Abstract Submitted
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**Disscociative Recombination of $N_2H^{+1}$** SAMANTHA FONSECA DOS SANTOS, NICOLAS DOUGUET, University of California Davis, VIATCHESLAV KOKOOULINE, University of Central Florida, ANN OREL, University of California Davis, ASA LARSON, Stockholm University — $N_2H^+$ is among the first molecular ions observed in the ISM. It is formed by fast proton transfer mechanisms and destroyed either by taking part on the molecular synthesis of more complex molecules or by dissociative recombination (DR). We will present theoretical results on the dissociative recombination (DR) of $N_2H^+$ at electronic impact energies ranging from $10^{-3}$ to 8 eV. At low energies, the main contribution to DR comes from the indirect DR process and the calculation have been made within the framework of a simplified model based on multi-channel quantum defect theory. For energies above 0.1 eV, the main DR process is the direct DR and the dissociation dynamics was treated in a time-dependent picture using the MCTDH package. We calculated cross sections and DR rates, and compared with the available experimental data from the CRYRING storage ring experiment.

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