

ASTROPHYSICS SEMINAR

Friday, 4 September 2009 at 11:00

The Status and Future Prospects for Gamma-Ray Polarimetry

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Abstract. Polarimetry remains one of the last unexploited aspects of X-ray and gamma-ray astronomy. This field had been largely dormant since the first X-ray measurements of the Crab polarization in the 1970's. In recent years, however, there have been several reports of polarization measured in gamma-ray bursts and solar flares. Although these results have all been of marginal significance, they have spurred a renewed interest in high energy polarimetry. This interest has been further piqued by the latest reports of polarized emission from the Crab as measured by INTEGRAL. Here I shall review the status of high energy polarization measurements and some of the theoretical motivations. I will also review the ongoing work at the University of New Hampshire, where we have been involved in high energy polarimetry for several years. Our efforts have included both observational work (e.g., using RHESSI to look for solar flare polarization) and experimental work (developing dedicated instrumentation for high energy polarization measurements). Our experimental efforts have recently culminated in a balloon program that we call GRAPE (Gamma-Ray Polarimeter Experiment), which is scheduled for its first scientific balloon flight in the fall of 2011.

Additional Information

The seminars are given in the ISDC "Pavillon" building
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