



**Weekly Wire**  
**East Asia and Pacific**  
**National Science Foundation Tokyo Regional Office**  
**September 4, 2013**

**AUSTRALIA: 25<sup>th</sup> Birthday of Telescope**

The Commonwealth Scientific and Industrial Research Organization celebrated the 25<sup>th</sup> anniversary at its telescope site on September 1. The compact array is a set of six dishes that work together as one much larger radio telescope. The telescope site is between the towns of Narrabri and Wee Waa in northwest NSW, approximately 500 km from Sydney. About 500 scientists from around the world use the telescope each year. The compact array data led to 76 refereed science papers in 2012, more than in any previous year of the telescope’s history.



<http://www.csiro.au/en/Portals/Media/CSIRO-telescope-marks-25-years-of-success.aspx>



**STA Science & Innovation Federal Election Questionnaire 2013**

Responses from the Australian Labor Party, Liberal National Coalition, and The Greens

**Priority 1:**

**Investment in science – R&D expenditure to OECD average by 2020**

Australian Government investment in research and development is approximately 2 per cent, ranking Australia 23rd among the OECD nations. Long-term strategic investment must be made, by both government and business, if we are to keep up with competitors in our region and the wider world. The 2012 National Research Investment Plan (NRIP) has laid out a plan.

**Priority 1: Investment in science – R&D expenditure to OECD average by 2020**

**Q: Will you commit to long-term strategic investment in R&D?**

**Q: Will you commit to increasing the investment to at least the OECD average by 2020?**

Party	Response	Additional Comments	
ALP	Yes. Australia invests only 1.7 per cent of its GDP on R&D well below the OECD average of 3.29 per cent. Under the Labor-Liberal Government, Australia's investment has increased to 2.24 per cent in 2012. Under Labor-Liberal we are now committing to 3.5 per cent of the OECD recommendation of 3.8 per cent of GDP compared to 2.7 per cent under the current government. We will continue to invest in research and innovation in science and technology. We will also invest in research and innovation in other areas such as health, education, and infrastructure. We will invest in research and innovation through the National Research and Innovation Council and the National Research and Innovation Council.	Investment in research and development is essential for Australia's research and innovation. As a reflection of this, we have increased our annual commitment on long-term investment in research and innovation from 2.24 per cent in 2012 to 3.5 per cent in 2013. Our government support of business research and development, offering to what some parties have labelled as the world's largest tax incentives for research and development in the world 20 years.	As a Science and Technology Australia (STA) member, we are committed to the National Research and Innovation Council and the National Research and Innovation Council.
LNP	At a time when there is a need for science, technology, innovation and infrastructure, it is necessary to invest in research and innovation. We will invest in research and innovation through the National Research and Innovation Council and the National Research and Innovation Council.	At a time when there is a need for science, technology, innovation and infrastructure, it is necessary to invest in research and innovation. We will invest in research and innovation through the National Research and Innovation Council and the National Research and Innovation Council.	At a time when there is a need for science, technology, innovation and infrastructure, it is necessary to invest in research and innovation. We will invest in research and innovation through the National Research and Innovation Council and the National Research and Innovation Council.
Greens	Yes. We will invest in research and innovation through the National Research and Innovation Council and the National Research and Innovation Council.	Yes. We will invest in research and innovation through the National Research and Innovation Council and the National Research and Innovation Council.	Yes. We will invest in research and innovation through the National Research and Innovation Council and the National Research and Innovation Council.

**AUSTRALIA: Science Asks Politicians**

For every federal election, Science and Technology Australia, representing 68,000 scientists and technologists, surveys the major and minor parties on their vision for science and technology. The answers are available on the website below. A few examples of the questions are: will you comment on long-term, strategic investment in R&D?; what plans do you have to ensure more consistent and sustained funding of critical research infrastructure, big and small?; what approaches will

you take to improve the quality and supply of mathematics and science teachers and resources at Australian schools?

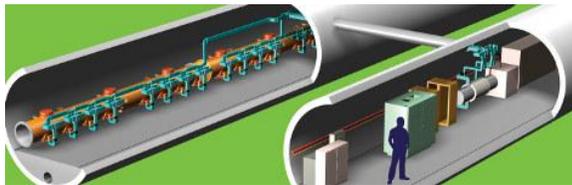
<http://scienceandtechnologyaustralia.org.au/news-media/>

**JAPAN: Hybrid Study-Abroad Program**

Kogakuin University, an institution focusing on engineering education, began a unique program nick-named “hybrid study-abroad.” Twenty one students in their junior year do home-stays with British families for four months beginning August 31 and improve their English ability by attending an English language school. And, differing from other study-abroad programs, they attend classes

in their major field that are offered in Japanese by the Kogakuin University professors who accompany the students to the UK. In this way, the program enables students whose English capabilities are not good enough to attend S&T institutions in the UK to study and live abroad. The financial burden on the students is minimized as they do not pay tuition to the UK host institution.

