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A Simple Online Analysis Example

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Labels:

- **ssh pslogin**
- **ssh atca211**
- **cp -r -d ~cpo/ana .** (this copies the analysis code to your area, only has to be done once)
- **cd ana** (change directory to "ana")
- choose a data file in /reg/d/pcds/amo/onlineo (they are labelled with the time at which they were recorded).

The "user modifiable code" lives in the file myana.cc. This only uses simple arrays, loops, and if statements. To compile, run, and examine the output use the following three commands:

- **./comp** (compiles the code, takes about 2 seconds)
- **./myana -f /reg/d/pcds/amo/onlineo/20090912-060451-0.xtc -n 100** (analyzes 100 events, leave off -n flag to analyze all events)
- **./root** (brings up ROOT gui to examine plots)

The output file is given the same filename as the input, but with a .root extension. The current myana.cc creates a histogram that averages together all shots (called a "profile" histogram) and saves the first 5 shots as separate histograms. There are some comments in myana.cc.

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Within the root GUI:

- double-click on the "ana" folder. this is the directory where the analysis output lives.
- double-click on the .root file that was output from the analysis (same filename as input, but with .root extension)
- that one root file is then selected. unfortunately, you have to double-click on it again.
- double-click on the histogram you wish to view. You can zoom in on axes by clicking and dragging on the axis, for example.
- you can quit root by typing ".q" at the terminal prompt

More information on root can be found at http://root.cern.ch