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X-Ray Photoabsorption in Magnesium Ions SH. A. ABDEL-NABY, M.F. HASOGLU, D. NICOLIĆ, T.W. GORCZYCA, Western Michigan University — K-shell photoabsorption cross sections are necessary for determining elemental abundances of the interstellar medium (ISM) from observed X-ray spectra. Over the past few years, our group has computed reliable K-shell photoabsorption calculations for oxygen [1-3], neon [4,5], and carbon [6] ions. We extend our calculations to magnesium ions using a state-of-the-art R-matrix method that incorporates the important Auger broadening and pseudoresonanace-elimination effects. Comparisons with available independent-particle (IP) results and other available data will also be presented.

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