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Angular power spectrum of sterile neutrino decay lines: the role of eROSITA

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Taking as reference the performance of the soon-to-be-launched eROSITA satellite, I will discuss the potential of angular auto- and cross-correlation power spectra in identifying sterile neutrino dark matter in the cosmic X-ray background. While sterile neutrino decays are always sub-dominant in the auto-correlation power spectra with respect to other background sources, they can be efficiently enhanced when cross-correlating with tracers of dark matter distribution. The planned eROSITA all-sky survey will potentially yield very stringent constraints on the sterile neutrino decay lifetime, enabling to test the recently claimed 3.56-keV X-ray line.

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