Atomic Spectra Bibliography Databases at NIST

ALEXANDER KRAMIDA, National Institute of Standards and Technology — NIST’s Atomic Spectroscopy Data Center maintains three online Bibliographic Databases (BD) containing references to papers with atomic data for controlled fusion research, modeling and diagnostics of astrophysical and terrestrial plasmas, and fundamental properties of electronic spectra of atoms and ions. The NIST Atomic Energy Levels and Spectra BD [http://physics.nist.gov/elevbib] now includes about 11500 references, mostly for years 1967–2007. The NIST Atomic Transition Probability BD, v. 8.1 [http://physics.nist.gov/fvalbib] with its 7500 references mainly covers years 1964–2007. The NIST Spectral Line Broadening BD, v. 2.0 [http://physics.nist.gov/linebrbib] has 3670 references, mostly for 1978–2006. All three databases are maintained in a unified database management system that allows us to quickly update the contents. Updates become available to users on the next day. An automated Data Entry module makes it easy to enter and categorize the data. The system allows us to keep the contents of all BDs up to date. A number of enhancements made since last year greatly increased public usability of the databases. This work is supported in part by the Office of Fusion Energy Sciences of the U.S. Department of Energy and by the National Aeronautics and Space Administration.

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