ElectroMagnetic Calorimeter (EMC)
Service Work
The EMC Electronics

- The EMC consists of 6580 Thallium-doped CsI crystals, each with two 1cm² silicon PIN diodes glued to the rear face.
- These diodes are connected to a preamplifier and the whole assembly is maintained in a temperature controlled nitrogen atmosphere.
- Each preamplifier provides amplification factors of 1 and 32, which are transmitted to mini-crates in an accessible location. There the signals are further amplified and digitized.
- Even when not taking data, the temperature is controlled to stresses on the system. The preamplifiers and digitizing electronics are cooled using a Fluorinert system, and indirectly by chilled water.
Service Work

- David Doll has been working since December 2007 as one of two ‘Electronics Experts’ on the EMC system.
- Responsibilities include:
  - Resolving problems with the digitizing electronics during data taking.
  - Testing, burning in, and replacing faulty components in the mini-crates, and cataloguing their locations.
  - Maintaining the cooling system and nitrogen atmosphere after the beams turned off.