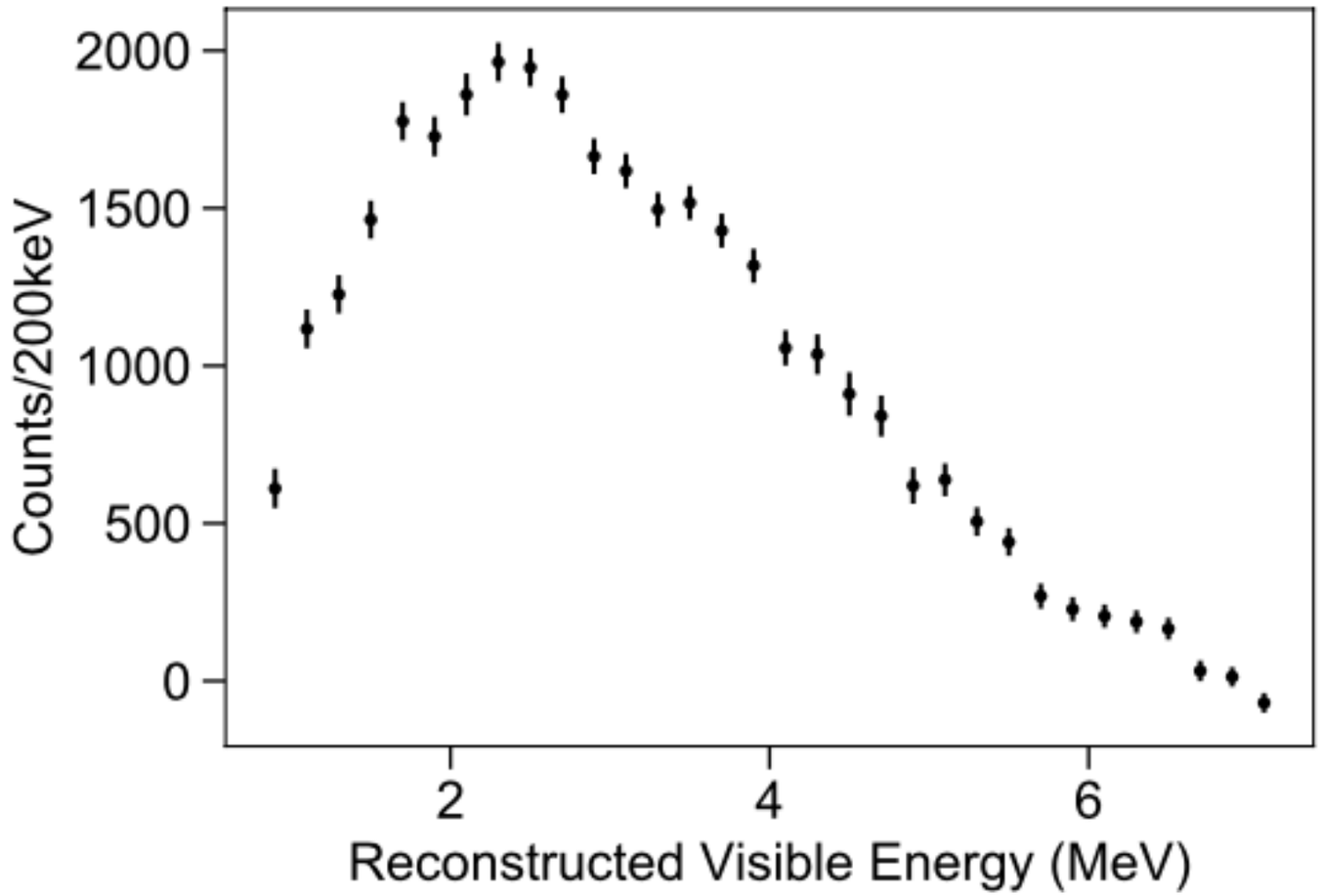
DATA FOR SHARING

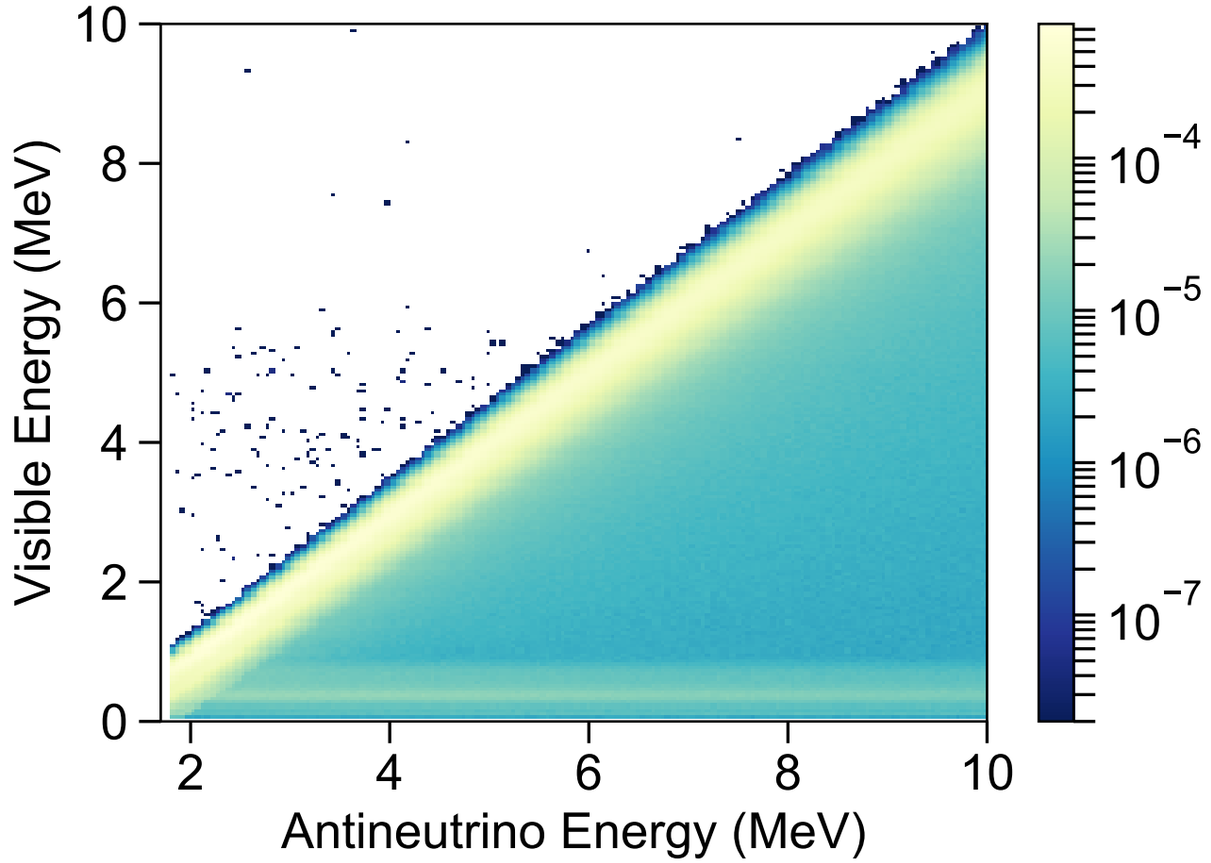
- In order to combine the analyses, we need to define the required shared data
- We have already uploaded the following PROSPECT data to the joint share:
  - Measured reconstructed prompt energy spectrum - `SpectrumData.txt`
  - Detector energy model and response matrix (converting antineutrino energy into reconstructed prompt energy) - `ResponseMatrix.txt`
  - Detector covariance matrix (statistics and systematic uncertainties) - `CovarianceMatrix.txt`
  - HFIR-specific antineutrino corrections (non-equalibrium corrections, ^{28}Al/^{6}He produced in structural materials) - `HFIRSpectrumPredictions.txt`
- Additionally, we propose sharing background spectra and subtraction procedure
- Much of this is publicly available with our arXiv post (or will be very soon), though not in as much detail

