The IBM System/360-75I and DDP-224 Computer Complex

The 360-75 is the Laboratory's main computer.   It has 524288 bytes
(quarter-words) of 750 nanosecond main memory.   It can manage several
jobs concurrently, for instance a conventional computing job and several
on-line jobs, which are acquiring data from experiments or measuring
devices in real time via a fast data link to the nearby DDP-224 computer.

The DDP is a small fast computer (12288 words of 1.9 microsecond main
memory) which has extensive interrupt and input-output facilities.   To
it can be attached measuring devices (e.g. the Hough-Powell and Cathode-
Ray-Tube film scanners), experimental equipment (possibly via a remote
computer in the experimental area) and typewriters through which physicists
can communicate with their programs running in the 360 machine.

Software has been written in the Rutherford Laboratory to synchronise
the actions of the two machines, so that several on-line users simultaneously
can benefit from the data-processing power of the 360 and the data-gathering
and data-disseminating power of the DDP.   This software takes care of all
communication between the two machines, and the collection and dispatch of
messages for the typewriters.   IBM software protects the multiprogramming
in the 360, and at the same time schedules a stream of non-on-line jobs.