GLAST Large Area Telescope:
Collaboration Meeting
August 26, 2005

Pulsar, Supernova Remnant, Plerion Group (PSR/SNR/PWN)

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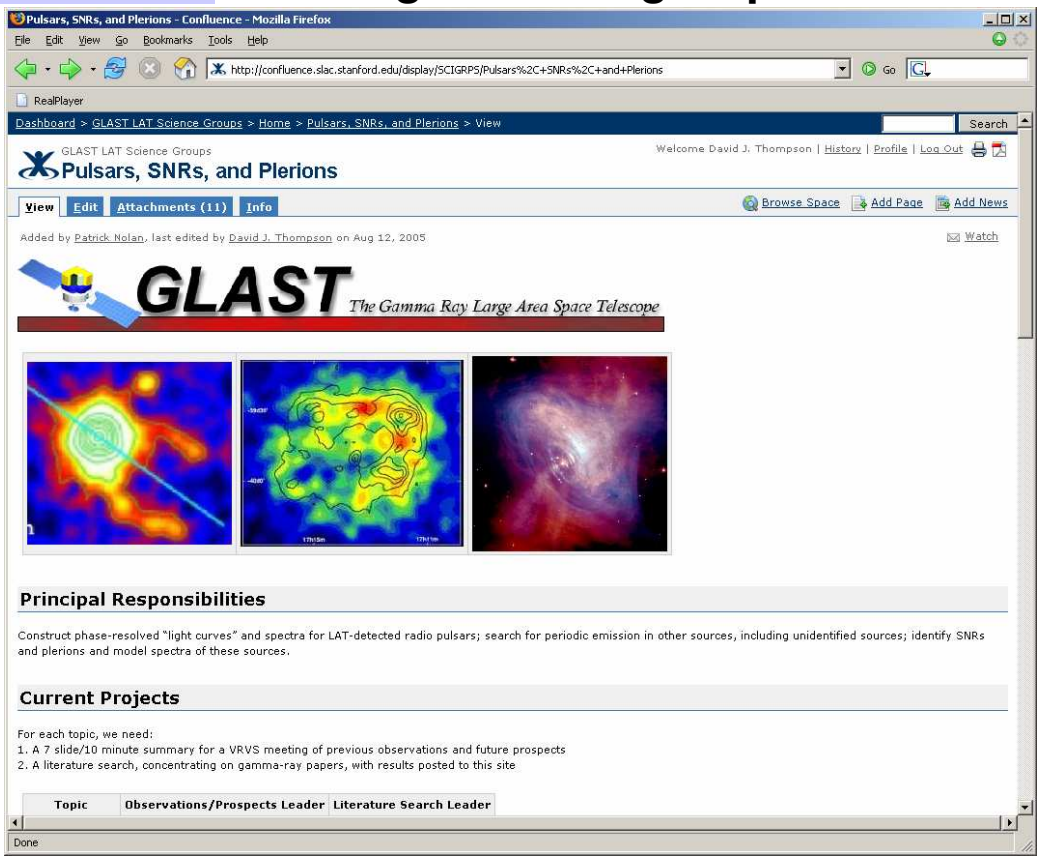
Group Activity to date

- Group has ~35 members (with a dynamic membership!)
  - ~10-15 have been active in meetings
- VRVS meetings, Confluence WWW page
  - Still defining Issues, starting to work up reviews
- Work to date:
  - Reviewed Pulsar Tools & sample simulations for DC2 (Razzano – summaries yesterday afternoon and today)
  - Discussion of SNR and extended source detection – reference to AGILE studies (Longo, Chen)
  - Started on review of key sources and model constraints (Vela – Romani)
- Work Planned….

Status of Web Site

http://confluence.slac.stanford.edu/display/SCIGRPS/Pulsars%2C+SNRs%2C+and+Plerions **is being used for group activities.**



We do not have a public Web site yet. Maybe when we have something other than planning activities.

Group Activity to date

- **Work Planned**
  - **Some input for DC2 models**
    - **Different Galactic pulsar populations? (Razzano, Harding,…)**
  - **Review of new searches –**
    - **AO multi-beam, Parkes Galactic center, Methanol multi-beam**
  - **Review of ephemeris needs**
    - **`Triage' of Radio, X-ray timing effort**
  - **Review of Each Major Source (Crab, Geminga,…)**
  - **Review of `New' Source propsects (MSP, CTA-1, …)**
  - **Review of Blind Search techniques**
    - **New schemes vs. Standard tools**
  - **Multi- wavelength issues**
    - **Spatial, spectral de-convolution of SNR**
      - **TeV targets, X-ray maps…**
    - **Identification of PWNe (radio, X-ray maps, comparison with TeV)**
    - **X-ray survey, follow-up opportunities**
      - **Suzaku (Kawai), XMM (Ballet, Caraveo?)**
  - **Papers…**

Papers

- Papers
  - Pre-launch papers
    - Rev of GLAST potential for model constraints
    - Studies of blind search algorithms – use DC2 exercises as examples
  - 6 month papers : For several of the category I papers, we can write 50% now!
- Trying to get non-experts to do associated lit review…
  - Calibration papers
    - Timing checkout ~week of Crab, Vela, B1706-44
    - Crab PSR/PWN cross spectral calibration w/ TeV spectra
- Good discussion (today!) of `paper-mill' procedures for Group review

Anticipated Papers

Category I Papers	Category II Papers	Data Collection
Crab Pulsar and Nebula 1		Year 1
Vela Observations 1		Year 1
1st New Pulsar Detected by LAT		Year 1
Geminga Observations 1		Year 1
1st New Geminga-type Pulsar		Year 1
Summary of Pulsar Observations		Year 1-2
1st Detection of Millisecond Pulsar		Year 1-2
1st Year Observations of SNR		Year 1
	PSR B1259-63	After Periastron
	PSR B1951+32	Year 1
	PSR J1617-5055	Year 1
	PSR B1853+01/SNR W44	Year 1
	PSR B1706-44	Year 1
	PSR B1055-58	Year 1
	PSR J0218+4232	Year 1
	SNR RX J1713.7-3946	Year 1

Issues

1. **Need to increase the level of participation in the group**

   Some DC2 exercises may help

   Likely need for more focused PSR modeling efforts.
   -- Phase–resolved spectral models for Crab, Vela, Geminga

2. **How to involve critical non-LAT scientists, such as radio astronomers?**

   Simon Johnston ATNF a member, recruit others?

3. **How to coordinate overlapping analysis tools with other groups?**