

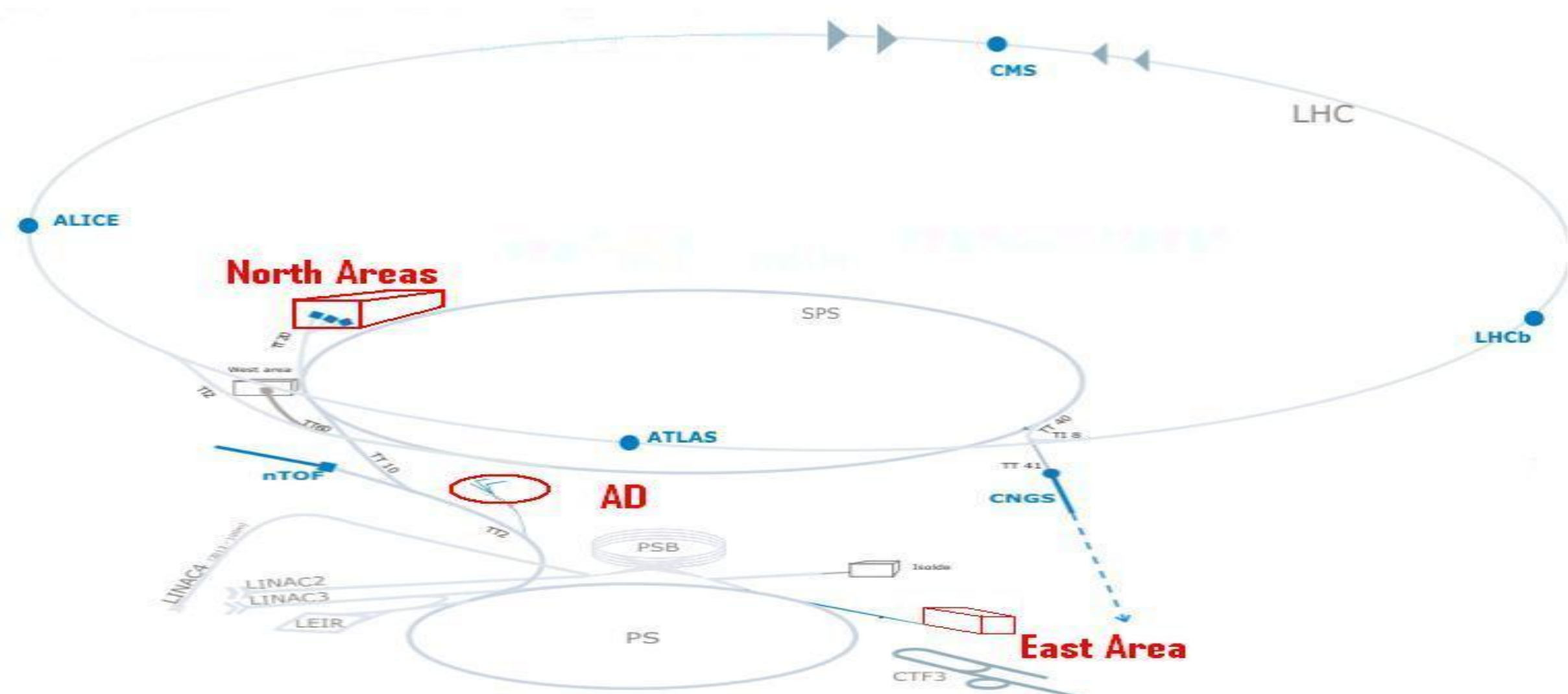
SOFTWARE RENOVATION OF THE CERN EXPERIMENTAL AREAS



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Abstract The Experimental Areas at CERN's Antiproton Decelerator (AD), Proton Synchrotron (PS) and Super Proton Synchrotron (SPS) have recently undergone a wide-spread electronics and software consolidation based on modern techniques. This paper will describe the scale of the software renovation and how the issues were overcome in order to ensure a complete integration into their respective control systems.

