COLLISIONAL PROCESSES INVOLVING RYDBERG ATOMS: RATE COEFFICIENTS

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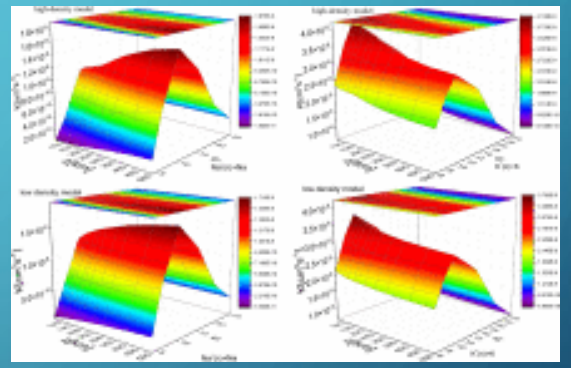
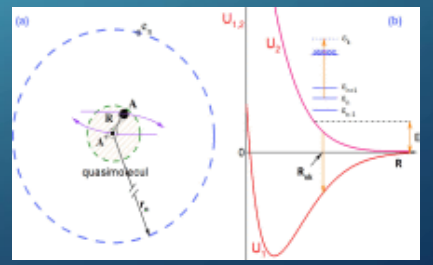
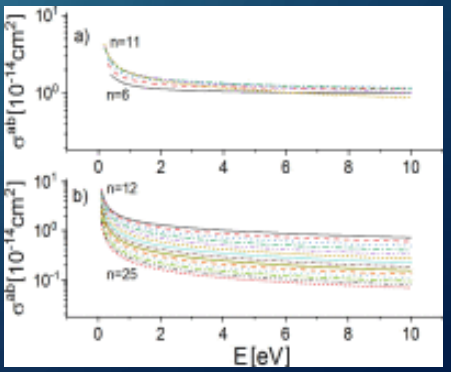
Ionization processes involving highly excited atoms and molecules in different environments continue to arouse the interest of researchers due to their influence on spectral properties (Albert et al., 2020; Gnedin et al., 2009; Srećković et al. 2023). Here we obtained the data, i.e. the rate coefficients for such processes for wide range of parameters and principal quantum numbers. Our goal is to produce high-quality data that can be properly incorporated into current codes and databases for modeling planetary atmospheres, laboratory plasma, geo-cosmic plasma, the ionosphere, etc.







References

Albert, D., et al., 2020, Atoms 8.4, 76.

Gnedin, Yu. N., et al., 2009 New astronomy reviews 53.7-10, 259-265.

Srećković, V. A., et al. , 2023, Advances in Space Research, 71(2), 1245-1251.