

# SG45 report – WPEC 33

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# Agenda

1. SG45 input file collection
2. SG45 software tools
3. SG45 deliverables
4. Beyond SG45 ...

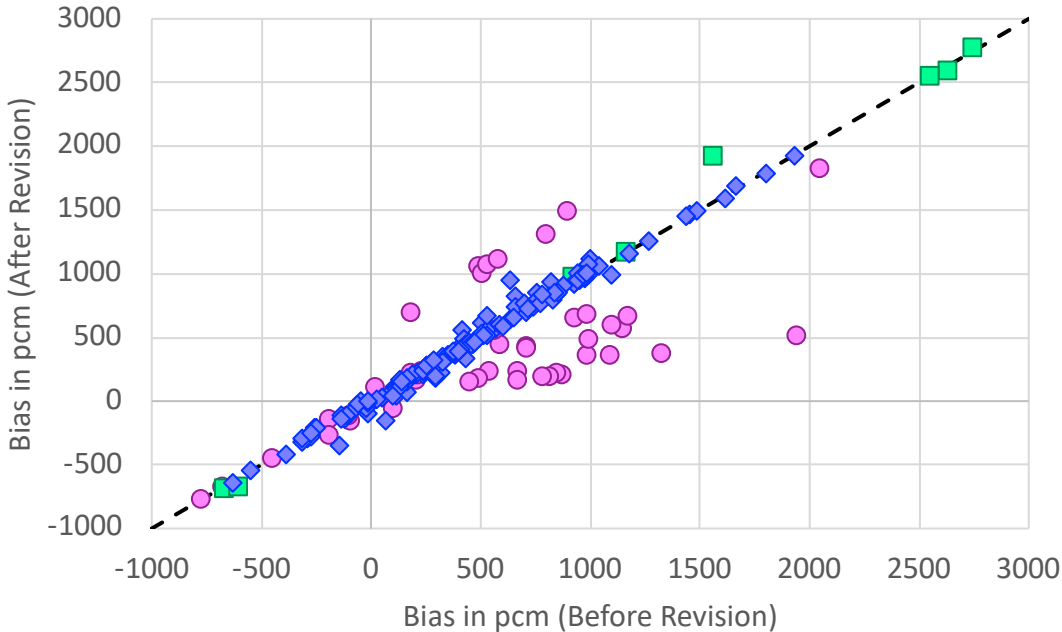


# SG45 input file collection

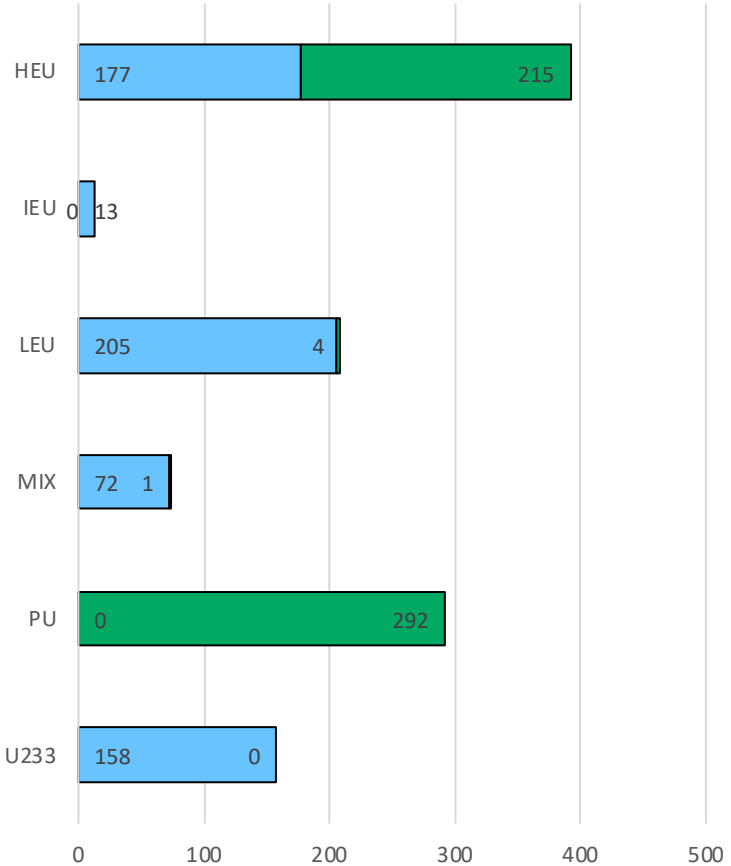
- The OECD/NEA SG45 gitlab site has received 3 contributions
  - No change here since the last WPEC meeting
  - IAEA Nuclear Data Section : MCNP input decks
    - Skip Kahler suite and internally produced files
  - NRG (Steven Van der Marck) : MCNP input decks
    - ICSBEP appendices and internally produced files
  - JAEA : MVP input decks
- ORNL is working on releasing the VALID suite input files
  - QA controlled input files for SCALE
- LANL is working on releasing the LABS input files
  - ~500 QA controlled and revised input files for MCNP
  - Based on the Skip Kahler suite (see above)



