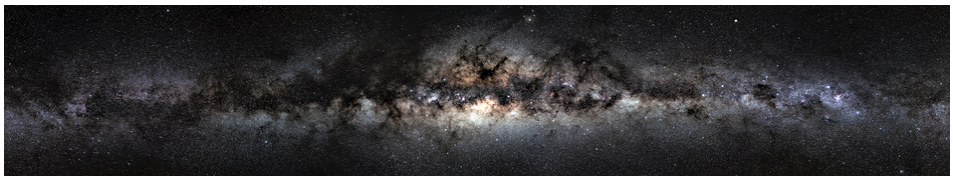

Contribution ID: **125** Type: **Poster**

Dark Matter Scattering in Gravitational Wave Detectors

Tuesday, 7 December 2021 08:20 (30 minutes)

We present prospects for discovering dark matter scattering in gravitational wave detectors. We study how a potential signal from a dark matter particle compares to typical background noises in gravitational wave detectors. The dark matter signal is modelled as an elastic scattering event with the interferometer components. For the background we focus on suspension thermal noise and quantum noise, which are the dominant noise components in the frequency range we are concerned about. We will start from a simple toy model and then extend it to a realistic case, KAGRA.

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Session Classification: Break and Poster Session