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Interstellar hub-filament system and the consequent star formation

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Observations of the stellar medium have revealed many structures forming prior to the birth of stars. Filaments being omnipresent and highly correlated with prestellar cores, stellar cluster that contain massive stars are usually found to be embedded in a hub-filament system. Continuum observations could not reveal 3D information, while spectroscopic observations have suggested that hub-filament systems might actually form with a flattened geometry. I will first present our recent effort to describe the formation of interstellar hub-filament systems through the growth of instabilities in a contracting sheet. Secondly, I will show our recent analyses of stellar distribution using data from GAIA DR3, which tentatively show traces of stars originally forming within a flat structure.

Section

Stars/Star Clusters

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