The Workshop on Signatures of Man-Made Isotope Production (WOSMIP)

Workshop Program

Workshop Program - Monday

3.00 pm	Delegate Early Registration - Pullman Sydney Hyde Park
4.45 pm	Delegates meet in the Lobby of the Pullman Sydney Hyde Park for the short walk to the WOSMIP VII Welcome Event
5.00 pm	**WOSMIP VII Welcome Event sponsored by Provisional Technical Secretariat for the Comprehensive Nuclear-Test-Ban Treaty Organization (Pre-registration required)** Wood and Smoke Bar, 77 Stanley Street, Darlinghurst (http://woodandsmokebar.com.au/)
7.00 pm	**Welcome Event Concludes** Evening at Leisure

Workshop Program - Tuesday

8.00 am	**Delegate Registration – Level 1, Pullman Sydney Hyde Park**
	Session 1: Welcome and Workshop Overviews *Chair: Judah Friese, Pacific Northwest National Laboratory*
9.00 am	**Welcome to WOSMIP VII** *Adrian Paterson, CEO, Australian Nuclear Science and Technology Organisation*
9.10 am	**WOSMIP VII Kick-off** *Emmy Hoffmann, Australian Nuclear Science and Technology Organisation*
9.20 am	**The History of WOSMIP** *Paul Saey, International Atomic Energy Agency*
9.35 am	**WOSMIP VII Overview** *Ted Bowyer, Pacific Northwest National Laboratory*
9.50 am	**Morning Tea (Sponsored by INVAP, S.E.) and Group Photo**
10.35 am	**Updated Worldwide Background of CTBT Relevant Xenon Isotopes Based on IMS Data and Mobile Systems** *Tammy Taylor, Director, International Data Centre, Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization*
10.55 am	**Status of the Noble Gas capability at the CTBTO International Monitoring System** *Nikolaus Hermanspahn, Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization*
11.15 am	**How Can CTBTO NG Stations Be Impacted y Radioxenon Releases from an Isotope Production Facility** *Jonathan Baré, Preparatory Commission for the Comprehensive Nuclear-Test-Ban-Treaty Organization*
11.35 am	**An Overview of Global Atmospheric Radioxenon Background Simulation Studies** *Sylvia Generoso, Commissariat à l'Énergie Atomique et aux Énergies Alternatives*
11.55 am	**Investigation of the Radioxenon Background Trend at Noble Gas IMS Systems** *Christophe Gueibe, Belgian Nuclear Research Centre*
12.15 pm	**ATM Analysis Results on Radioxenons Detected in Japan by JAEA/NDC** *Yuichi Kijima, Japan Atomic Energy Agency*
12.35 pm	**Working Lunch and Introductions**
	Session 2: Background Sources *Chair: Martin Kalinowski, Preparatory Commission for the Comprehensive Nuclear-Test-Ban-Treaty Organization*

Tuesday, 4th December, 2018

2.00 pm	**Observations of Radioxenon Emissions from BWRs Compared to Stack Data** *Anders Ringbom, Totalförsvarets Forskningsinstitut*
2.20 pm	**Research Reactor Contributions to Radioxenon Atmospheric Inventories** *Steven Biegalski, Georgia Institute of Technology*
2.40 pm	**Physical Characterization of filters from German and Sweden radiological monitoring networks with Ruthenium-106 from 2017** *Ian Hoffman, Health Canada*
3.00 pm	**European Monitoring of ^{106}Ru Airborne Concentrations in Fall 2017** *Olivier Masson, Institut de Radioprotection et de Sûreté Nucléaire*
3.20 pm	**Afternoon Tea (Sponsored by INVAP, S.E.)**
3.50 pm	**Isotopic Ratios for Ru-103/Ru-106** *Jonathan Burnett, Pacific Northwest National Laboratory*
4:10 pm	**Using Machine Learning to Estimate Atmospheric Sources from the 2017 Ruthenium Detections across Europe** *Lee Glascoe, Lawrence Livermore National Laboratory*
4.30 pm	**Contribution of NPP Emissions to the Xe-133 Measurements at the Remote IMS Stations** *Jolanta Kusmierczyk-Michulec, Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization*
4.50 pm	**Roundtable Discussion**
5.50 pm	**Poster Session with End of Day Drinks** *Session Sponsor: Mirion Technologies (Canberra)*
7.30 pm	**Close of Day 1**

