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No 8

# The ANS Globe

*...e-news from the ANS International Committee*

## From the editors

The ANS Globe is the Bulletin of the American Nuclear Society's International Committee. The ANS Globe has as its mandate the dissemination of news of international interest to International Committee members and to others. Please send us your letters, articles, and/or comments for consideration towards the next issue.

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## Contents

|  |              |
|--|--------------|
| <a href="#"><u>From the Chair</u></a>  | <b>p. 2</b>  |
| <a href="#"><u>The ANS International Committee's Web Page</u></a>            | <b>p. 3</b>  |
| <a href="#"><u>News from Sister Societies and International News</u></a>     | <b>p. 3</b>  |
| <a href="#"><u>News from ANS Divisions</u></a>                               | <b>p. 13</b> |
| <a href="#"><u>Highlights from the 2007 Boston June Meeting</u></a>          | <b>p. 14</b> |
| <a href="#"><u>Young-Generation Corner</u></a>                               | <b>p. 18</b> |
| <a href="#"><u>IYNC2008</u></a>  | <b>p. 18</b> |
| <a href="#"><u>Societies with Collaboration Agreements with ANS</u></a>      | <b>p. 19</b> |
| <a href="#"><u>Calendar of Events</u></a>                                    | <b>p. 20</b> |
| <a href="#"><u>Contact ANS International Committee Members by E-mail</u></a> | <b>p. 23</b> |

## From the Chair



Dear friends,

As our President Donald Hintz said recently: “It is really an exciting time in nuclear...we are about ready to go through the good times”. Moreover, it’s certainly one of the most exciting and lively periods as far as nuclear energy globalization is concerned!

According to Energy Secretary Samuel Bodman : “Global challenges require global solutions”. The impressive schedule of international meetings devoted to investigating those solutions has dramatically accelerated... Let me just mention :

- Global 2007, focusing on Advanced Nuclear Fuel Cycles and Systems (in the perspective of “Rising to the challenge: Globalization of Nuclear Energy”)
- The World Nuclear Association Symposium, gathering major nuclear industries from around the world (working on “Our Nuclear Future: Converting Vision to Reality”)
- The Global Nuclear Energy Partnership expanding its membership from five to sixteen
- ENC 2007, focusing on mature and innovative applications of nuclear technology, and, more recently
- the European Commission launching a Sustainable Nuclear Platform for nuclear energy research to prepare for the future.

Preparing the future while taking into account projections of energy needs is also a major concern within the GEN IV International Forum, working currently on six different advanced reactor designs.

In a short recent timeframe, several consortia have been formed between major companies in order to face these growing demand challenges: Westinghouse-Toshiba, GE-Mitsubishi, Unistar, Areva-Mitsubishi, etc.

Would it not be interesting and useful to take a look at the prospect of timely development of the various components of front- and back-end fuel cycle which condition a timely readiness to operate the reactors of the future?

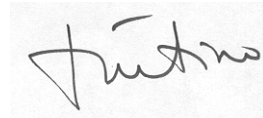
Regarding the uranium market, mine expansion is proceeding in different countries, such as Australia, Canada, India, Kazakhstan, as well as in Africa.

New uranium-enrichment-plant projects have been launched in the US and in France, and envisaged in Australia. The US starts building a MOX plant at Savannah River.

Last but not least, probably the most delicate part of the fuel cycle is waste management, where improvements at the national level in the rate of progress for solving high level, long-lived waste-management issues need strong decisions in terms of licensing policy, social consensus and political will.

Although the management of these types of waste is essentially a national responsibility, here also the joint efforts of our agreement-society members are significantly needed, while improving the mutual exchange of best practices and expertise, as well as increasing the international contribution to major topical meetings.

No doubt, our Committee could make a valuable contribution in this direction at the November meeting, which, as you know, will focus on “Making the Renaissance Real”.



France Brès-Tutino

## **The ANS International Committee’s Web Page**

Visit the enhanced ANS International Committee’s Section on the ANS website, at <http://www.ans.org/const/international>. It includes:

- Background information about the ANS International Committee
- Connections to ANS International Local Sections
- An overview of Society alliances with international organizations (INEA, INSC, and PNC), along with contact information
- Connections to 30 ANS Agreement Societies/Organizations, and
- Current/back issues of *The ANS Globe*, which features ANS International Committee activities and related items.

## **News from Sister Societies and International News**

- [Canadian Nuclear Society \(CNS\):](#)

There is currently a very high level of activity in the nuclear industry in Canada:

- Refurbishment of plants for life extension: 2 reactors at the Bruce Nuclear Generating Station, as well as the Point Lepreau reactor in New Brunswick, are in refurbishment phases, to extend their useful life.
- New build: The Ontario government has made a commitment for the building of 2 new reactors, although the type of plant has not yet been decided.
- Feasibility Study: The Province of New Brunswick, with 1 CANDU-6 reactor already in operation at Point Lepreau, will be accelerating a feasibility study for a 2<sup>nd</sup> reactor.
- Foreign plants: Cernavoda Unit 2, a CANDU-6 reactor in Romania, has recently achieved criticality. A CANDU-6 reactor is being seriously considered for a 3<sup>rd</sup> Cernavoda Unit in Romania.
- Canada has entered into an agreement with Argentina to help it in completing Atucha 2, a heavy-water pressure-vessel reactor of German design. In addition, Atomic

Energy of Canada Limited is in negotiations with Nucleoeléctrica S.A. for the building of a new 740-MW CANDU-6 power plant in Argentina.

- Energy Alberta Corporation, in partnership with Atomic Energy of Canada Limited, has filed an application with the Canadian Nuclear Safety Commission (CNSC) to build two ACR-1000 Advanced CANDU reactors near the town of Peace River, Alberta. The two reactors would be completed in 2017 and produce a total of about approximately 2200 MWe.
- The Canadian Government has recently announced that it has accepted the recommendation of the Nuclear Waste Management Organization for phased disposal of nuclear waste in Canada. Phased disposal is a long-term plan for eventual geological disposal of nuclear waste, following a period of several decades of safely storing the waste at the nuclear-plant sites, researching an appropriate site for long-term disposal, discussions regarding the site with the local community, and construction of the deep geological-disposal site, from which nuclear waste (irradiated fuel) may initially be recovered for recycling.

