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Upgrade of the ALPI low and medium beta RF control system

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The ALPI accelerator radio frequency (RF) control system at LNL (Legnaro National Laboratories) is currently undergoing a series of upgrades which will extends its lifetime and provide enhanced performance. This is a multi-year project where the upgrades are delivered incrementally while avoiding disruptions to the accelerator schedule. The first phase includes the development of new Low Level RF (LLRF) controllers, tuner and coupler stepper motor boxes and power amplifiers interfaces. The control system software and graphical user interfaces have been completely rewritten based on EPICS, supporting both the new and old LLRF controllers. A second phase is undergoing with the installation of the new software and hardware, while still using the old LLRF controllers, on the low and medium beta cavities of the ALPI accelerator. In the next phases the upgrade of the whole accelerator to the new software will be completed and the new LLRF controllers will be installed. This paper describes the technical solutions adopted and the status of the project.

Funding Agency

Footnotes

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Yes

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