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The JWST view on interstellar ices and gas

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A little over seven months ago, the James Webb Space Telescope (JWST) successfully started science operation. The data the JWST mission is providing,

in tandem with high-sensitivity interferometric observations, are advancing our understanding of astrochemistry in star- and planet-forming regions.

One example: these data are shedding light on the interplay between gas, ice, and dust, which leads to the formation of prebiotic molecules. In this talk, I will present preparatory work combining infrared and mm-observations in nearby star-forming regions (Serpens, Lambda Orionis, and Corona Australis). I will also introduce first JWST results of the Ice Age ERS program (PI: M. McClure) and of the MIRI Mid-INfrared Disk Survey (MINDS) GTO program (PI: Th. Henning). In summary, I will discuss the role of interstellar ices and gas towards developing molecular complexity during the star and planet formation process and I will outline recent discoveries in the field using JWST.