# SG45 input file collection



● Pu Metal    ■ PuO2    ◆ Pu(NO3)4    - - - No Change



■ Incomplete    ■ Complete



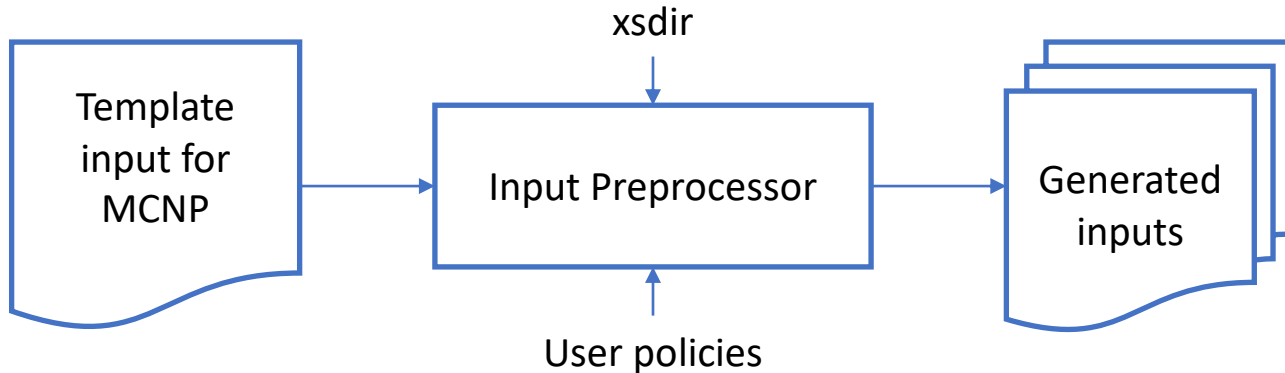
# SG45 input file collection

- The LABS repository now has over 500 input files
  - Still the old MCNP input files using ENDF/B-VII.1 nuclear data files
  - The associated material balance tables will be used to generate the template files
- Additional verification of the input files using the input parser
  - Removing unused materials
  - Adding missing 'e' in numbers using scientific notation
  - Some “interesting” typos in card names: e.g. MCNP accepts `m2t` instead of `mt2`
- Code to compare the material balance tables to the MCNP input files
- The final template files will be produced once these verifications are complete
  - These files and the material balance tables will be released to SG45



# SG45 software tools

- Maintain a single set of “template” input files for each code
  - Follow the benchmark description as close as possible
  - Devoid of specific library information or other organisational “choices”
- Generate the input files at the request of the user



- For the final tool, some assembly is still required
  - This tool will be released as open source in the future



# SG45 deliverables

- Report on input file QA
  - The QA overview document has been written down and circulated within the group
  - We're collecting examples of local QA procedures
    - IRSN and LANL are available
    - ORNL and LLNL will provide a contribution
- Report on the input files
  - Each contributor (IAEA, NRG, JAEA, LANL) will provide a description of their inputs
- LABS: QA verified template MCNP input files
  - LANL will release these files once they are ready
  - The associated tools will take some more time



# Beyond SG45 ...

- Continue to grow and improve our repository of input files
  - Review and revise our remaining MCNP input files
  - Continued intercomparison (the LLNL/ORNL/LANL/IRSN intercomparison exercise)
  - Expand the repository to other calculation codes if there is interest
- Associate with benchmark projects
  - ICSBEP, IRPHEP, SINBAD
  - Nice to have for this: a command line interface to the underlying experimental data

