

A VME-Based Measurement System for RF Parameters in the CERN PS, A. CAMPBELL, A. GAGNAIRE, R. GAROBY, S. HANCOCK, W. HEINZE, J.-M. NONGLATON, C.-H. SICARD, CERN - The CERN Proton Synchrotron (PS) is a highly versatile particle accelerator. It delivers beams of protons, antiprotons, leptons and lead ions on a cycle-to cycle basis. The controls interface to the RF systems of the PS has recently been replaced by six VME crates. As part of the upgrade, a digital system has been assembled which provides a measurement of the essential RF parameters of all cavities, including harmonic number and revolution frequency, each millisecond during the active part of every cycle of the machine. During the deadtime at the end of a cycle, these data are transferred from the VME modules to a VME crate-controller where processed machine-physics data are generated for every time sample. Information that would be very difficult to provide by ordinary analogue means is readily available for display or further treatment. This paper describes the hardware and software principles employed and the results achieved with the new measurement system.