

# DBANA Online Calibration Monitoring at CDF

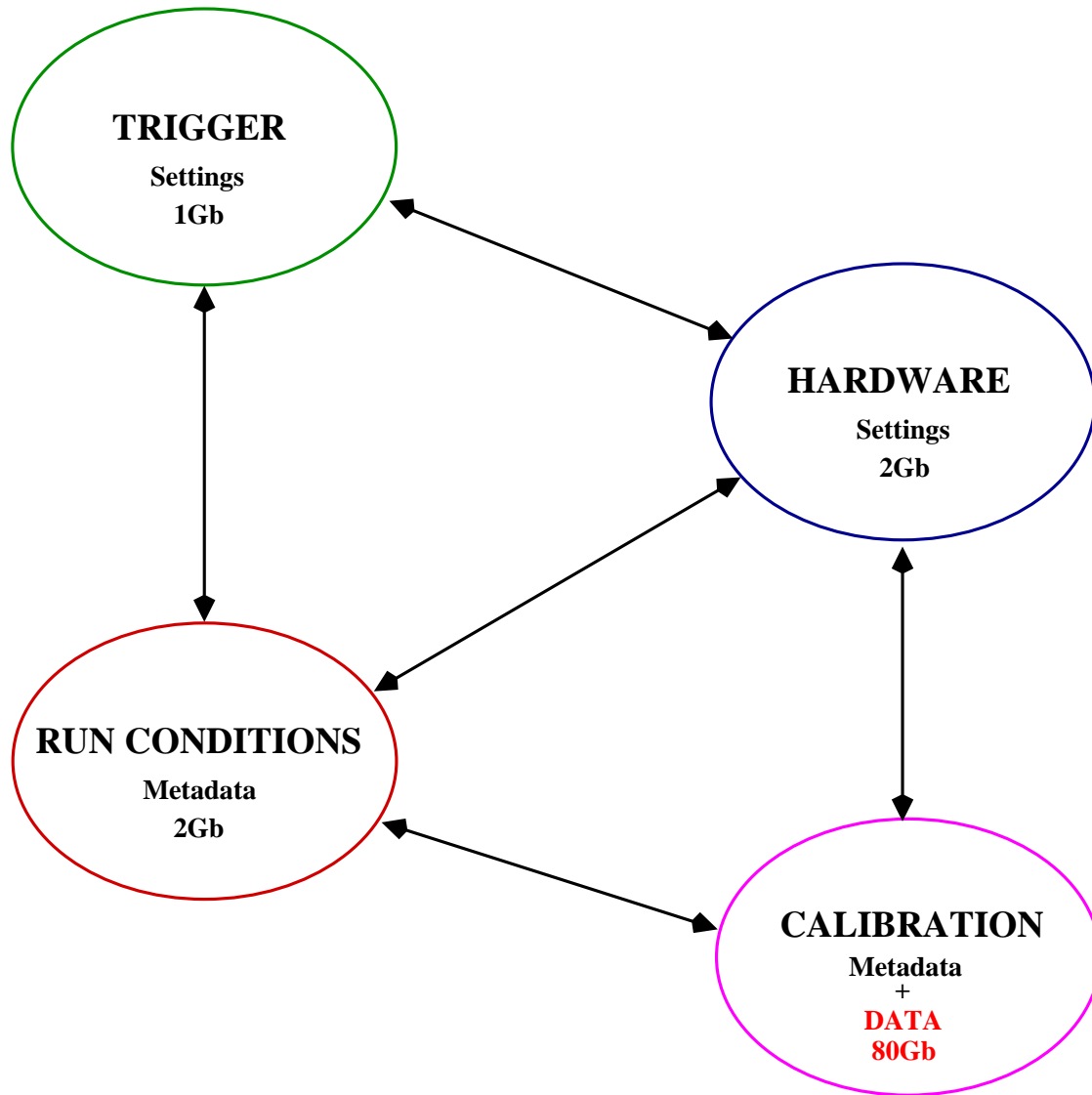
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# Databases at CDF

Use Oracle at Fermilab, freeware alternative offsite.