The NRU (National Research Universal) research reactor at Chalk River Laboratories is celebrating this fall its 50<sup>th</sup> Anniversary since first operation. NRU has played and is playing a central role in research to support the development of the CANDU heavy-water-moderated reactor-power system. In addition, since its very start, it has also played a crucial role in the production of radionuclides, helping to save tens of thousands of lives per year in hospitals throughout the entire world.

Officers of the Canadian Nuclear Society for the period 2007 June – 2008 June are:

- President: [Eric Williams](#) (Bruce Power, retired) [canoe.about@bmts.com](mailto:canoe.about@bmts.com)
- Past President: [Daniel Meneley](#), the current CNS President.
- 1<sup>st</sup> Vice-President: [Jim Harvie](#) (Canadian Nuclear Safety Commission, retired) [jdharvie@rogers.com](mailto:jdharvie@rogers.com)
- 2<sup>nd</sup> Vice-President: [Dorin Nichita](#) (University of Ontario Institute of Technology) [eleodor.nichita@uoit.ca](mailto:eleodor.nichita@uoit.ca)
- Secretary: [Prabhu Kundurpi](#) (OPG, retired) [kundurpi@sympatico.ca](mailto:kundurpi@sympatico.ca)
- Treasurer: [John Luxat](#) (McMaster University) [luxatj@mcmaster.ca](mailto:luxatj@mcmaster.ca)
- Financial Administrator: [Ken Smith](#) (UNECAN) [unecan@rogers.com](mailto:unecan@rogers.com)
- Executive Administrator: Ben Rouben (12 & 1 Consulting)  
[roubenb@alum.mit.edu](mailto:roubenb@alum.mit.edu)

- [French Local Section:](#)

The French Section invited [Dr. Phillip Finck](#), Associate Laboratory Director for Nuclear Programs at Idaho National Laboratory, to give a talk last May in Paris. On this occasion, he gave a very interesting and comprehensive presentation on “Nuclear Power in the United States: Options for the Future”. This event, hosted by AREVA in its new auditorium, gathered a large audience composed of the French Section members from AREVA, CEA and EdF as well as representatives from the US Embassy in Paris, international agencies and French Ministries. French American Foundation members were also invited. Moreover, the young nuclear generation was well represented with the

participation of many students from scientific and technical universities and young engineers from the nuclear sector.



From left to right: [Rosine Couchoud](#) (AREVA, Ministry of Foreign Affairs), [Frank Carré](#) (French Section Chair), [Dr. Phillip Finck](#), [Dominique Grenèche](#) (AREVA, French Section Vice Chair) and [France Brès-Tutino](#) (ANS International Committee Chair).

The French Section's 2007 General Assembly is scheduled for October 12, with the prestigious participation of the ANS Vice-President President Elect, [Professor William Burchill](#), who will give a lecture on "The US Renaissance and the Importance of the French Connection".



- [Italy:](#)

A recent poll of the Italian population (27-29 Aug 2007, published Oct 2007), taken 21 years after the nuclear referendum of 1987, concluded that the number of survey respondents against nuclear power had decreased from 80% to 32%.

Those Italian citizens who participated in the poll and are still against nuclear power have these main concerns: radwaste is still an unresolved problem, with potential impact on future generations (67.2%); nuclear-power-plant accidents are still possible (21.2%);

civilian nuclear power plants can lead to nuclear-weapons development (8.9%); and nuclear energy is too expensive (2.8%).

The Italian citizens participating in the poll who favor nuclear-power development responded that: the countries close to Italy have nuclear power plants (33.1%); deployment of nuclear power plants in Italy will be necessary to decrease the import and consumption of fossil fuels (17.1%); nuclear technology is safe, with only a very small risk of accidents (16.3%); and nuclear energy is economical (7.2%).

- [Atomic Energy Society of Japan](#): Dr. Kioto Aizawa sent the following report

#### [Student Exchange Program between the United States and Japan](#)

The student exchange program between the United States and Japan has been successfully running since 1979. This program has been maintained by the Chicago section of American Nuclear Society (Argonne National Laboratory) and the Atomic Energy Society of Japan. The Japanese committee consists of five members, including [Prof. Toshiyuki Takagi](#), Tohoku University (Chairman) and Prof. [Shuichi Hasegawa](#), Tokyo University (Secretary). More than eighty Japanese graduate students went abroad, mainly to the hosting institute, Argonne National Laboratory (U.S. organizer: [Dr. H. Myron](#)), via the program. More than 40 U.S. graduate students came to Japanese universities. The students have an excellent experience to develop their own research field from different points of view. Their stay for a few months also gives them new cultural insight into the foreign country. The students have spread over various fields, such as industrial and academic areas. Their airfare is covered by their country's program and the stipend by the host country's program. The program is financially supported by the Department of Energy (U.S.) and The Federation of Electric Power Companies of Japan and The Japan Atomic Power Company (Japan).

#### [Joyo Wins Landmark Award from ANS](#)

The ANS announced on November 14, 2006, that the experimental fast reactor "Joyo", operated by the JAEA at its O-arai R&D Center, had won the Nuclear Historic Landmark Award. The award was announced at the ANS 2006 Winter Meeting in Albuquerque, New Mexico. ANS Chairman [Harold McFarlane](#) visited Japan and made a formal presentation of the award certificate at the 30-year anniversary celebration ceremony, held at O-arai on June 6, 2007 (see photo).



T. Okazaki(President, JAEA) and H. McFarlane(President, ANS)

[Dr. Kiyoto Aizawa](#) sent also a detailed report on the Atomic Energy Society of Japan (AESJ) and its activities. Major items are the following:

The AESJ has 6628 regular members, 368 student members, and 255 Supporting Member Firms.

Dr. S. Tanaka is President of the AESJ. There are 3 Vice Presidents: [Drs. Y. Oka](#), [A. Kawahara](#), and [K. Matsui](#).

There are now 171 Fellows of the AESJ. 19 of these fellows were nominated in 2005.

International Conferences held in Japan in 2007 include:

- 2007 Jul 5-6, Safety Engineering Symposium 2007, “Creative Development of Safety Engineering”, Tokyo
- 2007 Jul 9-11, International Symposium on Symbiotic Nuclear Power Systems for 21<sup>st</sup> Century (ISSNP), Wakasa-wan Energy Research Centre
- 2007 Oct 15-19, 4<sup>th</sup> International Conference on Ion Exchange, Chiba University
- 2007 Nov 11-13, Workshop on Advanced Safeguards techniques for the Future of the Nuclear Fuel Cycle, Tokai Village

The 2007 AESJ Fall Meeting will take place on September 27-29 at Kita-Kyushu International Congress Hall, Fukuoka Prefecture. The 2008 Annual Meeting will be held March 27-28 at Osaka University, Osaka.

