

DATASET FOR ELECTRON-IMPACT PROCESSES INVOLVING HYDROGEN AND ALKALI MOLECULAR IONS

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The new data for electron-impact processes involving some small molecular ions have been reported. Collisional processes under consideration may have an effect on the atom excited-state populations i.e. Rydberg state populations, ionization level, and optical properties of various environments. Rate coefficients for electron-impact processes involving potassium, sodium, lithium and hydrogen molecular cations in domains of higher principal quantum numbers and temperatures up to 10 000 K are presented. The outcomes, i.e., the data gathered, could be used for various applications, such as plasma chemistry or experiments, for modelling atmospheres of diverse environments such as the interstellar medium, planets, and dwarf stars, and also in the plasma fusion area.