

SCALE Utilities for Nuclear Data Interrogation, Comparison, and Visualization

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Agenda

- in Fulcrum
 - Plot continuous-energy (CE) cross sections over multi-group (MG) cross sections MG
 - (H in H₂O, ²³⁵U, and anything else participants ask for)
 - Look at table of MG cross sections
 - Plot MG scattering matrices
 - Covariance library (show diagonal) and pretty plots (correlation)
 - Compare ENDF releases (cross sections and covariances)

Agenda

- OBIWAN (**O**RIGEN **B**inary **I**nterrogation **W**ithout **A** **S**CALE **i**Nput)
 - Libraries (F33 viewing [transition matrix library])
 - Viewing
 - Patching
 - Diff-ing
 - Converting
 - State sets (F71 viewing)
 - Viewing
 - Diff-ing

Agenda

- Comparison tools
 - Covariance (same group structure with different ENDF releases)
 - AmpxDiffer
 - run a pincell with varied composition to look at the shielded library that comes out
 - Paleale, RADE, Filter (master vs working)
- Using TSUNAMI-IP
- Look at standard comp (compoz)

Exercises!

OBIWAN Commands

- `obiwan view -format=ts my_library.f33`
- `obiwan patch -from old_lib.f33 -data=coeff[1]/n_production_xs patched.f33`
- `obiwan diff -reltol=0.1 lib1.f33 lib2.f33`
- `obiwan convert -version=6.2 -dir=new my_library.f33`
- `obiwan view -format=csv -idform='$$$IZZZAAA' my_conc.f71`
- `obiwan diff conc1.f71 conc2.f71`
- `obiwan view origen.rev05.yields.data`
- `obiwan view origen.rev03.decay.data`
- `obiwan view origen.rev01.jeff44g`

Conclusion

- Questions?
- Anything else you want to see?