

## **Water in protostellar evolution**

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Water is one of the most important molecules in interstellar clouds in general, and in star-forming regions in particular, having a pivotal role in the protostellar and protoplanetary environments.

As a dominant form of oxygen, it controls the chemistry of many other species. In addition, it is a unique diagnostic of warm gas and energetic processes taking place during star formation. As such, it represents an invaluable tracer of physical processes, such as accretion and outflows of matter, that dominates the evolution of the early stars.

Far-IR and sub-mm space observations of water vapor in protostellar systems have been performed during the last 20 years with the ISO, SWAS, Odin and Herschel satellites. Herschel in particular, thanks to its unprecedented spatial and spectral resolution, has clarified a number of details about the water formation and excitation mechanisms, showing at the same time that water presents peculiar line profiles difficult to be interpreted with the current picture of protostellar chemistry and physics.

I will review these Herschel findings showing that only high angular resolution far-IR observations can eventually shed light on the different components characterizing the complex region of water emission.