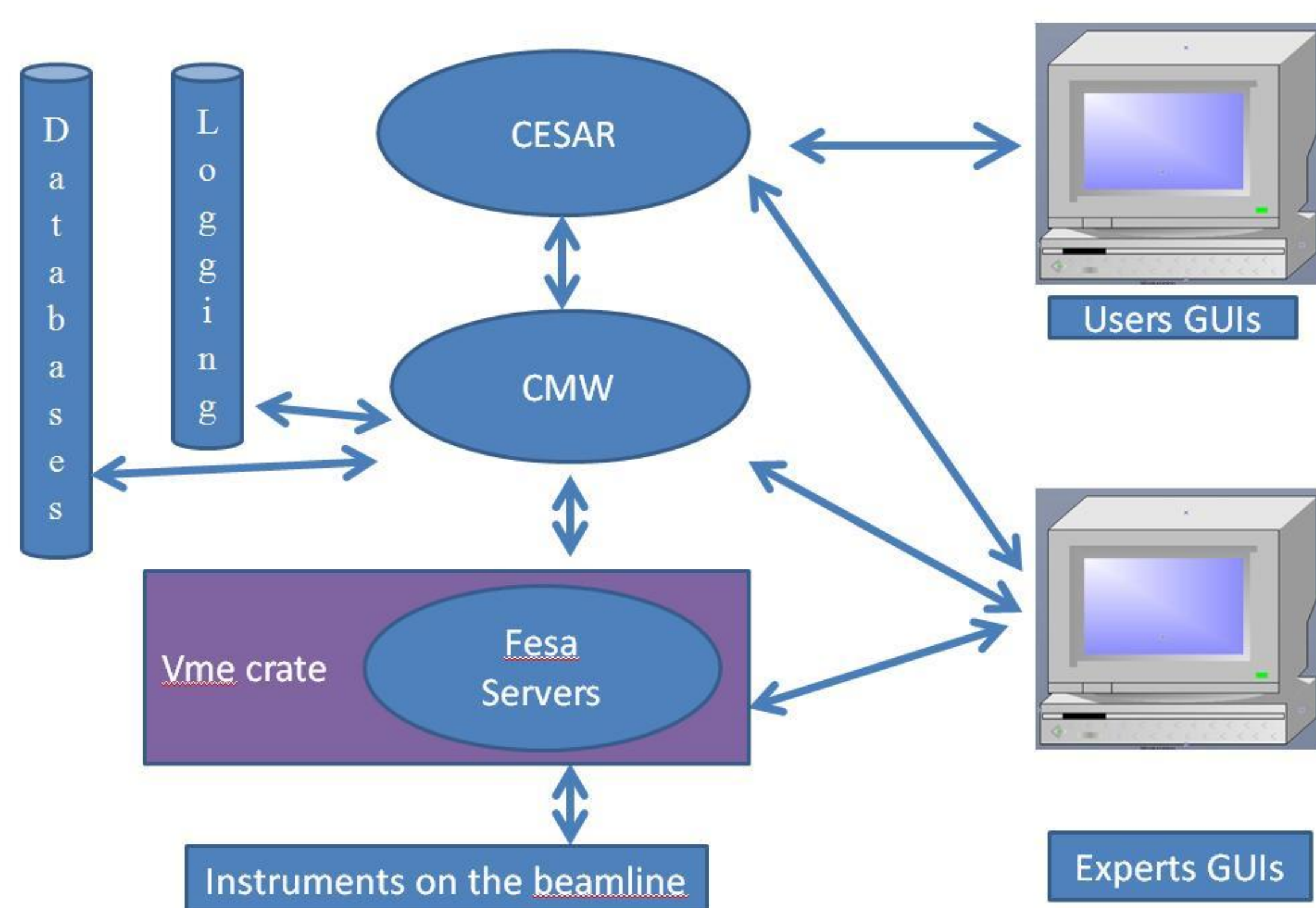
Where



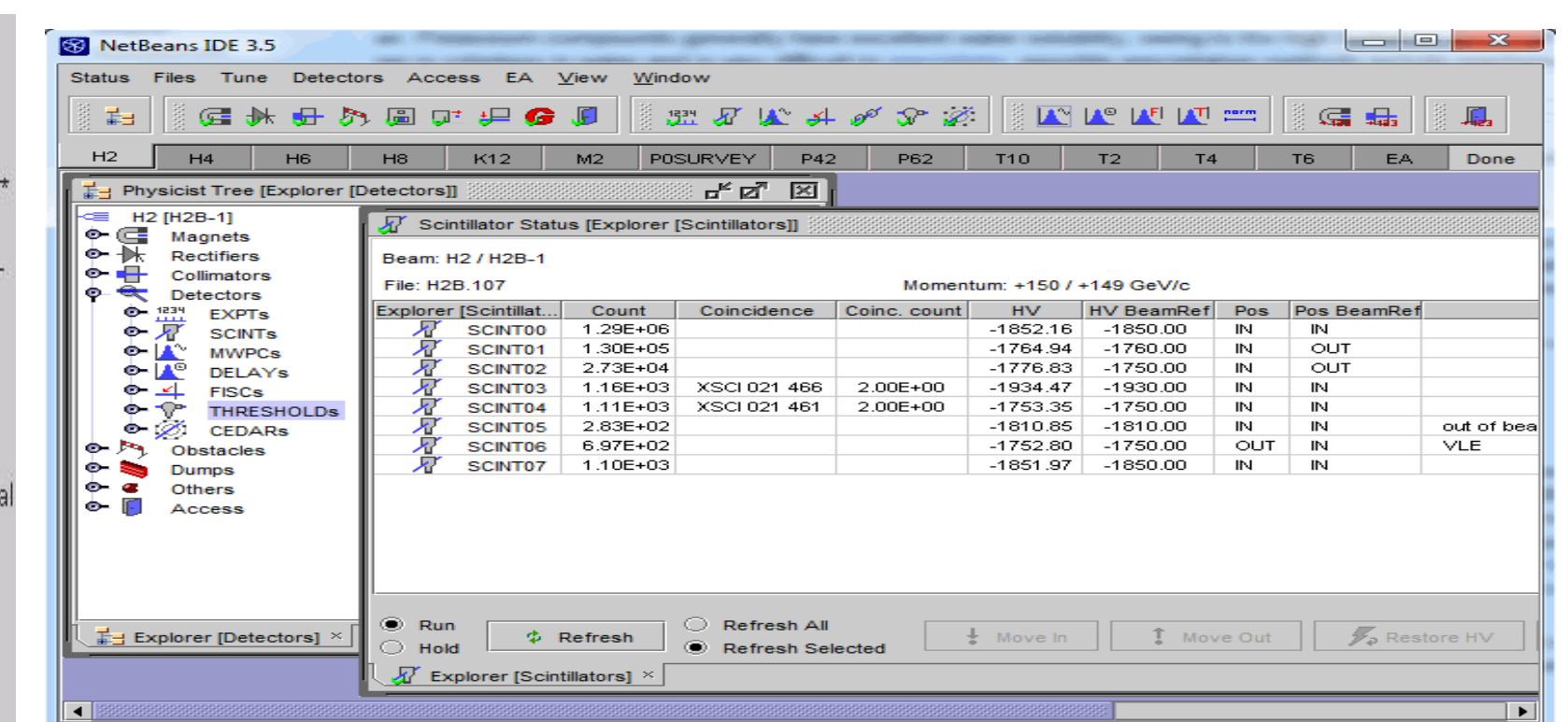
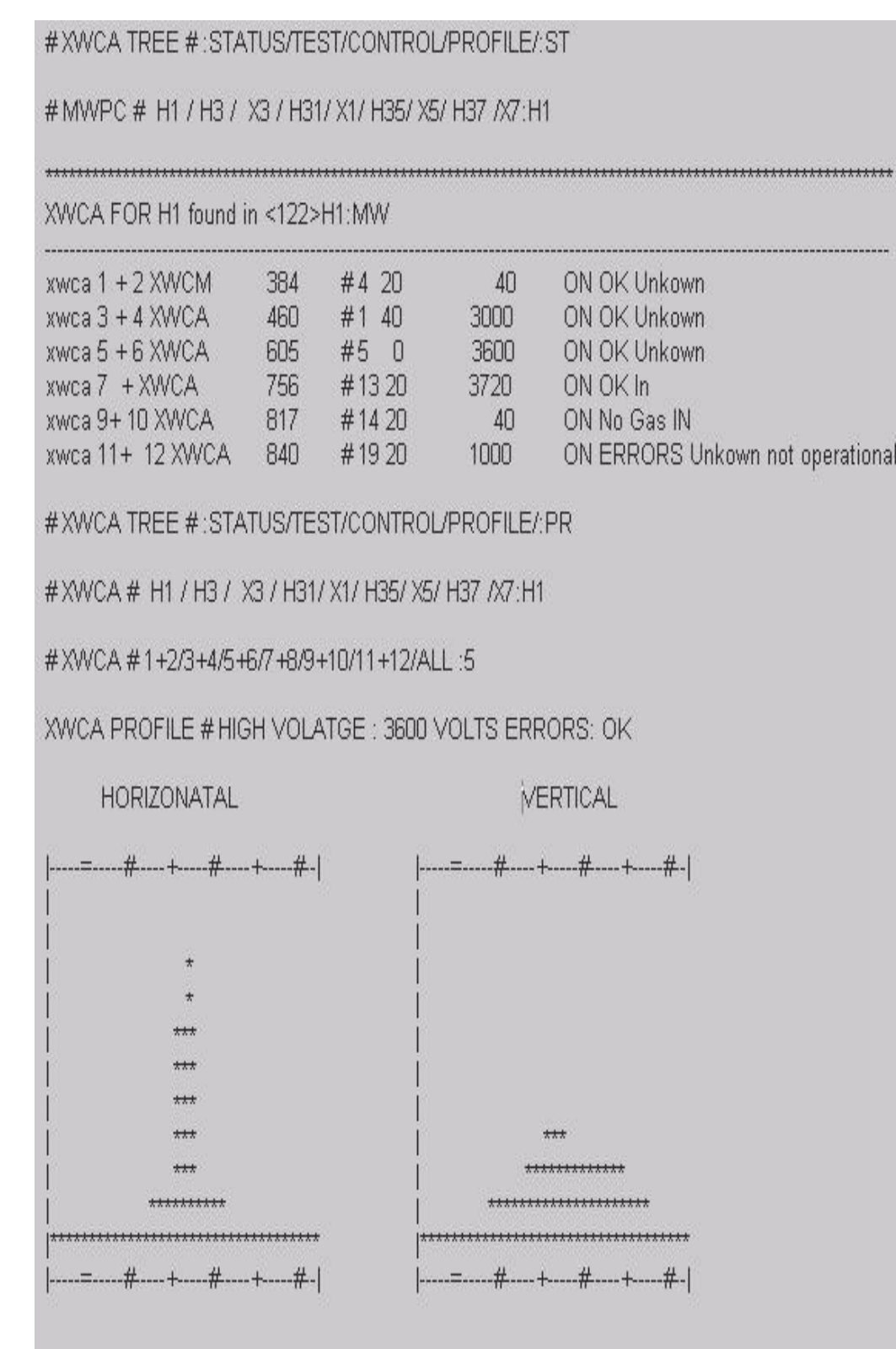
An experimental area beam line



