

Turbulence in the interstellar medium and star formation

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Turbulence is believed to play an important role in the interstellar medium and for the star formation process in the universe. This turbulence, which is both magnetized and highly compressible, has no obvious equivalent in other well studied environments. In the talk, I will first give a general overview of the field of star formation and its link to turbulence, emphasizing the role played by the density field. I will then focus more particularly on the density structures, which form in these turbulent flows namely the clumps and the filaments, that are primordial observable.

Finally, I will discuss the possible and still debated role of the ion-neutral friction as an important dissipative process for the interstellar turbulence.