

DESIGN AND COMMISSIONING OF THE ISAC CONTROL SYSTEM AT TRIUMF

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The control system for the initial stage of the ISAC radioactive beam facility at TRIUMF was recently commissioned and the facility delivered the first radioactive beam to users in December of 1998. The control system is based on the EPICS toolkit. VME based Motorola MVME162 CPUs serve as Input/Output Controllers, SUN workstations as application servers, and PCs are used with X-terminal software as operator interface stations. Modicon PLCs control the vacuum system and ion sources. A network of CAN-bus based controllers is used for the beam guidance system. Custom VME modules were developed for beam diagnostics. The EPICS display manager, dm, is used for the operator interface. IOC software was developed using the CAPFAST schematics editor. Necessary additions to EPICS will be discussed, as well as aspects of the integration with commercial systems, the economics of in-house design, and the efficiencies of the EPICS collaborative effort.