

## Neutrino self-interaction in the signals from blazar TXS 0506+056

*Thursday 5 December 2019 15:00 (30 minutes)*

Even though conventional leptonic or lepto-hadronic models of blazar successfully explain the observed electromagnetic component of the flaring signal from the Blazar TXS 0506+056 in a large range of energy window  $\sim (10-10^2 \text{ GeV})$ , the predicted neutrino flux is too small to be consistent with the IceCube observation at  $\sim 300 \text{ TeV}$ . We show that a sizable self-interaction of neutrinos with a light messenger resolves the discrepancy. Interestingly, the same physics can relieve the cosmological tension in  $H_0$  and  $\Omega_8$ .

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