
An updated list of photodissociation and ionisation rates in stellar and cosmic-ray induced radiation fields

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Résumé

The photodissociation and ionisation rates of molecules in a UV flux are key parameters in astrochemical models. We have critically re-assessed experimental and theoretical cross sections for a range of molecules and calculated these rates. We consider continuum fields with different wavelength dependencies, the H₂ line emission generated by cosmic ray collisions in deeply embedded regions, and depth-dependent molecular shielding functions.

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