the experience.

“It was so exciting . . . I really didn’t want to even come home,” Paddock said, admitting she was still a little jet-lagged and not quite re-acquainted with Manitoba time.

“There were a lot of tears on the last night. It was a lot of fun — even the lectures were fun!”

The pair were accompanied by math and physics teacher Ross Acree.

Over the school’s 14 days, the Westman pair — along with more than 140 other student delegates from countries like China, Japan, New Zealand, Malaysia and India — took in dozens of lectures and competitions focusing on science in the 21st century.

Paddock rates a lecture on Paleolithic nutrition and a science engineering challenge in which she was tasked to build a hovercraft, among her favourite activities.

However, she admits that after taking in tourist attractions like Sydney’s famous Opera House and the Harbour Bridge, a trip back for recreational purposes is definitely in her future.

“I’m already planning that I want to go back for the whole summer next year and work!”

It was the science school’s founder, Harry Messel, who was instrumental in bringing Paddock and Pryzner to Australia for the event.

It was only through a chance correspondence with the Rivers train station restoration committee that Messel discovered a Canadian student had never attended.

Messel spent several of his childhood years in the Rivers area while his father worked as a foreman on the Canadian National Railway.

Even at 87 years old, Messel delivered an inspiring speech at the end of this year’s school that Paddock knows will stick with her.

“He called us the ‘movers and shakers of the future,’” she recalled, laughing. “His speech was about keeping doors open and that you can do whatever you want to do, as long as you like it. If you’re going to do something, push for what you like.

“Everyone who was there has influenced our lives and I think they will always be remembered.”

Paddock and Pryzner both graduated from Rivers Collegiate earlier this year and have plans to attend Brandon University in the fall.

adowd@brandonsun.com
Beam me up Scott

by Justine Geake

A COLO High student will be one of 145 chosen this year for a hugely prestigious international science course which will hear the director of the Search for Extra Terrestrial Intelligence (SETI) Institute talk on humankind’s attempts to contact other worlds.

The Professor Harry Messel International Science School at University of Sydney next month has been adding rocket fuel to the science career prospects of senior high school students since 1992, and this year’s theme is Genes to Galaxies.

Scott Murphy of Year 11 will attend the two-week residential school on July 12-25, which selects lecturers for their international research reputations and their ability to communicate with students.

In the past these have included the likes of 1962 Nobel Prize winner James Watson (who discovered DNA’s double helix with Francis Crick) and fellow Nobel laureate Jerome Friedman who received his honour in 1990 for physics.

Professor Jill Tarter from the SETI Institute’s talk ‘SETI: Planning for Success - Who will speak for Earth and what will they say’ will be one of the major highlights of the science school. She will also do another talk ‘Extremophiles and Exoplanets: Expanding the potentially habitable real estate in the galaxy’. This talk will be repeated for the public on July 21 at the Seymour Centre.

NASA’s Wayne Lee, who guided the landings of the Mars Rovers ‘Spirit’ and ‘Opportunity’ is another guest lecturer this year. He will speak on those experiences in a talk entitled ‘Six minutes of terror – stories from landing the Rovers on Mars’.

To book for Jill Tarter’s public lecture, contact 8351 7940. It starts at 6.30pm and tickets are $20/$15.
Small Step, Giant Leap: Celebrating Apollo at 40

It’s been 40 years since the Apollo 11 mission landed on the moon and Neil Armstrong took that “one small step” to become the first human to set foot on another world. An exhibition at the University of Sydney, Small Step, Giant Leap: Celebrating Apollo at 40, commemorates this significant anniversary.

To be launched on Monday, 20 July 2009, Small Step, Giant Leap will celebrate the “giant leap for Mankind” that occurred in July 1969. This free exhibition will explore the story of the Apollo lunar program and highlight some University of Sydney connections.

Artefacts on loan from the Smithsonian National Air and Space Museum in Washington, USA, as well as contemporary space memorabilia from the Powerhouse Museum’s collection, help tell the story of Apollo 11’s historic lunar landing.

Sponsored by the University of Sydney’s US Studies Centre and the NSW Office for Science and Medical Research, Small Step, Giant Leap was curated by Kerrie Dougherty, Curator of Space Technology at the Powerhouse Museum.