Workshop Program - Wednesday

8.30 am	**Delegate Registration – Tea and Coffee on Arrival**
	Session 3: Research to Reduce the Radioxenon Impact on the International Monitoring System *Chair: Johan Camps, Belgian Nuclear Research Centre*
9.00 am	**Welcome to Day 2** *Johan Camps, Belgian Nuclear Research Centre*
9.05 am	**Overview of the CRP** *Tom Hanlon, International Atomic Energy Agency*
9.25 am	**Sharing Experience on Mitigating Radioxenon Through Preparation of Design Studies for Three Civilian Nuclear Facilities** *Christophe Gueibe, Belgian Nuclear Research Centre*
9.45 am	**Development of Radioxenon Abatement System for the Fission Mo-99 Production Process** *Suseung Lee, Korea Atomic Energy Research Institute*
10.05 am	**Testing and Validation of a Radioxenon Trap System under the EU Council Decision VI Project: Results and Outcomes** *Dominique Moyaux, Institut National des Radioéléments*
10.25 am	**Verification and Validation of Atmospheric Transport Models for Nuclear Security with the UF Training Reactor** *Andreas Enqvist, University of Florida*
10.45 am	**Morning Tea (Sponsored by Scienta Sensor Systems)**
	Session 4: Current Mo-99 Production Overview: Recent and Planned Activities at Isotope Production Facilities *Chair: Paul Saey, International Atomic Energy Agency*
11.15 am	**Radioisotopes Used in Nuclear Pharmacy and Nuclear Medicine Practice: Perspectives from the United States** *Neil Petry, Duke University*
11.35 am	**Mo-99 Production Overview** *Tom Hanlon, International Atomic Energy Agency*
11.50 am	**CNEA Update** *Eduardo Carranza, Comisión Nacional de Energía Atómica*
12.05 pm	**Radioisotope Production Updates in Jordan Research and Training Reactor** *Ahmad Malkawi, Jordan Atomic Energy Commission*
12.20 pm	**Status and Challenges of the IRE LEU Conversion Program** *Dominique Moyaux, Institut National des Radioéléments*

Wednesday, 5th December, 2018

12.35 pm	**Update at Curium** *Luis Barbosa, Curium Pharma*
12.50 pm	**Working Lunch**
2.20 pm	**Update on Isotope Production Plans in Algeria** *Oualid Mahdaoui, Permanent Mission of Algeria to the United Nations and Other International Organisations in Vienna*
2.35 pm	**Xe-133 for Medicine and Industry** *Ira Goldman, Lantheus Medical Imaging*
2.55 pm	**Development of Fission Mo-99 Process and Facility for the New Research Reactor of Korea** *Suseung Lee, Korea Atomic Energy Research Institute*
3.10 pm	**Plans by NWMI** *Carolyn Haass, Northwest Medical Isotopes*
3.25 pm	**Afternoon Tea (Sponsored by Scienta Sensor Systems)**
3.55 pm	**Update at Ensterna** *Yudiutomo Imardjoko, Ensterna*
4.10 pm	**Radioisotope Mo-99 Production from LEU In INUKI** *Bambang Herutomo, Indonesia Nuclear Technology and Services*
4.25 pm	**Argonne National Laboratory Support for Fission Mo-99 Production** *Alex Brown, Argonne National Laboratory*
4.40 pm	**Roundtable Discussion**
5.45 pm	**Close of Day 2**
6.45 pm	Delegates to Meet in the Lobby of the Pullman Sydney Hyde Park for short walk to the Australian Museum
7.00 pm	**Workshop Dinner – Australian Museum (Pre-registration Required)** **Sponsored by ANSTO, ARPANSA, ASNO, GeoScience Australia, and the Pacific Northwest National Laboratory**