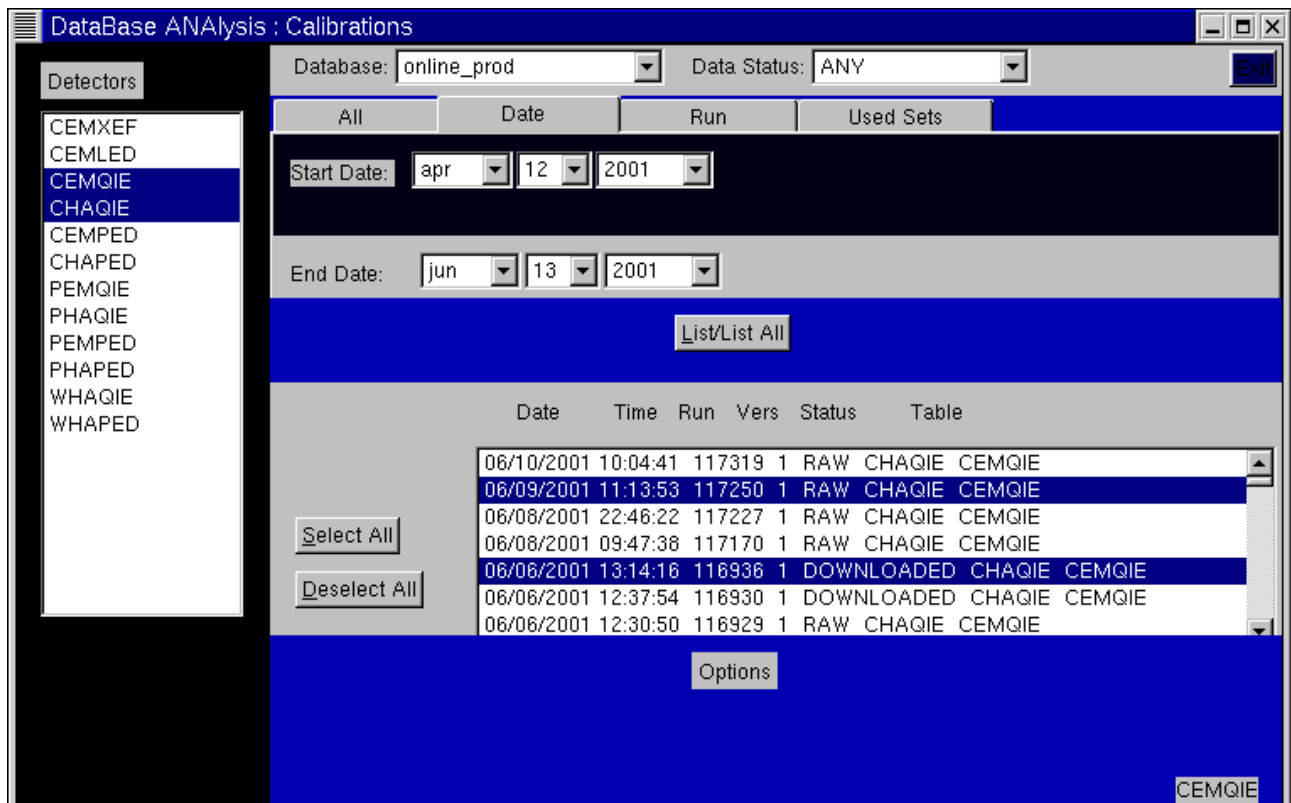
Calibration needs analysis tools for:

- Checking quality.
- Tracking changes over time.
- Data mining.

# DBANA Basic GUI

C++ GUI Analysis tool:

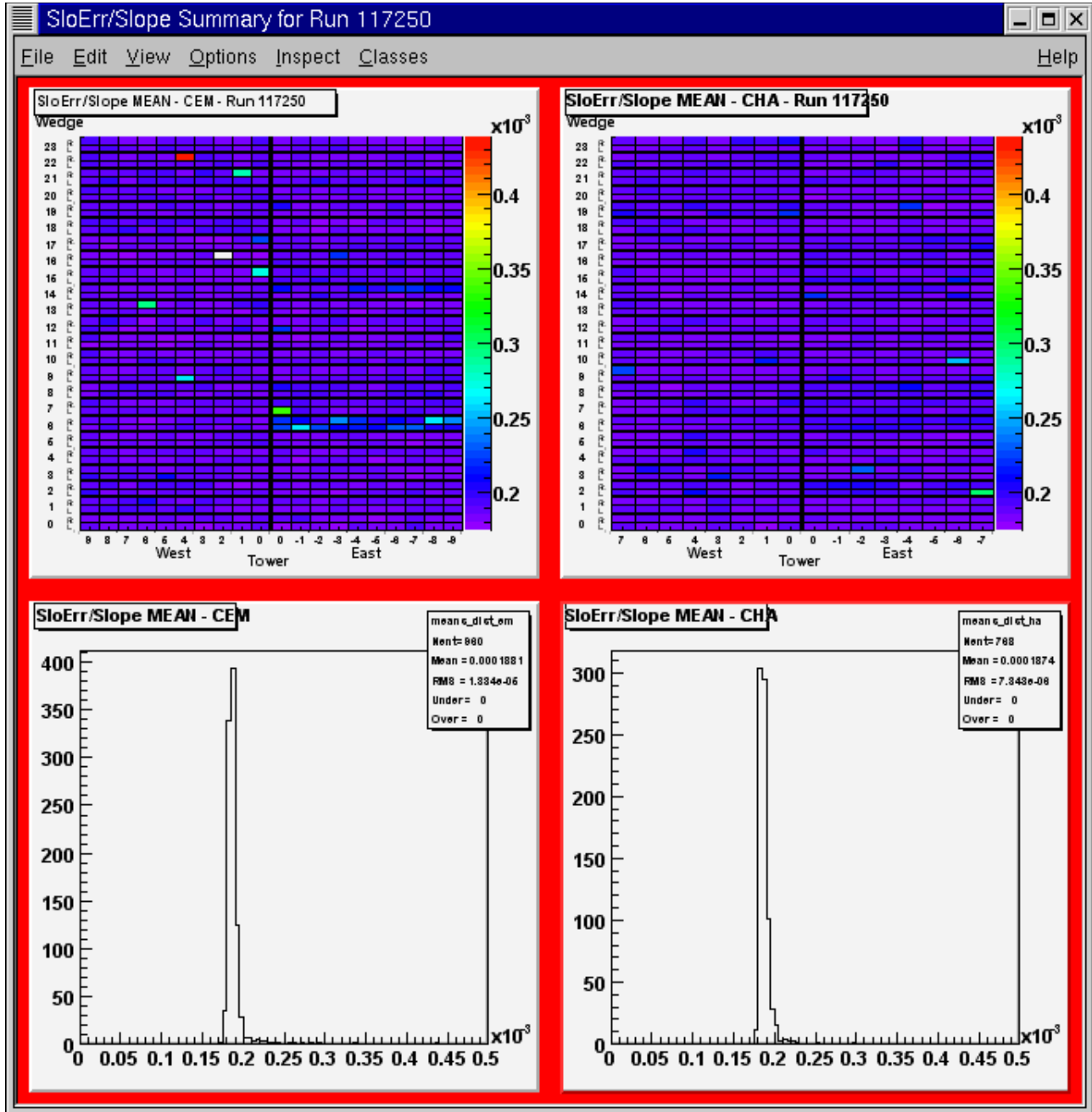
- User code (selection+analysis)
- Root libraries version 2.26.0 (graphics+widgets)
- CDF Database API
- Oracle libraries version 8.0.5