There are 55 nuclear power plants currently operating in Japan: 28 BWR, 4 ABWR, 23 PWR. One ABWR and 1 PWR are under construction. Eleven nuclear power plants are in planning.

The Japanese government has selected Mitsubishi heavy Industries to develop the next generation of fast breeder reactors (FBR), in an initiative promoted by the Japan Atomic Energy Authority. FBRs are central to Japan’s long-term energy policy in order to maximize the use of the uranium resource.

The High Temperature Engineering Test Reactor (HTTR) has been operated by JAEA. The HTTR carried out a long-term (30-day) period of full-power operation (with outlet coolant temperature at 850 °C) from March 26 to April 26, 2007 – the first such long-term operation at full power. The fission-product (FP) concentration in the primary circuit was 10 to 1000 times lower than in overseas HTGRs, showing that the HTTR had the world’s best performance in FP retention. Further tests of FP retention will be performed in a 50-day period of full-power operation with outlet coolant temperature at 950 °C.

The reprocessing plant at JNFL in Aomori prefecture is conducting operating tests. The maximum reprocessing capacity of the plant is 800 Mg(U)/year, which is sufficient to reprocess the spent fuel produced by 30 1000-MWe-class reactors.

On 2007 Apr 25, the Japan-US Joint Nuclear Energy Action Plan was presented.

This Plan comprises co-operation nuclear-energy research to advance new technologies, collaboration on policies that support the construction of new NPP, establishment of an international nuclear-fuel-supply assurance mechanism, and collaboration to support the safe expansion of nuclear energy while promoting nonproliferation. The GNEP-relevant portion of the Plan will develop long-term technologies essential to the GNEP vision.

- [Japan ANS Local Section:](#)

The following Officers of the Japan Local Section were installed April 1, 2007:

- Chair: [Kiyoshi Yamauchi](#), of Mitsubishi Heavy Industries Ltd.,  
[Kiyoshi\\_yamauchi@mhi.co.jp](mailto:Kiyoshi_yamauchi@mhi.co.jp)
- Vice Chair: [Masao Senzaki](#), of the Japan Atomic Energy Agency,  
[Senzaki.masao@jaea.go.jp](mailto:Senzaki.masao@jaea.go.jp)
- Secretary: [Ryuichi Oshima](#), of Mitsubishi Heavy Industries Ltd.,  
[Ryuichi\\_oshima@mhi.co.jp](mailto:Ryuichi_oshima@mhi.co.jp)
- Treasurer: [Yosuke Naoi](#), of the Japan Atomic Energy Agency,  
[Naoi.yosuke@jaea.go.jp](mailto:Naoi.yosuke@jaea.go.jp).

The Japan Local Section will hold its 38<sup>th</sup> General Meeting of Members in March 2008. Also, the Section holds Topical meetings every two to three months. [ANS President Dr. Harold McFarlane](#) was invited to the Section's Topical meeting in Tokyo on 4 June 2007, where he gave a presentation on "The Role of Professional Societies in the Responsible Global Expansion of Nuclear Energy" (see photo at right). Other topical meetings held from 2006 July to 2007 June were:



- July 28, 2006: "Outline of the Global Nuclear Energy Partnership (GNEP)", by Mr. Jeffrey A. Miller (DOE Japan Office), and "The Policy to the GNEP in Japan Atomic Energy Agency", by Mr. Hajime Niwa (JAEA)
- Sept 28, 2006: "Current Status and Future Challenges for Peaceful Use of Nuclear Energy and Nuclear Nonproliferation ", by Mr. Masao Senzaki (JAEA)
- Nov 27, 2006: "IAEA Activities in Support of Rising Expectation for the Role of Nuclear Power in Developing Countries ", by Dr. Akira Omoto (IAEA)
- Mar 29, 2007: "Latest Status in the Global Expansion of Nuclear Energy", by Mr. Tateo Shimizu (Toshiba)
- 
- [OECD](#): Information gleaned from the NEA Electronic Bulletin and/or from NEA Press Room on the Nuclear Energy Agency's website (<http://www.nea.fr>)

"New NEA Study Explores the Risks and Benefits of Nuclear Energy



With the publication of *Risks and Benefits of Nuclear Energy*, the OECD Nuclear Energy Agency (NEA) provides a useful new aid for decision makers. The study brings together authoritative information and illustrative data on how the risks and benefits of nuclear energy might be assessed in the light of sustainable development goals.”

- [Korea:](#)

[Dr. Nam Zin Cho](#), ANS Fellow and member since 1977, began a one-year term September 1 as President of the Korean Nuclear Society. [Dr. Cho](#) is Professor of Nuclear and Quantum Engineering at the Korea Advanced Institute of Science and Technology (KAIST) in Korea.



The Third Annual World Nuclear University Summer Institute ([www.world-nuclear-university.org](http://www.world-nuclear-university.org)), was held in Daejeon, Republic of Korea, from July 14 to August 24, 2007. It was organized by the WNU Coordinating Centre in cooperation with WNA, IAEA, NEA and WANO, the Korea Atomic Energy Research Institute (KAERI), Korea Hydro & Nuclear Power Co. (KHNP), and the Korean Nuclear Society. The World Nuclear University Summer Institute offers a unique career-building experience for about 100 future world leaders in nuclear science and technology. [Dr. Philippe Hauw](#) is the WNU Summer Institute Head Coordinator, based in London, UK. [Dr. Byung-Joo Min](#) of KAERI headed the local organizing committee.

- [Pacific Nuclear Council:](#)

The following report on next year’s 16<sup>th</sup> Pacific Basin Nuclear Conference was sent by Technical Program Chair [Prof. Yoshiaki Oka](#) of the University of Tokyo:

The Japan Atomic Industrial Forum, Inc. (JAIF) and the Atomic Energy Society of Japan (AESJ) are pleased to host the Pacific Basin Nuclear Conference (PBNC) and technical exhibitions under the auspices of Pacific Nuclear Council (PNC) on October 13-19, 2008 in Aomori, Japan. The Conference theme is “Pacific Partnership toward a Sustainable Nuclear Future”. Around the Pacific Rim, there are growing demands and expectation for further development of nuclear power as affordable and no carbon energy source, with sound scientific and technological bases. Reliable international partnership from research to power generation, and from public information to knowledge management, is vital for effective and peaceful nuclear development, and its safe operations. The Conference aims to promote such partnerships. Aomori is located in the northern part of Honshu (the main island of Japan). It is one of the world’s advanced nuclear technology centers. The 16PBNC website is <http://www.pbnc2008.org/>.

