ERC Facilities and Staff

Facilities Snapshot – Fall 2003:

• 18 Engine Test Stands
  – Six (6) Single Cylinder Heavy Duty Diesel Engines
  – Five (5) Smaller Single Cylinder Research and Flow Visualization Engines
  – Seven (7) Spark Injection and WSEC engines

• 10 Off-engine Experimental Development Labs

• Production, prototype injection systems:
  – Siemens, Orbital, Bosch, FIAT, Chrysler, Denso, Caterpillar, Cummins, Detroit Diesel Corporation and Lucas

• Extensive optical diagnostic capabilities
  – 3 Cu-vapor lasers, 3 Nd: YAG, Excimer, 4 Argon ion,
  – 2 PDA’s, PIV, 3 LDV’s, high speed cameras, movie and digital Kodak, Cordin framing camera, long distance microscope lens
  – Spectrometers, video frame grabbers, digital converters...

• 2 Bosch RTT and AVL DPL 482 Particulate Analyzers

• Two Fourier Transform Infrared Spectroscopes (FTIR’s) and other standard emission instruments:
  - exhaust HC, CO, NO, 2 full dilution tunnels

• “Cambustion” Fast-HC, Fast-NOx analyzers

• Bosch Optical Smoke Opacity /TEOM particulate mass analyzer

• 5 high-speed, custom Data Acquisition Systems (DAS)

• Additional time-based PC DAS’s

• SGI Origin 2000 Super Computer (32 CPUs)

• High-end compute clusters: 32 node, 27 node, 4 node and 4 node

• Workstations and PC’s at student, staff and PI desks

• Machine shop

• Dark Room