




WOSMIP
Workshop on Signatures of
Man-Made Isotope Production

InterContinental Hotel | Santiago, Chile | December 4-7, 2023
Workshop Program



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Monday, December 04 | Day 1

TIME	SESSION TITLE SPEAKERS
10:00 a.m. – 12:00 p.m.	Conference Registration InterContinental Santiago Las Americas Foyer Level 1
1:00 p.m. – 5:00 p.m.	Facility Tour CCHEN La Reina Facility
1:00 p.m.	Gather in InterContinental Hotel lobby to depart
1:30 p.m.	Load Buses to depart for CCHEN La Reina Facility
2:00 p.m.	Arrive and processing at CCHEN
2:20 p.m. – 2:30 p.m.	Welcome by the Executive Director of CCHEN, Luis Huerta CCHEN Library
2:35 p.m. – 2:45 p.m.	Group Photo Events Patio Esplanade
2:45 p.m. – 3:00 p.m.	Designation of groups to access the facilities
3:00 p.m. – 4:30 p.m.	Facility Visits: <ul style="list-style-type: none"> ▪ RECH-1 Research Reactor ▪ Nuclear Physics and Neutron Spectroscopy Center (CEFNEN) ▪ Cyclotron Once each group finishes the tour, they will join the networking session in the Library.
3:00 p.m. – 4:45 p.m.	Workshop Networking Coffee Break Digital Poster Session CCHEN Library <ul style="list-style-type: none"> ▪ Cytogenetic Dosimetry CCHEN ▪ Department of Shared Technological Resources CCHEN ▪ Radionuclide Dynamics in Agriculture CCHEN ▪ National Radiological Monitoring Stations CCHEN ▪ International Monitoring System Stations for Radionuclides CCHEN/OTPCE ▪ Source Term Analysis of Xenon (STAX) INVAP
4:45 p.m. – 5:00 p.m.	Conclusion of event and bus departure to InterContinental Hotel
7:00 – 9:00 p.m.	Workshop Networking Happy Hour Pullman Santiago El Bosque Hosted by ISTI



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Tuesday, December 05 | Day 2

TIME	SESSION TITLE SPEAKERS
8:30 a.m.	Conference Registration InterContinental Santiago Norte América Ballroom
9:00 a.m. – 11:00 a.m.	Welcome and Workshop Overview Session Chair: Ted Bowyer (PNNL)
9:00 a.m.	Welcome to WOSMIP IX Opening Remarks
9:30 a.m.	WOSMIP IX Overview Ted Bowyer PNNL
9:45 a.m.	Evolution of WOSMIP: A Journey Through Time Paul Saey TU Wien
10:00 a.m.	The International Monitoring System Radionuclide Network Richard Britton CTBTO
10:30 a.m.	<i>Workshop Networking Coffee Break / Group Photo</i>
11:00 a.m. – 3:00 p.m.	SESSION I: Backgrounds Session Chair: Lori Metz (PNNL)
11:00 a.m.	The Problems of Backgrounds at the CTBTO Prepcom Martin Kalinowski CTBTO Virtual
11:30 a.m.	XENAH: Xenon and Environmental Nuclide Analysis at Hartlepool Matthew Goodwin AWE <i>Presented by Ted Bowyer, PNNL</i>
12:00 p.m.	Evaluation of the Phase II test of Xenon International on Mount Schauinsland – Identifying detections of interest Sofia Brander BfS
12:25 p.m.	Xenon Background Measurements and Analysis in Nigeria in the Equatorial Region of Africa Abdulmajeed Ibrahim Nigerian Nuclear Regulatory Authority
12:50 p.m.	<i>Working Lunch</i>
2:00 p.m. – 3:00 p.m.	WOS-list Session Chair: Ian Cameron (PNNL)
2:00 p.m.	WOS-list: A repository for xenon source term data Charlie Doll PNNL
2:15 p.m.	Roundtable WOS-list Facilitator: Ian Cameron PNNL
3:00 p.m. – 3:30 p.m.	<i>Workshop Networking Coffee Break</i>



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Tuesday, December 05 | Day 2, cont.

