

4th Workshop on the Laser based Transmutator

University of Szeged, Szeged, Hungary

4-5th November, 2019

Program

Monday, 4th November

Venue: Conference Hall of the University Rector's Office

8:30 Welcome, registration

Morning session

Chair: Gabor Szabo (University of Szeged)

9:00 Greetings Laszlo Rovo, Rector (University of Szeged)
Laszlo Palkovics, Minister (Ministry for Innovation and Technology)

9.15 Introduction Toshiki Tajima (TAE Technologies)

9.45 Pillar 1 – Laser-based Neutron Source

9.45 – 10.10 *Pillar 1 introduction*

Gerard Mourou (IZEST, Ecole Polytechnique, CEA)

10.10 – 10.35 *Neutron generation with few cycle lasers - the Hungarian project*

Karoly Osvay (University of Szeged)

10.35 – 11.00 *Generation of multi-MeV protons and deuterons for neutron generation at higher repetition rates - first experimental results*

Georg Korn (ELI-Beamlines)

11.00 – 11.25 *First results at LOA on proton acceleration at 1kHz from thick targets in the relativistic regime*

Rodrigo Lopez-Martens (LOA)

11.25 – 11.45 *TBA*

Allen Weeks (ELI-DC)

11.50 – 12.00: Signature of a Project Opening Document by the representatives of IZEST Ecole Politechnique, University of Szeged, and TAE Technologies

12-13 Press conference

By invitation only

12-14.00 Lunch

Afternoon session

Chair: Karoly Osvay (University of Szeged)

14.00 Pillar 2 - Neutronics

- 14.00 – 14.20 *Introduction to Transmutation by external neutron sources and recent progress*
Sydney Gales (IPN CNRS)
- 14.20 – 14.45 *Laser –target interaction, neutron production and power flow*
Ales Necas (TAE Technologies)
- 14.45 – 15.10 *Study of Neutronic Transmutation of Transuranics in a Molten Salt*
Toshiki Tajima (TAE Technologies)
- 15.10 – 15.20: Pillar 2 discussion

15.20-15.30 Coffee break

15.30 Pillar 3 - Materials

- 15.30 – 16.00 *Carbon materials options for the molten salt reactor*
Thierry Massard (CEA)
- 16.00 – 16.20 *Preliminary research on carbon based materials testing*
Ales Necas, Toshiki Tajima (TAE Technologies)
- 16.20 – 16.30: Pillar 3 discussion

16.30 Pillar 4 - Chemistry

- 16.30 – 17.15 *Key chemical issues of the Molten Salt Reactor fuel salt selection*
Pavel Soucek (JRC Karlsruhe)
- 17.15 – 17.30 Pillar 4 discussion

19.00 Dinner

Tuesday, 5th November

Venue: Conference Hall at ELI-ALPS

- 8.30-9.00 Bus transfer to ELI-ALPS (from ART Hotel, Somogyi utca 16, Szeged)
- 9.00-10.30 Round table discussion**
- 10.30-11.00 Coffee break
- 11.00-12.30 ELI-ALPS site visit**
(please note that special registration is necessary – see the registration menu)
- 12.30 Lunch Box, leave to the airport