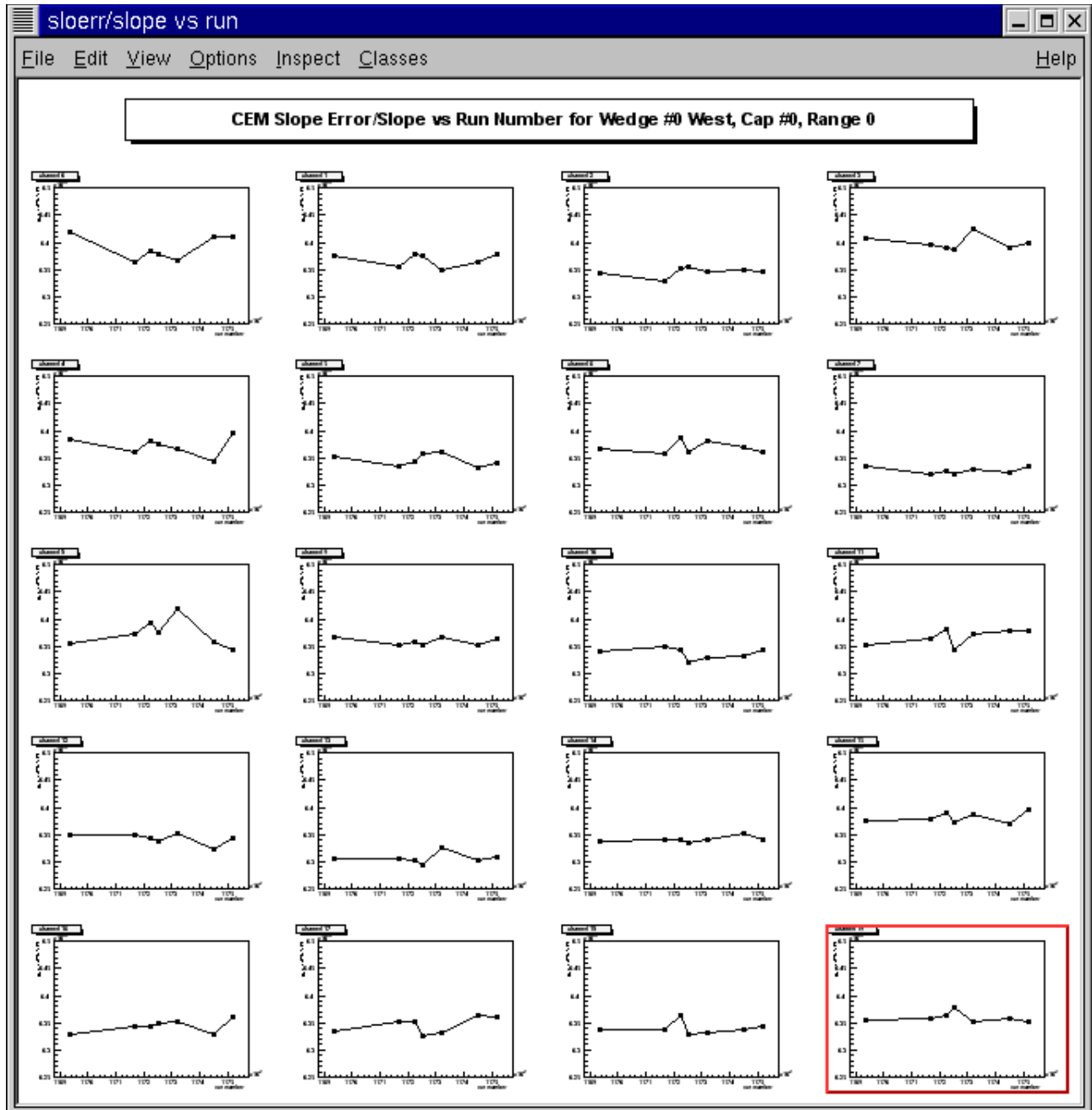
# DBANA Package

- Framework (TGMainFrame, TGCompositeFrame)
  - Detector Selection.
  - Database Selection.
  - Run Selection.
  - 6 classes + 1-3 developers
- Calibration Classes (TGCompositeFrame)
  - GUI elements in base class (DBANACalib : TGCompositeFrame).
  - Tree Definition:
    - \* Run Info branch
    - \* Indexing branch
    - \* Data branch
  - Data fetch into Tree.
  - Assign macros.
  - 10-20 classes + 6-12 developers
- “Analysis Macros”
  - Operates on Tree.
  - 3 types depending on number of selected runs: Single, Double, Multiple.
  - 50-100 functions, classes + 20-30 developers

# DBANA Macro Example



# DBANA Macro Example



# Database Browser

- Web, Java based.
- Accesses all databases.
- Prepared 'Report Groups'.
- Works with any Netscape, Explorer, Lynx, telnet.
- Inherently scriptable via bookmarking.

## Competitor or Colleague?

DBANA	Browser
+ Root, i.e. graphics	- Text oriented
+ Faster	- Slower
+ Macros	+ Scriptability
- Calibration only	+ All databases
- CDF software	+ Web-based

Planned connection by listing runs in Browser and spawning off DBANA with that input.

