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The LXCat project: a status report WOUTER GRAEF, Plasma Matters B.V., JAN VAN DIJK, Eindhoven University of Technology, MATTHEW HOPKINS, Sandia National Laboratories, LEANNE PITCHFORD, LAPLACE, CNRS and Univ. Toulouse III, France, BENJAMIN YEE, Sandia National Laboratories, THE LXCAT TEAM — LXCat is an open access website for archiving and manipulating data needed for modeling the charged particle components of low-temperature plasmas (LTP). The data include electron-neutral scattering cross sections (both as complete sets suitable for use with Boltzmann solvers, as well as total or differential cross sections), electron oscillator strengths, ion scattering cross sections, and transport and rate coefficients. LXCat hosts many databases contributed by members of the LTP community. In some cases data for the same process exist in multiple databases due to different sources or needs. While no judgment is made of the relative merit of such data, the site facilitates visitors in making their own comparisons. Related tools include mechanisms for plotting and downloading the data, and an on-line Boltzmann solver which uses complete sets of cross sections to generate transport and rate coefficients that can then be compared with experimental data or used in modeling tools. Since its inception in 2010, over 50 international volunteers have participated in this project. The organization requires work on many fronts including data contributors, site developers, and the outreach team. Those interested in sustaining this vital community resource should contact the authors.

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