

# TileDCS Web System

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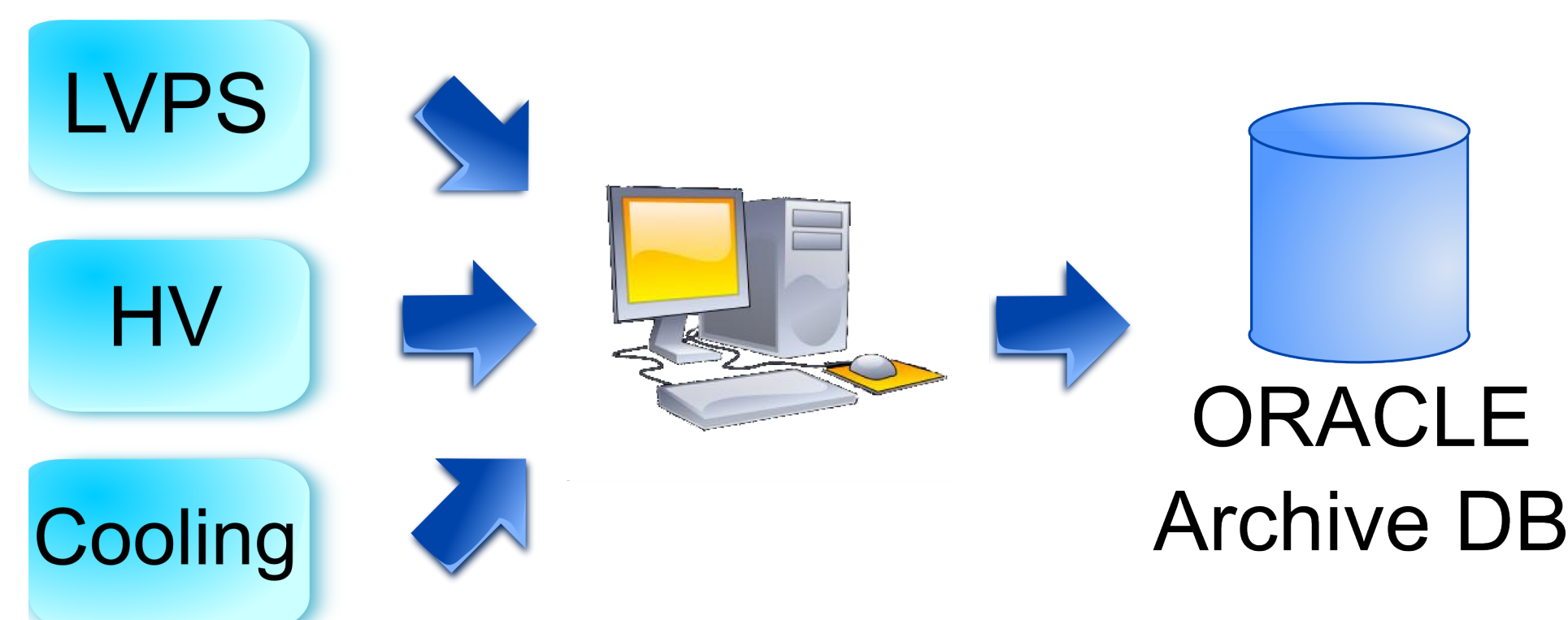


## Introduction

TileCal is the barrel hadronic calorimeter of the ATLAS detector. It is composed by 4 partitions, each one containing 64 modules.

The Detector Control System (DCS) is responsible for the coherent and safe detector's operation. The TileCal main DCS systems control and monitor:

- Low Voltage Power Supply (LVPS)
- High Voltage System (HV)
- Cooling System



The power supplies feed the electronic equipments and the cooling system enables the components' operation with safe temperatures.

The DCS acquires voltages, currents, temperatures and inner water pressure through PVSS-II softwares. The values are stored in the main *DCS ORACLE Archive*, as it is shown in the Figure above.

The DCS WEB SYSTEM goals are:

- Make a **standard procedure** for **monitoring** and **analysing** DCS data. This **ensures the safety** of the experiment and validates the data taken.
- **Retrieve** the needed **data** in a **transparent way** for the user
- **Highlight** possible **problems** automatically.
- Be **available** for all the **collaboration**.

