

The search for water in protoplanetary disks: Herschel and beyond

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Water is key in the evolution of protoplanetary disks and the formation of comets and icy/water planets. High excitation water lines originating in the hot inner disk have been detected in several young solar-mass stars (T Tauri stars) with observations in the near- and mid- infrared range. On the contrary, water vapor from the outer disk, where most of water ice reservoir is stored, was only recently reported in a few TTauri and Herbig stars thanks to Herschel.

I will present the observations obtained with Herschel, and show how these allowed us to constrain the location and content of the different water reservoir in protoplanetary disks. Then, I will discuss how future observations in the far-infrared at sub-arcsecond resolution will allow us to progress on the study of water in protoplanetary disks.