Abstract Submitted
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Low Energy Elastic Electron Scattering from Dimethyl Ether and Diethyl Ether[1] GILLIAN TATREAU, BORNA HLOUSEK, California State University, Fullerton, MATEAUSZ ZAWADZKI, Gdansk University of Technology, Gdansk, Poland, MURTADHA A KHAKOO, California State University, Fullerton — Experimental differential cross sections for electron scattering from two ethers - gaseous $(CH_3)_2O$ and $(C_2H_5)_2O$ - are presented. The measurements are taken with a high resolution electron spectrometer and use the relative flow method with a moveable (aperture) target gas delivery source [1] which obviates the need to know gas kinetic cross sections for the target molecule. Helium gas was used as standard, with established cross sections from [2,3]. The moveable source enables accurate determinations of background scattering [1] and the measurements are taken at incident electron energies of 1 eV to 30 eV for scattering angles of 10^o to 130^o. Comparisons with existing cross sections are made. [1] M. A. Khakoo *et al.*, J. Phys.B. **40**, 3601 (2007). [2] R. K. Nesbet, Phys. Rev. A **20**, 58 (1979). [3] D. F. Register et al. Phys. Rev. A **21**, 1134 (1980).

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