ATOMIC DATA FOR THE CHIANTI DATABASE, A. K. Bhatia, NASA/GSFC and E. Landi, University of Michigan

The CHIANTI spectral code consists of an atomic database and a suite of computer programs to calculate the optically thin spectrum of astrophysical objects and to carry out spectroscopic plasma diagnostics. The database includes atomic energy levels, wavelengths, radiative transition rates, collisional excitation, ionization and recombination rate coefficients, as well as data to calculate free-free, free-bound and two-photon continuum emission.

In recent years, we have been pursuing a program to calculate atomic data for ions whose lines have been observed in astrophysical spectra but have been neglected in the literature, and to provide CHIANTI with all the data necessary to predict line intensities.

There are two types of such ions: those for which calculations are available for low-energy configurations but not for high-energy configurations (i.e., C-like, N-like, O-like systems), and ions that have never or only seldom been studied. This poster will summarize the current status of this project and indicate the future activities.