Hunting TeV candidates among the uncertain blazars in the 4FGL catalog

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The emission of very high energy photons is in close connection with the production of ultra-relativistic particles and the role of high energy gamma-ray sources as cosmic particle accelerators.

In this study we identify high energy candidates among the uncertain blazars and unassociated sources in the 4FGL catalog and we study the detectability of those sources by the present generation of ground Cherenkov telescopes (IACTs) and CTA proposing new selecting methods of significant samples for current observation campaigns and also for the next extragalactic surveys.