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Te-REX: a sample of extragalactic TeV-emitting candidates

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We present a reference sample of potential TeV emitters, likely to be found in the next CTA extragalactic survey, selected from the REX catalogue. The REX project (Radio-Emitting X-ray sources) is one of the largest and best blazar collection produced by combining radio and X-ray data. Specifically, we focus here on the high-energy peaked BL Lac (HBL) population which are the expected most numerous class of TeV emitting sources. To select these objects we have considered only the REX with the highest X-ray-to-radio flux ratio ($\alpha\_RX < 0.73$) and B<21 (to exclude sources with z>0.5, where the EBL should preclude the possibility to detect them with CTA). We call this sub-sample Te-REX, for TeV- candidate REXs. We have been recently awarded of 35 hours at TNG/DOLORES to complete the spectroscopic identification of the Te-REX sample in the sky area that will be covered by the CTA extragalactic survey. Our sample constitutes an alternative and more complete approach with respect to other samples based on FERMI catalogues to carry out quantitative and unbiased studies of the TeV properties of this extreme class of blazars.

Are you presenting on behalf of collaborations or institutions?

None

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