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**Theoretical and experimental results for electron-impact ionization of the 3p state of Mg that has been laser aligned**[1] SADEK AMAMI, DON MADISON, Missouri Univ of Sci & Tech, KATE NIXON, ANDREW MURRAY, University of Manchester, Manchester, United Kingdom, JAMES COLGAN, Theoretical Division, Los Alamos National Laboratory, Los Alamos, New Mexico 87545, USA — Low energy theoretical and experimental quadruple differential cross sections (QDCS) will be presented for electron impact ionization of magnesium atoms that have been aligned by lasers. The incident projectile electron has an energy of 43.31eV, the scattered and ejected electrons were detected with equal energies (E1=E2=20eV), one of the final state electrons was detected at a fixed scattering angle of 30 degrees, and the other final state electron is detected at angles ranging between 0 degrees and 180 degrees. The Mg atoms are excited to the 3p state using a linearly polarized laser which produces a standing wave aligned perpendicular to the laser beam direction. Theoretical results will be compared with the experimental data for several different alignment angles both in the scattering plane as well as in the plane perpendicular to the incident beam direction.

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