Workshop Program – Thursday

8.30 am	**Delegate Registration – Tea and Coffee on Arrival**
	Session 5: Stack Measurements *Chair: Ian Hoffman, Health Canada*
9.00 am	**Welcome and The STAX Project Overview** *Lori Metz, Pacific Northwest National Laboratory*
9.20 am	**Use of and Procedures for Sharing Stack Release Data Received by the Preparatory Commission for the Comprehensive Nuclear-Test-Ban-Treaty Organization** *Martin Kalinowski, Preparatory Commission for the Comprehensive Nuclear-Test-Ban-Treaty Organization*
9.40 am	**Xenon Release Source Term Estimation Based on Near-range Monitoring and Atmospheric Dispersion Modelling** *Johan Camps, Belgian Nuclear Research Centre*
10.00 am	**Radio-isotope Emissions from Canada's Chalk River Medical Isotope Production Facility** *Guy Jonkmans, Defence R&D Canada*
10.20 am	**How the UK National Data Centre utilises Stack monitoring data in support of the Comprehensive Nuclear Test-Ban Treaty** *Richard Britton, Atomic Weapons Establishment*
10.40 am	**Morning Tea (Sponsored by ISTI)**
11.10 am	**The STAX Project – Data Processing infrastructure** *Matthias Auer, Instrumental Software Technologies*
11.30 am	**CTBTO Platform for Handling Stack Release Data** *Abdelhakim Gheddou, Preparatory Commission for the Comprehensive Nuclear-Test-Ban-Treaty Organization*
11.50 am	**Investigating Noble Gas Emissions from Nuclear Facilities in Central Europe** *Andreas Bollhöfer, Bundesamt für Strahlenschutz*
12.10 pm	**Radioxenon and Radioargon Emission Signatures from Chalk River Laboratories** *Steven Biegalski, Georgia Institute of Technology*
12.30 noon	**Working Lunch – Discussion on the Use of Stack Data**
2.00 pm	**ANSTO Experience with the Stack Monitoring System** *Tom Loosz, Australian Nuclear Science and Technology Organisation*
2.20 pm	**Installation of STAX Monitoring System at IRE – Performances Evaluation** *Benöit Deconninck, Institut National des Radioéléments*
2.40 pm	**An Autonomous Spectroscopic Noble Gas Monitor with Continuous Operation and Analysis** *James Zickefoose, Mirion Technologies (Canberra)*

Thursday, 6th December, 2018

3.00 pm	**Tailored Designed Stack Monitor for the STAX Project** *Mariana Di Tada, INVAP S.E.*
3.20 pm	**Afternoon Tea (Sponsored by ISTI)**
3.50 pm	**Simulating Xe-133 Concentrations at IMS Noble-Gas-Stations Using Stack Emission Data from Medical Isotope Production Facilities** *Andy Delcloo, Royal Meteorological Institute Of Belgium*
4.10 pm	**IPF Gaseous Effluent Stack Monitor Calibration With Customized Detection Geometries and Tailored Gas-like Sources** *Mariana Di Tada, INVAP S.E.*
4.30 pm	**Design of the 3rd ATM-Challenge 2019** *Christian Maurer, Zentralanstalt für Meteorologie und Geodynamik, Austria*
4.50 pm	**Roundtable Discussion**
5.50 pm	**Announcement of the Wozzie Award**
6.10 pm	**Close of Day 3**