# Database Browser : Main Page

Netscape: Initial Query -- CDFR2 Databases

File Edit View Go Communicator Help

Back Forward Reload Home Search Netscape Print Security Shop

Bookmarks Location:  What's Related

Database Browser CdfCode/ Logbooks Calibration DB B RECO Page ROOT Home Page

2001 Jun 11 16:21CDT [Legal Notices and Disclaimers](#)

## CDF Run2 Data Bases Queryer and Browser

[?](#)  Submit query to report phase.

[?](#)  Clear form to default values

[?](#)  Select a report group.

---

Source selection

[?](#) **The source defaults below should be adequate.**

[?](#)  Search within selected offline data server.

**This data base specification generally is used by the Data Catalog group of reports and is used to obtain Data Catalog data regardless of report group as some reports use multiple data bases.**

[?](#)  Search within selected online data server.

**This data base specification generally is used by the Calibration and and Triggers and Filters groups of reports and is used to obtain their data regardless of report group as some reports use multiple data bases.**

100%



# Database Browser : Calibration List

2001 Jun 11 16:24CDT [Legal Notices and Disclaimers](#)  
V\_3\_2, 2001-05-15 14:02:45.0, CVS 3.15.0int4

## CDF Run2 Calibration Report Group Calibration Run Lists on Replicated Online Production Report

The PUBLIC replication status used.

### CDF Run2 Calibration Run Lists

CID (link to data)	Run (number)	Version (number)	Table (name)	Status (text)	Creator (username)	Created (date)
<a href="#">32.503</a>	117,319	1	<a href="#">CEMQIE</a>	RAW	CDFDAQ	2001 Jun 10 10:07CDT
<a href="#">32.303</a>	117,250	1	<a href="#">CEMQIE</a>	RAW	CDFDAQ	2001 Jun 9 11:15CDT
<a href="#">32.223</a>	117,227	1	<a href="#">CEMQIE</a>	RAW	CDFDAQ	2001 Jun 7 22:47CDT
<a href="#">32.079</a>	117,170	1	<a href="#">CEMQIE</a>	RAW	CDFDAQ	2001 Jun 8 09:48CDT
<a href="#">31.811</a>	116,936	1	<a href="#">CEMQIE</a>	DOWNLOADED	CDFDAQ	2001 Jun 6 13:15CDT
<a href="#">31.771</a>	116,930	1	<a href="#">CEMQIE</a>	DOWNLOADED	CDFDAQ	2001 Jun 6 12:39CDT
<a href="#">31.731</a>	116,929	1	<a href="#">CEMQIE</a>	RAW	CDFDAQ	2001 Jun 6 12:32CDT
<a href="#">31.615</a>	116,882	1	<a href="#">CEMQIE</a>	RAW	CDFDAQ	2001 Jun 6 00:09CDT
<a href="#">31.503</a>	116,755	1	<a href="#">CEMQIE</a>	RAW	CDFDAQ	2001 Jun 4 16:31CDT
<a href="#">31.419</a>	116,672	1	<a href="#">CEMQIE</a>	RAW	CDFDAQ	2001 Jun 2 22:11CDT
<a href="#">31.323</a>	116,668	1	<a href="#">CEMQIE</a>	RAW	CDFDAQ	2001 Jun 2 21:40CDT
<a href="#">31.163</a>	116,568	1	<a href="#">CEMQIE</a>	RAW	CDFDAQ	2001 Jun 2 08:41CDT
<a href="#">31.031</a>	116,561	1	<a href="#">CEMQIE</a>	RAW	CDFDAQ	2001 Jun 2 05:29CDT

## Possible DBANA Upgrades

- Improved Tree structure (i.e. use classes in branches).
- Streamline the database fetching.
- Use Root to list macros and choose more interactively.
- Direct interface to CINT.
- Try to use pieces of Event Display for graphics.
- Add more cross referencing across other databases (Hardware, Run Conditions, etc.).
- How do we leave windows active after exiting functions?  
Are we creating memory leaks?

## Requests

- Why do windows go red?
- Would like to see 'data' only in TreeViewer.
- A better way to list user objects that doesn't include all the Root function, classes, etc.