SDA: Definitions, Organization, Tools, Methods & Results

A Collaboration between the Accelerator and Computing Divisions

Accelerator Division:
SDA Group, Integration Department: --> Analysis & Coordination
K. Gounder, E. McCrory, V. Papadimitriou, J. Slaughter

Controls Department: Data Acquisition
K. Cahill, C. King, B. Hendricks, M. McCusker-Whiting,
J. Patrick (and others)
Analysis Tools: T. Bolshakov

Computing Division : CEPA & CCF: Analysis Tools & Beam Physics Studies:
K. Genser, P. Lebrun, S. Panacek

Beam Physics Community: Analysis, data browsing.

SDA stands for:

Sequenced Data Acquisition: Sequencer driven processes that collect a defined set of information from multiple sources at specific times during a Run II store (includes "Stacks" manipulation (pbar sources), "Stash" (Recyler) and "Stores" (colliding beams in the TeV).

Shot Data Analysis: Based on sequenced data and periodic data logger -> Comprehensive access to accelerator data (settings, read back, instrumentation)

SDA Goals:

Ultimate: Beam Physics Analysis leading to higher integrated luminosity, via optimization of operations of the accelerator complex.

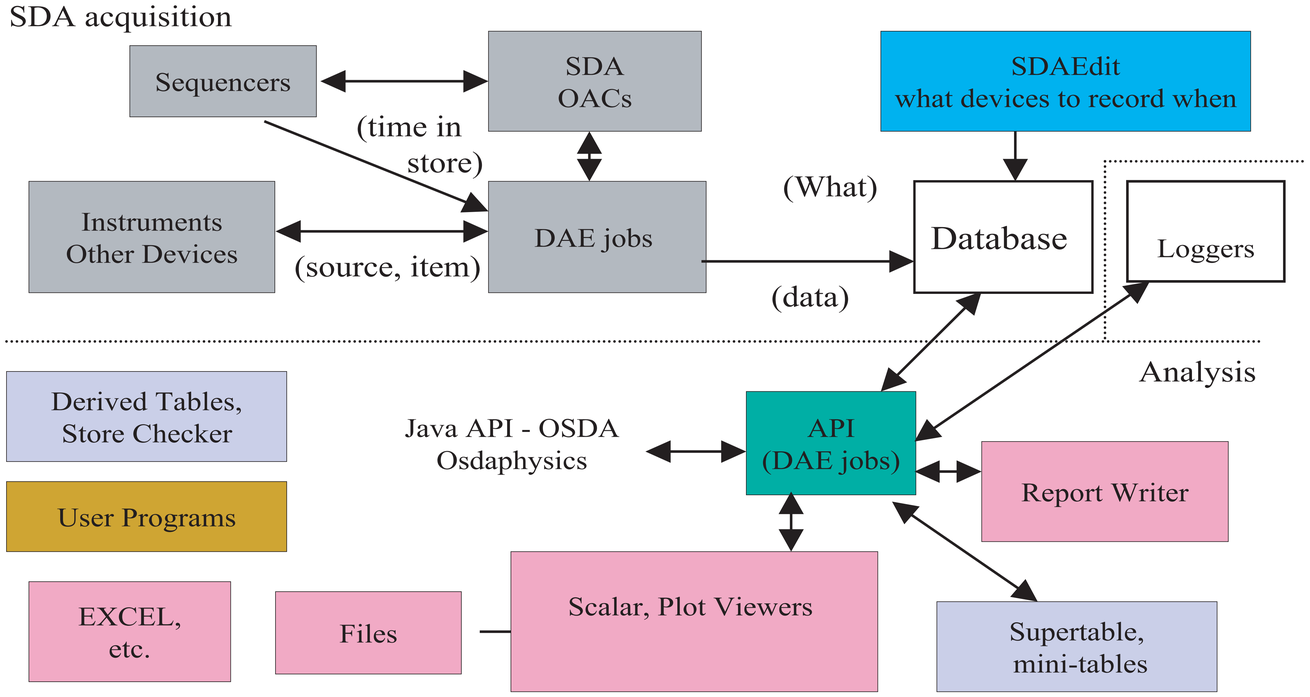
Day to day: Instrumentation checks & calibration, trending analysis, phenomenological modeling

A complex system.

