

## **Data Communication, Data Acquisition and Computational facilities**

The stringent budgetary situation continued during the period 1997-1999 reported here. Nevertheless advances were made in the development of the Physics Department's computer network, the available equipment was kept in usable condition and some new equipment was added and a dedicated link with the Internet was installed and is in operation.

### **Data Communication**

Most efforts were devoted to this area, managing, developing and improving the Department's network and the services offered. The network comprises 150 machines, including 20 multiuser systems and workstations (SUN, VAX, IBM/AIX). The remaining are PCs, with 20 running Linux and one Solaris\_x86. One SUN Sparc-10 was refurbished to be our main server for e-mail (POP), files (including an MS-Windows file repository through "Samba" software) and print. There are three HP postscript laser network printers. Accounting of resources usage has been implemented. A www server was also installed (www.tandar.cnea.gov.ar). A purchase order was placed by the end of 1999 for a SUN Ultra-10, as replacement for the SUN Sparc-10 'server', to be delivered early in 2000. This purchase started in mid 1998, being delayed by budget constraints. The network wiring in the Department's premises provides nearly full office coverage. An optoisolated segment was added for access in the laboratories, shops and experimental data acquisition areas. Hubs and local wiring were added, to meet additional needs and reach new areas in the building. Legacy wiring is being rebuilt, to migrate from the former Ethernet 10BASE5 backbone plus 10BASE2 segments to a 10BASE-T configuration. A "switch" (3Com 1100) was installed, to serve as the central point for the local network. It connects also a 100 MHz segment (with SUN and Silicon Graphics machines and one HP printer). The "router" connecting the local network with CNEA backbone (and the Internet) was improved in hardware and software. A dedicated link with the Internet was installed and put into operation (Sep '99), with the help of the Argentinean 'Asociación Ciencia Hoy' through its 'Proyecto Retina'. A definite improvement in the service quality resulted, as compared with the very congested CNEA's general purpose link used before. All machines in the network were reconfigured to comply with the domain change decided by CNEA's authorities, to 'cnea.gov.ar' instead of 'cnea.edu.ar' (Apr '99). Efforts were also devoted to accounting, monitoring and security. SUN Solaris\_x86 for Intel was installed in one machine for testing and evaluation purposes. Some utilities were ported to this new platform. A temporary subnetwork was setup for use during a training course in computational techniques ('98).

### **Data acquisition and Computational facilities**

The already available equipment (described in previous reports) was used for Data acquisition: a multiparameter data acquisition system based on CAMAC modules with a DEC microVAX 3300 running the "XSYS" software package. Several PC-based MultiChannel Analyzers are also available. A number of PC's (Pentiums) and two network printers (HP LJ5M, HP 4000N) were added. Older PC equipment was reassigned and reconfigured to suit the needs of their new users.

### **General Support**

Maintenance to the operating systems (patches and updates for SunOS, Solaris and Linux, etc.) and backups. Significant efforts were devoted to keep in working order a number of legacy systems (processors, peripherals, software). The installed PCs (ranging from /286 to P-III) demanded many work hours to deal with software and hardware failures. Routine assistance to users in matters of data acquisition, processing and communications, operation and equipment maintenance and purchases, where also our duties during the period.

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