

# ATOMIC AND MOLECULAR PHYSICS AND DATA ACTIVITIES FOR ASTROPHYSICS AT OAK RIDGE NATIONAL LABORATORY<sup>1</sup>

*D. J. Jeffery, P. S. Krstić, W. Liu, D. R. Schultz, and P. C. Stancil*

The atomic astrophysics group at ORNL produces, collects, evaluates, and disseminates atomic and molecular data relevant to astrophysics and actively models various astrophysical environments utilizing this information. With the advent of the World Wide Web, these data are also being placed on-line to facilitate their use by end-users. In this brief report, the group's recent activities in data production and in modeling are highlighted. For example, we describe recent calculations of elastic and transport cross sections relevant to ionospheric and heliospheric studies, charge transfer between metal ions and metal atoms and novel supernova nebular spectra modeling, ion-molecule collision data relevant to planetary atmospheres and comets, and data for early universe modeling.

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