## Data Retrieval

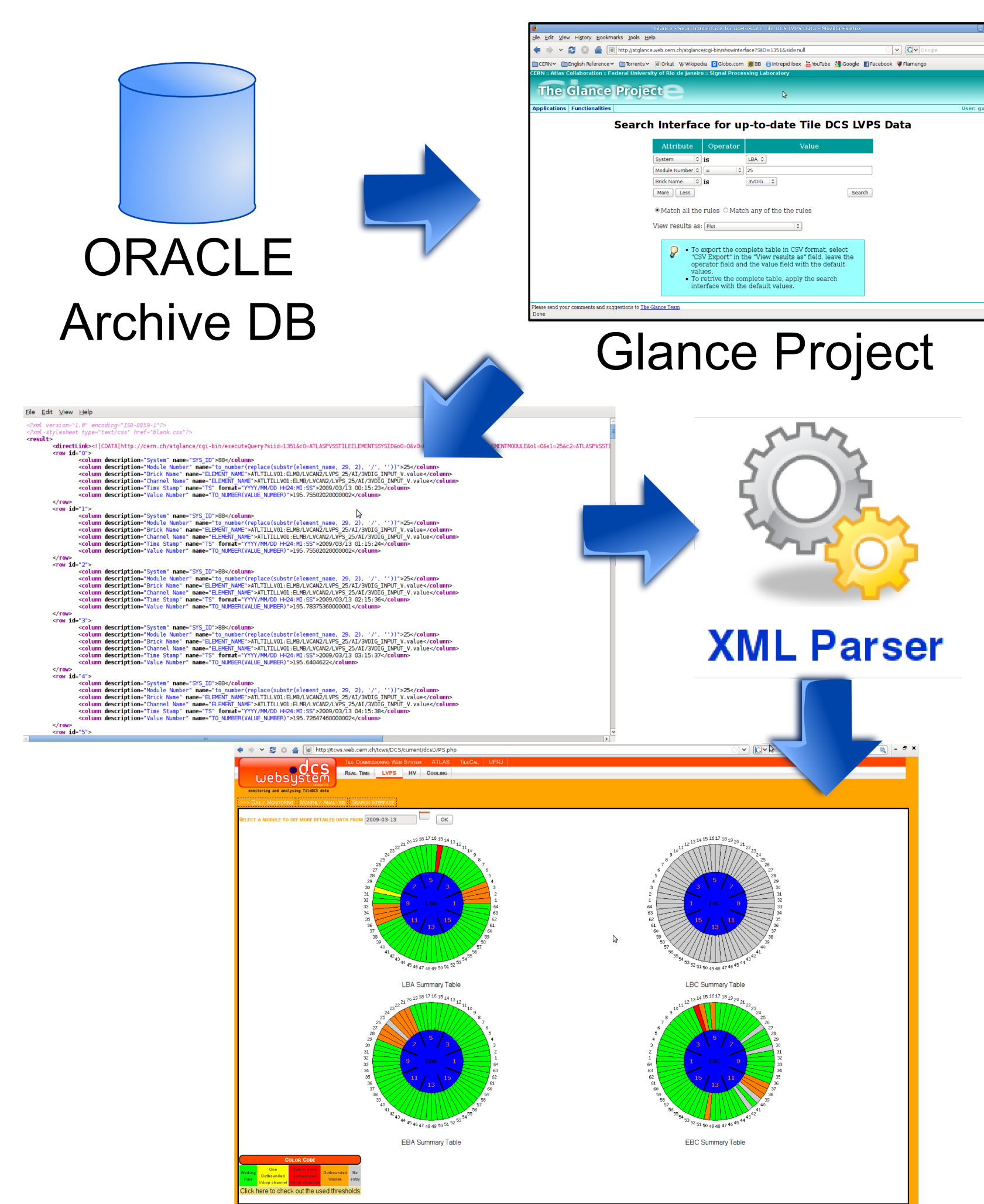
Data is retrieved using the **Glance System** <http://cern.ch/atglance/>, also developed by the collaboration LPS/UFRJ - ATLAS.

