

Preliminary Look At TEX-Hf (HMI-013)

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Nuclear Data and Methods

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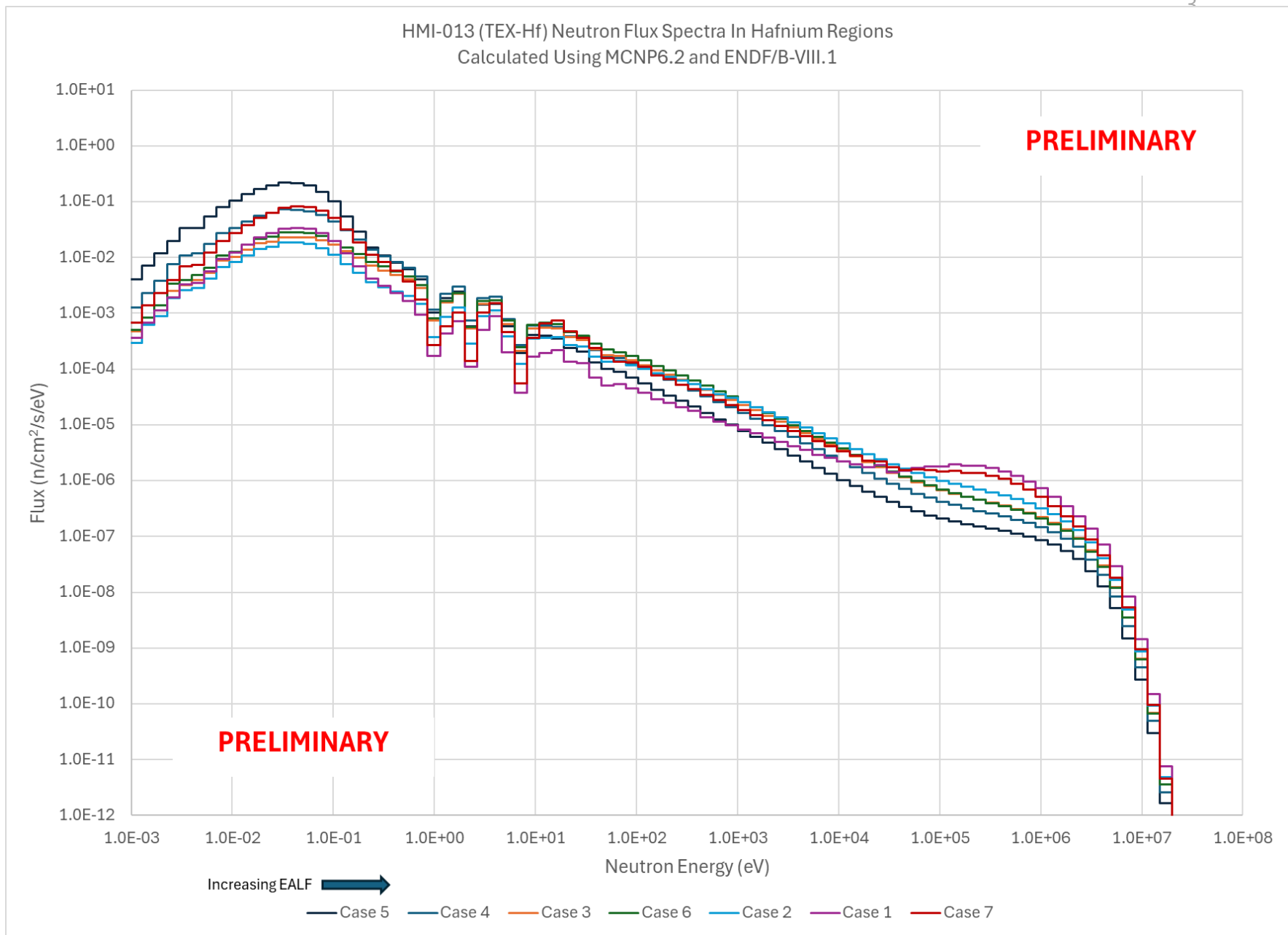
Approach:

Are we seeing a sensitivity to changes in Hf isotopic cross sections?

