

An RF simulator for control system development

Monday 26 August 2024 16:00 (2 hours)

Simulation tools are critical to the prototype and validation of control algorithms prior-to and during commissioning of LLRF systems. Moreover for industrial systems, diagnostics that are available on test systems and in laboratory accelerators are not always available in the field. RadiaSoft has been developing an RF simulator suite that allows for rapid prototyping of control algorithms in a fully integrated epics environment. As part of this process we have performed extensive testing and bench-marking using a novel C-band test cavity with a range of diagnostics. This poster provides an overview of the simulator, comparison of model output with measurements, and signal reconstruction results for cavity control.

Footnotes

Funding Agency

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Session Classification: Monday Poster Session

Track Classification: MC4: Technology: MC4.4 Low level RF