As for the 17<sup>th</sup> Pacific Basin Nuclear Conference, preliminary expressions of interest to host were received from the Canadian Nuclear Society, the Sociedad Nuclear Mexicana, and the Korea Atomic Industrial Forum/Korean Nuclear Society.

- [Romania:](#)

Unit 2 of the Cernavoda Nuclear Power Plant (CANDU-6 heavy-water reactor) achieved first criticality in 2007 May. Through the summer power was gradually ramped up and the unit was successfully connected to the grid. Entry of Cernavoda Unit 2 into commercial service is anticipated for late September.

- [Slovakia:](#)

Juraj Klepac, General Secretary of the Slovak Nuclear Society (SNUS), provided the following report:

SNUS, a member of European Nuclear Society, was established in January 1990 as an expert non-profit organization, with main goals as follows:

- Coordinate and support creative activity and satisfaction of technical interests of SNUS members, and provide information for their needs (inwards goal)
- Initiate and support dialogue with the general public, focusing on ecological priorities in the development of nuclear energy sector as a part of the energy mix, via substantiated arguments (outwards goal).

SNUS currently has 29 collective members and over 500 individual members who can be in one or more of the following sections:

- Women in Nuclear
- Young Generation
- Radiochemistry
- Radiomedicine
- Radioenvironmentalists

The SNUS carries out an “enlightenment” campaign at high schools, to explain to students the secrets and beauties of nuclear physics and nuclear technology. In terms of publications, the SNUS issues its own Bulletin. It has also issued the book “Atoms in Slovakia”, with first-hand records and memories of the first generation of nuclear pioneers in Slovakia who (amazingly) 50 years ago laid the foundations of the nuclear power sector in Slovakia. An English version of the book is in preparation and will be issued this year.

The SNUS annual general assembly was held April 26, 2007, in the mountain resort Casta-Papiernicka (see photo), where distinguished members received diplomas.

SNUS co-organizes an annual



major conference on nuclear energy. In 2007 this was held October 3 to 5 in Bratislava, Slovakia, and was titled “Secure Energy Supply 2007”. Other SNUS activities in 2007 include a round-table discussion with Patrick Moore, one of the founders of Greenpeace, and representatives of pro- and anti-nuclear groups, a conference of radiologists in October, and a joint Conference with the Czech Nuclear Society, “VVER Experience and Perspectives”, which will be held in Prague on October 10 to 12. In April 2008, an annual NUSIM conference with an embedded SNUS general assembly, will be held.

More information on SNUS (mostly in Slovak) can be found at [www.snus.sk](http://www.snus.sk).

- [Swiss Nuclear Society:](#)

The Swiss Nuclear Society is preparing to host the next ANS Reactor Physics Topical, PHYSOR-2008, in Interlaken, Switzerland, 2008 September 14-19. It will also host IYNC-2008, the International Youth Nuclear Congress 2008, scheduled 2008 September 20-26, just after PHYSOR-2008.

- [Taiwan:](#)

[Min-Shen Ouyang](#), Chair of the Nuclear Energy Taipei, sends the following report on the status of nuclear programs in Taiwan.

#### [Nuclear Power Facilities and Performance](#)

In 2006, Taiwan’s energy was 98% imported. Taiwan has three nuclear plants, Chinshan, Kuosheng, and Maanshan, each with two operating units. These are all operated by the state-owned Taiwan Power Company (TPC). In 2006, these units generated 39.87 TWh (gross) of electricity – just short of the record (39.97 TWh) achieved the previous year. Altogether, the nuclear units contributed a 17% share of overall domestic electricity production in 2006 (compared to 17.6% in 2005).

In terms of performance, the nuclear plants achieved a record average capacity factor of 88.93% in 2006, compared to 88.3% in 2005. Another record was the total production of solidified low-level radioactive waste from all units, 327 drums, 46% less than 601 drums in 2005. Other records are a Maanshan refueling outage of 33.37 days, continuous operation by both Chinshan units of more than 400 days, twice in a 3-year period, and 0 scrams for 4 consecutive years at Kuosheng.

Construction of 2 ABWR units is continuing at the Lungmen plant. At the end of 2007 May, 64.9% completion had been achieved. Following significant delays after a suspension of construction in 2000, the schedule for completion was redefined to be 2009 and 2010 for units 1 and 2 respectively. To ensure quality in construction, TPC invited WANO-TC to conduct a technical review of the project in 2006 December, and has been taking actions in response to all the findings and suggestions.

## Nuclear R&D and Regulatory Activities

Research at the Institute for Nuclear Energy Research (INER) focuses on several items:

- Development of O&M technology for nuclear power
- Upgrading of existing NPP
- Studies related to NPP license renewal
- Development of fuel cells and solar-power systems, and
- Development and commercialization of radiopharmaceuticals

In the past year, major nuclear regulatory activities have included:

- Reform of the examination system for licensing reactor operators
- Review of the power uprate of Kuosheng NPP
- Implementation of the risk-inspection and management system of high-risk radiation sources
- Development of a quality-control program for mammography, and
- Review of the safety-analysis report for the spent-nuclear-fuel dry-storage facility at Chinshan NPP.

