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.
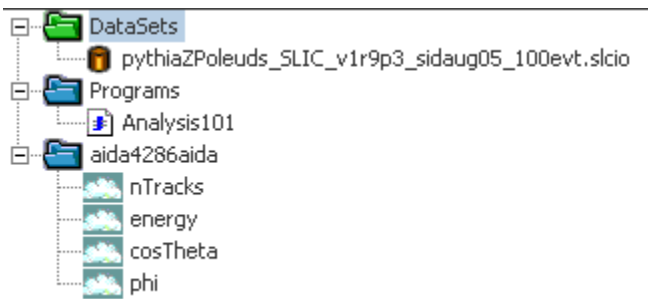
Processing Events

	The Go button processes all events until the end of the file
	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.

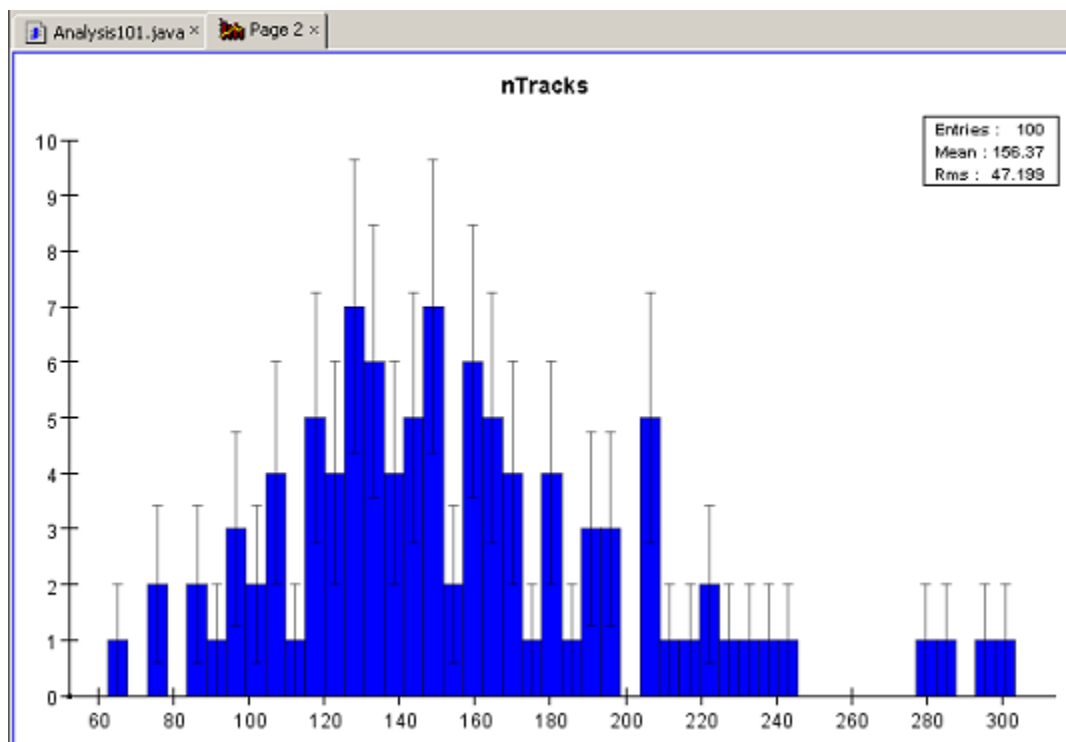You should then have something similar to this.

JASTree after Processing

DataSets
    pythiaZPoleuds_SLIC_v1r9p3_sidaug05_100evt.slcio
Programs
    Analysis101
aida4286aida
    nTracks
    energy
    cosTheta
    phi

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.

Analysis101.java ×   Page 2 ×

nTracks

Entries :   100
Mean : 156.37
Rms :   47.199

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".