

# The ZEUS Detector at HERA 1992 - 2007

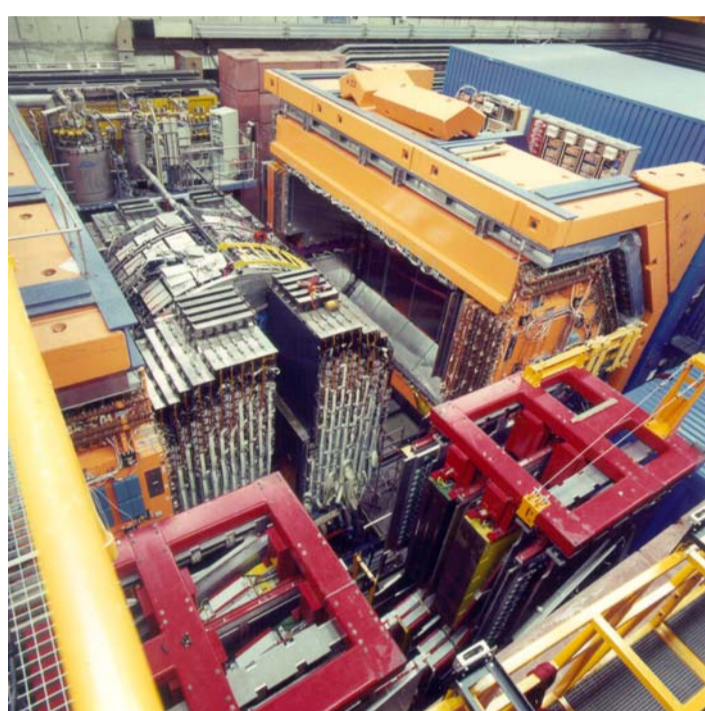
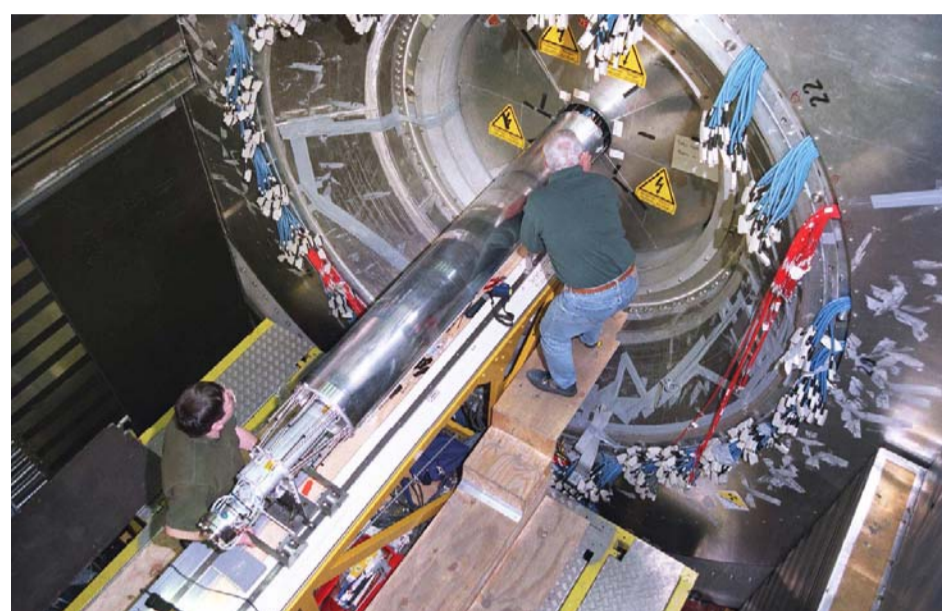


Photo of the ZEUS detector during installation



Installation of the MVD

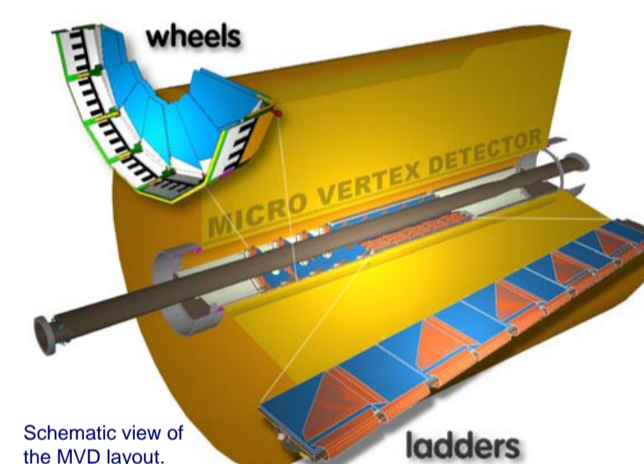
## MVD Micro-Vertex Detector



Photo of the lower half of the MVD.

**Barrel:**  
Three double layers of silicon-strip detectors: 4, 10 and 16 layers consisting of 5 modules (ladders), made of 2 half-modules with r-z, r-φ sensors and r-φ, r-z sensors of 512 readout channels each.

