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### **Atomic Data Needs for Modeling Supernova Light Curves<sup>1</sup>**

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The modeling of supernovae requires the application of knowledge from a wide range of numerical and physical disciplines. The requisite expertise includes hydrodynamics, radiation transport, nuclear physics and atomic physics. Recently, there has been increased interest in improving the number and quality of supernova observations, as exemplified by missions such as NSF's Large Synoptic Survey Telescope (LSST) and NASA/DOE's Joint Dark Energy Mission (JDEM). In support of these missions, the corresponding modeling efforts are also being expanded. In this talk, the role of atomic data is discussed as it pertains to the modeling of radiation emitted by supernovae. The Los Alamos OPLIB opacity database has previously been used in this context to provide atomic opacities for modeling plasmas under local thermodynamic equilibrium (LTE) conditions. The Los Alamos suite of atomic physics codes is currently being used to explore options for providing non-LTE atomic physics data in order to model plasmas under more complicated conditions.

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