



Physics Department seminar
DIPARTIMENTO DI FISICA, VIA CELORIA 16, MILANO

Aula A in presence and streaming

<https://fisica-unimi.zoom.us/j/97722832691?pwd=SIMzTjRwa2xiNDArVIZSV1BQU0RyQT09>

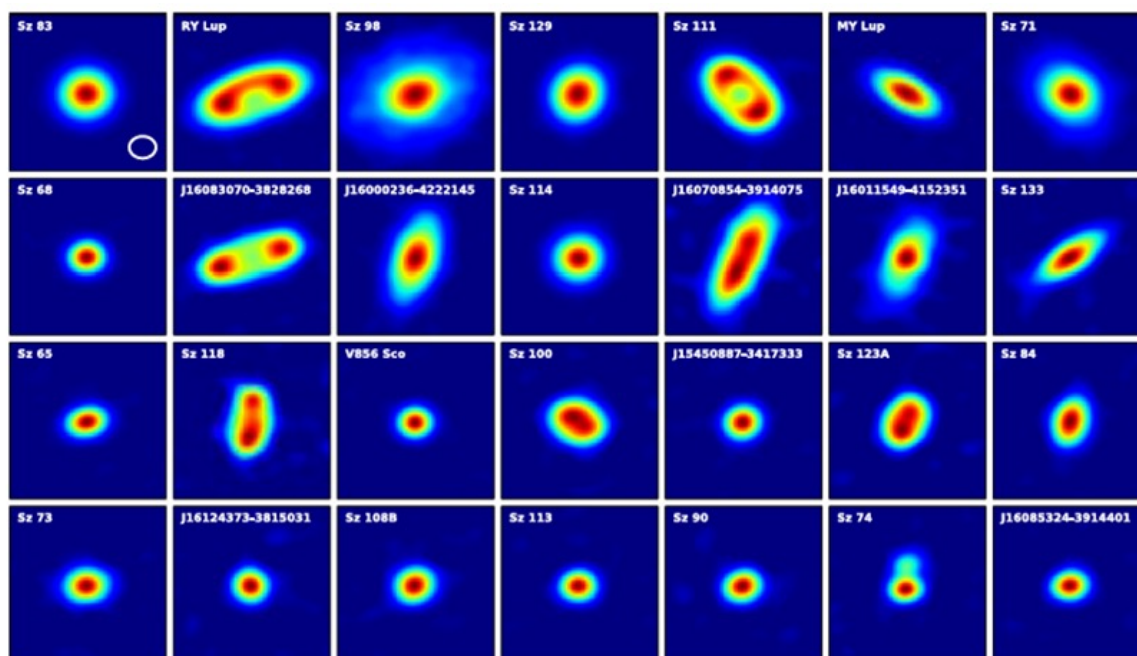
25 Marzo 2022– 14:30

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Rethinking the proto-planetary disc turbulent paradigm

Planets form in dust and gas structures orbiting young stars, called proto-planetary discs. These structures provide the building blocks to assemble planets and only if we understand proto-planetary discs we can build a successful planet formation theory. I will discuss how the field is critically reconsidering the general framework we use to describe proto-planetary discs, namely the assumption that they are turbulent objects. I will discuss the growing tension between this assumption and observations taken in the last few years with new instruments, that allow us to conduct entire surveys of the proto-planetary disc population, giving us a chance to probe the inventory of planet-forming material. I will introduce a possible alternative and chart a way forward I plan to investigate in the next few years. Finally, I will discuss how we are also starting to detect young, forming planets still embedded in proto-planetary discs. I will discuss what kind of planets we are currently capable of detecting in discs and how we can measure their masses from observations, using extremely precise measurements of the gas velocity.



Students are cordially invited – Contact silvia.leoni@mi.infn.it