



SFB 956 colloquium on January 14, 2013

Presenter | Rumpa Choudhury

Presentation title | Chemical Evolution in Hot Molecular Cores

Mini-abstract

Hot cores, observed in high mass star forming regions, are also found to be the reservoirs of many complex and rare molecules. Icy mantels of dust grains paves the way of formation of complex molecules through grain surface interactions of depleted species during the collapse phase. Radiative feedback of central massive stars release these molecules in the gas phase by evaporating the icy mantels. This together with further processing of these molecules at relatively high temperatures is responsible for the rich chemical spectrum of hot cores. We are currently developing a time dependent gas grain chemical code to simulate the chemical evolution of hot cores considering realistic density and temperature structures based on recent theoretical and empirical studies. Preliminary results from the code (e.g. temporal evolution of abundances, influence of physical conditions) will be discussed.