

## Intertwined Formation of H<sub>2</sub>, Dust, and Stars in Cosmological Simulations

In the metal-enriched interstellar medium, the abundance of molecular gas is primarily governed by the formation of H<sub>2</sub> on dust grains, as well as its self-shielding and shielding by dust against photo-dissociation by the interstellar radiation field. The upcoming presentation intends to describe a sub-resolution model for forming molecular hydrogen in hydrodynamic simulation with dust description and encouraging results in predicting the properties of galaxies in cosmological boxes.

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