

Search for CPT-violation in Positronium

We search for CPT-violating correlations between gamma rays in the decay of ortho-positronium (o-Ps) with CALIOPE, or CPT Aberrant Leptons in o-Ps Experiment. Using a tagged source flush against a cylindrical piece of aerogel, we generate positronium at the center of an annular array of 24 NaI(Tl) bars. We present the capabilities of the DAQ, which uses QDCs and TDCs to record the charge amplitude of pulses and timing information. We have characterized each bar in the detector and demonstrated the ability to create and detect positronium. We also include a study of systematics resulting from detailed Monte Carlo simulations.

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