SPECTRUM DATA



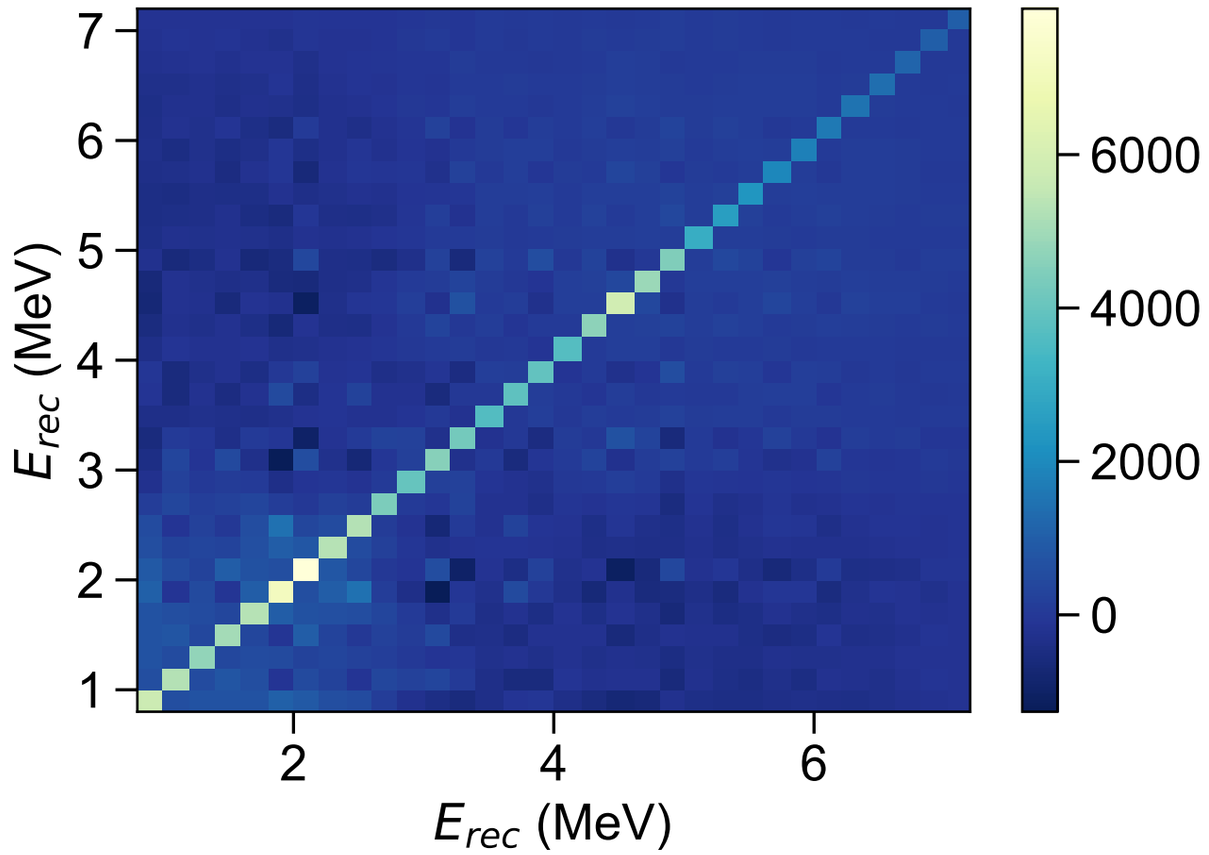
- Binned measured prompt energy spectrum
  - Post background-subtraction
  - Statistical uncertainties (including BG subtraction)
- Human-readable, CSV tabulated values

RESPONSE MATRIX



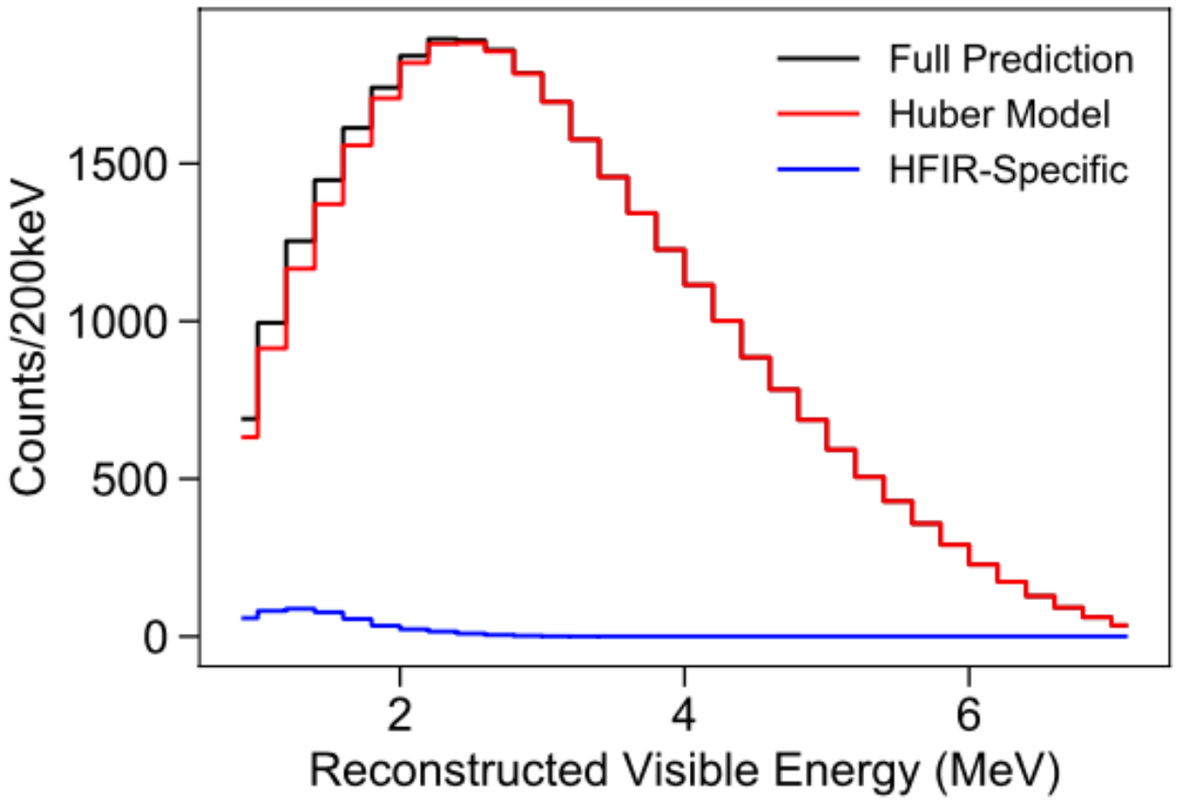
- Simulated detector response to antineutrinos, including all known detector effects
  - Each column is a simulated 50keV wide slice of antineutrinos
  - Accounts for non-linearity, resolution, escaping energy, etc
- Human-readable, CSV tabulated values

