

# Covariance Applications at the NNDC

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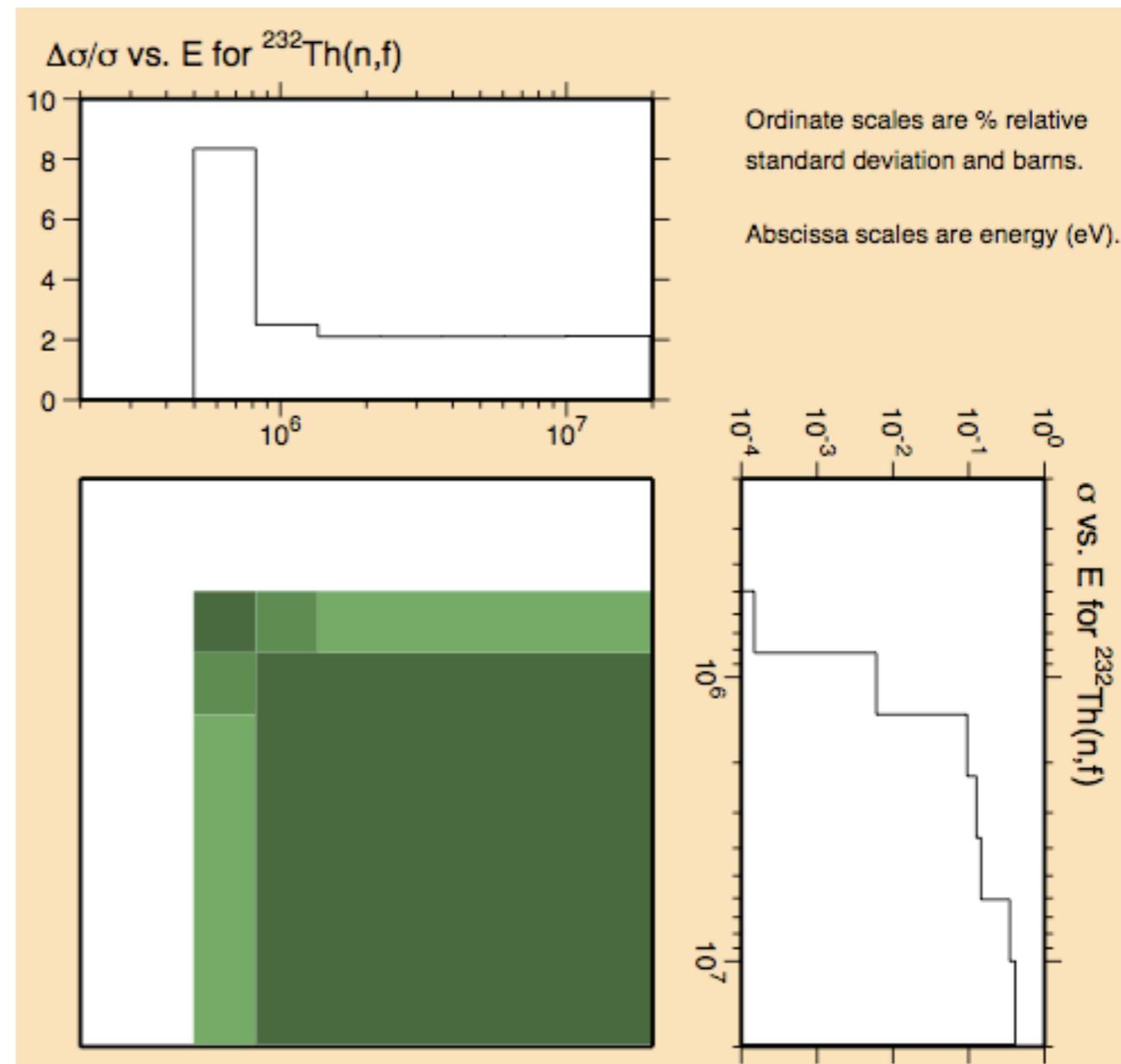
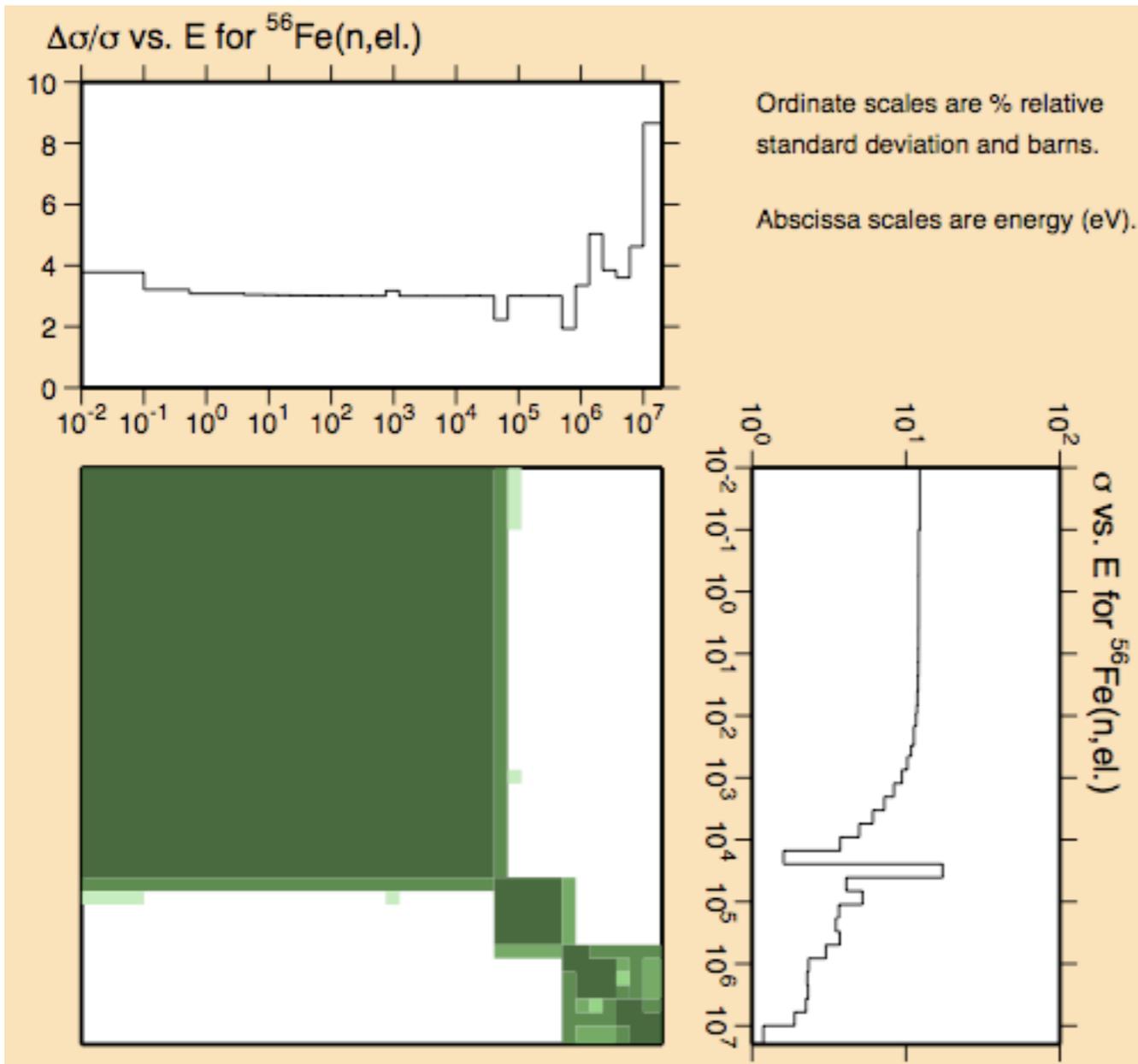
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# GNEP library:

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- GNEP is a collaboration for next-gen nuclear fuel cycle (“Gen-IV” reactors)
- Data Intensive! Project requires modeling neutron-rich environments with many (likely correlated) materials
- NNDC has provided initial covariances for 108 critical isotopes.

# Sample covariances



# Minor Actinides

- Minor actinides high priority for GNEP, new covariance evaluations required
- Plan to use reaction modeling code EMPIRE to generate covariances

