



WOS-list

A repository for xenon source term data

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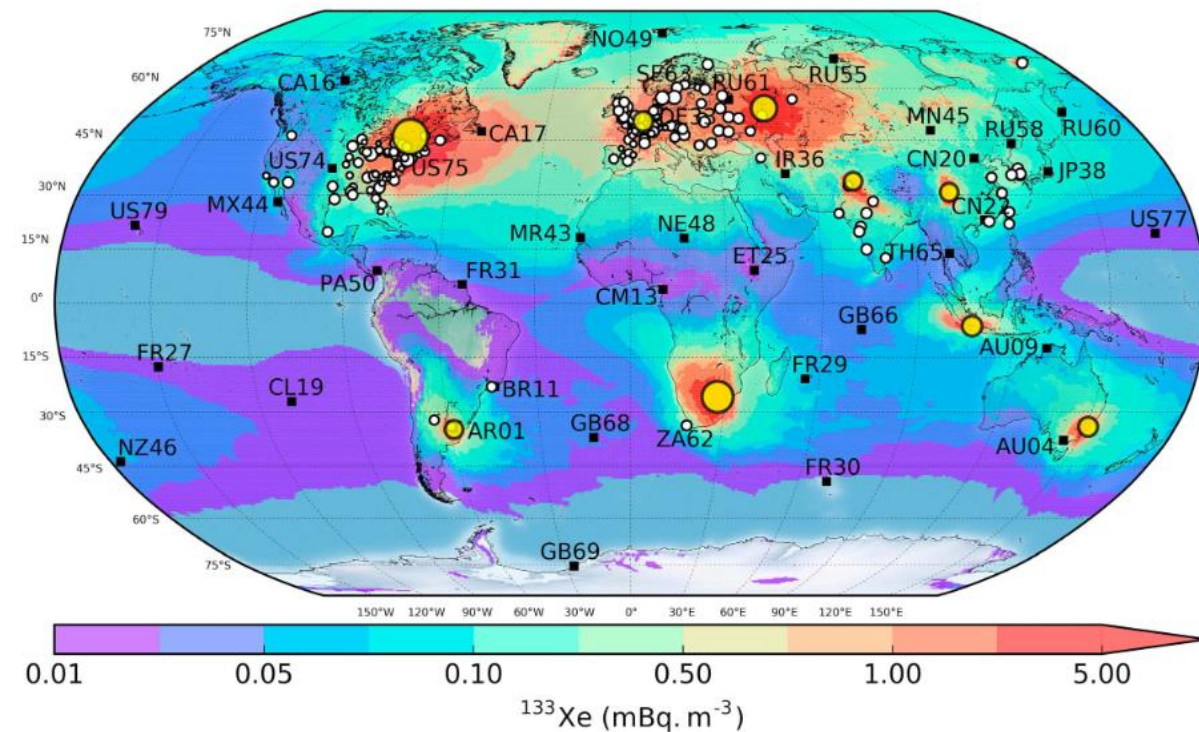


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Introduction

- Radioxenon backgrounds are a challenge for nuclear explosion monitoring
- Atmospheric Transport Modeling (ATM) is being investigated as a tool to discriminate industrial radioxenon global backgrounds from detections at IMS stations
- Therefore, quality data for input into ATM calculations is needed to better study and improve techniques for background modeling

