

Dark Photon Dark Matter Radio Signal from the Milky Way Electron Density

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In this talk I consider Thomson-like processes between dark matter dark photons and free electrons in the Milky Way. The result is a radio signal background that can be detectable with current or future radio telescope arrays. In particular, I compute sensitivity prospects for the Atacama Large Millimeter Array (ALMA) radio telescope and for the future Square Kilometer Array (SKA), concluding that unconstrained parameter space in a wide range of dark photon masses can be probed.

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