

X-ray Emission from the Winds of Massive Stars

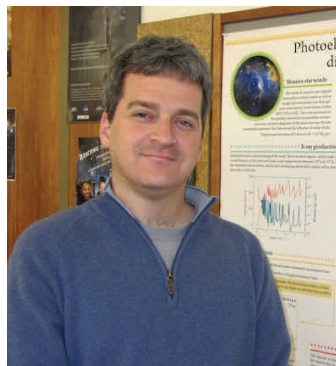
Hot, luminous, massive stars are strong sources of soft X-ray emission, despite their general lack of surface magnetic fields and the associated dynamo activity and MHD processes that heat a corona and explain the X-ray emission of solar-type stars. Since massive stars' surprising discovery as X-ray sources in the late 1970s, a consensus has emerged that the X-rays are produced in their strong radiation-driven winds. I will discuss two important classes of these wind-based massive star X-ray sources: (1) normal O stars with embedded wind shocks and (2) magnetic massive stars, which represent about ten percent of massive stars, and have confined magnetospheres in which magnetically confined wind shocks produce strong X-ray emission. The common theme will be how high-resolution spectroscopy can be used to determine the spatial structure of the winds and magnetospheres of massive stars and to learn about high-energy processes that they host.

Friday, October 30th

OPS, Room 140

4:00—5:00pm

Light refreshments will be served



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