This system **accesses** and **integrates** **databases** from different technologies and models.

The retrieved data is returned as ROOT Ntuples, plot, CSV and XML file formats.

Glance does the following:

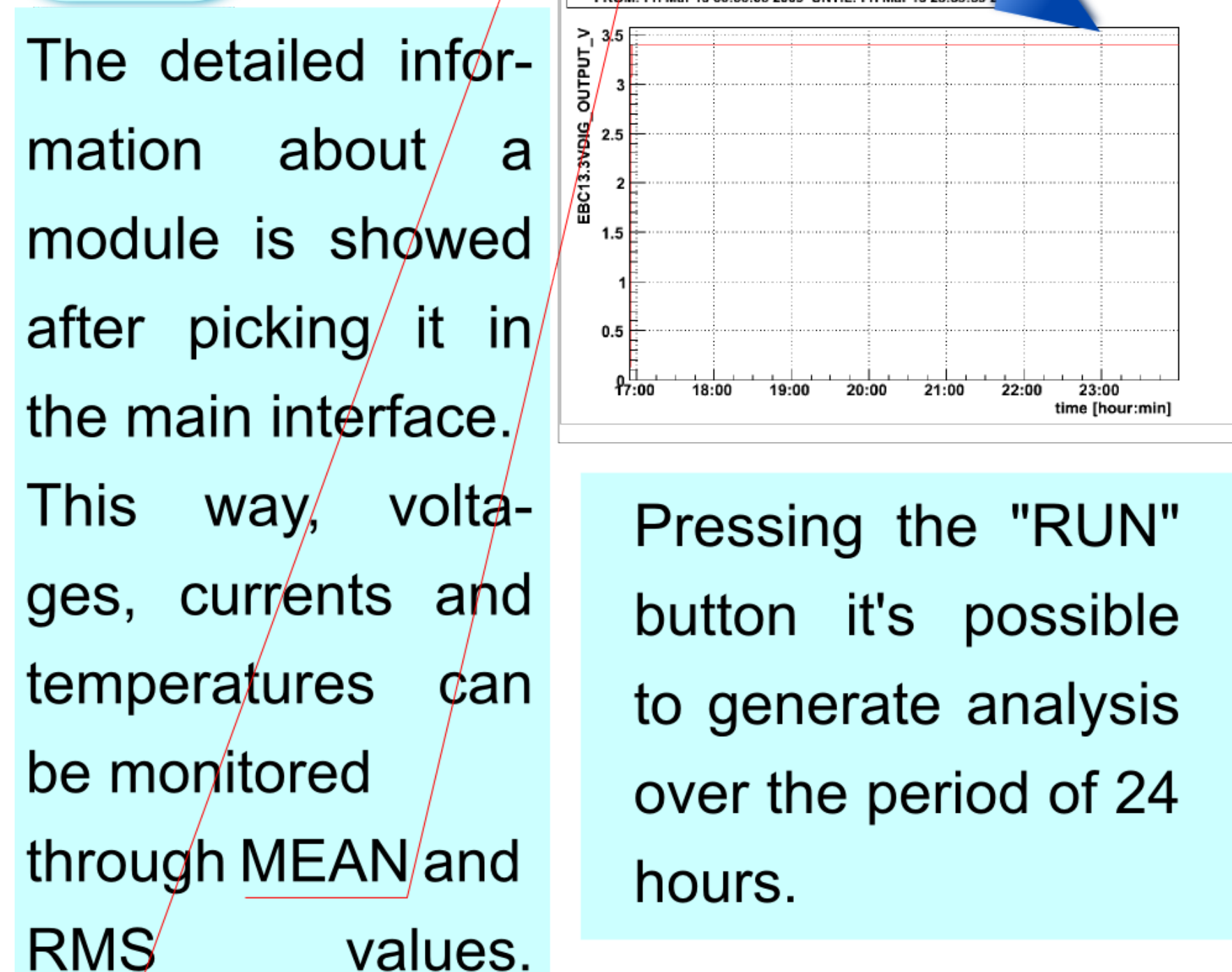