Workshop Program – Friday

8.00 am	**Delegate Registration – Tea and Coffee on Arrival**
	Session 6: ANSTO *Chair: Emmy Hoffmann, Australian Nuclear Science and Technology Organisation*
8.30 am	**Welcome to Day 4**
8.35 am	**ANSTO ANM Facility** *Michael Druce, Australian Nuclear Science and Technology Organisation*
9.05 am	**ANM Mo-99 Active Ventilation System** *Stuart Brink, Australian Nuclear Science and Technology Organisation*
9.25 am	**Workshop Wrap Up**
10.00 am	**Morning Tea (20 minutes)**
10.20 am	**Board Bus & depart Pullman Hotel by 10.30 am** *Please be sure to bring your passport & wear closed shoes.*
11:30 am	**Arrive at ANSTO**. Security check & bio-break (10 min)
11.40 am 11:50 am	**ANSTO overview presentation** (10 min) **ANSTO Tour – Part 1** (60 min) Split into groups for tour of ANSTO Nuclear Medicine facility: - Production & QC Labs - Production hot cells - STAX monitoring system
1:00 pm	**Working Lunch and Quiz** (60 min)
2:00 pm	**ANSTO Tour – Part 2** (30 min) - OPAL multi-purpose reactor - Australian Centre for Neutron Scattering
2.30 pm	**ANSTO Tour – Part 3 (Optional)** *Delegates not attending Part 3 will depart on a bus for return to Pullman Sydney Hyde Park at 2:30 pm* *Delegates wishing to attend the extended tour will depart (additional $28 AUD cost for this tour. Sunscreen and hat recommended).*
5.00 pm	**Delegates depart for return to Pullman Sydney Hyde Park**
6.30 pm	**Arrive at Pullman Sydney Hyde Park**

Workshop Program – Posters

Jonathan Baré	*Impact of CRL shutdown on CTBTO North-American noble gas stations*
Steven Bell	*Radioactive Gas Metrology at NPL*
Pierre Bourgouin	*Evaluating different alternative sites for IMS stations*
Jagoda Crawford	*Radon-222 detection in outdoor air and applications in atmospheric transport and mixing studies*
Christophe Gueibe	*Physical experiments and modelling work on xenon capture*
Bambang Herutomo	*INUKI experience with stack monitoring*
Ian Hoffman	*Medical Isotope Production and Research Reactors and the Global Radioxenon Background*
Miroslav Hyza	*Radiological Monitoring of the Atmosphere Using an Autonomous Aerosol Sampler*
Martin Kalinowski	*What do we need to know to access how radioxenon emissions from nuclear power plants interfere with nuclear explosion monitoring?*
Stanislav Kocvara	*NGM-2000 Spectrometric Noble Gas Monitor with HPGe Detector*
Jolanta Kusmierczyk-Michulec	*Influence of emission time resolution on the Atmospheric Transport Modelling (ATM) results*
Olivier Masson	*European-scale detection of I-131 in early 2017*
Lori Metz	*Emissions Mitigation R&D for the US Government*
Blake Orr	*Summary of East Asia Regional National Data Centre Workshop 2018*
Yves Pelletier	*The Judge: A Statistical Validation Tool for Atmospheric Transport Modelling*
Gary Perkins	*Automated Gas Extraction System for the handling of radioactive waste gases from routine carbon-11 production*
Eduardo Quintana	*Chimney Emission Monitoring of RA-3 Research Reactor at EZEIZA Atomic Center*
Kristin Shannon (Presented by Lori Metz)	*Progress Toward an LEU Fuel Cycle for Domestic Radioisotope Production from Fission Fragments*
Pouneh Tayyebi (Presented by Martin Kalinowski)	*Can radioxenon emissions from nuclear research reactors interfere with nuclear explosion monitoring?*
Momtaz Waheed	*Current Status of Medical Radioisotope Production in Bangladesh*
Matt Watrous	*Radioactive Test Materials*
Kassoum Yamba	*On the usability of event zero time determinations using radioxenon isotopic activity ratios given the real atmospheric background observations*