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## THE FeXI SPECTRUM NEAR 200 Å - CONSTRUCTING AN ACCURATE TARGET

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FeXI lines around 200 Å produce some of the strongest lines in the spectrum of the solar corona, and also offer electron density diagnostics for active region plasmas.

The upcoming SOLAR-B EIS spectrometer will provide in the next few years a wealth of observations with unprecedented spectral (velocities of a few km/s) and temporal (a few seconds) resolution, and it is therefore important that accurate line identifications and atomic data are provided. The Fe XI lines are prominent in the short-wavelength channel (163-209 Å).

Some of the strongest FeXI lines near 200 Å are caused by electric dipole transitions from three strongly interacting  $J=1$  levels to the levels of the ground configuration. There is no consensus in the literature about the strength of the mixing, as evidenced by different workers obtaining very different values for the relevant oscillator strengths. Even the energies of the three states are uncertain. Until these uncertainties have been resolved, existing collision strength calculations for FeXI must be treated with great caution.

We have carried out several elaborate CI calculations for FeXI and also for TiVII, where the same strong interactions arise but where the level identifications are more secure, and compared the results to solar observations and to laboratory spectra in attempt to devise a reliable target for a scattering calculation.