“The Apollo 11 Moon landing was one of the most significant scientific and technological events of the twentieth century. Our small exhibition provides a snapshot of the space program at this point in the 1960s and highlights some links between the University of Sydney’s School of Physics and Science Foundation for Physics and the US space program,” said Dougherty.

Included in the exhibition are three lunar tools used by NASA for training during the 1960s: a trenching tool, a hammer and a scale. These were all designed for collecting rock samples in lunar gravity and incorporate design features that make their use easier for astronauts wearing spacesuits.

“The design of these lunar tools is based on Earth tools, but they display special features, such as a thick handle with a rough grip on the hammer, to make it easier to use while wearing a spacesuit. The scale for weighing rock samples has been calibrated to function in lunar gravity,” explained Dougherty.
“There was a tremendous public excitement about the US space program in the 1960s. As part of this public engagement with the space program, NASA engineers, scientists and astronauts visited many countries. The University of Sydney’s International Science School, run by the Science Foundation for Physics, attracted some very big names in the space program to present lectures to the students,” said Dougherty.

“In 1962, Wernher von Braun, Director of NASA’s Marshall Space Flight Centre and chief engineer for the Saturn V rocket that launched Apollo on its historic flight to the moon, visited the University of Sydney’s International Science School,” said Dougherty.

“He was the first of several significant space program participants who would lecture to International Science School students in the ’60s and ’70s. Others included George Mueller, Associate Administrator of NASA’s Office of Manned Space Flight which managed the Apollo program, who lectured in 1967 and 1970, and astronauts Alan Shepard, the first American to go to space, and Gordon Cooper, who both visited in 1968 to speak to the students.”

“It’s very significant that the International Science School attracted these famous space personalities to Sydney at the height of their fame – it shows how prestigious the school was and still is,” explained Dougherty.

The exhibition includes a Saturn V model gifted to the International Science School at this time, as well as a selection of small celebratory items from the Powerhouse Museum’s E.A. and V.I. Crome Collection such as stamps, first day covers, postcards, pins and medallions.

“We have some wonderful items commemorating Apollo 11 that are part of the larger collection of space memorabilia amassed by the late Mr. Ernie Crome, as well as other examples of contemporary space memorabilia donated by other benefactors. Of particular interest is a first day cover to honour the Sydney visit of the Apollo 11 crew in November 1969 and a piece of notepaper autographed by the Apollo 11 crew at one of their state dinners.”

The Apollo 11 lunar landing, and the program that made it possible, inspired the best and brightest students to seek out careers in the exciting fields of space exploration, astronomy and aeronautical engineering.

Two graduates of the University of Sydney’s School of Physics had a particular involvement in the Apollo program: space physicist Dr Brian O’Brien was the principal investigator for the Dust Detector Experiment carried on Apollo 11-14, and Dr Phillip Chapman became the first ever Australian-born American astronaut. In 1967, Dr Chapman was selected as one of NASA’s first scientist astronauts, but he never made it to the moon due to the curtailment of the Apollo program.

To further mark the 40th anniversary of the Apollo 11 moon landing, Sleek Geeks Dr Karl and Adam Spencer will deliver a special presentation to tackle the myths surrounding the first landing on the moon at 6pm on July 20.

Small Step, Giant Leap: Celebrating Apollo at 40 opens on July 20 and runs until September 10, in the University of Sydney’s SciTech Library.

Exhibition details:
Small Step, Giant Leap: Celebrating Apollo at 40
Dates: 20 July – 10 September 2009
Hours: Mondays to Thursdays, 9am to 8pm. Fridays, 9am to 6pm. Saturdays, 9am to 5pm. Sundays, 1pm to 5pm. Closed 26 July, 2009.
Hailing the role of Sydney's alumni

Kelsey Munro

THE role of the Parkes Observatory in the moon landing is well known and the significant contribution of scientists from Sydney University is highlighted in an exhibition, Small Step, Giant Leap: Celebrating Apollo at 40.

It opened yesterday at the university's SciTech Library and will display Apollo artefacts and space memorabilia, and commemorate the role of alumni in the landing.

Its curator, Kerrie Dougherty, said: “Although the university wasn’t directly doing work for Apollo, there were people with university connections working with Apollo and you had people from NASA coming to lecture to the students.”