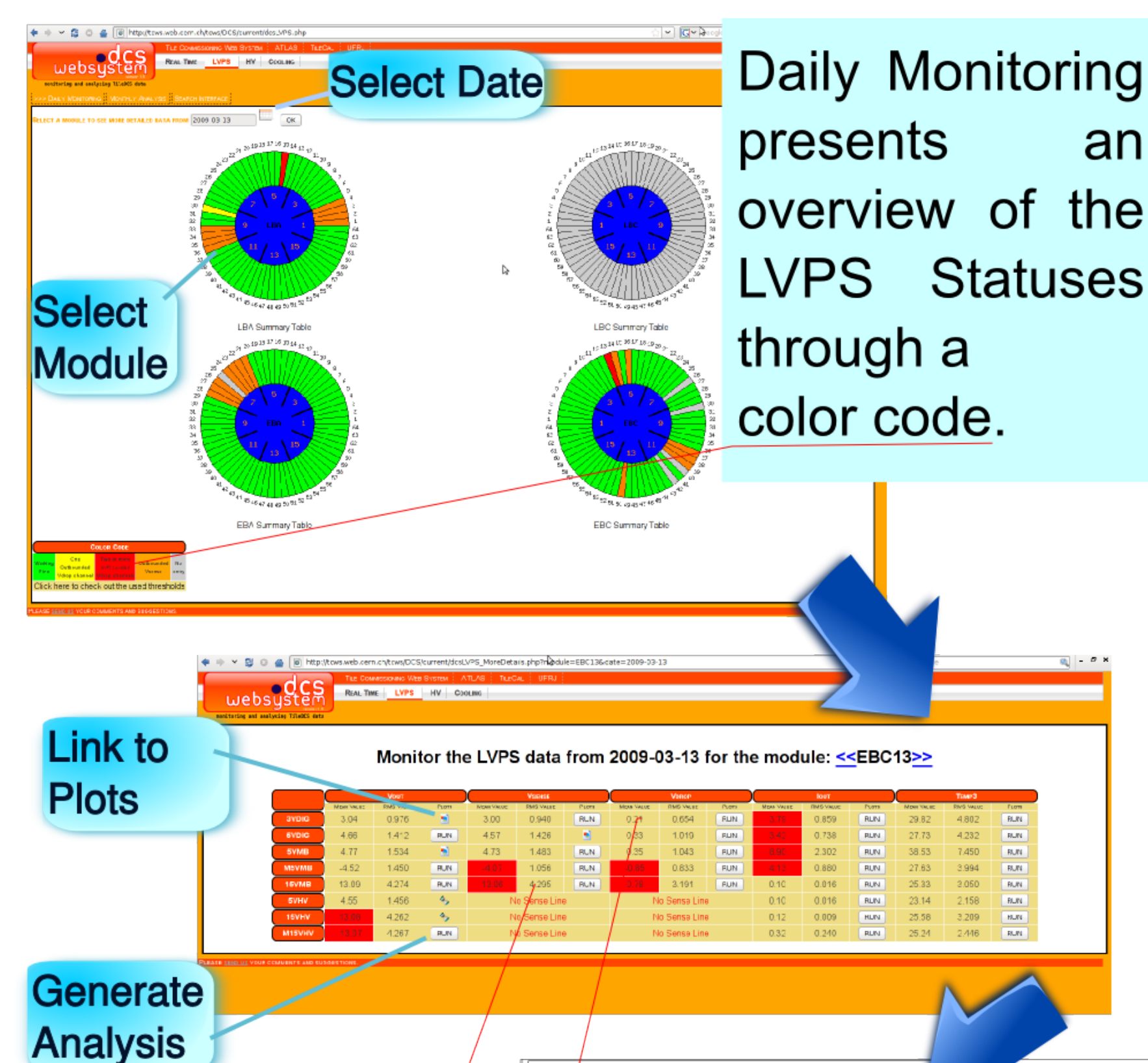
- **Access** *DCS Oracle Archive*
- **Retrieve the values**
- **Calculate mean** and **RMS** values for Daily Monitoring
- **Generate XML files**
- **Generate ROOT Ntuples** for Month Analysis
- **Allow requests for any time period**