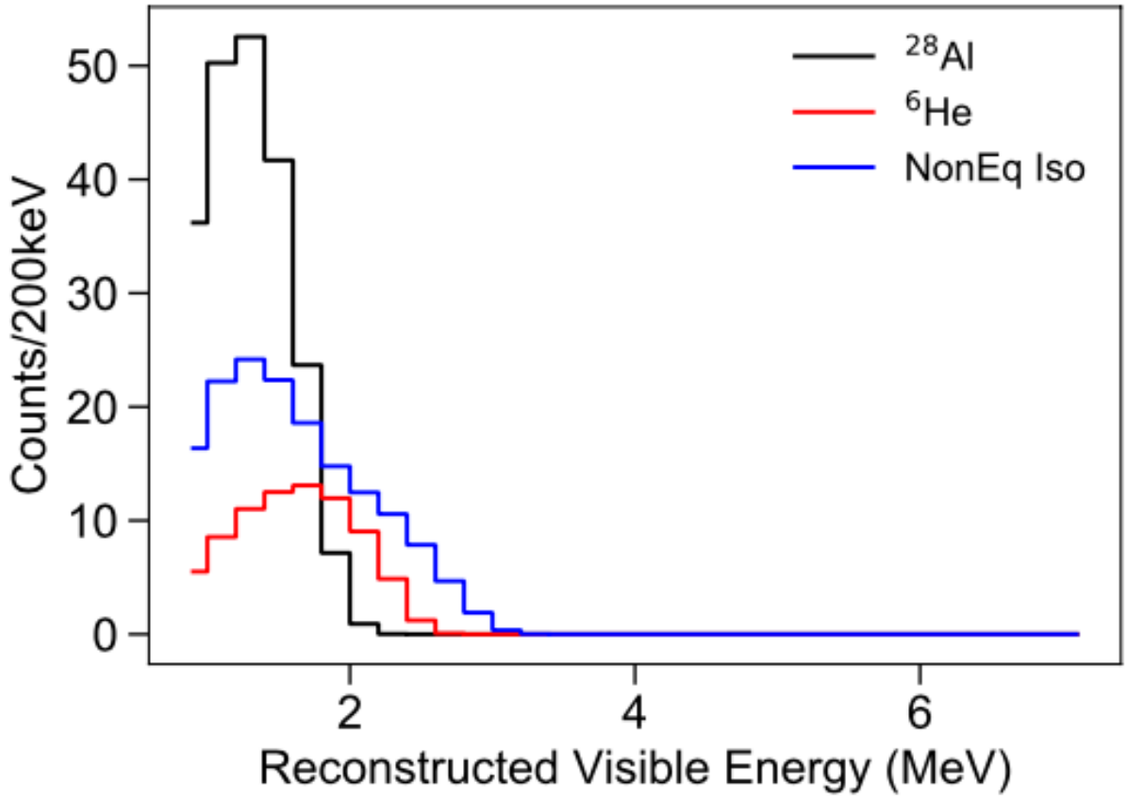
COVARIANCE MATRIX



- Contains all known uncertainties, including statistics and systematics
  - Correlated uncertainties determined by varying individual parameters in simulation and extracting individual covariance matrices
- Human-readable, CSV tabulated values

HFIR SPECIFIC PREDICTION





- HFIR has a few corrections that must be added to the Huber prediction
  - Non Equilibrium isotopes (calculated according to Mueller et al.)
  - ^{28}Al and ^{6}He antineutrinos produced in the structural material surrounding the fuel elements and core
  - Full spectrum is normalized to the detected number of IBD events
- Human-readable, CSV tabulated values