Working with a Sample Driver

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Drivers are for processing events one-by-one and doing some work on the data. This may include performing some physics analysis or creating plots. A driver can contain additional, "child" drivers, so the complexity of the processing algorithm can be segmented into several different logical functions.

> ✅ If you want to load Drivers that are in packages, you have to choose `File->Load` and specify the full path of the program. So, if your Driver `MyDriver` contains a statement like
>
> ```
> package x.y.z;
> ```
>
> then you have to `x.y.z.MyDriver`

Opening the LCIO File

Start JAS3 and open the file from the LCSim Event Browser Tutorial using the **File -> Open** command. If (and only if) you have **both** the LCIO and the org.lcsim plugin installed, you will be asked which one to use. In this case **select the org.lcsim plugin**.
If you now see the record loop commands and the name of the file displayed in the record source drop-down box, the file is loaded OK.

Opening the Sample Driver

Open a sample driver by going to **Help -> Examples** and navigating to **org.lcsim Examples**. Click on **Analysis101.java** to load the sample driver in a new window.

Compiling

To compile the sample Driver into code that will be executed when given events from the LCIO record, right-click on the window and click **Compile**.

You should see a message similar to the following.

```
4:09:28 PM ----------- compile successful
```

This indicates that the code was successfully compiled into a binary class file.

Loading

To load the Driver so that it will process events, select **Load** from the right-click menu.

Subsequent compiles of this file will cause the Driver to be automatically reloaded.
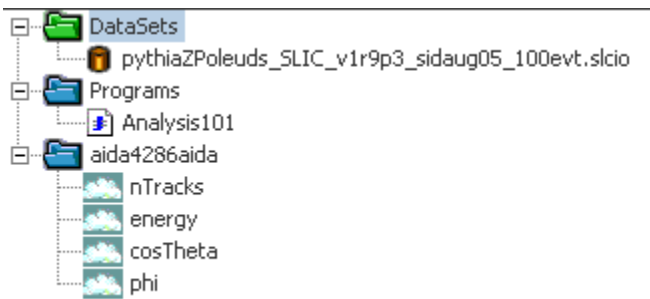
Processing Events

🔒 panpytautau-0-1000_SLIC_v1r9p3_sidaug05.slcio ▼ ◀ ▶ ⏸ ◼	The Go button processes all events until the end of the file
🔒 panpytautau-0-1000_SLIC_v1r9p3_sidaug05.slcio ▼ ◀◀ ⏸ ◼	The Go 1 button processes only the next event

To process some events using the loaded Driver, click on the **Go** button on the toolbar or press **F5**. This will run the Driver's process method over all the records in the LCIO file.

Once the processing is completed, expand all the folders on the **JASTree** menu.

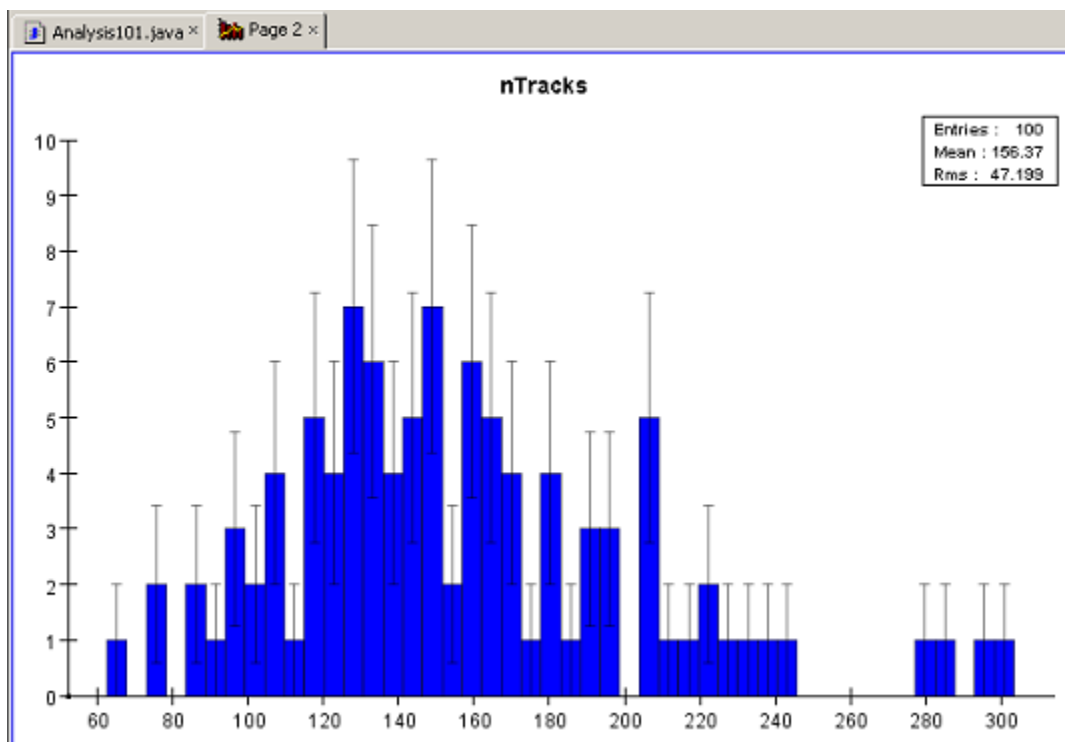You should then have something similar to this.

JASTree after Processing

Viewing Histograms

This particular example produces some histograms, which should be shown in the **JASTree** menu.

Try selecting the **nTracks** plot by double-clicking on its icon in the **JASTree**. The plot will be displayed in a new window.

View any other plot by double-clicking its icon in a similar fashion.
You can save the current plot from the file menu (via Save As) and you can save the whole tree by right-clicking on the folder (aida4286aida in this example) and selecting "Save As".