

MAPPING MOLECULES WITH RADIOASTRONOMICAL INTERFEROMETERS: WHAT CAN WE LEARN?

VALERIO LATTANZI, *The Center for Astrochemical Studies, Max-Planck-Institut für extraterrestrische Physik, Garching, Germany*; CECILIA CECCARELLI, *Institut de Planétologie et d'Astrophysique de Grenoble (IPAG), UJF-Grenoble / CNRS-INSU, Grenoble, France*; FRANCESCO FONTANI, *Arcetri Observatory, INAF, Florence, Italy*; PAOLA CASELLI, *The Center for Astrochemical Studies, Max-Planck-Institut für extraterrestrische Physik, Garching, Germany*.

Modern radio interferometers are changing, as expected, the way we look at the Universe. In particular, the unprecedented angular resolution and sensitivity are helping the observers to disentangle the complexity of the interstellar sources, spatially and chemically. Thanks also to the observable instantaneous bandwidth of modern receivers many molecular species can be observed at the same time. From these analyses several important information on the chemistry and kinematic of the observed regions can be derived, including chemical differentiation, isotopic fractionation, and inner physical composition of the cloud itself.

In this work, several maps of chemical compounds observed towards the protocluster OMC-2 FIR4, in the frame of SOLIS (Seeds Of Life In Space; Ceccarelli et al. 2017) large program at NOEMA, will be showed. In particular the observations presented will focus on the silicon and sulfur chemistry in this young protocluster in the Orion molecular cloud, which is one of the best and closest protocluster analog to the one in which the Solar System formed.