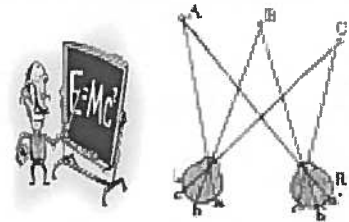




## WEEKLY CALENDAR



Department of Physics and Astronomy  
202 Nicholson Hall  
Louisiana State University and A&M College  
Baton Rouge, Louisiana 70803-4001

February 26, 2007

Tel: 225-578-2261/Fax: 225-578-5855  
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### General Seminar

"The HST/ACS Survey of Galactic Globular Clusters"

3:40PM / Thursday, 1 March 2007 / Room 109

[Refreshments served at 3:15 PM in Room 229 Nicholson]

Host: Dr. Arlo Landolt  
Ata Sarajedini, Ph.D.  
University of Florida

The HST/ACS Survey of Galactic globular clusters (GC) is a Treasury project designed to obtain photometry with  $S/N \geq 10$  for main sequence stars with masses  $\geq 0.2M_{\text{sun}}$  in a large sample of globulars using the Advanced Camera for Surveys (ACS) Wide Field Channel. The survey will produce an image atlas and source catalog with astrometry and photometry for stars in the target clusters using both newly obtained ACS observations as well as archival ACS Wide Field Planetary Camera 2 imaging, where available. In the spirit of the HST Treasury concept, the overall goal of this "legacy" survey is to investigate fundamental aspects of Galactic GCs (e.g., luminosity functions, reddenings, distances, ages, proper motions, binary fractions, to name a few) and provide a lasting contribution to cluster studies by creating a uniquely deep and uniform database of a large sample of Galactic GCs. I will present an overview of the project as well as some of the most recent results.

### Material Science & Engineering

" Multifunctional Properties of Substituted Mn-based Heusler Alloys "

3:40PM / Wednesday, 28 February 2007 / Room 109

[Refreshments served at 3:15 PM in Room 229 Nicholson]

Host: Dr. Philip Adams  
Shane Stadler

Southern Illinois University, Department of Physics, Carbondale, IL

The manganese-based full-Heusler alloys ( $X_2MnZ$ ) represent a broad class of materials that exhibit a wide variety of useful physical properties. In particular, many partially substituted alloys that are derived from the well-known  $Ni_2MnGa$  system exhibit peculiar behaviors that are all connected with the martensitic transformation observed in the parent alloy. Interesting properties include ferromagnetic shape memory effects, giant magnetocaloric effects (both "normal" and inverse), and giant magnetoresistance. In some cases, two of these properties exist in the same materials, making them prototypical "multifunctional" materials. Recent results and forthcoming experiments on the potential giant magnetocaloric material  $Ni_2Mn_xCu_{1-x}Ga$  will be presented.

### Relativity Seminar

"SOME HIDDEN AND OVERLOOKED STRUCTURES AT FUTURE NULL INFINITY IN MAXWELL, GR AND EINSTEIN-MAXWELL THEORIES – AND THEIR PHYSICAL APPLICATIONS"

12:15PM / Thursday, 1 March 2007 / Room 262

Host: Jorge Pullin  
Ted Newman, Ph.D.  
University of Pittsburgh

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**Reminder:**

Steering Committee meeting, Tuesday, February 27, 2007 at 3:40 p.m. in Room 201.

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**Publications:**

“Molecular dynamics with the united-residue force field: Ab initio folding simulations of multichain proteins”, **Ana Rojas**, Adam Liwo, Harold Scheraga, *Journal of Physical Chemistry B* 111 (1): 293-309 January 11, 2007.