

Laboratory Astrophysics for High Resolution Astrophysical X-ray Spectroscopy

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Abstract

The most obvious need for laboratory experiments in X-ray astronomy is in basic data for high resolution spectroscopy. Astrophysical X-ray spectroscopy of highly ionized gas has taken off with the launch of the *Chandra* and *XMM-Newton* observatories, and the success of this work can be attributed partially to the availability of reliable spectroscopic atomic data derived from, or benchmarked against, laboratory experiments. I'll briefly review some of the issues in this area. Astrophysical X-ray spectroscopy of near-neutral material is new, and has been found to lack some of the most basic spectroscopically reliable information required to exploit the potential of these data. I will review the astrophysical data, and the areas in which laboratory experiments could make a decisive difference.

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