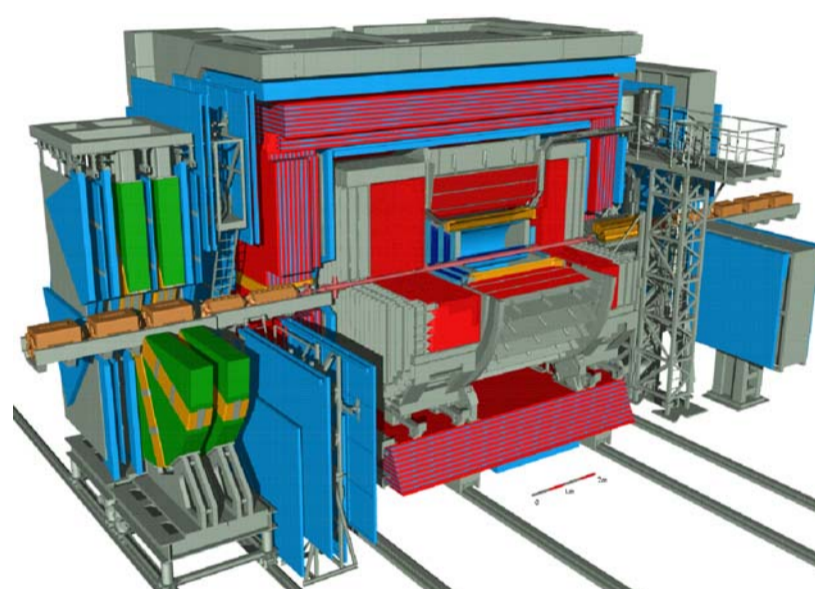
**Forward part:**  
Four double layers of silicon-strip detectors (wheels) arranged in 14 sectors, made of two trapezoidal sensors of 480 readout channels each.



Schematic view of the MVD layout.



Photo of the ZEUS collaboration on June 30<sup>th</sup>, 2007

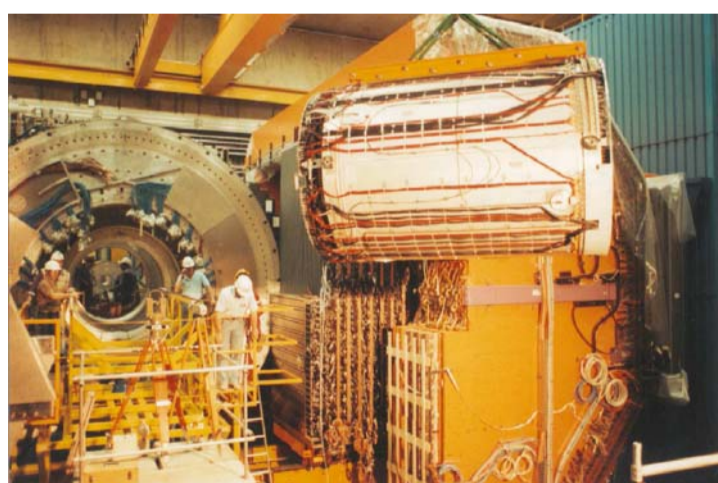


Overview of the ZEUS detector

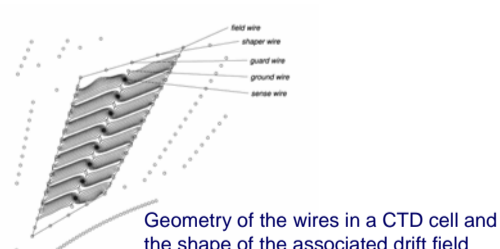
## CTD

Central Tracking Detector

The CTD is a cylindrical drift chamber, containing 4608 sense and 19584 field wires, organised in 9 concentric super-layers. It has a polar coverage of  $15^\circ < \theta < 164^\circ$ , is 2.05 m long and has an inner and outer radius of 0.182 m and 0.794 m, respectively.



Arrival of the CTD in the ZEUS hall



Geometry of the wires in a CTD cell and the shape of the associated drift field



Installation of the CTD in the ZEUS hall

## FDET

Forward Tracking Detector

The forward region of the ZEUS detector consists of the Forward Tracking Device (FTD) and the Straw Tube Tracker (STT). The FTD measures the tracks of charged particles in planar drift chambers located at the ends of the central tracking detector in forward (proton) direction. The STT comprises sectors of straw tube like drift chambers. It was installed in 2001 to improve the reconstruction of charged particles in the forward region. It has a polar coverage of  $6^\circ < \theta < 23^\circ$ .

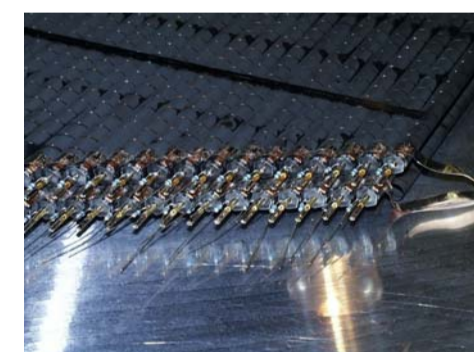


Photo of the straws in the STT



Transport and arrival of the FDET

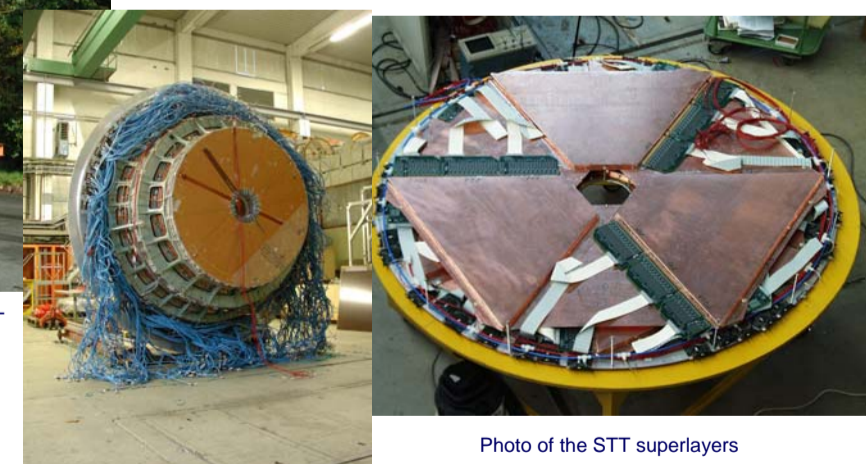


Photo of the STT superlayers