The 32nd Texas Symposium on Relativistic Astrophysics



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MASS: MeV emission line astrophysics with fine resolution CZT detectors

Tuesday, 12 December 2023 15:00 (15 minutes)

The MeV Astrophysical Spectroscopic Surveyor (MASS) is a conceptual Compton telescope using 3D position sensitive cadmium zinc telluride (CZT) detectors. The CZT detector works at room-temperature with a spectral resolution of 0.6% at 0.662 MeV, enabling us to construct a large format Compton telescope to measure astrophysical nuclear emission lines, and address astrophysical problems regarding nucleosynthesis, pulsars, relativistic jets, and even planetary formation. The technique will be demonstrated with a CubeSat flight in the near future.

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