

EPICS-based software for the Vulcan Target Alignment Rig

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New EPICS-based software was written to enable the alignment and inspection of targets in Vulcan Target Areas using the existing control hardware, with upgraded cameras.

The Vulcan Target Alignment Rig is used to inspect a component from various angles using three cameras and a rotary target stage, each of which can be controlled in x, y and z axes.

As the custom software written for the original system could not be upgraded to be compatible with Windows 10, it was decided to develop an EPICS-based software control system compatible with the existing motion controllers, while upgrading the cameras.

EPICS input/output controllers implement the required back-end functionality, such as communication with device drivers, inter-device communication and synchronization, parameter settings, etc. An intuitive graphical user interface has been developed with a similar appearance and features to the previous system.

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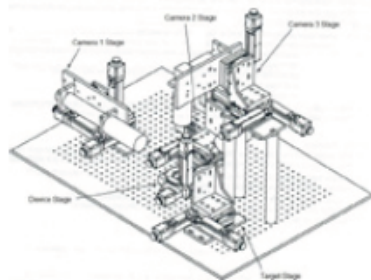


Figure 1: System layout

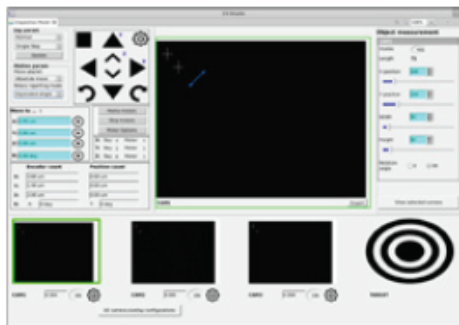


Figure 2: Inspection control panel