Data Acquisition

During 1995, the Data Acquisition group continued to maintain nine standard VMS VDACS/μSR data acquisition systems, the CHAOS CODA data acquisition system, the special RMC data acquisition system and two development systems. A few new projects were undertaken.

The Midas data acquisition system originating from PSI has been investigated. This system supports several platforms such as ULTRIX, OSF/1, OPEN/VMS, VMS, WindowsNT. A portion of it is now used as a mechanism of transferring ONLINE VDACS data to remote workstations for online analysis. The data acquisition machines for the proton hall users were isolated on an Ethernet segment and a Decstation 5000/25 installed to run NOVA analysis remotely. Nova analysis on the Decstation can process at least three times more data than the VMS VDACS machines while liberating the VMS CPU's.

In a parallel effort a platform independent version of NOVA has been developped . It has been validated so far under VMS, Ultrix, DEC Unix and SGI Irix.

The TRINAT facility has come online and shares the data acquisition of TISOL. In 1996 we will need to deploy a new system based on a VME front-end CPU.

For μSR users, the CAMPS system for slow controls has been installed. A paper on that subject was presented by Ted Whidden at the Real Time '95 conference (Michigan State University, May 1995). Porting of the frontend μSR software to a VME CPU with SCSI CAMAC access has just been completed. This will allow more flexibility in the choice of user workstation. At the moment the system is restricted to MicroVax'es severely limiting upgrades of the μSR data acquisition systems.

Software was developed to allow use of new Fastbus based pipeline TDC's (Lecroy 1877) as a readout system for proportional chambers instead of a PECOS system. At present this system uses an old inflexible interface for FASTBUS and reads out the data via CAMAC. In 1996, we will be moving to a new Fastbus interface compatible with our VME based data acquisition software.