Welcome

Fermi Data Analysis Workshop

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Workshop Objectives

• Today we’ll cover *Fermi* analysis basics:
  – Data content, selection cuts, caveats
  – Analysis methodologies, synopsis of tools
    • ML method ➔ point source analysis
    • Light curve & pulsar analysis

• Emphasis on hands on analysis
  – roving support staff

• Feedback & discussion

• GI Program: Guidelines for Proposer
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Presenter</th>
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<tbody>
<tr>
<td>8:00 - 9:00</td>
<td>Registration, Setup</td>
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<tr>
<td>9:00 - 9:10</td>
<td>Overview, Workshop Objectives</td>
<td>Shrader</td>
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<tr>
<td>9:10 - 9:20</td>
<td>Data Selection, Exploration</td>
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<td>9:20 - 9:45</td>
<td>Hands on Session 1</td>
<td>All</td>
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<td>9:45 - 10:00</td>
<td>Point Source Analysis</td>
<td>Chiang</td>
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<td>10:00 - 10:15</td>
<td>Using the Catalog for Analysis</td>
<td>Digel</td>
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<td>10:15 - 11:00</td>
<td>Hands on Session 2</td>
<td>All</td>
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<tr>
<td>11:00 - 11:15</td>
<td>Q&amp;A, Review</td>
<td>All</td>
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<tr>
<td>11:15 - 12:00</td>
<td>Hands on Session 2 (con.)</td>
<td>All</td>
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<tr>
<td>12:00 - 13:15</td>
<td>Lunch Break</td>
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<tr>
<td>13:15 - 13:30</td>
<td>Q&amp;A, Review</td>
<td>All</td>
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<tr>
<td>13:30 - 14:00</td>
<td>Hands on Session 2 (con.)</td>
<td>All</td>
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<td>14:00 - 14:15</td>
<td>Pulsar Analysis</td>
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<td>14:15 - 14:30</td>
<td>Light Curve Analysis</td>
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<td>14:30 - 15:45</td>
<td>Hands on Session 3</td>
<td>All</td>
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<td>15:45 - 16:00</td>
<td>Summary, Feedback</td>
<td>All</td>
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<td>16:00 - 16:30</td>
<td>GI Program and Science Highlights</td>
<td>Shrader</td>
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<tr>
<td>16:30 - 17:00</td>
<td>GI Program Q&amp;A</td>
<td>All</td>
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<td>17:00</td>
<td>Adjourn</td>
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Prerequisites

• Science Tools Installation – hopefully done prior, but we can help as needed
  – Workshop web page is useful resource

• Sample datasets on workshop web page
  – can substitute alternative data selections, but be cognizant of run-time, S/N issues

• Access to Fermi SSC web site
  – Data analysis documentation sets
    • Threads, Cicerone, Reference (‘fhelp’) docs
Useful Information

• Web URLs:
  – http://fermi.gsfc.nasa.gov/workshops/data_analysis_dec09/ Workshop web site
  – http://fermi.gsfc.nasa.gov/ssc/ FSSC home
  – http://fermi.gsfc.nasa.gov/ssc/data/access/ Data access
  – http://fermi.gsfc.nasa.gov/ssc/data/analysis/ Data analysis page
  – http://fermi.gsfc.nasa.gov/cgi-bin/ssc/faq/glastfaq.cgi FAQs
Cycle-3 Timeline

Announcement (as part of ROSES 2008)  September, 2009
Release online proposal aids &  November 5, 2009
documentation
Notices of Intent (optional)  November 16, 2009
Proposals Due  February 5, 2010
Proposal Peer Review  April, 2010
Stage-II (budget proposal) solicitation  May 2010
Budget deadline, processing & grants  June-July 2010
administration
Fermi Cycle 3 Begins  Mid August, 2010
Let’s get started …
Extra Slides
Overview: LAT Data Analysis Tools

Through a collaborative effort between the Fermi Science Support Center and the LAT instrument team, a suite of instrument-specific science analysis tools has been developed for public release. This software will be distributed and maintained by the FSSC. It has been designed within the framework of the HEADAS FTOOLS methodology, to ensure cross-mission compatibilities wherever possible and to minimize the learning curve for users of other high-energy astrophysics mission data sets. The general analysis flow is illustrated in this graphic:
Sample data sets posted online:

Vela Pulsar, 3C 454.3
Hopefully this has already been done(?) but if not, refer to this page for supported platforms, installation instructions.

Installing the Fermi Science Tools

You can install the Fermi Science Tools using either a source distribution or using a precompiled binary. The preferred method is to use the binary distribution. If you are unsure which distribution to select contact your system administrator. On a unix command line you can find your machine type with the command:

```
uname -m
```

and you should see something like i686, x86_64, or powerpc.

To determine the version of libc you can try:

```
ls /lib/libc*
```

and you should see something like

```
/lib/libc-2.3.4.so
```

where the 2.3.4 is the libc version.

We have binary distributions for:

- Scientific Linux 4 32 bit libc 2.3.4
- Scientific Linux 5 32 bit libc 2.5
- Scientific Linux 4 64 bit libc 2.3.4
- Scientific Linux 5 64 bit libc 2.5
- MAC OS X 10.4 powerpc