- Thailand:

Dr. Chainarong Cherdchu, President of the Nuclear Society of Thailand (NST), sent a report on activities of the NST in FY 2006-2007. Some of the major activities were:

- 24 Feb 2006, Annual Meeting of the NST, with special lectures “SPECT Radioisotopes and FDG Production with 30 MeV Cyclotron”, by Dr. Ahmet Cokragan, and “Different Challenges: Interesting Solution”, by Paul Stephens
- 2 Jun 2006, Keynote Lecture “Nuclear Power Plant”, by Dr. Somporn Chongkum, at Annual Meeting of Thai Industrial Council
- 29 Aug 2006, Seminar “From Energy Crisis to Business Survival”, by Dr. Chainarong Cherdchu, at Thai Chamber of Commerce
- 30 Jan 2007, Symposium by Mr. Preecha Karsuthi and Mr. Monchai Labreuntaweek, “Nuclear Physics in New Curriculum for Pre-Engineering Students”, at King Chomklao Institute of Technology
- 8 Mar 2007, “PDP 2007 and Sustained Development”, by Mr. Preecha Karsuthi, at Thammasat University
- 3 Apr 2007, Seminar by Mr. Preecha Karsuthi, “Public Opinion on Electric Power Demand and the PDP 2007”
- 8 Jun 2007, Symposium “Role of Nuclear Technology and the Sufficiency Economy Philosophy, Bangkok
- 8 Jun 2007, Annual Meeting of the NST 2006, with Keynote Speech “Why NPP”, by HE Dr. Piyasawas Ammaranun, Minister of Energy
- 17 Jul 2007, Exhibition “Nuclear Technology”, organized by Ministry of Foreign Affairs
- 16-17 Aug 2007, 10<sup>th</sup> Conference on Nuclear Science and Technology, “Nuclear Energy for the World”, Bangkok

Also, publication of books “Science for Life”, 2006, and “Radiation for Diagnosis and Treatment”, 2006.

The website of the Nuclear Society of Thailand is at [www.nst.or.th](http://www.nst.or.th).

## **News from ANS Divisions**

To further the implementation of the Joint Protocol between the International Committee and the Professional Divisions Committee, we are pleased to include in the Globe some newsworthy items from the ANS Divisions.

- [Education and Training Division](#) (gleaned from ETD Past Chair Richard Coe’s Message in 2007 Spring Newsletter):

An alliance partnership has been established between ETD and the European Nuclear Society to conduct an international conference on nuclear training and education during the even years. The Nuclear Engineering Science Technology and Training (NESTet,08) will be held in Budapest, Hungary, in May 2008.

The Conference on Nuclear Training and Education, CONTE 09, will be held February 8-11, 2009, in Jacksonville, FL.

This year’s ANS-ETD Training Excellence Awards were presented to Dr. Gilbert Brown, University of Massachusetts - Lowell and Dr. Andrew Klein, Idaho National Laboratory, for exemplary dedication, service and leadership to nuclear education and training.

- [Mathematics and Computation Division \(MCD\)](#):

MCD is focusing its efforts on organizing its next Topical, the 2009 International Conference on Advances in Mathematics, Computational Methods, and Reactor Physics, scheduled to be held 2009 May 3-7 in Saratoga Springs, NY (see Calendar of Events below).

- [Reactor Physics Division \(RPD\)](#):

RPD is looking forward to its next Reactor Physics Topical, PHYSOR-2008, which will be held 2008 September 14-19 in Interlaken, in the beautiful Swiss Alps, with the theme “Nuclear Power: A Sustainable Resource” (see Calendar of Events below).

- [Environmental Sciences Division](#) (from Pete Fledderman, ESD Division Chair):

The ESD has approved the creation of the W. Bennett Lewis Award, to be presented to an individual who carries on the pioneering work of Dr. Lewis relating to long-term and sustainable energy needs. The award description reads, in part:

“The award is granted to an individual who has made major lifetime contributions in

nuclear science and engineering towards minimizing environmental footprint, attaining long-term global sustainable energy and development, and having shown great foresight in elucidating these goals as recorded in archival publications. The award honors Dr. W. Bennett Lewis, a visionary who understood the importance of providing a clean and abundant source of energy to support the world population for generations to come.”

ESD is currently considering candidates for the first W. Bennett Lewis Award.

## **Highlights from the 2007 June Boston Meeting**

- [On ANS Board of Directors:](#)

Heartiest congratulations to International Committee members [Sama Bilbao y León](#) and [Juan Luis François](#), who were newly elected to the ANS Board of Directors, respectively as U.S. At-Large Board member and Non-U.S. Board member!

- [Nuclear Activities in Australia:](#)

Dr Clarence Hardy, President of the Pacific Nuclear Council and Secretary of the Australian Nuclear Association, gave the following report on nuclear activities in Australia:

The Australian government is making very strong statements on every possible occasion to support nuclear power being considered in the future energy mix, but the opposition still opposes nuclear power.

Australia has about 36% or about 716,000 tonnes uranium (te U) of the world's low-cost uranium resources. There are three mines producing uranium at present: Olympic Dam in South Australia, Ranger in the Northern Territory, and Beverley in South Australia. In 2005, Australia produced a record 11,217 te U, accounting for 23% of world mine production. The prospects for a further increase in Australian uranium production are good. BHP-Billiton is investigating plans for a major expansion of the Olympic Dam copper-uranium-gold mine in South Australia. There are several other possible in-situ leach mining operations in addition to that of Heathgate Resources at the Beverley deposit.

All three of these reviews recommended that the government amend current Commonwealth legislation which prohibits the construction of nuclear power stations or fuel cycle facilities. The Prime Minister indicated in a media release on 28 April that the government would amend this legislation, set up a nuclear regulatory body and increase support for nuclear education. On the same day the opposition Australian Labor Party relaxed its previous restrictive policy on uranium mining to allow new uranium mines to proceed, but it still opposes nuclear power and is encouraging greater development of renewable energy sources.

The Prime Minister officially opened the new multi-purpose OPAL (Open Pool Australian Light Water) Research Reactor at the ANSTO Lucas Heights Research Laboratories near Sydney on 20 April 2007. The reactor cost over \$300M, uses 19%-enriched uranium silicide fuel, and reached criticality on 12 August 2006, with full power of 20MWt on 3 November 2006. It will have a high level of availability to produce neutron beams for advanced research and for commercial radioisotope production.

OPAL's predecessor, the HIFAR (High Flux Australian Reactor) 10MWt reactor, was officially closed by the Minister for Education, Science and Training, on 30 January 2007, after 47 years of full power operation. A ceremony was held on 1 June 2007 to place a plaque near the reactor by the Institution of Engineers Australia, to recognize it as a National Engineering Landmark. The reactor will be decommissioned to a green-field site over the next 20 years.