Average backgrounds of radioactive xenon in the atmosphere



From Generoso, 2017

What is WOS-list

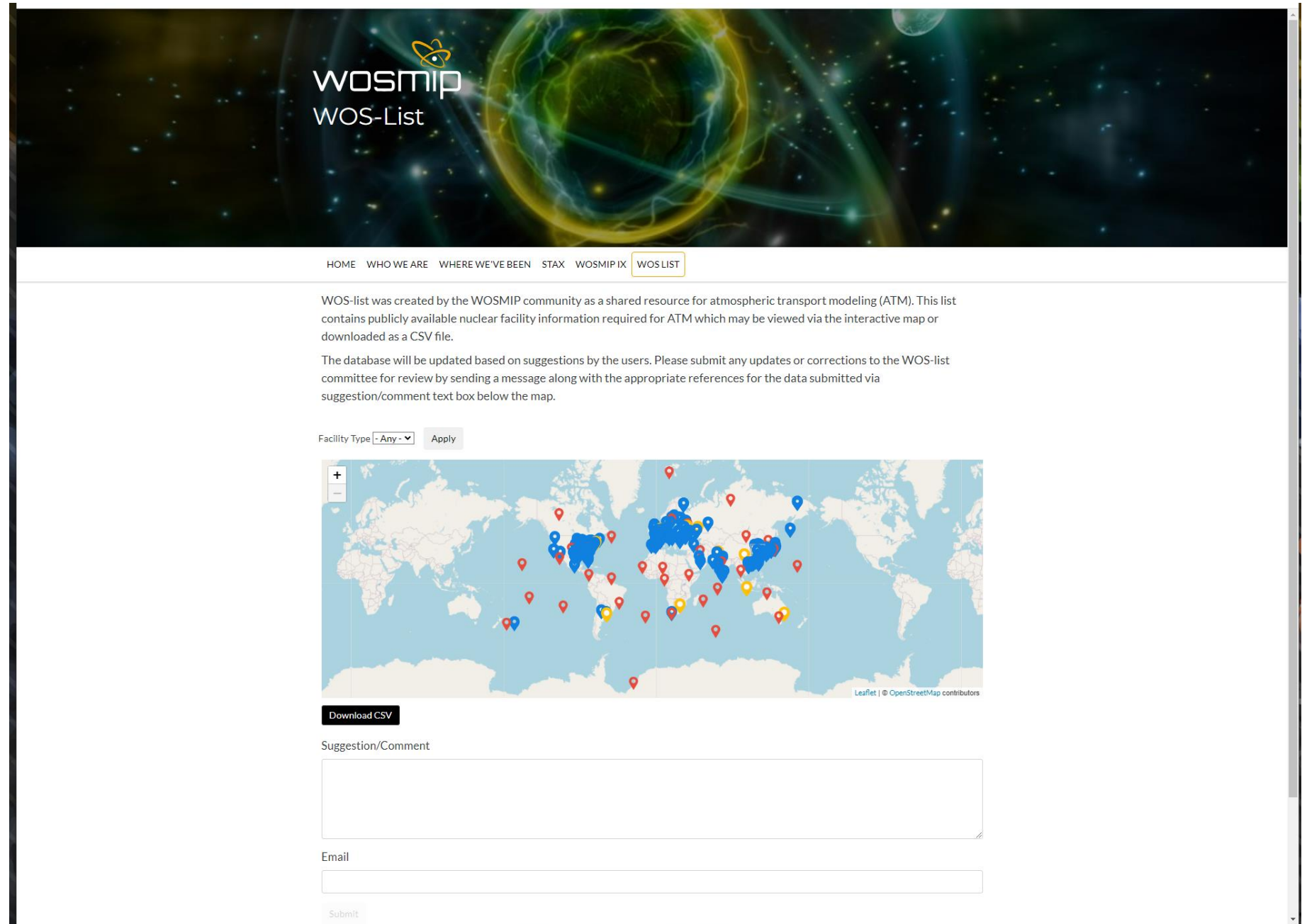
- Idea for WOS-list stems from discussions at previous WOSMIPs
- There is a need for radioxenon source term data that is accessible by NDCs for ATM calculations
- **The Idea** - a webpage hosted database for source term information of radioxenon releases from industrial facilities
- Information and other data required for ATM calculations was created
- The data will include
 - Medical Isotope Production and Hospitals
 - Nuclear Power Reactors
 - Annual radioxenon release rates for each facility

WOS-list Overview

- The WOS-list webpage has information documented in a spreadsheet
 - MIP & Hospital
 - NPP
 - IMS
 - Others may be added
- Webpage will be accessible from the WOSMIP website
- The data is downloadable
- Included information is updatable by submission of suggestions
- Interactive map allows for visualization of information

Interactive Map (Landing page)

- Map includes locations of NPP, MIP, and IMS
- Selectable views (NPP, MIP, IMS)
- Zoomable
- Can hover over locations for more information (pulled from spreadsheets)



The screenshot shows the landing page for the WOSMIP WOS-List interactive map. The page features a dark header with the WOSMIP logo and navigation links: HOME, WHO WE ARE, WHERE WE'VE BEEN, STAX, WOSMIP IX, and WOS LIST. Below the header, there is a paragraph of text explaining the purpose of the WOS-list and how it is updated. A dropdown menu for 'Facility Type' is set to '-Any-' with an 'Apply' button. The main content is a world map with numerous colored pins (red, blue, yellow) indicating the locations of nuclear facilities. Below the map, there is a 'Download CSV' button, a 'Suggestion/Comment' text area, an 'Email' input field, and a 'Submit' button.

How to update data

- Goal – Prevent obsolescence
- Possible edits
 - Change values reported
 - Add columns as new data types are required
 - Add or delete facilities
 - Other?
- Suggestion submittal
 - Include reference if available
 - Sent via email to review committee chair
 - Committee will review suggestions and update periodically
- Committee members
 - Chosen from the WOSMIP community to approve and implement updates

Summary

- WOS-list is a webpage hosted database for radioxenon release source information and other data required for ATM calculations was created
 - Updates and edits submitted by the WOSMIP community
- The included data will include
 - MIP & Hospital
 - NPP
 - IMS
 - **Other suggestions?**
- Roundtable discussion following session
 - What to include to make this a great resource for the community
 - Please bring your ideas and suggestions

Roundtable discussion ideas

- 1) What data is needed by the explosion monitoring community?
 - a. Is averaged yearly data sufficient?
 - b. If not, what time resolution would suffice?
 - c. Historical yearly data from continuously operated facility?
- 2) What data is available currently? Examples include...
 - a. Journals
 - b. Public release from regulators
 - c. Voluntary contributions
- 3) What concerns are there with sharing data?
- 4) Planned next steps

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Thank you

