

Date/Time Program – Update October 23, 2013

Sunday 27/10/2013

17:00 - 20:00 *Reception at Hotel President Wilson – Distribution of participant kit including CERN access pass 47, quai Wilson, Geneva*

Monday 28/10/2013

07:30 - 08:45 *Registration for those who could not register at the reception on Sunday evening*
Opening Ceremony (Chair: Jean-Pierre Revol)

09:00 - 09:15 Welcome
09:15 - 09:40 Introduction of ThEC13 by representative of iTheC (Claude Haegi, Former President of Geneva Government)
09:40 - 10:20 A Future for Thorium Power? (Carlo Rubbia, IASS, Potsdam, Germany; GSSI, L'Aquila, Italy)
10:20 - 10:30 **Conference Photo**
10:30 - 11:00 **Coffee break**

Session 1

National & International Thorium Programmes (Chair: Anil Kakodkar)

11:00 - 11:30 Towards sustainable, secure and safe energy future: Leveraging opportunities with Thorium (Anil Kakodkar, India)
11:30 - 12:00 Thorium Energy R&D in China (Hongjie Xu, SINAP, China)
12:00 - 12:30 The Japanese Thorium Programme (Toshinobu Sasa, JAEA, Japan)
12:30 - 13:00 Thorium Fuel Cycle activities in IAEA (Uddharan Basak, IAEA)
13:00 - 13:30 Overview of European Experience with Thorium fuels (Didier Haas, Belgium)

13:30 - 15:00 **Lunch break**

Session 2

National & International Thorium Programme (Chair: Alex Mueller)

15:00 - 15:30 Overview of the Thorium Programme in India (Pallippattu Krishnan Vijayan, BARC, India)
15:30 - 16:00 The UK's strategy on thorium nuclear technologies (Robert Arnold, Department of Energy and Climate Change, London, UK)
16:00 - 16:30 The Feasibility and Desirability of Employing Thorium Fuel Cycle for Power Generation (Bal Raj Sehgal, Nuclear Power Safety, Sweden)
16:30 - 17:00 MYRRHA: A Flexible and Fast Spectrum Irradiation Facility (Hamid Ait Abderahim, SCK-CEN Mol, Belgium)

17:00 - 17:30 **Coffee break**

Session 3

Innovative Thorium-Reactor Concepts (Chair: Alex Mueller)

17:30 - 18:00 The Thorium Cycle: Past Achievements & Future Prospects (Dominique Grenèche, ex-CEA, France)
18:00 - 18:30 Thorium Molten Salts, Theory and Practice (Paul Madden, Queen's College, UK)
18:30 - 19:00 Flibe Energy LFTR Development Strategy (Kirk Sorensen, Flibe Energy, USA)

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Tuesday 29/10/2013

Session 4

Innovative Thorium-Reactor Concepts (Chair: Sylvie Delpech)

08:30 - 09:00 An industrial view on Thorium: Possibilities, Challenges and Paths forward (Luc Van Der Durpel, AREVA, France)
09:00 - 09:30 Global and Turkish perspectives of Thorium fuel for nuclear energy (Muammer Kaya, Osmangazi University, Turkey)

- 09:30 - 10:00 Opportunities and Challenges for Thorium in Commercial MSRs (Tony Donaldson and Joel Turner, Rolls-Royce, UK)
- 10:00 - 10:30 Current Czech R&D in Thorium MSR Technology and Future Directions (Jan Uhlir, Research Centre Rez, Czech Republic)

10:30 - 10:55 **Coffee break**

Session 5

Innovative Thorium-Reactor Concepts (Chair: Egil Lillestol)

- 10:55 - 11:00 **Conference Photo**
- 11:00 - 11:15 Welcome (Rolf Heuer, CERN DG, CERN, Geneva, Switzerland)
- 11:15 - 11:45 Thorium Nuclear Power and Non-Proliferation (Hans Blix, ex Director General of IAEA, Sweden)
- 11:45 - 12:15 The Road to Enablement for a Liquid-Fuel Reactor Fuelled by Thorium (John Durham, Weinberg Foundation, UK)
- 12:15 - 12:45 Thorium in LWRs: first results from the ongoing irradiation campaign in the Halden Reactor (Øystein Asphjell, SCATEC, Oslo, Norway)

12:45 - 14:30 **Lunch break**

Session 6

Thorium-Fuel Cycle & Transmutation (Chair: Yacine Kadi)

- 14:30 - 15:00 Utilization Potential of Thorium in CANDU Reactors and in Fusion-Fission (Hybrid) Reactors (Sümer Sahin, Atılım University, Turkey)
- 15:00 - 15:30 Introducing the Thorium Fuel Cycle (Daniel P. Mathers NNL, UK)
- 15:30 - 16:00 Recycling Challenges of thorium-based fuels (Piaray Kishen Wattal, BARC, India)
- 16:00 - 16:30 Aqueous and Pyro-reprocessing (Sylvie Delpech, CEA, France)
- 16:30 - 17:00 PSI Studies on Advanced fuel cycle options for Fast/Thermal MSR Utilizing Thorium (Jiri Krepel, PSI, Switzerland)

