SEARCH FOR HIGH ENERGY GAMMA RAY PULSAR EMIS-SION WITH THE CELESTE EXPERIMENT

D. DUMORA

Centre d'Etudes Nucleaires de Bordeaux-Gradignan, 33175 Gradignan Cedex, France.

dumora@cenbg.in2p3.fr

The CELESTE experiment detects gamma rays in the 50 GeV range by measuring the atmospheric Cerenkov light collected using 40 of the heliostats of the Themis central tower solar facility.

We have recently announced an upper limit for the exponential energy cut-off in the spectrum of the Crab pulsar $\frac{dN}{dE} = KE^{-\gamma}e^{-\frac{E}{E_0}}$ with $E_0 = 30 GeV$. This result was obtained with the CELESTE standard analysis used for the study of the continuous emission from the nebula. We discuss here a specific analysis of CELESTE data which preserve low energy events in order to study the pulsed component.

We also present results for PSR1951+32 which may be the most promising candidate for the first detection of a gamma ray pulsar by a ground based experiment.