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ELECTRON IMPACT EXCITATION AND RADIATIVE TRANSITION RATES FOR Cr II

Marcio Melendez, Meriela Martinez, Manuel A. Bautista, Connor Ballance

*The Catholic University of America, Physics Department, 620 Michigan Ave., NE, Washington, DC
20064, USA*

Email: 07melendez@cua.edu

A complete dataset of electron impact excitation and radiative transition rates for Cr II is presented. The calculations are carried out with the R-matrix method and consider coupling effects and resonance structures in detail. The atomic data allow us to build a 162-level atomic model to study the emission spectra of gaseous nebulae. Our theoretical model is then compared against the emission spectrum of Eta Carinae.