



ID de Contribution: 39

Type: Non spécifié

How does the cosmic rays influence the gas and grain chemistry in star-forming regions?

jeudi 30 juin 2011 17:20 (20 minutes)

The presence of cosmic rays in regions where stars are forming actually dramatically changes the gas and grain chemistry as compared to environments where photons less energetic such as FUV and UV photons usually dominate. In my talk, I will review first the main differences existing between these two illumination mechanisms of the interstellar matter. I will then present their respective influence on the star-forming gas chemical and physical properties. I will show the key species to observe if one want to disentangle these mechanisms or identify the cosmic rays presence in a specific star forming source. These results are of prime interest since they increase our understanding of the star formation processes occurring especially on galaxy scales where usually photons with different energy are well mixed. I will focus also on the potential contaminating influence of X-ray photons on the chemistry driven by cosmic ray.

Orateur: Dr BAYET, Estelle (Oxford University)

Classification de Session: Diffuse emission and cosmic ray interaction with interstellar matter