

The discovery in very-high-energy gamma rays of Blazar TXS1515-273 by MAGIC and extreme MAGIC results

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BL Lac objects which possess a synchrotron peak at unusually high X-ray frequencies ($\text{peak}_S \geq 10^{17}$ Hz) were categorized as extreme high-frequency BL Lacs (EHBLs) by Costamante et al. (2001). As a consequence of the location of the synchrotron peak, the inverse Compton hump of EHBLs is expected to peak in the gamma-ray band, making them interesting targets for very-high-energy gamma rays studies. Such objects are expected to be very faint according to the blazar sequence. Nevertheless, in recent studies, when detected at very-high-energy gamma rays, some of them have revealed very interesting intermittent temporal behaviour. Here we present the recent results on the candidate extreme blazar TXS 1515–273 ($z = 0.1285$) discovered in the very-high-energy range by MAGIC, together with a multiwavelength dataset. The interpretation of the broadband emission has been performed with different leptonic models. Observations and models are put in context with the recent studies and results on extreme blazars carried on by the MAGIC telescopes.

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