

Cosmic Cartography 2022: Exploring the Cosmic Web and Large-Scale Structure



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Type: **not specified**

HAmiltonian Monte carlo reconstruction of the Local Environment (Hamlet)

Wednesday, 9 March 2022 14:40 (20 minutes)

Our goal is to recover the linear peculiar velocity and density field from observations of galaxy peculiar velocities, specifically the Cosmicflows3 catalog. Our efforts are focused on attempting to recover the posterior probability function of the peculiar velocity field according to the Λ CDM model. By assuming the priors of the Λ CDM model we use a Hamiltonian Monte Carlo technique to sample from the posterior probability function in order to recover the linear peculiar velocity field and the corresponding cosmographic density field.

Presenter: VALADE, Aurelien (IP2I/AIP)

Session Classification: Day 3 Afternoon