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**NIST's atomic databases for applied and fundamental science**

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NIST maintains several databases on atomic properties. This talk will give a brief review of these databases with focus on the Atomic Spectra Database (ASD), which is the only source of critically evaluated data on atomic energy levels, spectral lines, and transition probabilities. These data are widely used for plasma modeling in astrophysics, fusion science, and many other diverse fields from environmental science to nuclear physics and atomic clocks. A recently released new online interface was designed for modeling of laser induced breakdown plasmas used in analysis of composition of materials, such as minerals, steel alloys, glasses, and even Mars rocks. All these applications demand further extension and better precision of atomic data sets, which requires new extensive compilations and in many cases new research. These requirements that will be discussed in the talk demand a change in current culture of atomic physics research worldwide.

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