

# Exploring the long GRB population using Swift BAT6 sample

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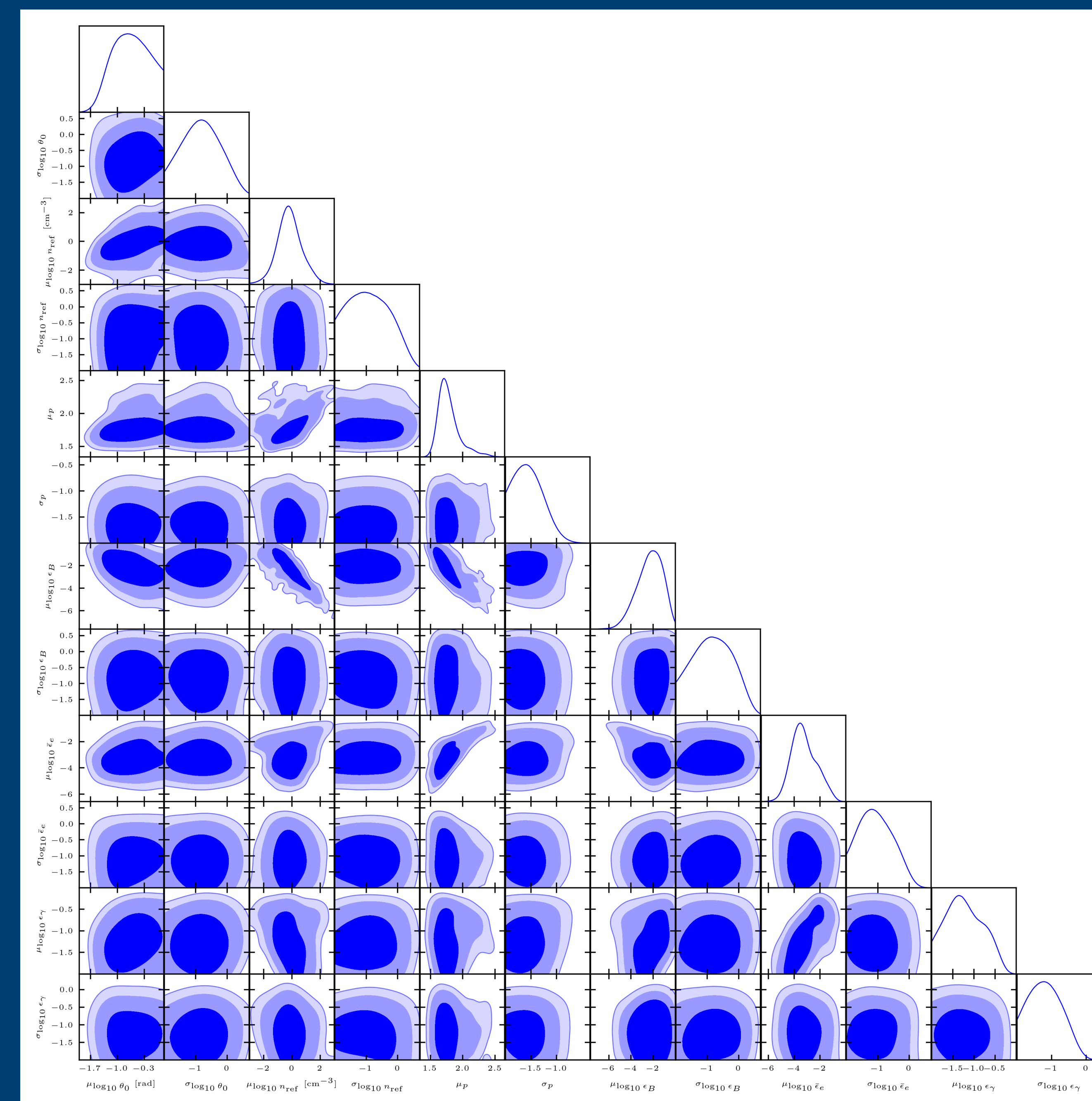
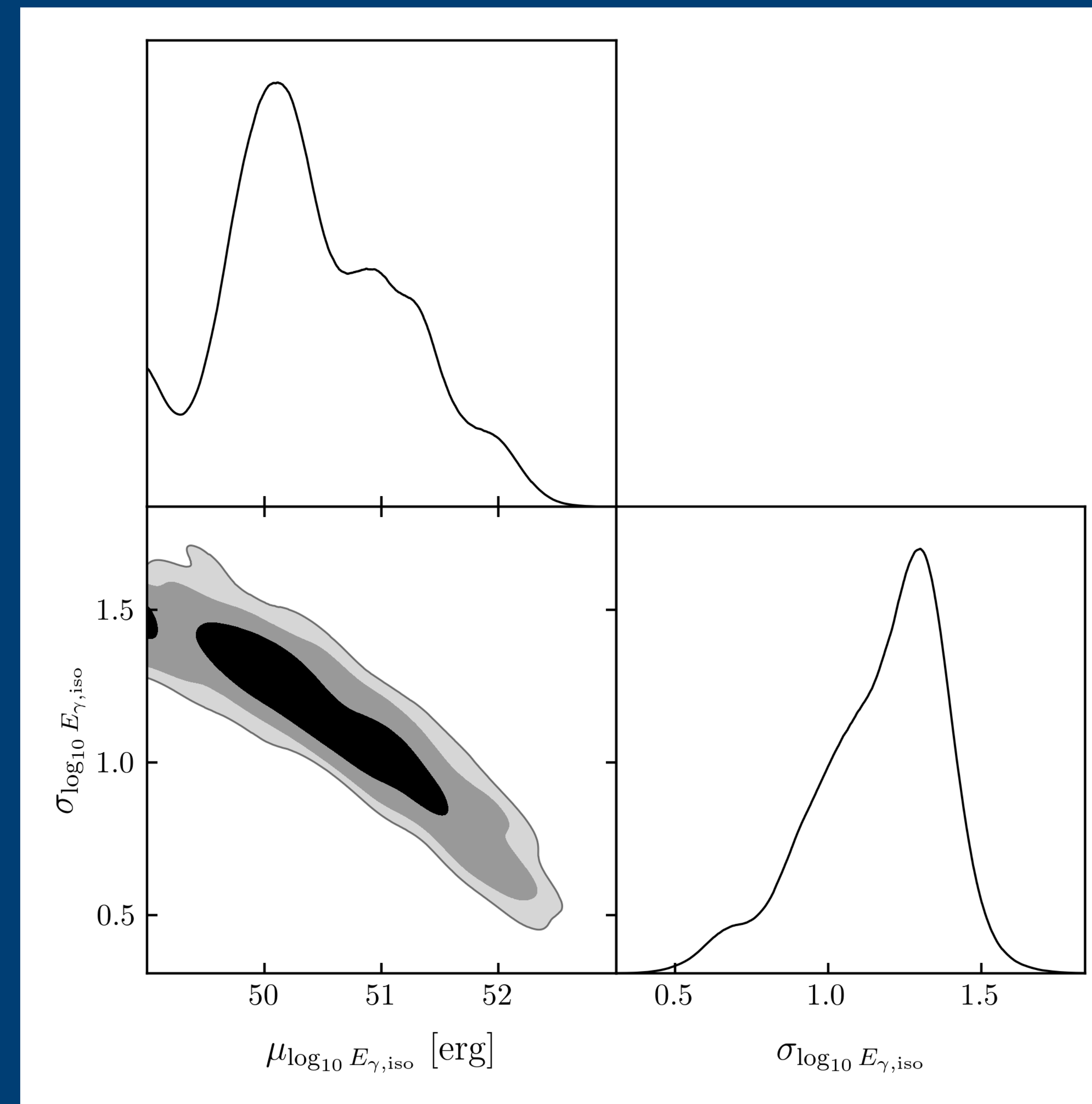
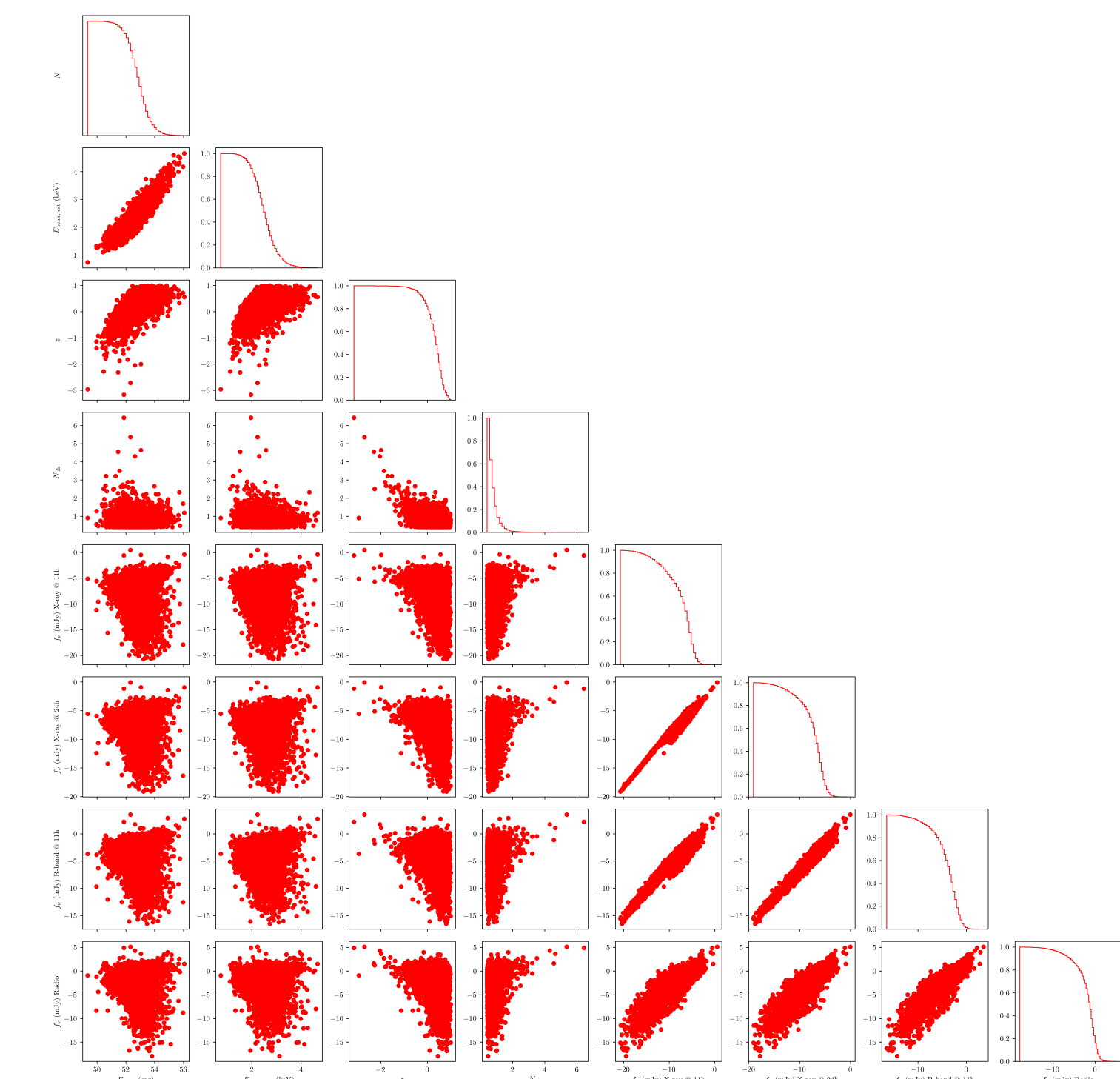
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## Population Synthesis

- Generating synthetic population with afterglow parameters determined by Afterglowpy package
- Using Bayesian inference to fit synthetic population to observed BAT6 sample

## Generated population

Sampled parameters:



Future steps:

- Conduct parameter inference for ISM environment and wind environment, respectively.
- Extending the analysis to TeV emission. (Afterglowpy can be used to generate spectra in the TeV regime)