

# **Potential programs for high sensitivity FIR spectroscopy with SPICA**

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We discuss the potential of high sensitivity FIR spectroscopy as the major tool to probe the physical properties of active nuclei and starburst regions of local and distant galaxies. For local galaxies, we will map the discs and ISM through the low ionization ionic lines and a variety of molecular tracers, such as OH, H<sub>2</sub>O and high-J CO. At increasing distances, the most important ionic nebular lines (typical of stars and AGNs) are shifted into the FIR, making possible to compare the observed spectra with those predicted by different evolutionary scenarios.