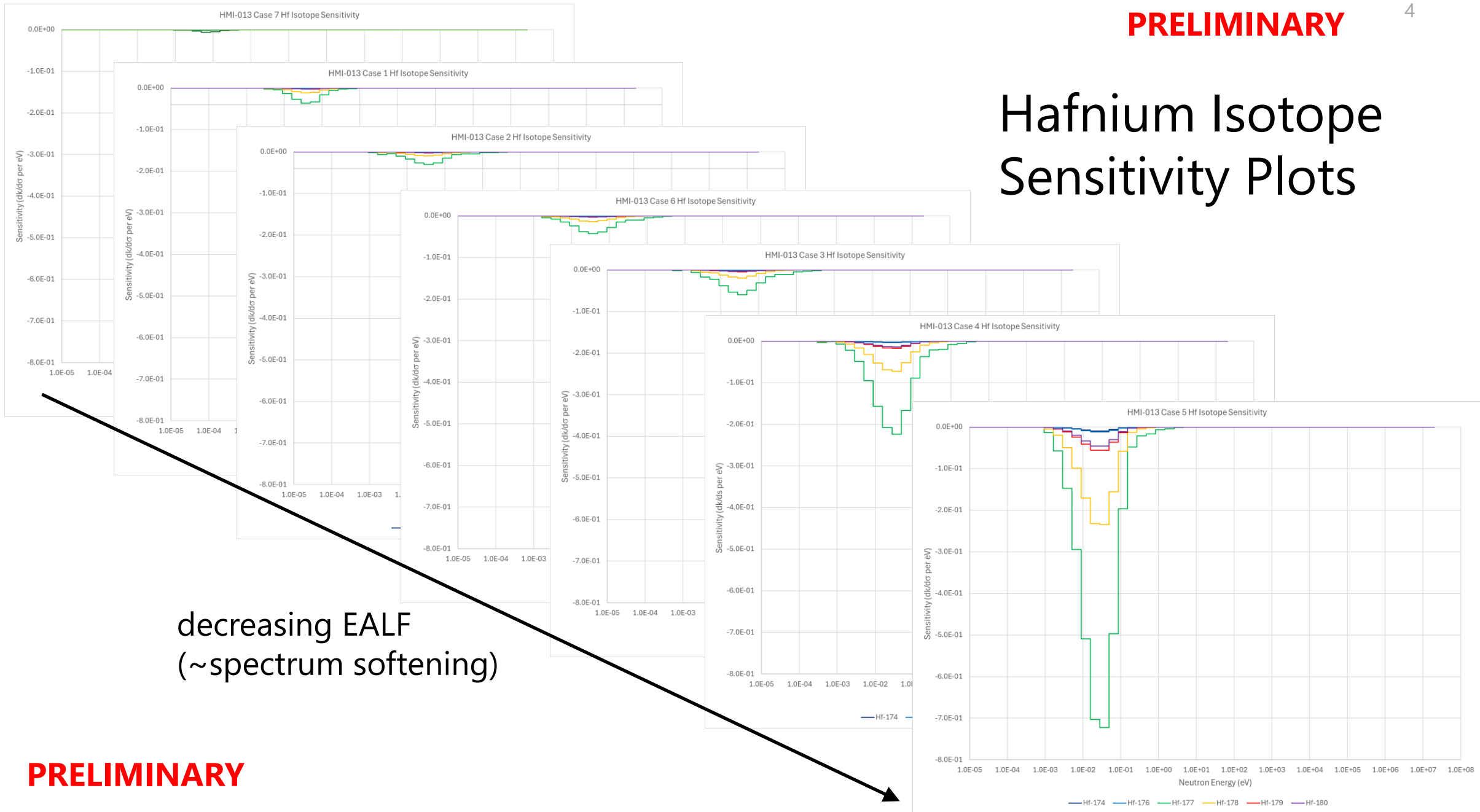
- Nuclear Data Used:
 - ENDF/B-VIII.0
 - ENDF/B-VIII.1
 - ENDF/B-VIII.1_FF_HF
 - Based on RPI LINAC measurements
 - ENDF/B-VIII.1 as base data, but with JEFF-3.3 RRR and URR spliced in
 - Processed with NJOY2016.74
- MCNP V6.2
 - Eigenvalues, flux spectra in Hf regions, and Hf sensitivities calculated

Neutron Spectra in Hf Regions

- *Expected spectral shift with different cases*
- *Effect of Hf-177 (n,γ) resonances clear*



Hafnium Isotope Sensitivity Plots



Eigenvalue Results

- *ENDF/B-VIII.1 shows improvement over ENDF/B-VIII.0*
- *Even better with ENDF/B-VIII.1_FF_Hf!*

