

# X-ray Emission from Massive Stars

David Cohen

Department of Physics and  
Astronomy  
Swarthmore College

Hot, massive stars are among the brightest objects in the Galaxy, and their intense light drives strong stellar winds from their surfaces. These winds might be related to the production of X-rays on massive stars. If so, massive stars' X-rays are much different than those found our own Sun and other cooler stars like the Sun that produce X-rays via magnetic activity. With the recent launch of the *Chandra* X-ray telescope, we can, for the first time, use high-resolution X-ray spectroscopy to determine how hot, massive stars produce X-rays. Specifically, we can learn what role their winds play in the X-ray production process and what role magnetic fields might play. I will present background information about hot stars, radiation pressure, spectroscopy, and the Doppler shift, and then discuss some recent results obtained by Swarthmore College undergraduates on the mystery of hot star X-ray production.

