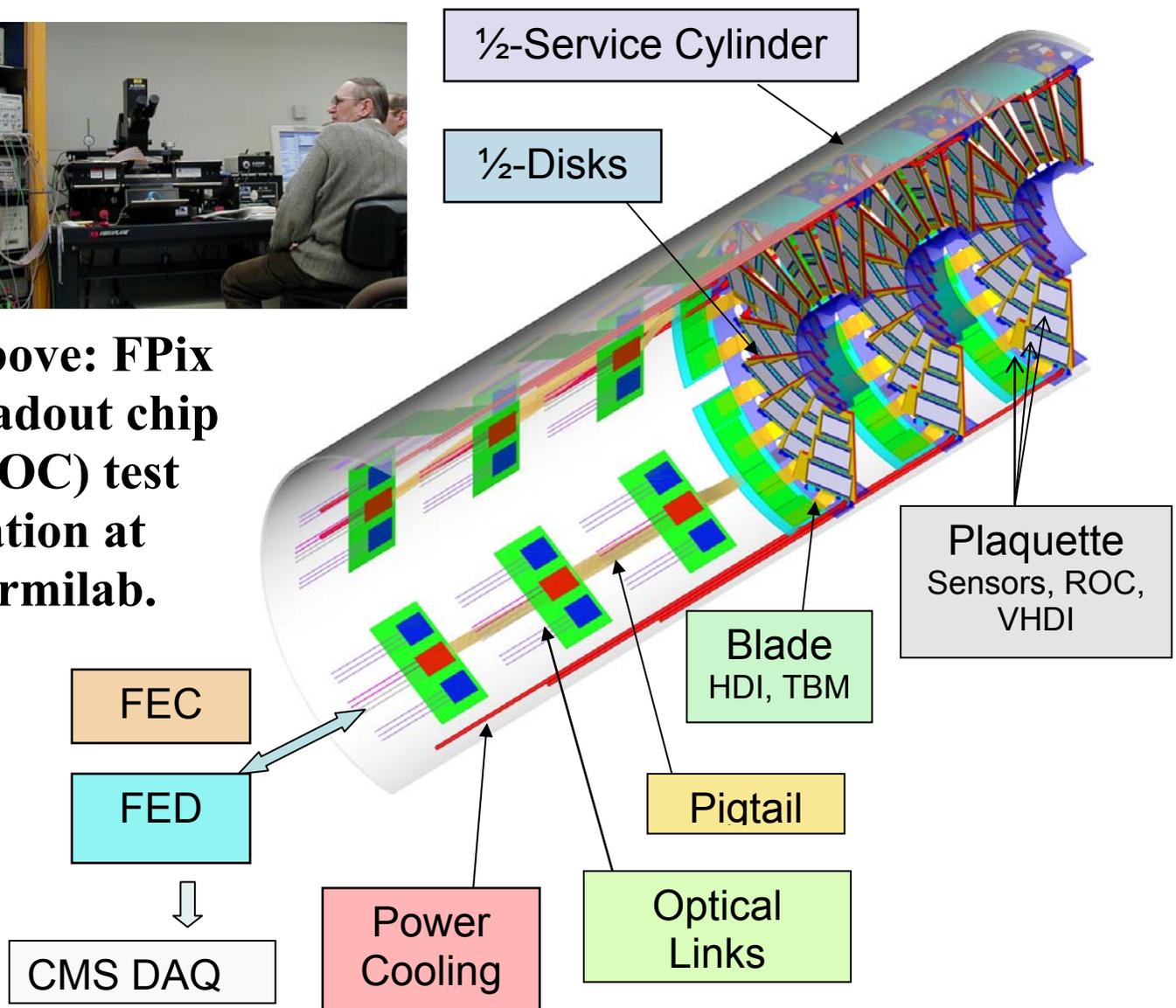


U.S. CMS Project Progress- 4th Quarter FY2003

CMS Inner Detector Forward Pixel (FPix) system



Above: FPix readout chip (ROC) test station at Fermilab.



Above: FPix system is a complex sub-system requiring R&D, testing and integration of multiple state-of-the-art components including silicon sensors and electronics.

U.S. CMS will deliver in '07:

- **4 Disks (fully instrumented)**
- **TBM (for CMS Pixels)**
- **FEC (for CMS Pixels)**

U.S. CMS Project Progress- 4th Quarter FY2003



Left: Both Hadron Calorimeter (HCAL) half-barrels are complete and in their alcove positions at the CMS hall. Electronics installation is in progress. After a burn-in period, vertical slice operations will begin and continue until the CMS magnet test in mid 2005.



Above: HCAL Test beam setup at CERN. Modules of all geographic regions of HCAL (barrel, endcap, outer, forward) were successfully tested in a 25 ns (LHC-structured) beam.