Probing the gas and dust in the planet-forming zones of disks using ground- and space-based observations

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Abstract

Most planets are expected to form within the inner 10 au of protoplanetary disks. Constraining the disk structure, the composition of the gas, and the evolution of this region is vital for understanding the formation of these planets. Several observational tools are available for studying this region; wide spectral coverage observations from space and high spectral and spatial resolution observations from the ground offer unique pathways to probe the inner disk. In this talk, I will highlight what we are learning about inner disk chemistry with JWST and describe how we can build a comprehensive picture of the inner disk structure and composition by combining JWST observations with VLTI-GRAVITY(+) and VLT-CRIRES+.

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