- [The International Nuclear Societies Council:](#)

INSC Chair [Andrew Kadak](#) reported that INSC 2007/2008 Officers are: Chair [Andrew Kadak](#), ANS ([kadak@earthlink.net](mailto:kadak@earthlink.net)), 1<sup>st</sup> Vice Chair [Gustavo Alonso](#), Mexican Nuclear Society ([galonso@nuclear.inin.mx](mailto:galonso@nuclear.inin.mx)), 2<sup>nd</sup> Vice Chair [Shunsuke Kondo](#), Atomic Energy Society of Japan ([shunsuke.kondo@cao.go.jp](mailto:shunsuke.kondo@cao.go.jp)), and Secretary/Treasurer [Franck Deconinck](#), European Nuclear Society, ([frank.deconinck@vub.ac.be](mailto:frank.deconinck@vub.ac.be)).

Chair [Andrew Kadak](#) reported also that the INSC will be focusing on improving its website, <http://INSC.dyndns.org>, initiating a blog for member societies and the general public, and providing summary reports on current issues.

- [Korea:](#)

[Mike Diekman](#), Secretary of the ANS International Committee, reported that during July 2007 approval of a new Agreement for Cooperation between the Korean Nuclear Society (KNS) and the ANS was confirmed by both parties, implementing an ANS Board action during the 2007 ANS Annual Meeting. The KNS had approved the proposed "standard" agreement in early 2007. Shown in the attached photos (left to right) are then [ANS President Harold F. McFarlane](#) and [Vice President Donald C. Hintz](#), conducting preliminary discussions with [KNS Vice President/President Elect Nam Zin Cho](#) regarding the proposed new agreement in Boston, prior to ANS Board approval.



- [Mexico:](#)

[Juan Luis François](#), Past President of the Sociedad Nuclear Mexicana, reported that the 15% power uprate and refurbishment of the Laguna Verde Nuclear Plant is in progress. The Laguna Verde Plant has two BWRs of 682 MWe each.

A new government development plan for energy considers diversifying the sources of energy for electricity production. Nuclear energy is part of this diversification. Mexico's infrastructure plan for electricity is considering the construction of new nuclear plants.

- [OECD/NEA:](#)

Point-of-Contact [Dr. Gail Marcus](#) reported that the OECD/NEA participates in ANS meetings and receives ANS publications. As Dr. Marcus recently completed her appointment at the NEA, she introduced NEA's [Evelyne Bertel](#), who will communicate to the IC the new liaison with the NEA.

- [Pacific Nuclear Council:](#)

[Paul Fehrenbach](#), Past President of the Pacific Nuclear Council, reported on an important Position Statement recently approved by the PNC:

**PNC POSITION STATEMENT ON THE INTERNATIONAL ATOMIC  
ENERGY AGENCY PROGRAM OF ACTION FOR CANCER THERAPY  
(PACT)**

During its 2007 June meeting in Boston, the Pacific Nuclear Council (PNC) approved the position statement (included below) supporting the International Atomic Energy Agency Program of Action for Cancer Therapy (PACT).

The PACT Program represents an important health benefit of nuclear technology of direct interest to many developing countries around the world, including PNC member countries.

The PNC continues to encourage its member organizations to identify ways in which they can assist the IAEA in advancing this needed program.

The PNC Statement reads as follows:

“Recognizing the impending crisis with respect to incidence of cancer and that by 2020 it is expected that cancer could kill over 10 million people per year if action is not taken,

Recognizing that the fastest growing incidence of cancer is among the population of developing countries,

Recognizing that many lives could be saved by a combination of screening and treatment,



Recognizing that nuclear technology in the form of nuclear radiation and oncology is an available and effective method of diagnosis and treatment for many types of cancer [Note: “Nuclear oncology” involves nuclear medicine techniques that employ unsealed or liquid radioactive materials in the diagnosis or treatment of cancer, whereas “Radiation oncology” involves treating cancer by radiotherapy through external beam or brachytherapy], and

Recognizing that there is currently an extreme shortage of radiation therapy availability within the developing countries,

The Pacific Nuclear Council (PNC) strongly supports the purpose of the IAEA Program of Action for Cancer Therapy (PACT) – to respond effectively to the crises posed by the increase in cancer in developing countries. PNC also strongly supports implementation of the PACT Program to make available the human, technical and regulatory resources needed to establish, improve, and expand radiotherapy treatment programs in the developing world within a broad, multidisciplinary cancer capacity building program. This program will complement and enhance treatment investment with support for cancer policy and advocacy, epidemiology, prevention, early detection/diagnosis, palliation and society building, and

The Pacific Nuclear Council urges our member organizations to also support PACT, <http://www.naweb.iaea.org/pact/>, by bringing the importance of this program to the attention of their members, and by urging their members to consider ways of assisting the IAEA in resourcing this program.”

- [Developments in the United Kingdom:](#)

[Philip Beeley](#), Point-of –Contact with the British Nuclear Energy Society, reported on:

- the recent publication in the UK of a white paper favorable to nuclear development
- an update on nuclear decommissioning and waste management, and
- developments to address improvements in nuclear education and training in the UK.

- [Candidates ANS IC for 2008 Elections to ANS Board of Directors:](#)

For the 2008 election to the Board of Directors, the International Committee was to suggest nominees from the Europe/Africa Region to the ANS Nominating Committee. At its meeting in Boston, the IC voted to recommend the following nominees:

- [Philip A. Beeley](#), of the U.K.
- [Dominique Grenèche](#), of France
- [Prof. Oum Keltoum Bouhelal](#), of Morocco

Attached are a few photos of International Committee members.



Group Photo at the IC Meeting

IC Secretary Mike Diekman & Chair France Brès-Tutino



Dr. Clarence Hardy making his presentation

O.K. Bouhelal, C. Hardy, J. Spitalnik at the IC meeting

IC Chair France Brès-Tutino with IC Vice-Chair Atambir Rao



## Young-Generation Corner

### IYNC2008!

IYNC2008, the Fifth International Youth Nuclear Congress, will be held September 20-26, 2008, in Interlaken, Switzerland, immediately following PHYSOR-2008.

