

Impact of DM noise modeling on the GWB search

Wednesday, November 19, 2025 11:00 AM (15 minutes)

Building on Iraci et al. (2024), we study the impact of our main modelling routines to mitigate the effects of the ionized interstellar medium during the search for the Gravitational Wave Background (GWB) with Pulsar Timing Arrays (PTAs). To this scope, we use synthetic PTA datasets and model the DM variations as Gaussian Processes (DM GP) using the Enterprise software to test the consistency of our routines under controlled conditions. For the first time, we are moving our analysis to the Discovery software suite, which allows us to speed up the parameter estimation process.

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