

A CONTROL SYSTEM UPGRADE FOR THE DARESBUURY MEIS FACILITY

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Abstract

The Medium Energy Ion Scattering (MEIS) Facility at Daresbury Laboratory is operated by the Science & Technology Facilities Council as a user facility for the benefit of UK HEI researchers and industry. MEIS enables the investigation of the surface structure and properties of crystalline materials using an ion beam probe. MEIS opened in 1996, but was constructed using parts of much older machine, the Nuclear Structure Facility (NSF), following its decommissioning in the early 1990s. Much of the hardware and software used in the control system dated from the 1970s & 80s. This was becoming increasingly difficult to maintain and the possibility of failure of obsolete, unrepairable components posed a serious risk that the facility could become unusable. The solution adopted is based on an EPICS IOC on a PC running Linux. Communications with the plant hardware are via a USB parallel interface. The MIDAS support library, which was already used for the data acquisition system, was extended to include a channel access client. A tcl/tk user interface is provided to give users a consistent and familiar look and feel.

**CONTRIBUTION NOT
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