
What statistical metric to compare ISM simulations and observations?

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Abstract

New statistical descriptions related to the so-called scattering transforms recently obtained attractive results for several ISM studies. These statistics share ideas with convolutional neural networks, but do not require to be learned, and allow direct characterization of interactions between scales in non-linear processes. In this talk, I will introduce these statistical descriptions, and discuss how they can be used to introduce a notion of distance between different observational and simulated maps of the ISM. I will then discuss the first results obtained while comparing observations and simulations of dense star forming regions. Work with A. Gusdorf and F. Levrier

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