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Searching for an X-Ray Emission Line from Sterile Neutrino Dark Matter JOHN TOMSICK, UCSD/CASS — If keV-mass sterile neutrinos exist and if they are the Dark Matter, Abazajian & Fuller have argued that decays of these particles could lead to an X-ray emission line that could be detected by current satellites such as XMM-Newton and the Chandra X-ray Observatory. In this presentation, I discuss the work that has been done to search for this line in the X-ray background, from clusters of galaxies, and from nearby galaxies. I also discuss prospects for further searches that could lead to discovering the signature emission line or ruling out sterile neutrinos as a significant contributor to the Dark Matter.

John Tomsick
UCSD/CASS

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