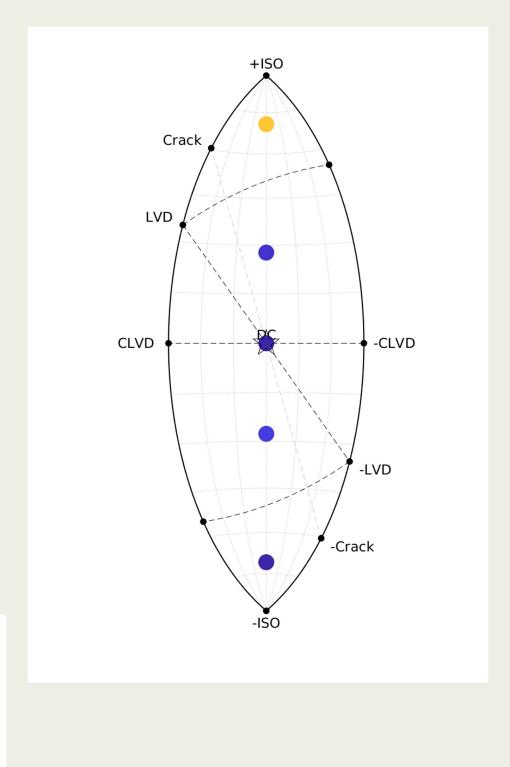
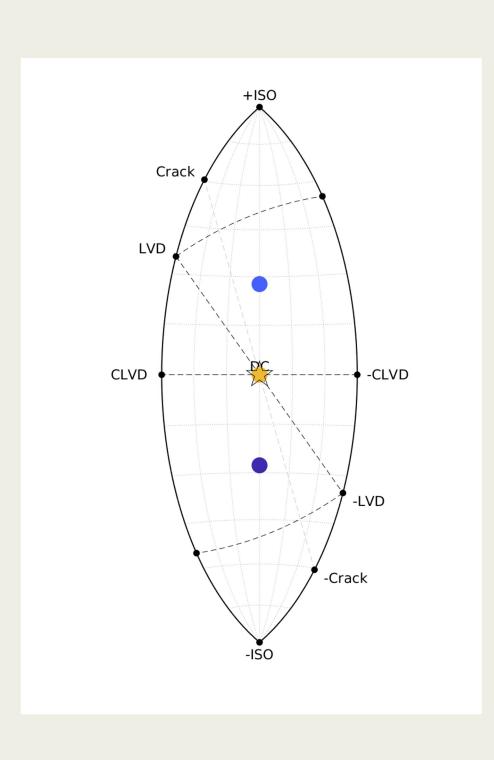
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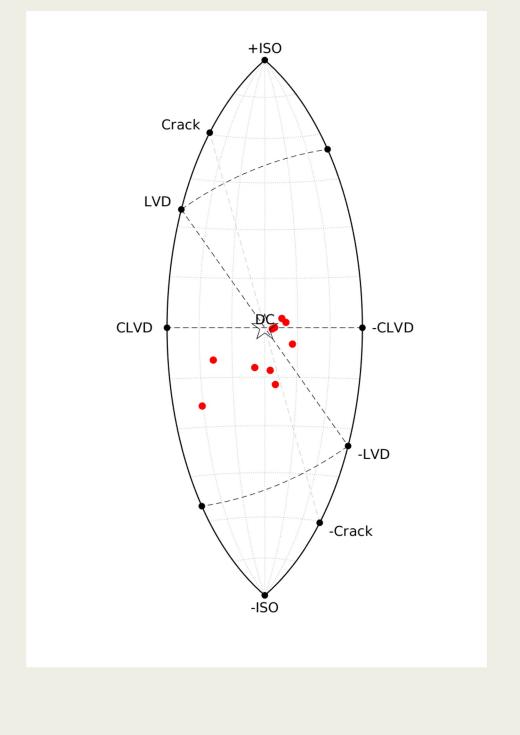
Quantifying uncertainty in regional-scale seismic moment tensors

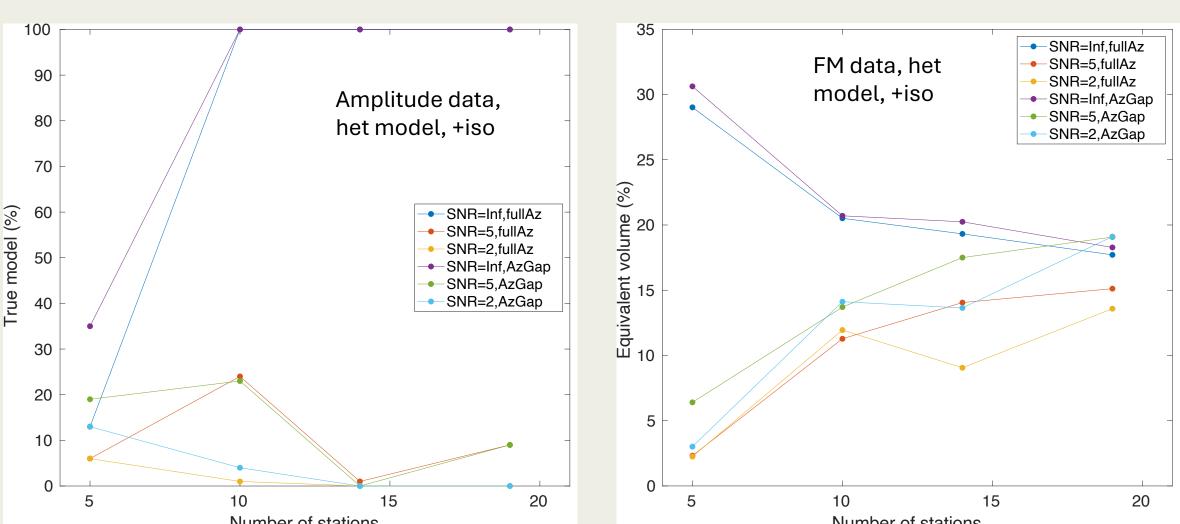
Leiph Preston and Andréa Darrh Sandia National Laboratories, Albuquerque, NM, USA

