Latest results on ice evolution during the star formation process in Chamaeleon I, as studied by the JWST ERS IceAge program

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Icy grain mantles are the main reservoir for volatile elements in star-forming regions. The IceAge Early Release Science program [1] on the James Webb Space Telescope proposed to trace the evolution of pristine and complex ice chemistry in Chameleon I – a representative low-mass star-forming region – through various stages of star formation from dense cloud to protoplanetary disk. In this talk, we will present the latest results of this program, focussing first on the ice inventory and icy dust grain properties in the quiescent cold core,[2,3] before presenting observations of the edge-on disk HH 48 NE.[4] The use of laboratory spectra of interstellar ice analogues to interpret observational data will be highlighted throughout.

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