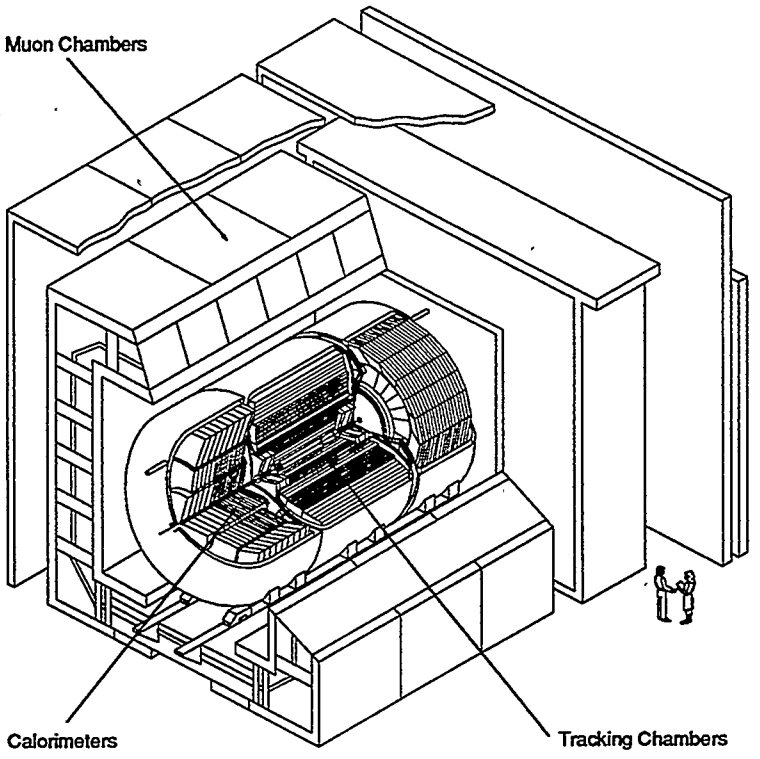

Figure 2: A cut-away view of the DØ detector. The inner tracking detectors are surrounded by the calorimeter cryostats, and both are situated inside the toroidal magnet. Planes of chambers outside the magnet provide for muon identification and momentum measurement.

shown in Fig. 3. The tracking system consists of three independent devices arranged coaxial to the beam line. A 4-layer silicon-strip detector (SVX) with inner and outer radii of 3.0 and 7.9 cm provides of order 40 μ precision on the impact parameter of individual charged track trajectories extrapolated to the beam line. A set of time projection chambers (VTX) instrument the tracking region between 12 and 22 cm in radius, providing high-precision tracking in the $r - z$ plane. An 84-layer drift chamber (CTC) detects charged particles in the region between 30 and 132 cm from the beamline. Together, these detectors measure particle momentum to a precision σ_p given by

$$\frac{\sigma_{p_T}}{p_T} = 0.0009 p_T \oplus 0.0066, \qquad (8)$$

for particles with $p_T \gtrsim 0.35$ GeV/c. The central calorimeter instruments the region $|\eta| < 1.1$, and is comprised of projective towers of size $\Delta\eta \times \Delta\phi = 0.1 \times 0.26$ radians. Each tower is made of a sandwich of Pb or Fe plates interleaved with scintillator. A Pb sandwich 25 radiation lengths thick is used to measure electromagnetic shower energies. An iron-scintillator sandwich approximately 5 interaction lengths thick is