Contribution ID: **4**   Type: **not specified**

Statistical methods for the combination of data: ThreeML

Wednesday, 28 September 2022 16:20 (30 minutes)

As the multi-messenger era is now fully active, it is crucial that the community has a framework within which to analyze data from multiple messengers, wavelengths, and instruments in a statistically robust, common way. 3ML (https://threeml.readthedocs.io) provides an abstract, plugin-based data interface for instruments to combine analysis through each instrument's own unique likelihood. Users and instrument teams can create or use existing plugins to interface their data to a plethora of Bayesian and optimization packages in a uniform way. Analysis results are reported and stored in portable file formats that allow for the sharing and replication of results in a way that provides observers to produce robust scientific results that the community can interpret. 3ML currently supports, via standard plugins many ground and space-based observatories as well as being the analysis tool for some collaborations (HAWC, XIPE, Fermi-LAT, POLAR, GECAM).

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Session Classification: General session