

Abstract Submitted  
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**Radiative collisional processes for atoms and ions**<sup>1</sup> J.F. BABB, ITAMP, Harvard-Smithsonian CfA, B. M. MCLAUGHLIN, Queen's U. Belfast — We describe theoretical studies of radiative collisional processes between atoms and ions. The cross sections and rate coefficients for the radiative charge transfer process between a carbon atom and a helium ion ( $\text{C-He}^+$ ) [1] and between other atom-ion pairs are calculated. The radiative association process is investigated for a carbon atom and a proton ( $\text{C-H}^+$ ) and for other atom-ion systems. Applications of the results are discussed. [1] J.F. Babb and B. M. McLaughlin, J. Phys. B 50 (2017), 044003.

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