Brian O’Brien was the first person to attain a PhD in astrophysics at Sydney University. He became principal investigator on the Apollo program for two lunar experiments. One investigated cosmic rays from the sun having an impact on the lunar surface, and the other explored the electrostatic properties of lunar dust. His experiments were conducted on four Apollo missions, 11 to 14.

“As it happens the data from that [dust] experiment is now considered quite important and of interest to NASA because of their plans to go back to the moon,” said Ms Dougherty, who is curator of space technology at the Powerhouse Museum.

A Sydney University physics and mathematics graduate, Phillip Chapman, was selected by NASA to be among the first group of scientist-astronauts in 1967 to go to the moon. Due to budget cuts to the program after the moon landing, he never got his ride, but worked for NASA until 1972.

Objects on loan from the Smithsonian’s National Air and Space Museum in Washington include a engineering model of a scoop arm which tested the mechanical properties of the moon's surface before the landing and modified tools the astronauts used in training.

The university's annual Harry Messel International Science School attracted top-level NASA speakers to lecture in the 1960s. Among them in 1962 were Werner von Braun, chief engineer of the rocket that launched Apollo, and George Mueller from the NASA office.

Astronauts Alan Shepard and Gordon Cooper also lectured at the university in 1968.

This year's science school is on this week, with 150 students from Australia, Japan, the US and Canada in residence.

Last night at the university's Footbridge Theatre, as part of the exhibition, the broadcasters Karl Kruszelnicki and Adam Spencer debated the myths of the landing.

The biggest myth? “That we didn't go there,” Dr Kruszelnicki said yesterday. The exhibition runs until September 16.
Lunar tunes: that's not all folks

Richard Massey

ISS2009 REPORT

March 20th, 2009

The first project for the new Apollo 11 mission was unveiled last week, with NASA announcing that it would send a crew of astronauts to the moon in 2009. The mission, which was due to be launched in 2007, was delayed due to budget cuts and technical problems.

"It's been a long time coming," said John Mather, senior scientist at NASA. "We're excited to be able to finally get Apollo 11 off the ground." Mather was joined at the announcement by other NASA officials, who said that the mission would be a "historic" event.

The crew of Apollo 11 will include a mix of scientists and engineers, with a focus on exploring the moon's surface and gathering data for future missions. The mission will be launched from Kennedy Space Center in Cape Canaveral, Florida.

"We're really looking forward to this," said astronaut Lisa Mullins, who will be one of the mission's main crew members. "It's been a dream come true for me." Mullins, who has been an astronaut for over 10 years, said that she was excited to be able to finally launch the mission.

The mission is expected to last for several weeks, with the crew spending most of their time on the moon's surface. They will be joined by other astronauts who will be sent to the moon in the future, with the goal of establishing a permanent base on the moon.

"We're really looking forward to this," said Mullins. "It's been a dream come true for me."
Looking into her future

WOODLEIGH School’s Laura Snyder has been accepted into a highly prestigious science school.

The year 12 student will attend the Professor Harry Messel International Science School at Sydney University in July.

“Only 140 students from around the world are selected. It offers an important kick-start to their careers,” school spokesman Adam Liddiard said.

The school is held every two years for two weeks with all expenses paid.

Laura, 17, has also been accepted into the International Science School and will represent Victoria at the Australian and New Zealand Association for the Advancement of Science Youth Congress in Melbourne.

“I’m thrilled,” Laura, of Langwarrin said. “It will help me with my career. I’m hoping to study medicine.”
Science scholarships a Wingham High first

In a first for Wingham High, two Year 11 students, Josh Eagles and Kate Johnson, have won scholarships to participate in the prestigious Harry Messel International Science School for years 11 and 12 students.

The school will be held at the University of Sydney from July 12 to 25 and is organised and funded by the Science Foundation for Physics. Josh and Kate will have all expenses paid, including air fares, accommodation and meals.

One hundred and forty five students from all over NSW have been chosen for the school. Josh and Kate applied in February and their successful applications were based on their Year 10 marks, their resumes, an exposition from each arguing their suitability and reference from science head teacher Mr Watts and principal Mr Elliott.

The theme for this year’s course is “Genes to Galaxies”. Josh and Kate will participate in lectures, workshops and activities delivered by a host of Australia’s eminent scientists and personalities such as Dr Karl Kruszelnicki.

