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**Comparisons of sets of electron-neutral scattering cross sections and calculated swarm parameters in O2** LEANNE PITCHFORD, M.C. BORDAGE, G.J.M. HAGELAAR, S. PANCHESHNYI, LAPLACE, CNRS and Univ Toulouse, France, S.F. BIAGI, Univ Liverpool, UK, Y. ITIKAWA, Inst of Space and Astronautical Sci, Japan, I. KOCHETOV, A. NAPARTOVICH, SRC TRINITI, Russia, A.V. PHELPS, JILA, NIST and Univ Colorado, USA — The purpose of this communication is to describe the four independently-compiled sets of electron-O2 scattering cross section sets that are presently available on the LXCat site (www.lxcat.net). Three of these cross section sets were assembled and adjusted for good agreement with swarm parameters, and the fourth set consists of recommended data resulting from an evaluation of beam experiments and available theoretical. The cross sections sets are intended to be "complete" in the sense that the major electron energy, momentum, and number changing processes are taken into account, but it should be noted that the electronically excited levels included in the compilations differ from one cross section data set to another. We use these different data sets as input to a Boltzmann equation solver and calculate the electron transport and rate coefficients. Comparisons of calculated transport and rate coefficients with experimental data will be presented for each cross section set. We note that the consistency of the experimental data in O2 is not as good as the data for H2 and N2 (see previous poster). Some cross section data for electron scattering from Reactive Oxygen Species (ROS) are also available on LXCat.

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