TIME	SESSION TITLE SPEAKERS
3:30 p.m. – 4:15 p.m.	POSTER SESSION Session Chair: Tami Weber (PNNL)
3:30 p.m. – 3:35 p.m.	Poster Session Introduction Stanislav Kočvara VF Nuclear
3:35 p.m. – 4:15 p.m.	<p>Poster Session Flash Talks</p> <p>Posters:</p> <ol style="list-style-type: none"> 1. <i>Andrés Cárdenas Ceballos: Title TBD</i> 2. <i>Eduardo Carlos Carranza, Eduardo Nassif, Mauro Nuñez, Román Pino, Andrés Zapata, and Ricardo Sagarzazu: The EZEIZA MIPF STAX</i> 3. <i>Benoît Deconninck: Mo-99 production using a high-power accelerator - The story of a challenging project</i> 4. <i>Charlie Doll: STAX-2 investigation into the impact of nuclear power plants on nuclear explosion monitoring</i> 5. <i>Michael Foxe: Utilizing the Man-Made Isotope Transport and IMS Data to Evaluate Climate Change Indicators</i> 6. <i>Lee Glascoe: Improving Sensor Siting for Plume Detectability with Multiscale Atmospheric Transport Modeling</i> 7. <i>Anas Hamdouchi: STAX system at IRE</i> 8. <i>Claus Johannsen: Recovery and performance of the Noble Gas system at CLX19, Easter Island, during and after the COVID-19 pandemic lock-down</i> 9. <i>Martin Kalinowski: Exploring the use of radioxenon to radioiodine isotopic ratios as additional screening method regarding possible CTBT-relevant events</i> 10. <i>Joshua Kunkle: Evaluation of methodologies for forming a global view of radionuclide release events and their application to the data fusion pipeline at the CTBTO</i> 11. <i>Jolanta Kusmierczyk-Michulec: The interhemispheric transport of anthropogenic emissions: additional challenge for source localization</i> 12. <i>Boxue Liu: Impacts on Characterization of CTBT-relevant Nuclear Events using Isotopic Activity Ratios caused by the Radioxenon Background at IMS Stations</i> 13. <i>Ahmad Malkawi: Radioisotope Production in Jordan Research reactor update</i> 14. <i>Christian Maurer: Final results of the 1st Nuclear Explosion Signal Screening Open Inter-Comparison Exercise 2021</i> 15. <i>Sri Sundari Retnoasih: Estimation of Radioxenon Release Trajectory Plots Based on The Recent Development of the Molten Salt Reactor</i> 16. <i>Antoinetta Rizzo: Title TBD</i> 17. <i>Troy Robinson: An Analysis of Potential Sources of Non-fission Product Xenon Radionuclides</i> 18. <i>Cari Seifert: Lessons learned from an atmospheric radiotracer experiment</i> 19. <i>Ana Valdés Durán: Potential studies of radioactive elements in soils and sediments, Chile</i> 20. <i>Jim Zickenfoose: Predictive Maintenance of HPGe-based Systems with Lab-Pulse Services</i>



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Tuesday, December 05 | Day 2, cont.

TIME	SESSION TITLE SPEAKERS
5:15 p.m. – 9:30 p.m.	EVENING EVENTS
5:15 p.m.	Gather in InterContinental Hotel lobby to depart
5:30 p.m.	Load Buses to depart for Club de Campo de Oficiales Quinchamali Fach
6:00 p.m. – 7:30 p.m.	WOSMIP Poster Session Happy Hour Club de Campo de Oficiales Quinchamali Fach Hosted by VF Nuclear
7:30 p.m. – 9:30 p.m.	Offsite Dinner Club de Campo de Oficiales Quinchamali Fach Hosted by CCHEN



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Wednesday, December 06 | Day 3