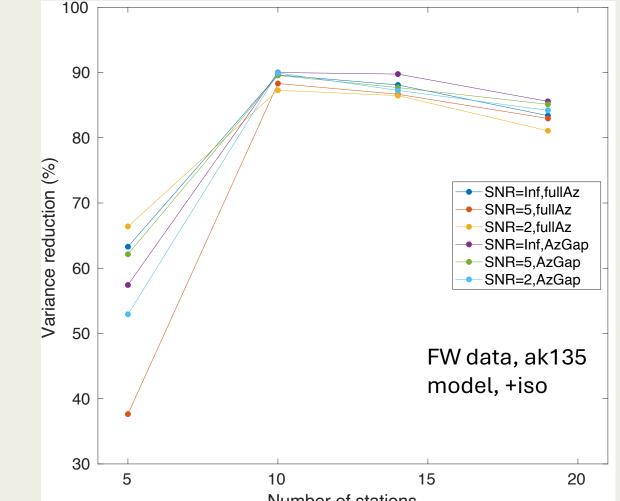
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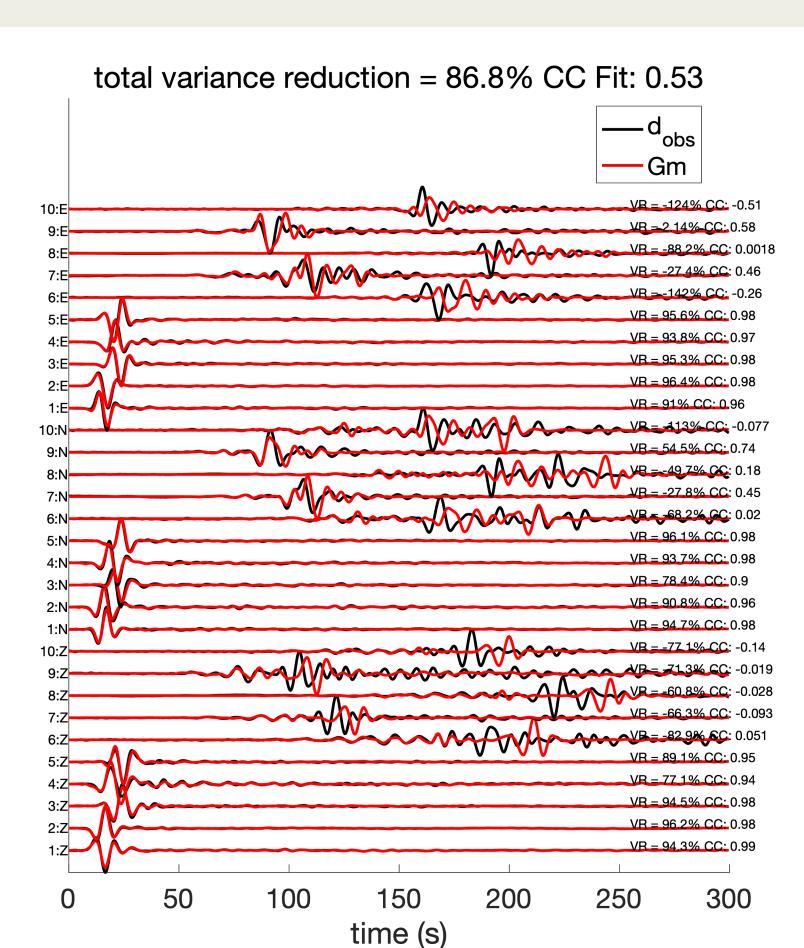












- Understanding the uncertainty in moment tensor analyses is key to a proper interpretation of those results
- Earth model errors can cause biases in moment tensor results that basic statistical tests like the 95% confidence F-test used here will not identify, but a 1-D model based on a 3-D can help mitigate biases
- Errors are non-Gaussian; thus, standard F-test confidence intervals are inaccurate especially when realistic noise contaminates observations
- FW inversions provide more accurate, higher confidence results than amplitudes or FMs, but still can be biased by inaccurate earth models