17:00 - 17:30 **Coffee break**

Session 7

Thorium-Fuel Cycle & Transmutation (Chair: Yacine Kadi)

- 17:30 - 18:00 Nuclear Data Development Related to Th-U Fuel Cycle in China (Haicheng Wu, CIAE, China)

19:30 - 23:30 **Conference banquet at Hotel President Wilson, Geneva**

**Conference banquet talk delivered by M. Pascal Couchepin
Former President of the Swiss Confederation**

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Wednesday 30/10/2013

Session 8

Thorium-Reactor Physics (Chair: Robert Cywinski)

- 08:30 - 09:00 Nuclear Data Development Related to Th-U Fuel Cycle in India (Srinivasan Ganesan, BARC, India)
- 09:00 - 09:30 Nuclear Data for the Thorium Fuel Cycle and Transmutation (Frank Gunsing, CEA, France)
- 09:30 - 10:00 Fast Reactor Physics (Konstantin Mikityuk, PSI, Switzerland)
- 10:00 - 10:30 Introduction to the Physics of Thorium Molten Salt Fast Reactors (Elsa Merle-Lucotte, IN2P3 CNRS, Grenoble, France)

10:30 - 11:00 **Coffee break**

Session 9

Accelerator-Driven Systems (Chair: Mike Seidel)

- 11:00 - 11:30 ADS Physics and Motivations (Jean-Pierre Revol, iTheC/CERN, Geneva, Switzerland)

- 11:30 - 12:00 Review of Accelerators for ADS (Alex C. Mueller, CNRS-IN2P3, France)
 12:00 - 12:30 Cyclotrons for ADS (Pierre Mandrillon, AIMA, France)
 12:30 - 13:00 Euratom MAX Program: the MYRRHA Accelerator Experiment (Frederic Bouly, LPSL Grenoble, France)
 13:00 - 13:30 Accelerator development for ADSR (Roger Barlow, Huddersfield University, UK)

13:30 - 14:45 **Lunch (shorter lunch time)**

Session 10

Accelerator-Driven Systems (Chair: Karel Samec)

- 14:45 - 15:05 Spallation Target Developments (Michael Wohlmuther, PSI, Switzerland)
 15:05 - 15:30 MEGAPIE: the world's first high-power liquid metal spallation neutron source (Christian Latgé, CEA, France)
 15:30 - 16:00 Thorium Target Design for Accelerator Driven-Molten Salt Reactors (Laszlo Sajo-Bohus, Universidad Simon Bolivar, Venezuela)
 16:00 - 16:30 Virginia ADS Consortium (Ganapati Myneni, Virginia Tech, USA)

17:00 - 17:30 **Coffee break**

Session 11

Accelerator-Driven Systems (Chair: Andreas Pautz)

- 17:30 - 18:00 KURRI Thorium-loaded ADS Experiment (Cheolho PYEON, Research Reactor Institute, Kyoto University, Japan)
 18:00 - 18:30 A Status and Prospect of Korea ADS (Jong-Seo Chai, Sungkyunkwan University, Seoul, Korea)

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Thursday 31/10/2013

Session 12

Accelerator-Driven Systems (Chair: Karel Samec)

- 08:30 - 09:00 The Troisk ADS Project (Stanislav F. Sidorkin, INR-Troisk, Russia)
 09:00 - 09:30 China ADS projects (Lei Yang, IMP CAS, China)
 09:30 - 10:00 Accelerator Driven Systems for thorium utilization in India (S.B. Degweker, BARC, India)
 10:00 - 10:30 The iTheC Strategy (Yacine Kadi, iTheC/CERN, Geneva, Switzerland)

10:30 - 11:00 **Coffee break**

Session 13

Round Table Discussion

- 11:00 - 13:00 **Introduction:** 7 times 5 minute presentations by session chairs:
 – National & International Thorium Programmes (Sessions 1 and 2; Anil Kakodkar, Alex Mueller)
 – Innovative Thorium Reactor Concepts (Sessions 3, 4, 5; Egil Lillestol, Sylvie Delpech)
 – Thorium-Fuel Cycle and Transmutation (Sessions 6 and 7)
 – Thorium-Reactor Physics (Session 8; Robert Cywinski)
 – Accelerator-Driven Systems: The accelerator (Session 9; Mike Seidel); The spallation target (Session 10; Yacine Kadi); National projects (Sessions 11 and 12; Andreas Pautz, Karel Samec)
 – **Discussion:** Critical vs subcritical systems for thorium - relative merits; next steps in thorium technology developments; international collaboration framework
 12:30 - 13:00 Conference summary and a look into the future of thorium technologies (Jean-Pierre Revol, iTheC, Geneva, Switzerland)

13:00 - 13:30 **Closing Ceremony (Egil Lillestol, Andreas Norlin)**

13:30 - 15:00 **Final lunch**

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