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The Diagnostics Of Hydrogen-Cesium Plasma Using Fully Relativistic Electron Impact Cross Sections PRITI PRITI, DIPTI DIPTI, Department of Physics, IIT Roorkee, Roorkee, India, REETESH GANGWAR, Department of Particle Physics and Astrophysics, Weizmann Institute of Science, Rehovot 7610001, Israel, RAJESH SRIVASTAVA, Department of Physics, IIT Roorkee, Roorkee, India — Electron excitation cross-sections and rate coefficients have been calculated using fully relativistic distorted wave theory[1]for several fine-structure transitions from the ground as well as excited states of cesium atom in the wide range of incident electron energy. These processes play dominant role in low pressure hydrogen-cesium plasma relevant to the negative ion based neutral beam injectors for the ITER project[2].The calculated cross-sections are used to construct a reliable collisional radiative (CR) model to characterize the hydrogen-cesium plasma[3]. The calculated plasma parameters are compared with the available experimental and theoretical results[4].

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