Chemical richness of protoplanetary disks and related physical properties

A.Dutrey

Laboratoire d’Astrophysique de Bordeaux, 118 Allée Geoffroy Saint-Hilaire
33615 Pessac Cedex, France

Thanks to ALMA, there exist numerous (indirect) evidences that proto-planetary disks observed around young low-mass stars are the sites where planets form. Yet, the gas mass and thermal structure of these disks remains uncertain. Multi-line observations of molecules are required to probe these.

Observations with NOEMA cannot resolve the main planet forming zone (located at radii < 20-30 au), but many important results on the physics and chemistry of these disks have been obtained with NOEMA. I will use recent NOEMA and ALMA observations of protoplanetary disks orbiting around TTauri stars to discuss the chemistry and physics of these disks, illustrating the complementary of the two mm arrays.