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Angular Distributions and Dalitz plots for  $C^{6+}$  ionization of  $He^1$ SEBASTIAN OTRANTO, RONALD OLSON, Physics Department, University of Missouri-Rolla, Rolla MO 65401, JUAN FIOL, CONICET and Centro Atómico Bariloche, 8400 S. C. de Bariloche, Río Negro, Argentina — Single ionization fully differential cross sections for 2 MeV/amu  $C^{6+}$  + He collisions are presented and analyzed using the classical trajectory Monte Carlo (CTMC) and Continuum Distorted Wave (CDW) models. The present theoretical results are compared with recent experimental data of Fischer *et al* [1]. The published experimental conditions are considered in the theoretical models. The inclusion of the thermal motion of the target atom leads to an improved description of the forward electron emission [2]. Moreover, we present cross sections in the plane perpendicular to that of the collision, for which experimental angular distributions have not been yet reported. Dalitz plots for single ionization fully differential cross sections in ion-atom collisions are presented and are used to help elucidate the collision dynamics. [1] D. Fischer, R. Moshammer, M. Schulz, A. Voitkiv and J. Ullrich, J. Phys. B: At. Mol. Opt. Phys. 36, 3555 (2003). [2] R. E. Olson and J. Fiol, Phys. Rev. Lett. 95, 263203 (2005).

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