
Dust in Ramses galaxies with more than ad hoc dust-to-metal ratios

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Abstract

I will introduce a new subgrid model of dust evolution for simulations of galaxies with Ramses, where dust can grow by accretion of metals from the interstellar medium, be destroyed by thermal sputtering and supernova explosions, and be released by stellar material. Recent developments also include a two size (0.005 and 0.1 micron) description of the dust distribution – which communicate through coagulation and shattering –, and two different chemical species (graphite and silicate). I will show several predictions of this dust model on the dust-to-metal ratio of galaxies, the size and chemical composition of dust, and the extinction curves of galaxies, etc. I will discuss the possible extensions of the model.

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