

**REMOTE DATA ACQUISITION FOR SPS 352MHZ SC CAVITIES**

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The CERN SPS machine is equipped with four superconducting RF cavities. These are used to accelerate the beams required for LEP, during Electron and Positron cycles. During the past two years the control system hardware for these cavities has been upgraded to the LEP standard. However, the standard LEP software acquisition system was insufficient to monitor the cyclic mode of operation of the SPS. A decision was taken to build a new independent fast Data Acquisition system based on commercial products. The system is based on National Instruments PXI (an extension to Compact PCI for instrumentation) with a 166Mhz Pentium CPU running Windows NT and LabVIEW 5.0. In order to fulfill user requirements such as multi-user access, portability and high speed, a client/server approach has been used. The server deals with the acquisition of sixteen signals at a rate of 1msec during the whole SPS super cycle, which lasts 14.4sec. The client is composed of a virtual oscilloscope interface (one or four channels) with online signal and timing selections, automatic data and user setting storage capabilities. The client runs on both platforms used at CERN (PC and HP/UX).