

Agenda First Tritium School

25th-28th March 2019

Main Lecture Hall, Jožef Stefan Institute, Ljubljana, Slovenia

Monday 25.03.2019

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| 8:30-9:50 | Registration | | |
| 9:50-10:00 | Welcome – prof. dr. Jadran Lenarčič - Director of JSI, dr. Christian Grisolia (CEA)- TRANSAT coordinator | | |
| Topic : Tritium management and detection | | Chair : Christian Grisolia CEA | |
| 10:00-10:50 | Different detection techniques for tritium inventory | Pascal Fichet (CEA, France) | 50 min (L1) |
| 10:50-11:40 | Reducing releases from tritium facilities | Walter Shmayda (Univ. Rochester, US) | 50 min (L2) |
| 11:40-12:30 | Tritium management in DEMO breeding blanket | Ion Cristescu (KIT, Germany) | 50 min (L3) |
| 12:30-14:45 | Lunch – Opening of Institute open days at 13:00 | | 135 min |
| Topic : Tritium migration, management | | Chair : Ion Cristescu KIT | |
| 14:45-15:35 | Tritium migration in breeding blankets in fusion technology | Carlos Moreno (CIEMAT, Spain) | 50 min (L4) |
| 15:35-16:10 | Lithium enrichment needs for fusion and fission applications | Katharina Battes (KIT, Germany) | 35 min (O1) |
| 16:10-16:30 | Coffee break | | 20 min |
| 16:30-17:05 | Feedback and perspectives issued from the OBT WG inter-laboratory exercises | Nicolas Baglan (CEA, France) | 35 min (O2) |
| 17:05-17:40 | Numerical and experimental investigation of yttrium metal as a getter material for the hydrogen hot trap of IFMIF/DONES | Sebastian Hendricks (CIEMAT, Spain) | 35 min (O3) |
| 17:40-18:10 | Discussion on tritium detection migration, management | | 30min |



Tuesday 26.3.2019

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| Topic : Tritium inventory and control | | Chair : Sabina Markelj JSI | |
| 8:30-9:20 | Hydrogen isotope retention and transport in neutron-irradiated tungsten | Yuji Hatano (Toyama University, Japan) | 50 min (L5) |
| 9:20-10:10 | Modelling of tritium inventory in plasma facing component in fusion devices | Klaus Schmid (IPP, Germany) | 50 min (L6) |
| 10:10-10:25 | Coffee break | | 15 min |
| 10:25-11:15 | Tritiated dust in tokamak | Christian Grisolia (CEA, France) | 50 min (L7) |
| 11:15-11:50 | Analysis of fuel retention in plasma-facing components. Experience from D-T operation of JET with carbon walls, current approach and preparation for next campaigns | Marek Rubel (KTH, Sweden) | 35 min (O4) |
| 11:50-14:45 | Lunch – Lecture – Institute open days at 13:30 | | 175 min |
| Topic : Tritium inventory and control | | Chair : Pascal Fichet CEA | |
| 14:45-15:20 | Measurement of tritium on W divertor tiles used in JET-ITER like wall campaigns using imaging plate and β -ray induced X-ray spectrometry | Sun Eui Lee (Toyama University, Japan) | 35 min (O5) |
| 15:20-15:45 | Activities at the university of Latvia for tritium measurements from functional and plasma facing materials | Gunta Kizane (University Latvia, Latvia) | 25 min (C1) |
| 15:45-16:05 | Coffee break | | 20 min |
| 16:05-16:40 | Permeation measurements using a getter layer and ion-beam based detection | Thomas Schwarz-Selinger (IPP, Germany) | 35 min (O6) |
| 16:40-17:15 | JSI Fusion for Energy (F4E) activities involving tritium measurements | Ivan Kodeli (JSI, Slovenia) | 35 min (O7) |
| 17:15-17:50 | Learnings from dismantling an obsolete tritium installation and decommissioning tritium laboratories | Kris Dylst (SCK CEN, Belgium) | 35 min (O8) |
| 17:50-18:20 | Discussion on Tritium inventory and control | | 30 min |



Wednesday 27.3.2019

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| Topic : Radiotoxicity/ecotoxicity | | Chair : Veronique Malard CEA | |
| 8:30-9:20 | Overview of tritium effect | Laurence Lebaron-Jacobs (CEA, France) | 50 min (L8) |
| 9:20-10:10 | Assessing ecotoxicological impact of tritium | Awadhesh Jha (Plymouth, UK) | 50 min (L9) |
| 10:10-10:30 | Coffee break | | 20 min |
| 10:30-11:20 | Epidemiological studies of tritium exposure | Richard Wakeford (University Manchester, UK) | 50 min (L10) |
| 11:20-11:55 | Tritiated and non tritiated ITER-like tungsten particles in lung-derived cells: An epigenotoxic study | Chiara Uboldi (CEA, France) | 35 min (O9) |
| 11:55-12:20 | Determination of radiological parameters (H-3) of drinking water in Poland in 2010-2015 | Agnieszka Fulara (CLOR, Poland) | 25 min (C2) |
| 12:20-14:20 | Lunch Break | | 120 min |
| Topic : Radiotoxicity/ecotoxicity | | Chair : Awadhesh Jha UK | |
| 14:20-15:10 | Biokinetics of low levels of tritium as HTO or OBT and its genotoxicity relative to gamma-radiation in a laboratory mouse model | Dmitry Klokov (CNL, Canada) | 50 min (L11) |
| Topic: Tritium dosimetry | | Chair : Awadhesh Jha UK | |
| 15:10-16:00 | Dosimetry of tritium in humans and non-human biota | Francois Paquet (IRSN, France) | 50 min (L12) |
| 16:00-16:20 | Coffee break | | 20 min |
| 16:20-17:10 | Tritium dosimetry: Modelling approaches at the sub-cellular scale | Giorgio Baiocco (UNIPV, Italy) | 50 min (L13) |
| 17:10-17:35 | Uncertainty of internal dose estimation from tritium exposure | Anna Pantya (Energia, Hungary) | 25 min (C3) |
| 17:35-18:05 | Discussion on Radiotoxicity/ecotoxicity/dosimetry | | 30 min |
| 20:00 - | Tritium School Dinner – Ljubljana city center – Restaurant Vodnikov hram https://goo.gl/maps/pLLC91MsFP62 | | |



Thursday, 28.3.2019

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| Topic : Tritium Waste | | Chair: Karine Liger CEA | |
| 8:30-9:20 | The effect of soft housekeeping waste composition on the accuracy of common tritiated waste measurement techniques | Robert Vale (UKAEA, UK) | 50 min (L14) |
| 9:20-10:10 | French strategy for solid tritiated waste management | Karine Liger (CEA, France) | 50 min (L15) |
| 10:10-10:25 | Coffee break | | 15 min |
| 10:25-11:15 | UK approach to tritiated waste processing and disposal | Dave Coombs (UKAEA, UK) | 50 min (L16) |
| 11:15-11:50 | H3AT: Tritium advanced technology | Damian Brennan (UKAEA, UK) | 35 min (L17) |
| 11:50-13:00 | Lunch - Lecture – Institute open days at 12:00 | | 70 min |
| 13:00-15:00 | Adjourn - lab tour Accelerator - optional | | |

L-Lecture 40 + 10 min; O-Oral 30+5 min ; C – Contributed 20+5 min

