Introduction to the Workshop Series

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March 10 , 2005

Where are we ?

LAT Design, Development and Operations - Microsoft Internet Explorer

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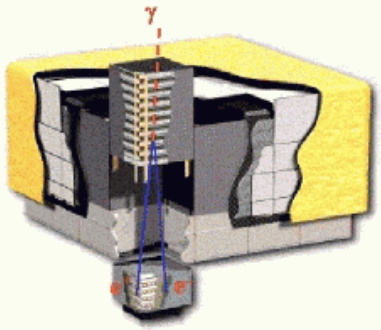
Address http://www-glast.slac.stanford.edu/ Go Links

GLAST The Gamma Ray Large Area Space Telescope

LAT Design, Development, and Operations

[GLAST LAT Home | Other GLAST Links | Institutions | Directory of LAT Mailing List Subscribers | Phone Numbers | Team Member Information]

Search Form Go



Project Management

- Calendar
- Email Calendar Changes
- Organizational Chart
- Project Controls
- Project Management Plan
- Management Meeting Calendar (January - June 2005)

Subsystems

- Tracker
- Calorimeter
- ACD
- Electronics & DAQ
- Mechanical
- Integration & Test
- Quality Assurance
- Science Analysis Software
- EPO
- System Engineering
- ISOC

WHAT'S NEW

LAT Engineering Meeting
March 8, 2005

CANCELLED
Collaboration Meeting
March 8-9,2005

Reviews and Meetings

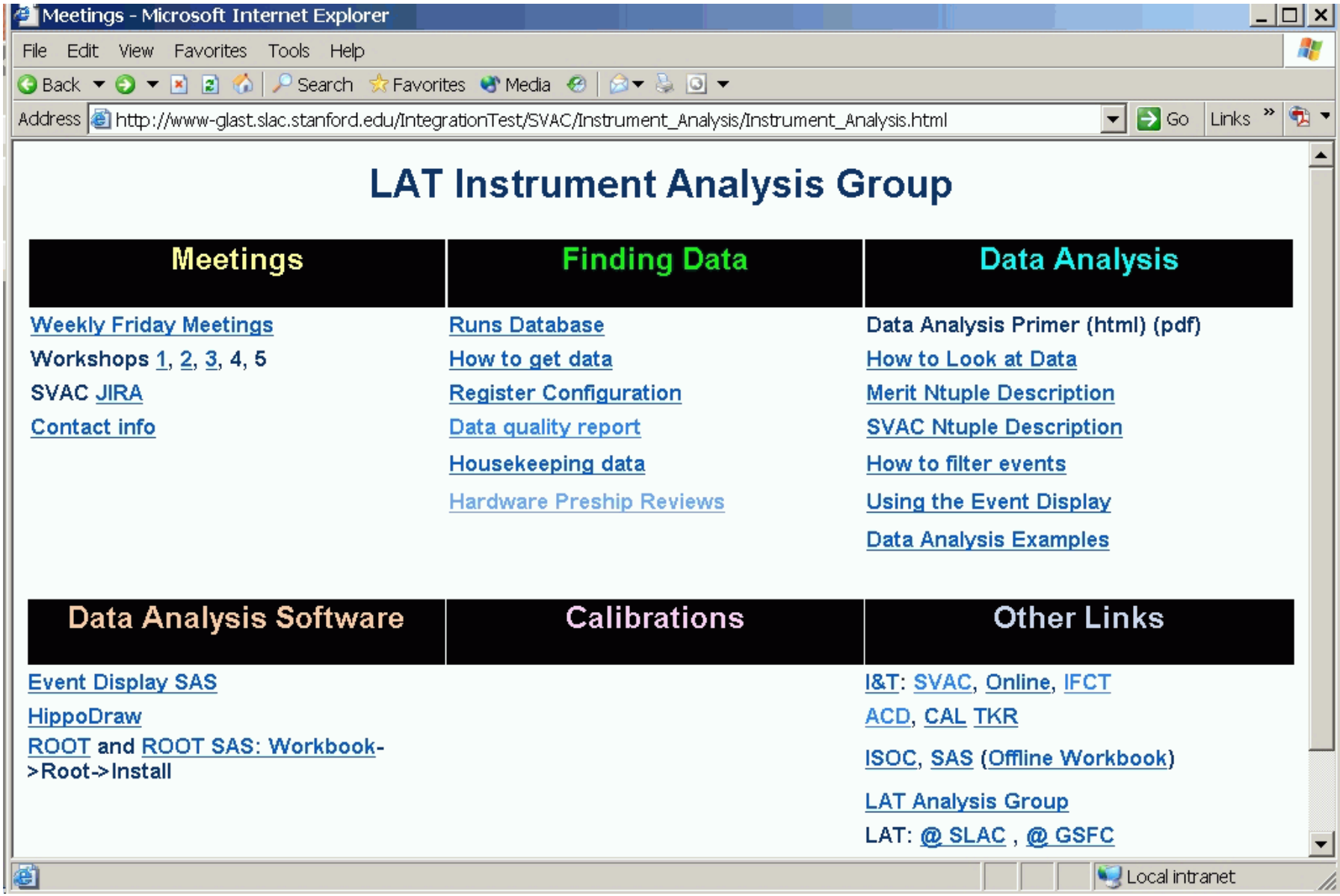
- LAT Monthly Status Reviews
- Past Reviews
- Peer Reviews
- LAT Engineering Meetings

