

Shaping the Italian contribution to HWO



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The HWO perspective of the Italian JEDI collaboration - JETs and Disk @ INAF

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The evolution of disks around young-low-mass stars and the related phenomena of accretion and outflows are hot topics in modern astrophysics. Our capability to investigate these key aspects for star- and planet-formation has recently received a boost thanks to the increasing quality of high spatial and spectral resolution observations and new analytic and numerical tools for theoretical studies.

The Italian JEDI - JETs and Disks @ INAF collaboration brings together researchers working in these fields, and it is a vibrant and growing community with multiple and complementary competences. In particular, JEDI researchers have extensive experience in space observations, built over time with many successful programs for JWST, HST, Herschel, Spitzer and other missions (with GO, GTO and archival data).

In this contribution we present our activities, highlight some of the open questions that can be answered with new instrumentation, and discuss the contributions we can make to the planning of the Habitable Worlds Observatory in the study of accretion and ejection in young stars in other galaxies, the detection and characterization of circumplanetary disks - including associated accretion and planetary jets, the analysis of shocks from accretion streamers, and the investigation of the smallest spatial and spectral scales of the jet launching regions, to establish the feedback of outflows on the planet formation process.

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