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Lepto-hadronic modelling of neutrino-candidate blazar 5BZB J1150+2417

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Recent observations highlight the importance of active galactic nuclei (AGN) in the context of high-energy neutrino production.
The focus of this study is 5BZB J1150+2417, which was recently proposed as associated with neutrino emission during the first 9-yrs of IceCube observations among other blazar-type sources.
To test the proposed neutrino-blazar association we perform a theoretical modelling study of radiative processes.
Modelling the quasi-simultaneous, broad-band spectral energy distributions, we test various methods from purely leptonic to lepto-hadronic models with external photon fields to fit the observations.
Historically, 5BZB J1150+2417 is classified as a BL Lac source.
However, our results find a spectral shape in the $\gamma-$ray emission, that suggests a deviation from the log-parabolic double hump structure, typical for these objects.
Our lepto-hadronic models predict a low neutrino production rate, although at reach of the IceCube neutrino detector over 10 years.

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