Josh said he was looking forward to hearing from Professor Jill Tarter, the director of SETI (Search for Extraterrestrial Intelligence). The Honourable Justice Robert French, chief justice of the High Court of Australia, will also be speaking.

Josh and Kate will sacrifice their whole school holidays to participate in the school but both believe it is well worth it.

“It will be great to get an idea of what you can do with science,” Katie said.

“It is likely that I will be studying science at uni so this experience will be really useful for me.”

Josh had similar ideas on the value of the school.

“I am looking forward to the lectures from the highly-acclaimed scientists and working out a way of getting into the business of science,” he said.

Both made the point that mixing with so many talented students from all over the State will be both fun and a great learning experience.

Science masterminds . . . Year 11 students Kate Johnson and Josh Eagles will spend their school holidays soaking up all they can about the world of science in the Harry Messel International Science School.
What’s the link between five Indian high school students, Dr Karl Kruszelnicki and ANZ?
The answer is ANZ’s donation towards scholarships for India’s top five secondary school science students who took part in the Prof. Harry Messel International Science School (ISS) at The University of Sydney. The scholarship, which covered the travel within Australia, accommodation and meals, was a two week live-in program held in the second half of July.

ANZ Board member, Dr Greg Clark, who has a business background in micro-electronics, computing and communications, donated $10,000 towards the scholarships on behalf of ANZ.

India’s top science students were joined by science mentor Nurytha Madappa, an international Science School alumnus from Bangalore who is now studying Engineering at Stanford University in the USA.

The students participated in lectures and workshops and heard from high-profile leaders in their fields including Australian celebrity scientist Dr Karl Kruszelnicki, and Wayne Lee from the NASA Mars Mission.

“India is an important part of ANZ’s super regional strategy. From a business perspective it’s important that we help foster a passion for science and technology in the next generation, as well as finding ways to work with colleagues from different cultures and perspectives,” Dr Clark said.

To be a bank librarian, how much do you need to know about banking?

“Understanding the business is key to adding value to our clients and improving what we deliver. We also like to find out how the information we’ve gathered has been used and whether it has led to the winning of an account. This helps us refine results for the next request,” said Manisha.

How do you determine what people are looking for?

“One of the key skills is teasing out what people want to know, what they already know, and where they’ve already searched,” said Karen.

“When I started my career, I was one of just five librarians qualified to do online searches. Now people call us if Google has failed them!”

Over the years, what has changed in the way you access information?

“The speed of turnaround expected on requests is a big change. People want information immediately,” said Karen.

“Also, the concept of paying for information is more difficult these days because so much information seems to be available for free. The bank invests a significant amount in information products but the value proposition for spending money on information varies. It depends on what you stand to gain,” said Marilla.
Young Einstein

HENNESSY Catholic College student, Jack Elliot, has been selected to receive a scholarship to the 35th Professor Harry Messel International Science School (ISS) which are awarded every two years. The ISS theme for this year is Genes to Galaxies and is organised by the science foundation for physics at the University of Sydney and will run from July 12 - 25.

Mr Elliot said he thinks the opportunity he has been awarded is amazing and has recognised it as the experience of a lifetime.

“I’m more excited than nervous,” said Mr Elliot.
Young produces the winner

In presenting the $1000 Prize, committee person Jenny White of Cowra congratulated Steph and acknowledged that it was the commitment and enthusiasm of all the Central West Branch members and the interested members of the community of Cowra, Canowindra and Orange who attended the annual fund raising dinners that enabled the scholarship to be funded.

The guest speaker at the dinner was former Canowindra student, Associate Professor Sarah Biddulph. Ms Biddulph is Reader in Law at Melbourne University Law School and Associate Director (China) of the Asian Law Centre. Dr Biddulph spoke of “Law and Order in contemporary China.” The audience felt privileged to hear from such a gifted person. Fluent in Mandarin, tell of the concerns of the China officials for the rising number, over 50 million, of unemployed migrant workers. Migrants meaning internal migrants, peasants, who had moved, often without permission, from the rural to the urban centres to work in construction and in light industries.

Dr Biddulph praised the A1UW Central West Branch for encouraging the education of rural women in reaching their potential. The Central West Branch annually awards the UAI Scholarship valued at $1000 as well as a biannual Postgraduate Doctoral and Masters Research Award. Ms Biddulph is generous to the Central West. Applications are available now from Dr Lois Foster PO.577 Cowra.
Hennessy Catholic College student, Jack Elliot, has been selected to receive a scholarship to the 35th Professor Harry Messel International Science School (ISS) which are awarded every two years.

