

**Water cooling in protostellar objects:
results of the ISO-LWS and the future role of FIRST**

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We review the results of the far-infrared emission line spectra of the water molecule obtained with the Long Wavelength Spectrometer onboard of ISO on a sample of protostellar and pre-Main Sequence sources.

Water was expected to play an important role in the cooling of shock-excited regions associated with the star formation process. Contrary to the current C-type shock models, ISO has found that in most of the sources water is not the dominant coolant and has much lower abundances than expected. These results have been recently confirmed by the observations made by SWAS. We will outline here the possible explanations.

FIRST, with its high spatial and spectral resolution with respect to ISO, will be able to identify and disentangle different emitting regions allowing an accurate study of shock excited regions. Moreover, due to the improved sensitivity, statistically significant samples of protostellar and pre-Main Sequence objects will be observed.