I. Tracker

    A. Pixels

        1. Technology

            a. Physical basis of charged particle detection by semiconductor

            b. Silicon sensors with front end chips for readout

            c. Optical readout

        2. Physical structure

            a. 46,080 pixels per sensor

            b. Sensors generally 50x400 microns each

            c. 16 sensors per module, 1744 modules total

            d. 80 million channels, 1.4 m long, 0.5 m wide

        3. Readout

            a. On-detector lasers provide optical readout link

            b. DAQ crates off-detector receive and interpret signals

            c. Failures of lasers and motivation for alternatives

        4. Relevance for b-tagging

    B. SCT

        1. Technology and structure

            a. Silicon technology also

            b. 4 double-sided layers, 6.36 x 6.40 cm

        2. Role in track reconstruction

    C. TRT

        1. Technology, structure, readout

            a. Ionization of gas when traversed by charged particle

            b. 2-tier threshold system distinguishes between tracking hits and transition radiation

        2. Particle identification role

II. Calorimeters

    A. Electromagnetic

    B. Hadronic

III. Muon System

IV. Trigger and Data Acquisition

    A. Three-Layer Trigger System

1. L1
    a. Muon Stream
    b. EGamma Stream
    c. JetTauEtMiss Stream
2. L2
    a. Region of Interest readout based on L1 objects
    b. More granular
3. Event Filter
    a. Full event reconstruction
    b. Reconstruction time and rate
B. Data Recording
C. Event Reconstruction