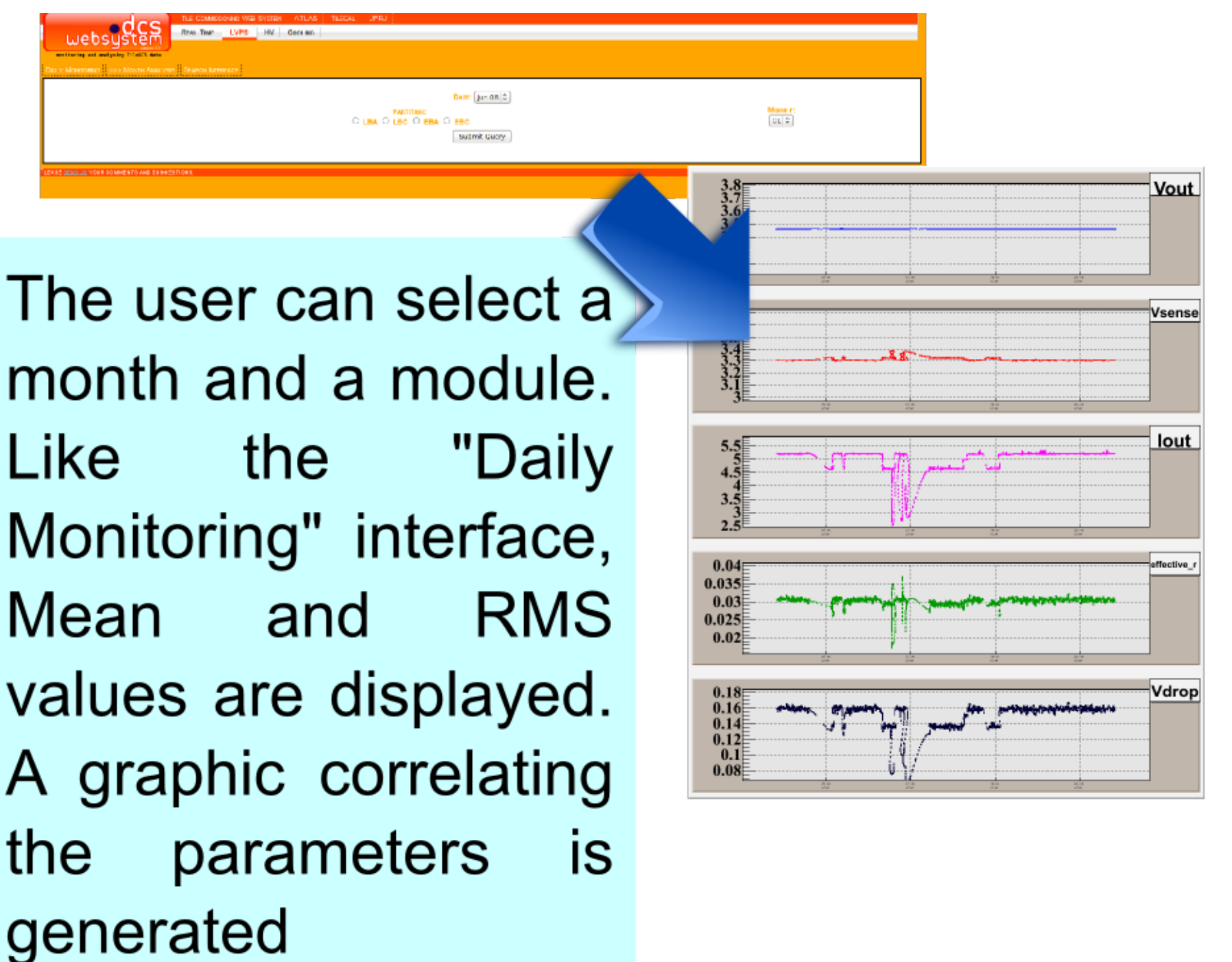
## DCS Web System

The power supplies data is displayed in three different ways :