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Mr Elliot said he thinks the opportunity he has been awarded is amazing and has recognised it as the experience of a lifetime.

“I’m more excited than nervous,” said Mr Elliot.

“Tob be rubbing shoulders with the top people in their fields, people who may later be my colleagues will be awesome.

“I’m going to do Dentistry at university with a Masters in Orthodontics, I’ve wanted to do that for a long time.

“Charles Sturt in Orange has the best Dentistry Campus in the country so I’d really like to go there.

“I like to meet and help people. I know it’s not an easy field and it will be challenging.

“Country lifestyle has a lot to offer, it has a strong sense of helping people and I would like to practice in a country area.” Mr Elliot said.

Science Co-ordinator for Hennessy Catholic College, Dr Tristan Burg, said it is a wonderful thing for the College and a wonderful thing for rural education.

“It shows that attending a country school is not a disadvantage.” Dr Burg said.

“When Stephanie McCabe won the same award two years ago I thought that was great, but this is really fantastic.

“It really reflects the quality of science education at this college.” Dr Burg said.
HENNESSY SCIENTIST: Dr Tristan Burg with Jack Elliot in the science labs of Hennessy Catholic College. Jack will receive a scholarship to the 35th Professor HarryMessel International Science
Scholar Update

“37 Sleeps To Go!”

WELCOME TO ISS2009
the 35th Professor Harry Messel International Science School Genes to Galaxies and congratulations on being selected for this unique and prestigious program. This will be the first of four newsletters to prepare you for the ISS.

You should have now received a copy of the Scholars Handbook which details everything you need to know about getting to the ISS, such as being met by us at the airport, station or organising your own transport. There is also an outline of the program of lectures and workshops.

Flight details for Australian scholars will be issued to you by Friday, 19 June.

Accommodation is in the nearby Women’s College and rooms will be assigned to you prior to your arrival. You will be sharing rooms, so be prepared for having a ‘roomie’!

Remember - the ISS is a REWARD for your aptitude and passion for science - there is no test and no exam. While you will be expected to attend all lectures, workshops, formal occasions and participate in the choice of social activities available to you, there is also personal time set aside for study (and study groups are often organised).

Please do not bring laptops - access to computers and internet will be available outside lecture and workshop periods in our computer labs only. We can not guarantee security of laptops. Passports and other valuables may be stored in our safe.

Sydney in July is WINTER max. 17°C (63F) min. 7°C (45F), and it does rain - please come prepared.

“In The Pursuit of Excellence”
ISS MOTTO

You will be allocated a group (defined by colour & name) on arrival. Each group, with up to 24 scholars, will attend workshops together - and we may instigate a little healthy competition to keep things lively!

There are some formal functions (not too many) during the ISS, so please bring your school uniform (or smart clothes if no school uniform), for these occasions.

Media attention is also a feature of the ISS, so do be prepared to answer questions about your passion for science (and, of course, how valuable your ISS experience has been)!

Swine Flu: Human swine influenza (H1N1) is a new influenza virus causing illness in people, everyone is susceptible and a vaccine is not yet available. Minimizing the spread of the disease is a priority in Australia. School-aged students arriving from certain countries have been requested to stay away from school for 7 days to ensure any illness is quarantined. At this point this does not affect the ISS. We are closely monitoring the situation and will put in place measures to reduce the risk of infection during the ISS. You will be informed if the situation changes. For updates please see: www.usyd.edu.au/ohs/swine_flu.shtml

Coming Next:
Wednesday 17 June
ISS program update, Your obligations, Visiting & visits from family and friends during the ISS, ensuring an enjoyable experience for all.

Wednesday 1 July
Pre-reading material, including the ISS Book of Lectures, The Challenge and Leadership & Ethics.

Wednesday 8 July
What to pack; staying healthy; Airport collections; Sunday registration.

Best wishes from the
ISS2009 A-Team.

Adam, Alex, Alison & Anne

www.scienceschool.usyd.edu.au

“The Science Foundation for Physics within The University of Sydney

5 June 2009

There are no words within me that can possibly describe this unforgettable experience.” NSW ISS Scholar

5 June 2009

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Scholar Update
“25 Sleeps To Go!”

