APEX/J-PEX: A High-Resolution Spectrometer for EUV/X-ray Wavelengths

M. P. Kowalski, R. G. Cruddace, H. Gursky, D. J. Yentis (*NRL*), T. W. Barbee, Jr., W. H. Goldstein, J. F. Kordas (*LLNL*), G. G. Fritz (*PRAXIS, Inc.*), M. A. Barstow, N. P. Bannister (*University of Leicester*), J. S. Lapington (*MSSL*)

Abstract

Future X-ray and EUV missions should include high-resolution spectrometers, permitting use of the full range of spectroscopic diagnostics, in particular measurement of line profiles and Doppler shifts. We present a design for such an instrument (APEX), which would fly on a Small Explorer Satellite and which employs multilayer-coated ion-etched gratings in a normal-incidence configuration. We have already flown successfully a prototype spectrometer (J-PEX) on a NASA sounding rocket. The resulting EUV spectrum of the white dwarf G191-B2B will be presented.

CATEGORY: NORMAL STARS AND WHITE DWARFS