[Note: This summary is a translation of an Asahi article-August 24, 2013](#)



#### **JAPAN: International Linear Collider**

Japanese researchers have identified the mountainous region between Iwate and Miyagi provinces as the candidate site for the International Linear Collider. However, it is still unknown when the Japanese government (GOJ) will begin

establishing the facilities. As construction costs are estimated at Yen 830 billion (\$8.3 billion), the GOJ is seeking major contributions from other countries who wish to participate. No other country has volunteered to construct such a collider.

[Note: This summary is a translation of a Nikkei article-August 23, 2013](#)

#### **JAPAN: Agriculture Study Getting More Attractive**

The number of applicants for university agriculture departments has been steadily increasing for the past several years. For example, the success rate for the entrance examination for the newly-established applied plant science division of Hosei University was one out of 11.6 applicants in 2008, but it has become more competitive to one out of 20.9. Also, every one of the graduates from the Hosei University's plant science division was offered a position by either the government or food-related industries. These numbers reflect increasing interest by young people in food safety as well as environment and energy issues. Another notable feature about university agriculture departments is that 42% of the students enrolled are women, which is a much higher rate compared with other S&T departments.

[Note: This summary is a translation of a Nikkei article-August 26, 2013](#)

#### **JAPAN: Plans for an NIH-equivalent**

The total of the JFY2014 medical science budgets at the Ministry of S&T, Ministry of Health, and Ministry of Industry will be about Yen 120 billion (\$1.2 billion), an increase of 20% from JFY2013. This fall, the cabinet will submit a bill to the Diet to establish a Japanese equivalent of the National Institute of Health (NIH). If successful, the bill will enable the Prime Minister's Office to oversee and monitor the budgets in medical science fields involving basic, clinical, and applied research. The biology-related academic societies are concerned about possible impacts to the basic research budget in biology.

[Note: This summary is a translation of a Nikkei article- August 24, 2013](#)

#### **JAPAN: FIRST Project Results to be Made Public**

The Government selected the organizations in the table below to publicize the research results obtained from 30 projects supported by the "Funding Program for World-Leading Innovative R&D on Science and Technology (FIRST)." FIRST (\$30 million/5years/project) will end in March 2014.

Grantee	Symposium	Amount
Hakuhodo Company	EXPO-type exhibition for all the 30 projects	Yen 112 million (\$1 million)
Nikkei BP Consulting Company	Matching the results with business sector for the 30 projects	Yen 30 million (\$300K)
RIKEN	International symposium for the RIKEN's project	Yen 21 million (\$210K)
Waseda Research Initiative Corp.	International symposium - Message to the year 2030	Yen 10 million (\$100K)
Convention Linkage Inc.	International symposium – Next-generation diagnosis	Yen 20 million (\$200K)

Note: This summary is a translation of a Cabinet Office Homepage article-August 22, 2013

#### JAPAN: JFY2014 MEXT S&T Budget Request

The Ministry of Education, Science and Technology (MEXT), which receives two-thirds of the Japanese government S&T budget, requested a JFY2014 S&T budget of Yen 1,184.1 billion (\$11.8 billion), an increase of 19.9% or Yen 196.8 billion (\$2 billion) from the previous year. Major request items are in the table below. All the ministries will negotiate their budgets with the Ministry of Finance from September through December. The NSF Tokyo Office will produce a report when the JFY2014 S&T budget proposal is finalized at the end of December 2013.

Program	JFY2014 request (Billion Yen)	(\$ Million)
Japanese version of NIH	65.0	650
Cross-ministerial Strategic Innovation Promotion program	35.0	350
Grants-in-Aid for Scientific Research (KAKENHI)	233.8	233.8
Strategic Creative Research program	62.4	624
Center of Innovation program (COI)	26.5	265
International Thermonuclear Experimental Reactor program (ITER)	30.5	305
R&D on Earthquake and Disaster Prevention	14.9	149
Recovery from the Nuclear Power Disaster	23.1	231
Training of S&T Innovation Personnel	8.0	80
Strengthening of Research Universities	8.8	88
Maintenance and Advancement of Large-scale Facilities (Spring-8, SACLA, J-PARC, K-supercomputer)	52.2	522
R&D on Post-K Supercomputer and Big Data	4.5	45
R&D on New Backbone Rocket	7.0	70
R&D on Asteroid Explorer <i>Hayabusa-2</i> and Contribution to Safety and Disaster Prevention in Space	15.7	157
Strategic Promotion of Marine Resource Exploration	5.6	56
Maintenance of Fast Breeder Reactor "Monju"	19.5	195

Note: This summary is a translation of a MEXT web article-September 1, 2013

#### JAPAN: Japanese Version of I-Corps

Under the 'Training of S&T Innovation Personnel' in the table above, MEXT plans to establish a Japanese version of I-Corps with Yen 500 million (\$5 million) in JFY2014 using NSF's I-Corps program as the model. The program supports young researchers and Ph.D. students to attend classes on how to establish venture companies, build business models, prepare for interviews, and produce prototypes using small amounts of funding.