Program Update:
We are now less than on month out from the first ISS2009 lecture. We are pleased to confirm that this year we will hear from 13 lecturers giving a total of 17 lectures.

You will also participate in workshops provided by staff from the disciplines of biology, chemistry, geology, microscopy, museums and physics. A first for this ISS is a special module on Leadership and Ethics in Science. The full program will be provided to you at registration on Sunday 12 July.

Be sure to also look out for the program of social activities being planned by the Young Scientists of Australia.

Your obligations
It’s all about you! The ISS is a program recognising and rewarding excellence (more than just academic). Months of planning and the efforts of many people ensure that the ISS is the enriching program that has inspired generations of ISS scholars for almost 50 years.

You are expected to attend all the lectures and workshop activities. There are also official functions that you are expected to attend: the ISS Harbour Cruise (Sat 18) and Gala Reception (Wed 22) where staff from the University, ISS sponsors, media and government representatives are keen to meet and chat with you! Some of you may also be invited to functions hosted by Consulates in Sydney.

Please bring your school uniform (or smart clothes if no uniform) for these events.

Visitors
The ISS is a packed program of talks and activities running from after breakfast to dinner each day of the ISS, including weekends. Leaving campus to visit relatives or friends is possible, with prior written permission by your parents or guardians, but bear in mind that you could be missing out on a great organised excursion.

Scholars enjoy the chocolate fountain at the ISS2007 Gala Reception

Visits to the campus by family can be organised, but remember – the ISS is about you and is a unique opportunity to meet and get to know peers from around the world, and there is a well organised program to enjoy.

The ISS House Parents, within the Women’s College, are responsible for your well-being, they must know where you are at all times, so you will need to check in and out with them prior to any trips off-campus, and also sign-in any visitors.

Fun
The ISS is FUN! You will be in the company of like-minded individuals experiencing the excitement of being the honoured scholars of the 35th Professor Harry Messel International Science School. You can expect to be treated with respect and some attention. It is important to understand that each of you are in turn expected to show the same respect to each other, to the ISS staff and members of the University and public. If you do experience any difficulties the ISS staff and House Parents are here to help.

H1N1 (swine) Flu Update:

We have prepared a Pandemic Planning Guide, sent with this update, outlining the steps we are taking to ensure the health and well-being of all participants in the ISS. Our most recent advice from NSW Health (our state health office) is for “business as usual”. Scholars arriving from Melbourne, Japan, USA or Canada are not required to undergo any exclusion period if you have no signs of illness. We continue to monitor the situation and will keep you informed of any developments.

Coming Next:

Wednesday 1 July
Pre-reading material, including the ISS Book of Lectures, The Challenge and Leadership & Ethics. Speaking to the Media.

Wednesday 8 July
What to pack; staying healthy; Airport collections; Sunday registration.

Best wishes from the ISS2009 A-Team.

Adam, Alex, Alison & Anne

www.scienceschool.usyd.edu.au
Scholar Update
“11 Sleeps To Go!”

Pre-reading material
Accompanying this update are several pages of material for you to read before you get here. It might be of benefit to you and your team if you have had time to prepare for some of the challenges we have in stall for you.

The Lectures
Each ISS produces a book of lectures which is provided to scholars upon arrival. You will receive your copy at registration on Sunday. In order to give you as much time as possible to get your head around the content of the lectures, we are sending you a PDF advanced copy to enjoy before your arrival - no need to bring with you - your hardcopy is waiting for you here.

The Science & Engineering Challenge (SEC)
The SEC is on Thursday 16 July. Each ISS team will be represented in all eight challenges with points awarded to teams achieving best results. The final challenge is performed in front of everyone before a prize-giving ceremony to celebrate success. Activity sheets are provided to get you thinking - maybe choose one or two favourites?

Leadership & Ethics Activity
A new activity for the ISS: Leadership & Ethics in Science consists of two sessions of plenary talks and discussion forums lead by leaders from The University of Sydney. Pre-reading material is provided to prepare you for this unique module.

Media
Media interest in the ISS continues to build, and many of you have already been photographed and interviewed about your successful selection to the ISS. There is no doubt that further media interest will take place once you are here. To assist us to manage this process, we ask that you complete the accompanying interview permission form which requires a signature from a parent or appropriate adult. Please bring this with you to registration on Sunday 12 July.

