

An analytic model of comet ionosphere chemistry

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Abstract

We present an alternative approach for modeling ion-neutral chemistry in the inner coma of a low to moderately active comet [1]. The new model is analytic in its nature. Closed-form expressions to calculate fractional ion number densities as a function of cometocentric distance and activity level are presented. Advantages and limitations of the new method compared with the more standard approach of cometary ionosphere chemical modeling will be discussed.

References

[1] Vigren, E., Analytic model of comet ionosphere chemistry, A&A in print.