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## Dark matter spikes around stellar-mass black holes: Evidence of a primordial origin?

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Recent observations of black holes in two nearby low-mass x-ray binary systems have suggested possible evidence of dark matter density spikes. It has long been established that cold dark matter should form dense spikes around intermediate-mass and supermassive black holes due to the adiabatic compression of the dark matter profiles and accretion. Lighter black holes of a stellar origin, however, are not expected to develop spikes, and so it is unclear how these observed stellar-mass black holes could have acquired such features. Primordial black holes, on the other hand, likely come equipped with dark matter mini-spikes. In this talk, we explore the possibility that these stellar-mass black holes may actually be primordial in origin, confronting the data with predictions of the mini-spike radial profile for a range of dark matter models.

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