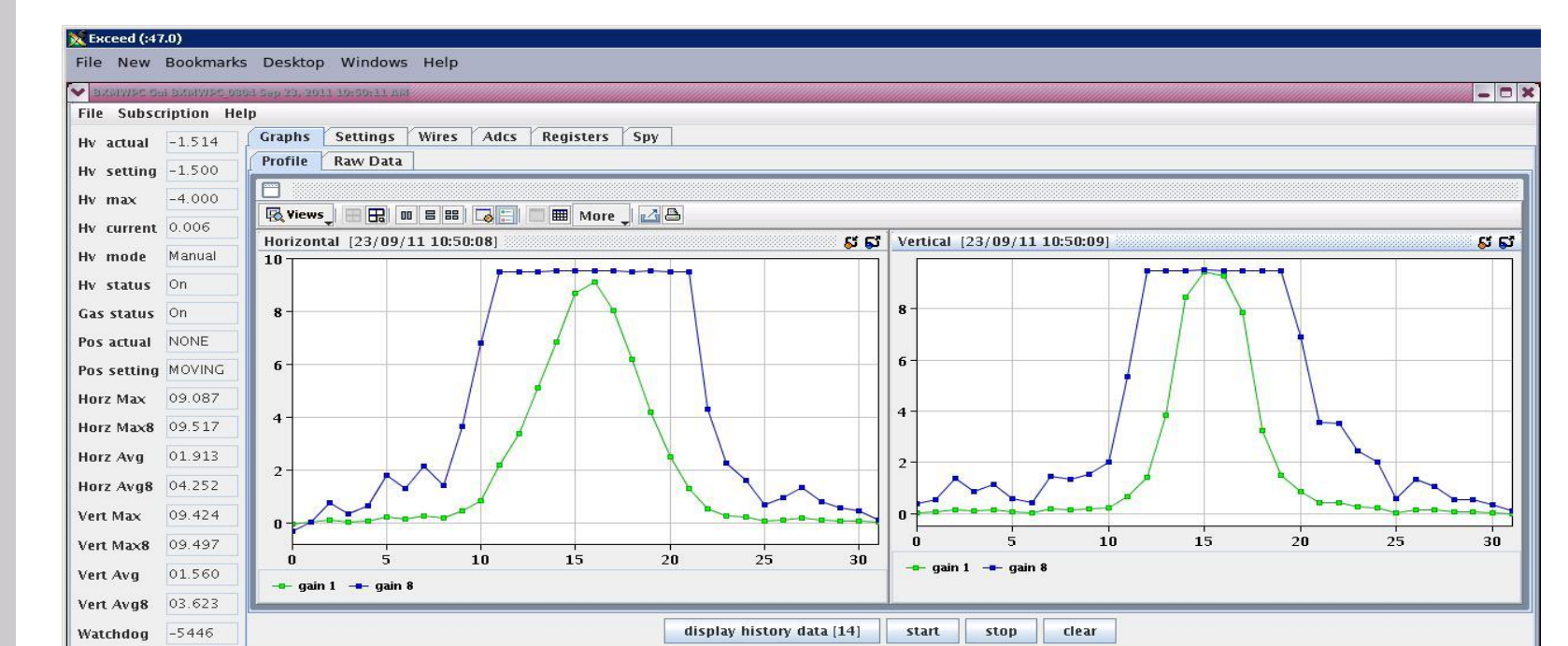
Software structure



GUIs



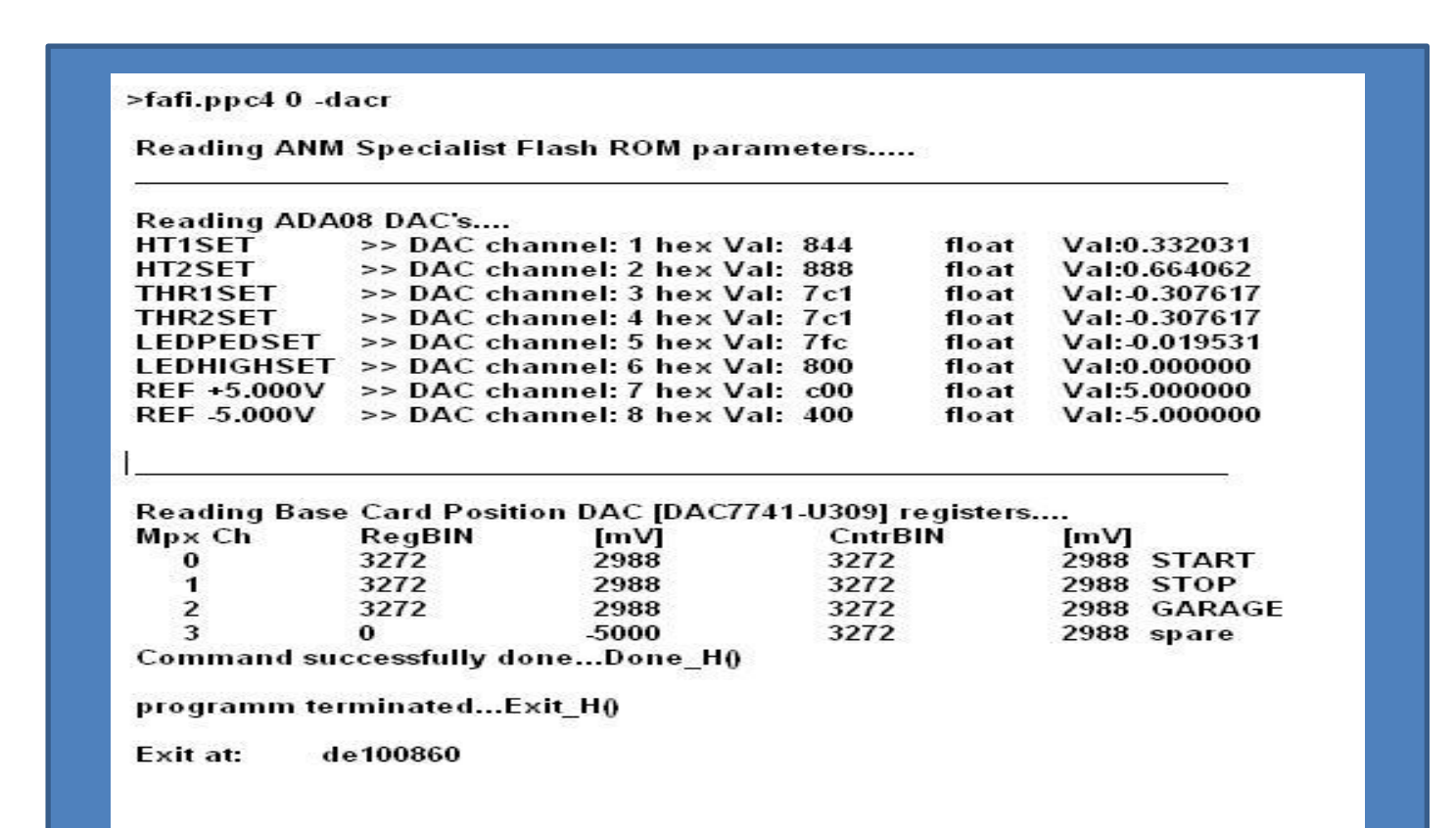
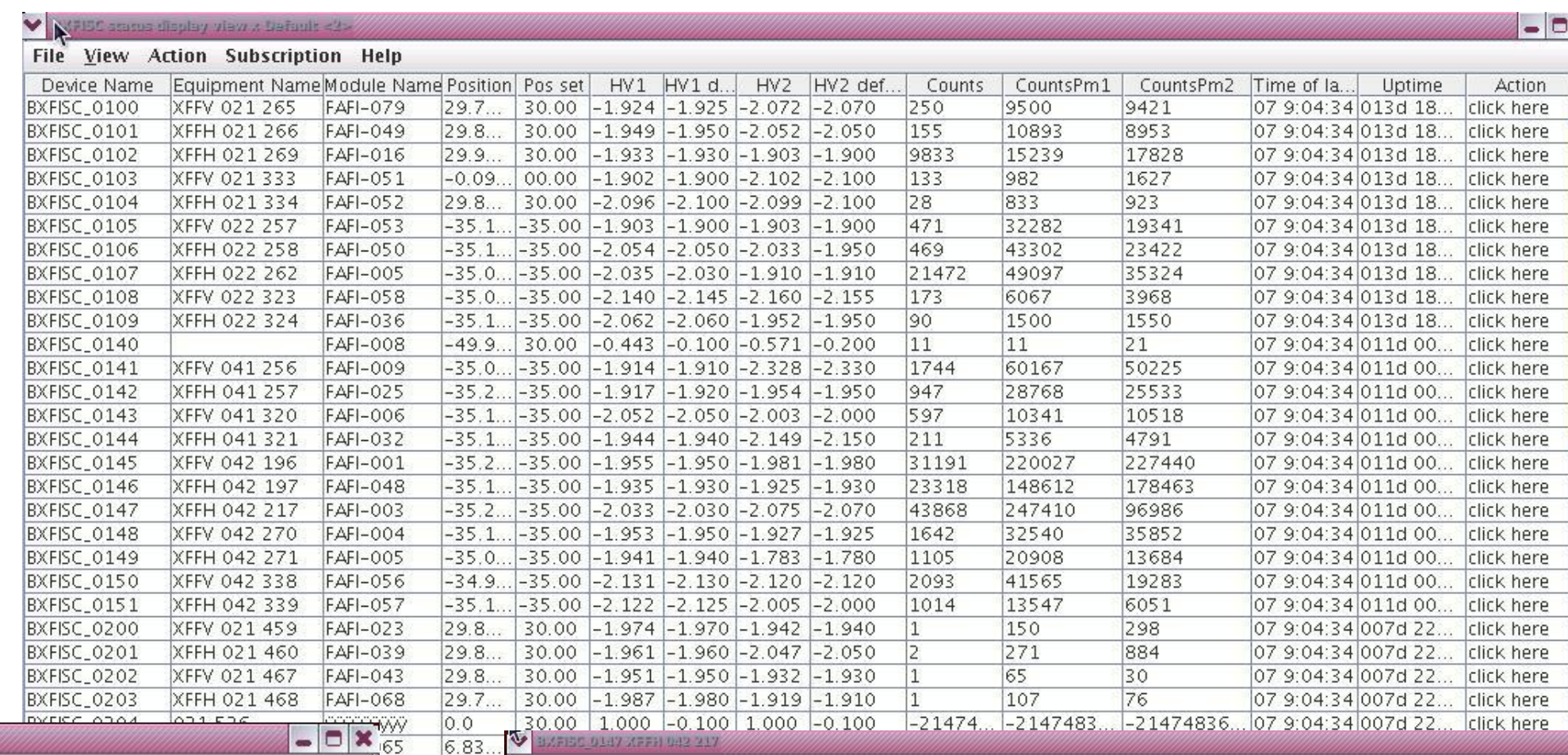
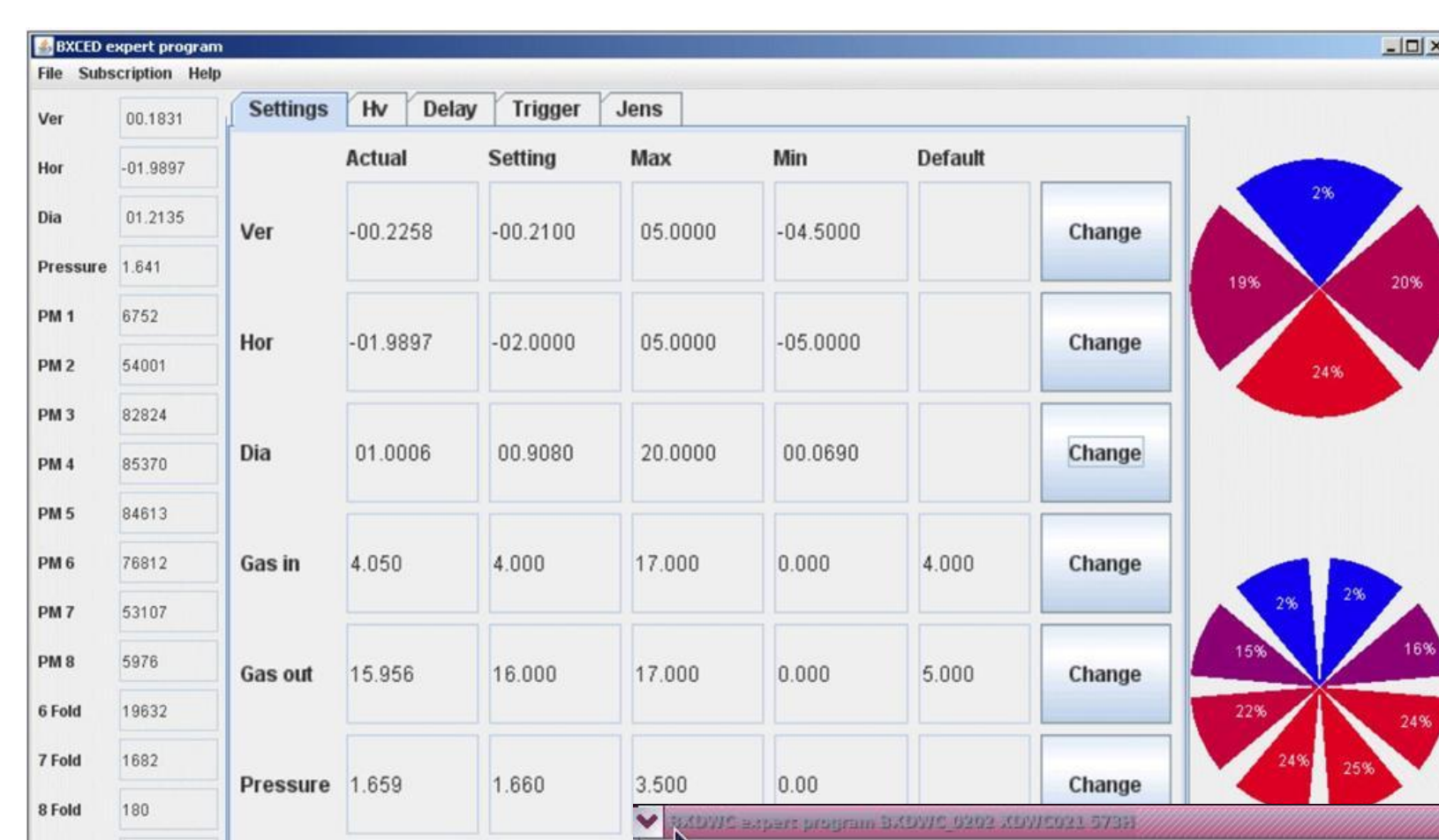
To users GUIs



To Experts GUIs

From

Expert GUIs examples



Conclusions

As a result of this hardware and software renovation CERN's Beam Instrumentation Group has been able to support more experimental users, with fewer CERN staff dedicated to these areas. The instrumentation of the experimental areas is now based on modern, maintainable software tools and on the hardware side the new equipment-oriented approach has increased the reliability of the electronics. Both of these consolidations have made the overall maintenance load significantly smaller. From a user point of view the control system has changed from a command line to a more intuitive GUI based interface that provides better displays. A further side effect of using CERN standard software solutions has been to enable other software experts to remedy issues where formerly only the author of the code had the needed knowhow.