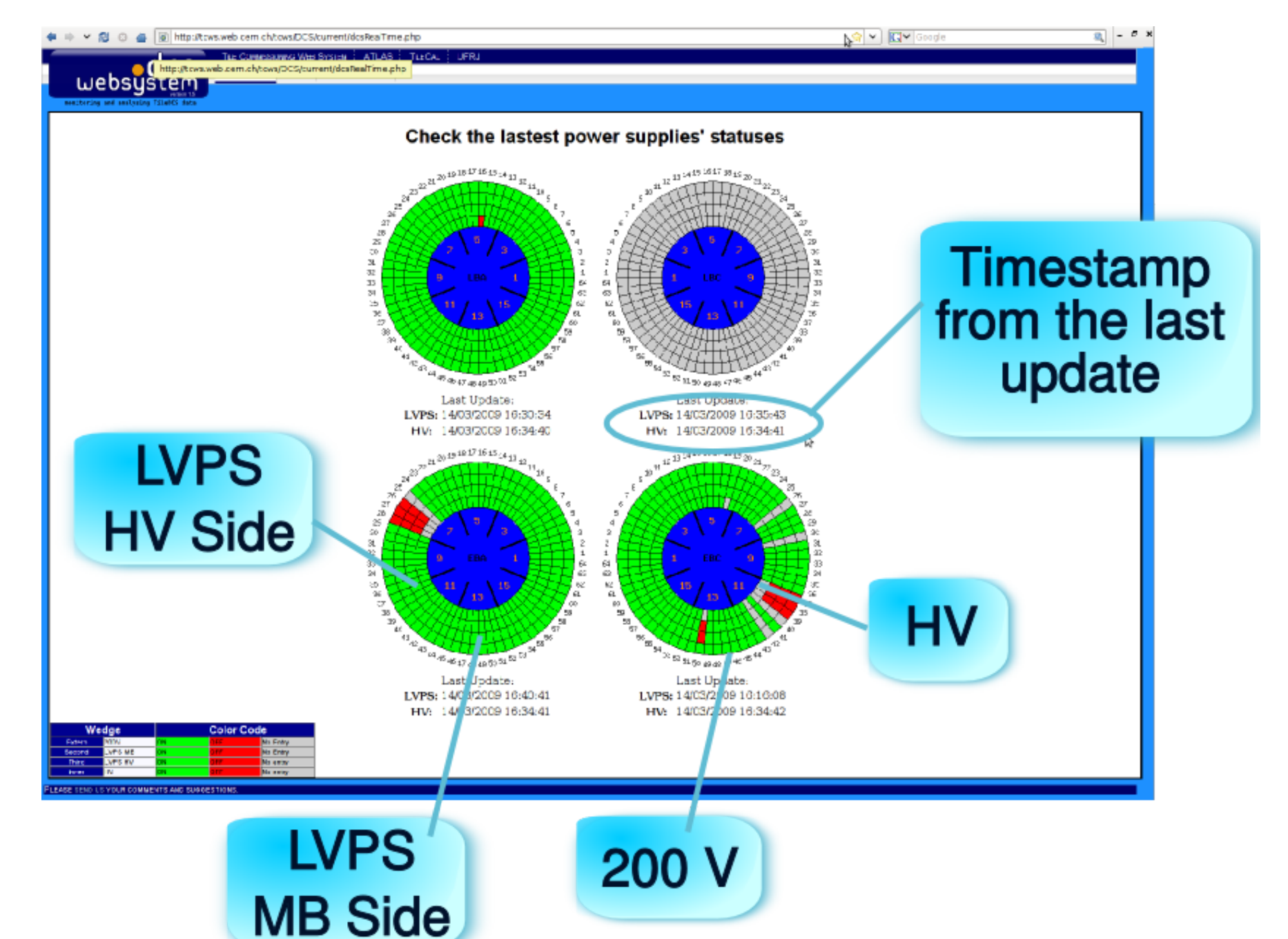
## Daily Monitoring



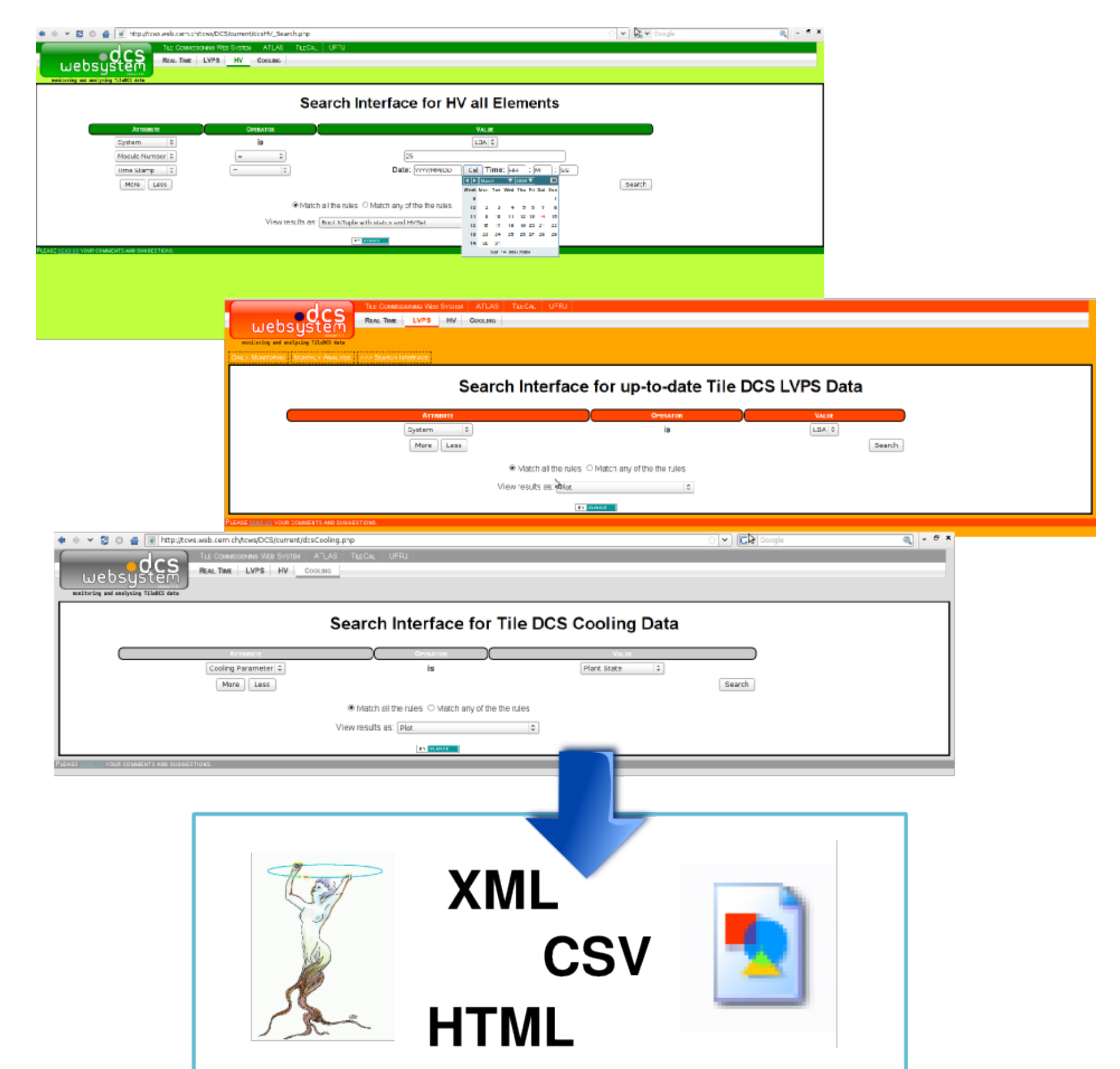
## Monthly Analysis



## Real Time Display



## Search Interfaces



The DCS Web System **retrieves data** for **any time period** through its **Search Interfaces**, where the user can **specify the parameters**. After being **retrieved the values** are **processed** and displayed as **charts**, **ROOT ntuples** files, **CSV** files, **"unsmoothed"** **XML** files and **HTML** tables.

## Next Steps

- Monitoring Temperatures
- Show parameters history
- Monthly Analysis for HV data