

# Origin of the statistical properties of the star-forming interstellar medium

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## **Abstract**

Star formation happens inside the turbulent interstellar medium. Stars are elementary units of the visible Universe, while each individual star holds different characteristics. The mass being one of the most prominent stellar properties, how the exact value is determined at the end of the star formation process is still a complicated question. The interstellar medium is governed by the turbulent flow, magnetic field, cosmic rays, and interstellar ionizing radiation. How self-gravity dominates over various processes at some certain scale and sets the final stellar mass is a non-linear process that involves several mechanisms. The stellar mass distribution is described with the Initial Mass Function (IMF). In this talk, I will give an overview of our current understanding of the IMF and some statistical properties of the turbulent star-forming gas.