Data Analysis

- Test Beam
- Balloon Flight
- LAT Analysis Group
- Instrument Analysis Group

Local intranet

New Web Page


Meetings - Microsoft Internet Explorer
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Address http://www-glast.slac.stanford.edu/IntegrationTest/SVAC/Instrument_Analysis/Instrument_Analysis.html
Go Links
LAT Instrument Analysis Group
Meetings
Weekly Friday Meetings
Workshops 1, 2, 3, 4, 5
SVAC JIRA
Contact info
Finding Data
Runs Database
How to get data
Register Configuration
Data quality report
Housekeeping data
Hardware Preship Reviews
Data Analysis
Data Analysis Primer (html) (pdf)
How to Look at Data
Merit Ntuple Description
SVAC Ntuple Description
How to filter events
Using the Event Display
Data Analysis Examples
Data Analysis Software
Event Display SAS
HippoDraw
ROOT and ROOT SAS: Workbook->Root->Install
Calibrations
Other Links
I&T: SVAC, Online, IFCT
ACD, CAL TKR
ISOC, SAS (Offline Workbook)
LAT Analysis Group
LAT: @ SLAC , @ GSFC
Local intranet

Goals for this Workshop Series

Prepare for Instrument Data Analysis

- Familiarizing LAT Collaborators with the
  - LAT instrument
    - Front-End Electronics
    - Trigger and Data Acquisition
    - Data Analysis Software
  - Data taking plans during LAT integration using
    - Cosmic rays
    - Van de Graaff photons
- Create a forum to
  - exchange knowledge between all subsystems and “hardware and software oriented people”
- Use simulated and real Data to
  - exercise reconstruction algorithms (mostly with real data)
  - exercise the data analysis tools and provide feedback to developers
- Develop expertise to
  - uncover and quantify any instrumental effects that could have an impact on the LAT science data
  - start the work that will evolve into the Science Operations Group of the ISOC
  - create a core and trained group to participate in the beam tests analysis effort (after instrument delivery)

Develop ownership of the LAT instrument

The Workshop Series

- Instrument Analysis Workshop 1 (June 7-8, 2004)
  - Kick off meeting
  - Homogenize the knowledge from people who will do the data analysis
  - Assign “projects” using Monte Carlo simulated data
- Instrument Analysis Workshop 2 (September 27, 2004)
  - Discuss results from MC projects assigned during Workshop 1
  - Discuss results from projects derived from REAL data collected with the Engineering Models (CAL and TKR)
- Instrument Analysis Workshop 3 (March 10, 2005)
  - Analysis of real data from the first two towers
- Instrument Analysis Workshop 4 (Summer, 2005 - TBR)
  - Analysis of real data from XX-towers (TBD)
- Instrument Analysis Workshop 5 (September, 2005 TBR)
  - LAT Data Analysis (and to validate Monte Carlo simulation)

Goals for Workshop 3

Instrument Data Analysis – real data!

- **Discuss improvements in the reconstruction code**
  - **New and better TKR recon**
  - **New and better CAL calibrations**
    - **We made it just in time, thanks SAS/CAL/TKR !**
- **Discuss improvements in the infrastructure**
  - **Analysis examples**
  - **Tutorials**
  - **Runs Database**
- **Discuss data analysis for End to end runs with cosmic rays**
  - **Working group**
- **Preliminary results**
  - **From 3 test runs we took 2 ½ weeks ago**

Develop ownership of the LAT instrument

Which data do we have?

- 3 precious runs with ~ 100K events each
  - 140001338
  - 140001339
  - 140001340
- Monte Carlo simulations

- These were not processed with the Engineering Model Code
  - We used GlastRelease and did it by hand
  - There will be a reprocessing next week when we get the final tagged code
    - Just in time for data taking (scheduled for next Monday)
      - » Details later in the morning talks

Special Thanks to

- Everyone who has helped to debug and improve the infrastructure
  - Thanks SAS for the support and patience with our requests usually due tomorrow…
    - Sure we want more…we will always do
- European/Japanese Collaborators who are providing substantial contribution to keep projects going
  - Keep the flame alive when away from SLAC…
    - Come to SLAC if you are feeling lonely…
- NRL and Pisa for providing the whenever-you-can support during this important construction phase
  - We appreciate the XX% donations in the weekly meetings
    - but we need you at a 100% level to understand the instrument!
    - ..and you all came to give talks in all Workshops: thank you !
- Everyone working with the “new Kid on the block” : Trigger
  - We are getting the infrastructure in place
  - First Data from integrated tower !
- Bill and Steve for the guidance and support
  - Couldn’t do it without you !
- Anders, Xin and Warren
  - Hard-working, dependable and fun to work with: the fuel for this engine
    - Yep, you guys need a break: take 40 long minutes for lunch next time…

Side Note

- **We are all exhausted**
  - **This week was pretty intense in I&T since we are gearing up to take data**
    - **Not everything will be smooth, but it will still be fun !**