Note: This summary is a translation of a MEXT web article-September 1, 2013

**KOREA: Foldable Micro Electric Car**

Researchers at the Korea Advanced Institute of Science and Technology (KAIST) developed a foldable, compact electric vehicle (Armadillo-T) that can be utilized as a personal car or part of the public transit system to connect major transportation routes. It is a four-wheel-drive, all-electric car with two seats and four in-wheel motors. As the motors are installed inside the wheels, and the 13.6 kwh capacity of lithium-ion battery pack is housed in the front, the battery and motors do not have to change their positions when the car folds. Once folded, the small and light (450 kg) electric vehicle takes up only one-third of a 5-meter parking space, allowing three of its kind to be parked. With a smartphone-interfaced remote control on the wheels, the vehicle can turn 360 degrees, enhancing drivers' convenience when parking the car.



[http://www.kaist.edu/english/01\\_about/06\\_news\\_01.php?req\\_P=bv&req\\_BIDX=10&req\\_BNM=e\\_d\\_news&pt=17&req\\_VI=4435](http://www.kaist.edu/english/01_about/06_news_01.php?req_P=bv&req_BIDX=10&req_BNM=e_d_news&pt=17&req_VI=4435)

**KOREA: Battery from Rice Husks**

Korea Advanced Institute of Science and Technology (KAIST) researchers have successfully utilized rice husks as the silicon anode to be used in high capacity lithium ion secondary batteries. The new silicon anode derived from rice husks exhibits superior output and lifespan. The researchers separated naturally occurring, highly porous silica material within the rice husks and developed a 3-dimensional, highly porous silicon anode material. Silicon has attracted much attention as anode material for next generation lithium ion secondary batteries because it exhibits 3-5 times higher capacity than conventional graphene.

[http://www.kaist.edu/english/01\\_about/06\\_news\\_01.php?req\\_P=bv&req\\_BIDX=10&req\\_BNM=e\\_d\\_news&pt=17&req\\_VI=4445](http://www.kaist.edu/english/01_about/06_news_01.php?req_P=bv&req_BIDX=10&req_BNM=e_d_news&pt=17&req_VI=4445)

**KOREA: Radar Satellite**

The Korea Aerospace Research Institute reported that the Kompsat-5/Arirang-5 X-band synthetic aperture radar space craft that was launched from a Russian-Ukrainian vehicle was successfully in orbit. Weighing 1,400 kg at launch, Kompsat-5/Arirang-5 is expected to operate for at least five years in a 550-kilometer polar low Earth orbit. Its radar instrument is able to collect data with a ground-sampling distance of 1, 3, and 20 meters.



<http://www.spacenews.com/article/launch-report/36910dnepr-rocket-launches-s-korean-radar-satellite>

**SINGAPORE: MedTech Convention 2013**

The A\*STAR MedTech Convention 2013 (August 26-27) brought together clinicians, scientists, business figures and global key opinion leaders to share and exchange the latest in MedTech R&D and business developments. More than 500 participants (20% more than expected) signed up, including industry partners, clinicians, and scientists from the US, Japan and South Korea. MedTech aims to leverage Singapore's strengths in engineering, manufacturing and biomedical

sciences. Over the past decade, the MedTech output in Singapore has tripled to US\$3.43 billion in 2012, creating 9,000 jobs in Singapore.

<http://www.a-star.edu.sg/Media/News/Press-Releases/ID/1860/Inaugural-ASTAR-MedTech-Convention-2013-sets-scene-for-future-growth-of-MedTech-industry-in-Singapore.aspx>

**NEW ZEALAND: 2013 Science Investment Round**

The Science and Innovation Ministry announced the 2013 Science Investment Round. The government will invest NZ\$276 million (US\$216 million) in 51 research programs from October, 2013 for a period of one to seven years. The investment will be shared among the funds for: biological industries, energy and minerals research, health and society research, high value manufacturing and services research, and environmental research.

<http://www.msi.govt.nz/get-funded/research-organisations/2013-science-investment-round/>