

Searching for PeV bursts

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Over the past forty years, there have been occasional reports of the observations of 'bursts' by small air shower arrays operating at energies of about 1 PeV. These would seem to be of astrophysical origin and related to the thrust of studies pursued to the CREDO program. The bursts are rare and few burst searches have extended past a time required to record more than a handful of potential events. There have also been discussions of the burst data which offer alternative non-astrophysical explanations.

This paper will critically review some of the burst results, which may suggest that interesting burst events have been detected at a rate of ~ 1 per year. If these exist, the astrophysical processes of their origin need to be examined and some possibilities will be discussed in the paper.

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