ACol – Database for collisional processes

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Atomic and molecular data and databases, especially today, are crucial for creating models and simulations of physical processes as well as for interpreting (big)data gathered from observations and measurements (Albert et al. 2020; Srećković et al. 2020). Models must be updated frequently, incorporating as many processes as possible and utilizing the most precise data (Vujčić et al. 2015; Srećković et al. 2022). Our goal is to participate in this by providing such datasets. In this contribution we present current stage of ACol database. The rate coefficients for excitation/deexcitation and ionization/recombination collisional processes in hydrogen, helium, and alkali plasmas are included in ACol. The database is currently under development. The data could be helpful for researching and modeling LTP as well as weakly ionized layers in various atmospheres.

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