TIME	SESSION TITLE SPEAKERS
9:00 a.m. – 1:50 p.m.	SESSION II: Emissions & Sources Session Chair: Paul Saey (TU Wien)
9:00 a.m.	Review of Xe-135 observations, specifically in Japan, and possible sources that might explain high Xe-135/Xe-133 ratios Martin Kalinowski CTBTO Virtual
9:25 a.m.	Retention of molten salt reactor off-gas Clayton Hudson University of Texas, Austin Virtual
9:50 a.m.	<i>Workshop Networking Coffee Break</i>
10:35 a.m.	XENAH: Current status, results and challenges faced Andrew Petts EDF Energy
11:00 a.m.	Possible impact on IMS observations of radioiodine and radioxenon emission produced by spontaneous fission of Cm-244 and Pu-240 and released during spent nuclear fuel (SNF) reprocessing plants Tatiana Boitsova CTBTO
11:25 a.m.	IAEA Cooperative Research Program (CRP) Lori Metz PNNL
11:50 a.m.	Radiation resistance and thermal durability of silver-exchanged zeolites for trapping radioxenon Christophe Gueibe SK CEN
12:10 p.m.	<i>Working Lunch</i>
1:50 p.m. – 4:00 p.m.	SESSION III: Stack Monitoring Session Chair: Christopher Celis (CCHEN)
1:50 p.m.	STAX Judah Friese PNNL
2:15 p.m.	Update on the STAX data viewing software Mattias Auer ISTI
2:40 p.m.	Interacting with STAX – Data access and processing Mihaela Rizescu ISTI
3:05 p.m.	<i>Workshop Networking Coffee Break</i>
3:35 p.m.	Stack Monitoring Q&A Ted Bowyer PNNL
4:00 p.m. – 4:25 p.m.	SESSION IV: Production Session Chair: Judah Friese (PNNL)
4:00 p.m.	NNSA Support to Mo-99 Production Max Postman NA-23 Virtual
4:25 p.m.	Woster Award Session Chair: Ted Bowyer (PNNL)
4:40 p.m.	Session Concludes
7:00 p.m.	Offsite Dinner Divertimento Chileno Hosted by CTBTO



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Thursday, December 07 | Day 4

TIME	TITLE SPEAKER ORGANIZATION
9:00 a.m. – 12:05 p.m.	SESSION V: Production, <i>cont.</i> Session Chair: Judah Friese (PNNL)
9:00 a.m.	Curium Briefing on Mo-99 & Xe-133 Production Roy Brown Curium
9:25 a.m.	Full conversion of IRE Mo-99 production process to LEU : Impact on radio-xenon emissions Frédéric Brabant IRE
9:50 a.m.	Project of a new Fission Radioisotope Production Plant in Argentina and the planned noble gas emission mitigation system Daniel Cestau CNEA
10:15 a.m.	IAEA Activities in support of Mo-99 Production with LEU John Dewes IAEA
10:35 a.m.	<i>Workshop Networking Coffee Break</i>
11:05 a.m.	Environmental radiation monitoring on the territory and vicinity of the National Centre for Nuclear Research, Poland Grzegorz Krzyszczoszek & Jakub Ośko NCBJ
11:35 a.m.	Environmental radiation monitoring on the territory and vicinity of the National Centre for Nuclear Research, Poland Grzegorz Krzyszczoszek & Jakub Ośko NCBJ
12:05 p.m. – 4:15 p.m.	SESSION VI: ATM & Events Session Chair: Christian Maurer (GeoSphere Austria)
12:05 p.m.	Using a Monte Carlo Approach to Determine the Radioxenon Probability Density Function at an IMS Station for Background Estimation Yuichi Kijima CTBTO Virtual
12:30 p.m.	Investigation of the joint influences of background RN sources and topography on plume characteristics at monitoring sites using the Weather Research and Forecasting model with inline chemistry (WRF-Chem) Alex Jonko LLNL
12:55 p.m.	<i>Working Lunch</i>
2:05 p.m.	Top-down estimates of daily global emissions of anthropogenic radioxenon during 2013-2022 Don Lucas LLNL
2:30 p.m.	A Software Tool for Exploring Scientific Methods to Estimate the Radioxenon Background with more Confidence Robin Schoemaker CTBTO
2:55 p.m.	The Swedish Noble Gas Array – experience and future Elmgren FOI
3:20 p.m.	Updating Algorithms of Isotopic Activity Ratios and the associated Thresholds for screening CTBT-relevant Nuclear Events Boxue Liu CTBTO
3:45 p.m.	<i>Workshop Networking Coffee Break</i>
4:15 p.m. – 4:35 p.m.	CONCLUSION & SUMMARY Session Chair: Michael Foxe (PNNL)
4:35 p.m.	The Wozzie Ted Bowyer PNNL
5:00 p.m.	Conference Concludes