## **Societies with Collaboration Agreements with ANS**

The following is a list of nuclear societies with collaboration agreements with the ANS, along with the corresponding website addresses. The Table contains also a few other entries of interest to ANS International Committee members.

| <b>Society</b>  | <b>Website or E-Mail Address</b>   |
|---|--|
| Asociación Argentina de Tecnología Nuclear            | -  |
| Associação Brasileira de Energia Nuclear              | <a href="http://www.aben.com.br">www.aben.com.br</a>                                       |
| Association des Ingénieurs en génie atomique du Maroc | -  |
| Atomic Energy Society of Japan                        | <a href="http://wwwsoc.nii.ac.jp/aesj/index-e.html">wwwsoc.nii.ac.jp/aesj/index-e.html</a> |
| Australian Nuclear Association                        | <a href="http://www.nuclearaustralia.org.au">www.nuclearaustralia.org.au</a>               |
| Bangladesh Nuclear Society                            | -  |
| British Nuclear Energy Society                        | <a href="http://www.bnes.com">www.bnes.com</a>   |
| Bulgarian Nuclear Society                             | <a href="http://www.bgns.bg">www.bgns.bg</a>   |
| Canadian Nuclear Society                              | <a href="http://www.cns-snc.ca">www.cns-snc.ca</a>   |
| Chinese Nuclear Society                               | <a href="http://www.ns.org.cn">www.ns.org.cn</a>   |
| Croatian Nuclear Society                              | <a href="http://hnd.zvne.fer.hr">hnd.zvne.fer.hr</a>                                       |
| Czech Nuclear Society                                 | <a href="http://www.csvts.cz/cns">www.csvts.cz/cns</a>                                     |
| European Nuclear Society                              | <a href="http://www.euronuclear.org">www.euronuclear.org</a>                               |
| Hungarian Nuclear Society                             | <a href="http://www.kfki.hu/~hnucsoc/hns.htm">www.kfki.hu/~hnucsoc/hns.htm</a>             |
| Indian Nuclear Society                                | <a href="http://www.indian-nuclear-society.org.in">www.indian-nuclear-society.org.in</a>   |
| Israel Nuclear Society                                | <a href="mailto:meins@tx.technion.ac.il">meins@tx.technion.ac.il</a>                       |
| Lithuanian Energy Institute                           | <a href="http://www.lei.lt">www.lei.lt</a>   |
| Malaysian Nuclear Society                             | <a href="http://www.mint.gov.my/mns">www.mint.gov.my/mns</a>                               |
| Nuclear Energy Society of Kazakhstan                  | <a href="http://www.nuclear.kz">www.nuclear.kz</a>   |
| Nuclear Energy Society of Russia                      | <a href="mailto:ns@kia.ru">ns@kia.ru</a>   |
| Nuclear Energy Society of Slovenia                    | <a href="http://www.drustvo-js.si">www.drustvo-js.si</a>                                   |
| Nuclear Energy Society of Thailand                    | <a href="http://www.nst.or.th">www.nst.or.th</a>   |
| OECD/Nuclear Energy Agency                            | <a href="http://www.nea.fr">www.nea.fr</a>   |
| Polish Nuclear Society                                | <a href="http://www.ptn.nuclear.pl">www.ptn.nuclear.pl</a>                                 |
| Romanian Nuclear Energy Association                   | <a href="http://www.aren.ro">www.aren.ro</a>   |
| Romanian Society for Radiological Protection          | <a href="http://www.ispb.ro/rsrp.htm">www.ispb.ro/rsrp.htm</a>                             |
| Slovak Nuclear Society                                | <a href="http://www.nuc.elf.stuba.sk">www.nuc.elf.stuba.sk</a>                             |
| Sociedad Nuclear Española (SNE)                       | <a href="http://www.sne.es">www.sne.es</a>   |
| Sociedad Nuclear Mexicana                             | <a href="http://www.sociedadnuclear.org.mx">www.sociedadnuclear.org.mx</a>                 |
| Ukrainian Nuclear Society                             | <a href="http://www.ukrns.odessa.net">www.ukrns.odessa.net</a>                             |
| Women in Nuclear – Global                             | <a href="http://www.win-global.org">www.win-global.org</a>                                 |
| <b>Affiliated National Societies</b>                  | <b>Website or E-Mail Address</b>   |
| Belgian Nuclear Society                               | <a href="http://www.bns-org.be">www.bns-org.be</a>   |

| <b>Associated Nuclear Organizations</b> | <b>Website or E-Mail Address</b>  |
|---|---|
| International Nuclear Societies Council | <a href="http://insc.dyndns.org">http://insc.dyndns.org</a>             |
| Pacific Nuclear Council                 | <a href="http://www.pacificnuclear.org">www.pacificnuclear.org</a>      |
| <b>Non-U.S. Local Sections</b>          | <b>Website or E-Mail Address</b>  |
| Austrian Section                        |   |
| French Section                          | <a href="http://local.ans.org/france/">http://local.ans.org/france/</a> |
| Italian Section                         |   |
| Japanese Section                        |   |
| Latin American Section                  | <a href="http://www.las-ans.org.br">www.las-ans.org.br</a>              |
| Korean Section                          |   |
| Swiss Section                           |   |
| Taiwan Section                          | <a href="mailto:u805301@taipower.com.tw">u805301@taipower.com.tw</a>    |

## Calendar of Events

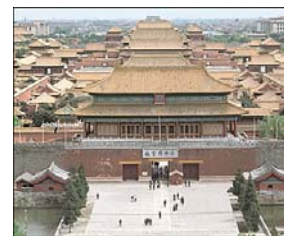
Some Upcoming International Conferences on Nuclear and Related Topics  
(Please give us information about your upcoming conferences, for inclusion in this space)

### 2007

- 15-17 October: International Conference on Radioactive Waste Disposal, “Geological Repositories: A Common Objective, A Variety of Paths”, Berne, Switzerland – <http://www.icgr2007.org>
- 15-19 October: International Symposium on Nuclear Energy “SIEN’07”, “Nuclear Power – A New Challenge”, Bucharest, Romania – <http://www.aren.ro>
- 21-26 October: PATRAM International Radioactive Materials Transportation Symposium, Miami, FL, USA – <http://www.patram.org>
- 30-31 October: “Emerging Nuclear Fuel Cycles”, London, UK; organized by IBC Global Conferences – <http://www.nuclearevents.com/fuelcycles>
- 30-31 October: Advanced Safety Assessment Methods for Nuclear Reactors, Daejeon, Republic of Korea
- 11-17 November: ANS/ENS International Winter Meeting, Washington, DC, USA – <http://www.ans.org/meetings>
- 13-16 November: Workshop on Advanced Safeguards Technology for the Future Nuclear Fuel Cycle, Tokai-mura, Ibaraki, Japan  
<http://www-pub.iaea.org/MTCD/Meetings/announcements.asp?confid=1073>
- 14-17 November: “Nuclear Power for the People” International Conference, Plovdiv, Bulgaria (organized by the Bulgarian Nuclear Society) – E-mail:

