X-ray Line Spectroscopy of Hot Stars

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[Contributed talk, 15min.]

Abstract

Chandra grating spectroscopy has provided a completely new view of high energy processes occurring on massive, hot stars. The initial results from high-resolution spectral observations of a small number of hot stars have been surprising, to say the least. The fast stellar winds of hot stars make these sources one of the few classes of astrophysical objects for which Chandra can make spectrally resolved measurements of line profiles. The observed line profiles vary significantly in both width and shape among the hot stars thus far observed. These results, along with line-ratio diagnostics of density and proximity to the photospheric UV field, are difficult to understand within the framework of any single theory of X-ray production on hot stars. In this talk, I will review the current observational results of high resolution Chandra spectroscopy of hot stars, and will discuss the implications for coronal, wind shock, and hybrid models of hot star X-rays.

CATEGORY: NORMAL STARS AND WHITE DWARFS