What to Pack
We hear that many of you will soon be leaving your homes for your journey to Sydney - so brought forward this item. Sydney’s climate is pleasantly moderate. July temperatures are 9-16°C (49-61°F) and enjoys 7 hours of sunlight/day. Expect some rainy days.

Clothes: school uniform (for the formal occasions), smart casual clothes (for lectures and workshops): jeans, t-shirt or collared shirt, sweatshirt or jumper, beanie, covered shoes (must be worn in lab sessions), flip-flops or sandals (good for around Women’s College), trainers for sport or walks. Umbrella and rain coat (for wet days). Laundry facilities are available at the College.

Gym: access to the Uni gyms and ball courts is available at student rates (e.g. $4 per swim). Bring your own equipment or hire.

Spending money: recommend AU$150-200.

Other: if you have space, could include a small musical instrument for talent night and check shirt for the barn dance.

Medicines: please bring your own prescription medication, as well as cold & flu tablets as we can not provide these to you. You can also purchase items from the pharmacy.

Mobile phones: if you are bringing a mobile phone from overseas, ensure you have ‘international roaming’ activated. We can not take responsibility for lost or stolen mobile phones or any other personal items (overseas participants should have travel insurance).

ISS Hoodies
If you would like to buy a limited-edition ISS-hoodie (sweatshirt with hood), these can be ordered prior to your arrival. Cost is approx. AU$55. Please send your order to adam@physics.usyd.edu.au (put ‘hoodie’ in subject line) and indicate male or female, size: extra-large (XL), large (L), medium (M) or small (S). Pay at registration.

H1N1 (swine) Flu Update
No update since email of 18 June. Due to the mild nature of the illness, quarantine measures have now been reduced. Everyone will be strongly encouraged to practice good sneeze and cough etiquette, and to wash hands well.

Coming Next
Wednesday 8 July
Checklist: staying healthy; airport collections; Sunday registration.

Best wishes from the
ISS2009 A-Team.

Adam, Alex, Alison & Anne
www.scienceschool.usyd.edu.au

The University of Sydney
“There are no words within me that can possibly describe this unforgettable experience.” NSW ISS Scholar

The Science Foundation for Physics within The University of Sydney

ISS2009:
GENES TO GALAXIES
35th Professor Harry Messel International Science School

8 July 2009

Scholar Update
“4 Sleeps To Go!!!!!!”

Checklist
Some of you are already on route, others are just now thinking about what to pack! Here is a quick checklist of some essential items:
- passport or other photo ID
- school uniform or smart outfit
- warm clothes (also an umbrella)
- spending money (up to $200)
- own cold & flu medicine

Staying Healthy
Each time we run an ISS we seek to minimise the potential spread of colds and flu’s. We do this by insisting that everyone adopts best hygiene practice:
- cover mouth and nose when coughing or sneezing
- use disposable tissues and dispose after use
- wash hands regularly and thoroughly
- report to staff if experiencing any flu-like symptoms; such as fever, cough, tiredness, muscle aches, sore throat, chills, shortness of breath, runny nose and headache

Please also bring (or be prepared to buy) your own cold and flu medicines (including paracetamol, e.g., “Panadol” or aspirin) as we are not allowed to dispense these to you.

Airport collections
We have organised transport between the airport and the college and will be meeting those of you arriving into Sydney Airport (both domestic and international). Look out for ISS staff members with signs saying ISS2009: Genes to Galaxies.

Coming Next
The 35th Professor Harry Messel International Science School Genes to Galaxies 12-25 July 2009!

Best wishes from the ISS2009 A-Team.
Adam, Alex, Alison & Anne
www.scienceschool.usyd.edu.au

See you all on Sunday!!!!

Sunday Registrations
Anyone making their own way to the College on Sunday must arrive between 2.30pm and no later than 4.30pm.
You are to come to the Women’s College - 15 Carillion Avenue, Newtown - and head to the Menzies common room. Here you will sign in, be issued with your ISS bag, keys and any additional information before being shown to you room.
Everyone, unless otherwise arranged with us, is to attend the information session in the Menzies Room at 5.00pm.
Also, if anyone has any issues getting to the College they can contact either Adam +(0) 417 6990 423 or Alex +(0) 428 100 088.

The University of Sydney