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Scientific project:

The space between stars and planets is filled with large clouds of gas and dust. It is in these clouds that new stars and planets form. We know that these clouds host an incredibly rich chemistry, where even very complex organic molecules form. Understanding how these molecules form is one of the key questions facing the interdisciplinary field of astrochemistry, the study of chemistry in astronomical environments. To understand the chemistry, it is crucial to combine laboratory studies with observations. In this respect, the LERMA group at the Université de Cergy-Pontoise under the leadership of F. Dulieu is unique, in that it has a laboratory designed to simulate interstellar conditions. Combining these experiments with observations done by L. Kristensen, we are setting up a collaboration with the specific aim of pinning down the Sulfur-chemistry in the interstellar medium, through a concerted effort combining experiments and observations.