

Abstract Submitted
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Noise characterization of atomic magnetometers on the GNOME network IBRAHIM SULAI, SEBASTIAN ASCOLI, Bucknell University, GNOME COLLABORATION — The GNOME (Global network of atomic magnetometers for exotic physics) experiment comprises a network of shielded atomic magnetometers designed to search for spin interactions with fields that have been proposed in various extensions of the standard model such as axions. The experiment relies on the stable operation of the sensors over long (\sim months) intervals. Our goal is to develop a noise model for each sensor on the network which can be used in subsequent analyses. We report on (1.) a characterization of the noise non-Gaussianity during a dedicated observational run, and (2.) an excess power analysis of the data in search of signals coincident with known astrophysical events.

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