



Study of C₂N₂ in a cometary coma

S. N. Delanoye, J. De Keyser

Belgian Institute for Space Aeronomy (BIRA - IASB), Brussels, Belgium
(sofie.delanoye@aeronomie.be)

To study the cometary composition and its variability as a function of the distance to the Sun and to the nucleus, models of the chemistry in a cometary coma are necessary. We have developed software to manage a database of cometary species and reactions and to generate code automatically to compute source/loss balances. Important databases available in the literature are included, resulting in an enormous source of chemical information. In the present study, a small subset of this database is used to interpret data obtained by Giotto concerning the presence of C₂N₂ in the coma of comet Halley. We examine the suggestion that C₂N₂ could be a possible parent of CN. So, this study can shed more light on the origin of CN in a cometary coma. We also investigate the effect of the uncertainties on the reaction rates on the reliability of our conclusions.