Abstract Submitted
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Electron excitation of Cesium and its application to plasma modeling[1] RAJESH SRIVASTAVA, PRITI PRITI, Indian Institute of Technology (IIT) Roorkee, Roorkee 247667, India, DIPTI DIPTI, NIST, 100 Bureau Drive, Gaithersburg, MD 20899, USA, REETESH GANGWAR, Weizmann Institute of Science, Rehovot 7610001, Israel — Electron impact excitation cross-sections and rate coefficients have been calculated using fully relativistic distorted wave theory for several fine-structure transitions from the ground as well as excited states of cesium. As an application, the calculated detailed cross-sections are used to construct a reliable collisional radiative (CR) model [1] to characterize the hydrogen-cesium plasma. These processes play dominant role in low pressure hydrogen-cesium plasma, which is relevant to the negative ion based neutral beam injectors for the ITER project. The calculated cross-sections and the extracted plasma parameters from the present model are compared with the available experimental and theoretical results [2]. [1] R. K. Gangwar, Dipti, R. Srivastava and L. Stafford, *Plasma Sources Sci. Technol.* **25**, 035025 (2016). [2] Priti, Dipti, R K Gangwar and R Srivastava, *J. Quant. Spectrosc. Radiat. Transf,* **187,** 426 (2017).

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