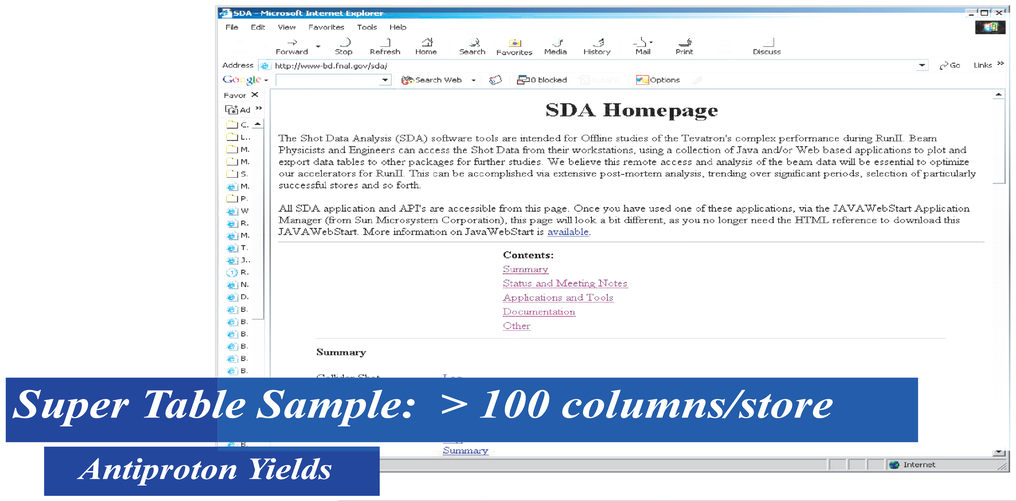
Entirely written in Java

Integrated with the Web

SDA acquisition

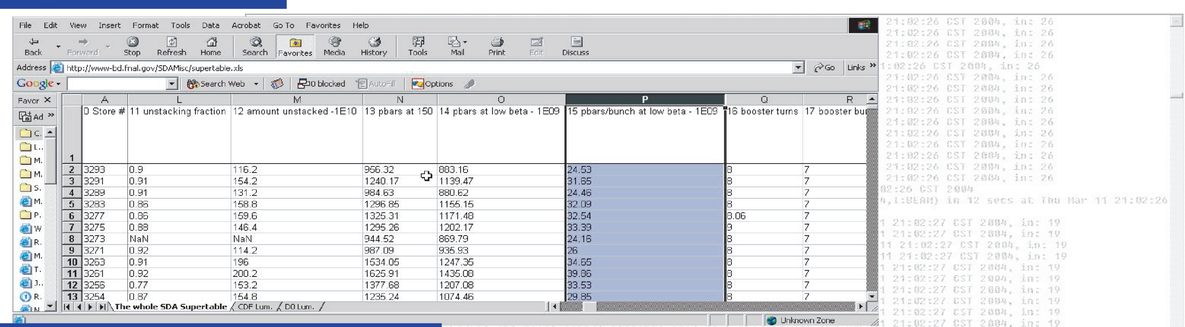


Fully integrated with the Web: (http://www-bd.fnal.gov/sda/)

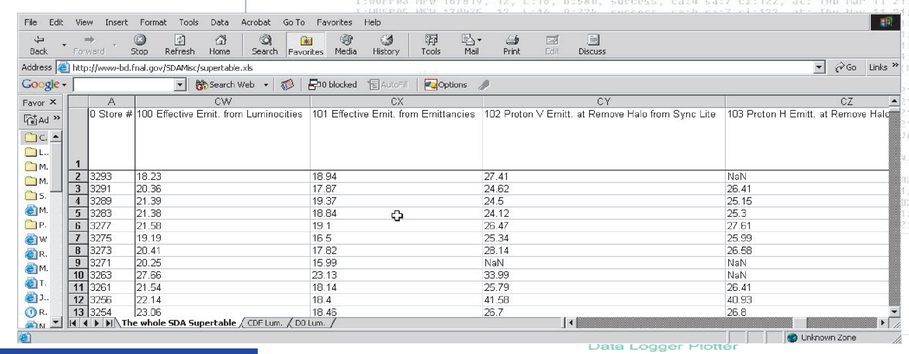


Super Table Sample: > 100 columns/store

Antiproton Yields

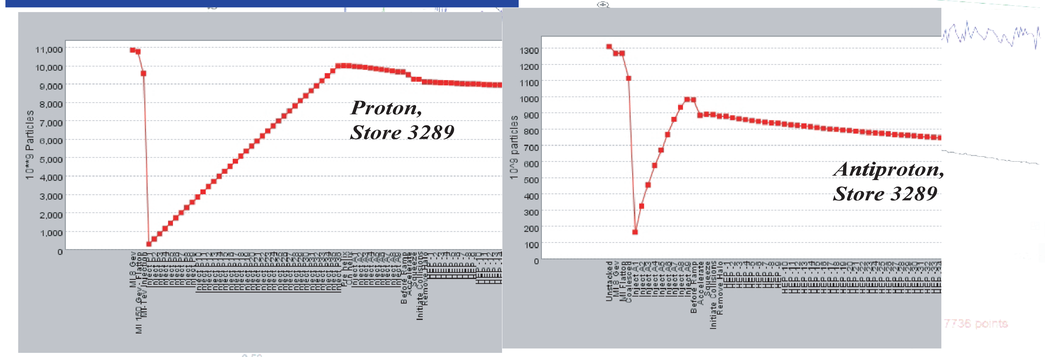


Emittances, luminosities...

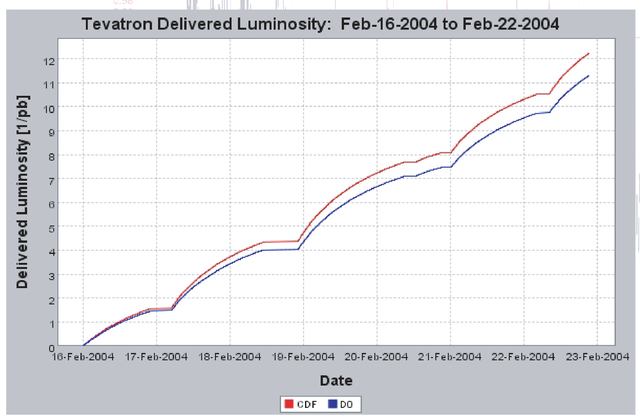


Derived Tables

Beam Intensity during the store.



Weekly Integrated Luminosity



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