

MODELLING STUDY OF INTERSTELLAR ETHANIMINE ISOMERS

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Ethanimine (CH_3CHNH), including both the E- and Z- isomers, were detected towards the star-forming region Sgr B2(N) using the GBT PRIMOS data (Loomis et al 2013), and were recently imaged by the ACTA (Corby et al. 2015). These aldimines can serve as precursors of biological molecules such as amino acids thus are considered prebiotic molecules in interstellar medium. In this study, we present chemical simulations of ethanimine with various physical conditions. From models for Sgr B2(N) and environs, calculated ethanimine abundances show reasonable agreement with observed values, while the translucent cloud models yield much lower abundances. These results agree with locations suggested by observations that ethanimine isomers were detected in the foreground of the shells of the hot core.