[anstoyan@inrne.bas.bg](mailto:anstoyan@inrne.bas.bg)

- 4-6 December: The International Workshop on Thorium Utilization for Sustainable Development of Nuclear Energy (TU2007), Beijing, China – <http://pe.ep.tsinghua.edu.cn/thoriumworkshop/>
- 16-19 December: The 2<sup>nd</sup> International Conference on Physics of Solid State Ionics, Tokyo Institute of Technology, Kanagawa, Japan <http://thermo.msl.titech.ac.jp/ICPSSI/index.html>



## 2008

- 10-14 February: PIME 2008, International Workshop on Nuclear Public Information in Practice, Prague, Czech Rep. – Organized by ENS – <http://www.euronuclear.org>
- 24-28 February: Waste Management 2008, HLW, TRU, LLW/ILW, Mixed, Hazardous Wastes & Environmental Management, Tucson, AZ, USA – <http://www.wmsym.org/html/news.cfm>
- 2-5 March: RRFM 2008, Research Reactor Fuel Management, Hamburg, Germany – Organized by ENS – <http://www.euronuclear.org>
- 9-12 March: 2nd Joint Emergency Preparedness and Response & Robotics and Remote Systems Topical Meeting (12th Robotics and Remote Systems for Hazardous Environments/10th Emergency Preparedness and Response), Albuquerque, NM, USA - <http://www.ans.org/meetings>
- 30 March – 4 April: 8<sup>th</sup> International Meeting on Facilities Operations – Safeguards Interface, Portland, OR, USA – <http://www.ans.org/meetings>
- 13-18 April: ICRS-11/RPSD-2008: 11<sup>th</sup> International Conference on Radiation Shielding/15<sup>th</sup> Topical Meeting of the ANS Radiation Protection and Shielding Division, Callaway Gardens, GA, USA - <http://icrs11.me.gatech.edu/>
- 13-18 April: 2nd-INCC, 2nd International Nuclear Chemistry Congress, Cancún, México, National University of Mexico, <http://depa.fquim.unam.mx/2ndincc>
- 4-9 May: Conference on Nuclear Engineering, Science and Technology: Training and Education (NESTet), Budapest, Hungary – [nest2008@euronuclear.org](mailto:nest2008@euronuclear.org)
- 1-4 June: 29<sup>th</sup> Annual Conference of the Canadian Nuclear Society and 32<sup>nd</sup> CNS/CNA Student Conference, Toronto, Ontario, Canada – <http://www.cns-snc.ca>
- 8-12 June: ANS Annual Meeting and ICAPP 2008, Anaheim, CA, USA – <http://www.ans.org/meetings>
- 3-6 August: Utility Working Conference, Amelia Island, FL, USA - <http://www.ans.org/meetings>

- 24-29 August: Seventh International Conference on Nuclear and Radiochemistry (NRC7), Budapest, Hungary, nrc7@mke.org.hu - Chair: Lazlo Wojnarovitz, Hungarian Academy of Sciences
- 7-11 September: International Topical Meeting on Probabilistic Safety Assessment and Analysis (PSA '08), Knoxville, TN, USA - <http://www.ans.org/meetings>
- 7-11 September: 2008 International High-Level Radioactive Waste Management (2008 IHLRW), Las Vegas, NV, USA - <http://www.ans.org/meetings>
- 14-18 September: PHYSOR-2008, ANS Reactor Physics Topical Meeting PHYSics Of Reactors 2008, “Nuclear Power – A Sustainable Resource”, Interlaken, Switzerland; organized by the Swiss Nuclear Society and the Paul Scherrer Institute – <http://www.physor2008.ch>
- 20-26 September: IYNC-2008, International Youth Nuclear Congress 2008, Interlaken, Switzerland (hosted by the Swiss Nuclear Society) – <http://www.iync.org/>
- 28 September – 2 October: 18<sup>th</sup> Topical Meeting on the Technology of Fusion Energy, San Francisco, CA, USA - <http://www.ans.org/meetings>
- 13-17 October: 16PBNC, 16<sup>th</sup> Pacific Basin Nuclear Conference, Aomori, Japan; organized by the Japan Atomic Industrial Forum (JAIF) and the Atomic Energy Society of Japan (AESJ) – <http://www.pbnc2008.org>
- 19-24 October: IRPA 12, 12th International Congress of the International Radiation Protection Association, “Strengthening Radiation Protection Worldwide”, Buenos Aires, Argentina – <http://www.irpa12.org.ar/>
- 9-13 November: ANS Winter Meeting, Reno, NV, USA – <http://www.ans.org/meetings>

## 2009

- 19-22 April: Advances in Nuclear Fuel Management IV, Hilton Head Island, SC, USA – <http://www.ans.org/meetings>
- Apr-May: ICAPP 2009, Tokyo, Japan
- 3-7 May: M&C Topical: 2009 International Conference on Advances in Mathematics, Computational Methods, and Reactor Physics, Saratoga Springs, NY, USA – <http://www.ans.org/meetings>
- 31 May - 3 June: 30<sup>th</sup> Annual Conference of the Canadian Nuclear Society and 33<sup>rd</sup> CNS/CNA Student Conference, Calgary, Alberta, Canada – <http://www.cns-snc.ca>
- 14-18 June: ANS Annual Meeting, Atlanta, GA, USA – <http://www.ans.org/meetings>
- 12-17 July: The Twelfth Quadrennial International Conference on Fracture (ICF12), Ottawa, Ontario, Canada - <http://www.icf12.com>

- 6-10 September: Global '09, Paris, France
- 15-19 November: ANS Winter Meeting and Nuclear Technology Expo, Washington, DC, USA – <http://www.ans.org/meetings>

## 2010

- 6-10 June: 31<sup>st</sup> Annual Conference of the Canadian Nuclear Society and 34<sup>th</sup> CNS/CNA Student Conference, likely in Montréal, Québec, Canada
- 13-17 June: ANS Annual Meeting, San Diego, CA, USA – <http://www.ans.org/meetings>
- 14-18 November: ANS Winter Meeting and Nuclear Technology Expo, New Orleans, LA, USA – <http://www.ans.org/meetings>

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