

## The Galactic center Interstellar Medium: from ISO to FIRST

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With the purpose of investigating the heating mechanisms of the Galactic center (GC) molecular clouds, we have studied a sample of 18 clouds distributed all along the CMZ (Central Molecular Zone) at millimeter and infrared wavelengths using ISO and IRAM-30m telescopes. The clouds were selected from the CS or SiO large scale maps of the GC region. ISO has shown the complexity of the GC “molecular” clouds detecting, not only large column densities of warm molecular gas ( $H_2$ ) without associated warm dust, but emission of atoms and low excitation ions (CII, OI, SiII,...) that should arise in shocked or photon-dominated regions (PDRs). In addition, ISO has also detected emission from ions like SIII, NeII, ArII, or NII (in some clouds we have even detected NeIII and OIII) that should arise from HII regions that were previously unsuspected due to the non-detection of Hydrogen recombination lines at millimeter wavelengths.

In our contribution we will review the ISO results on the large scale study of the GC interstellar medium. We will also look forward to the FIRST satellite and discuss how it will help to understand the energetics of the GC. The high spectral and spatial resolution that the HIFI instrument will achieve, would be of great interest to study the morphology and kinematics of the ionized material and the warm molecular gas.