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Low-cost button BPM signal processing electronics for the AWA electron linac

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Single-pulse, high dynamic range BPM signal detection has been at the top of the Argonne Wakefield Accelerator (AWA) Test Facility's most-wanted list for many years. The AWA beamline's unique capabilities require BPM instrumentation with an unprecedented dynamic range, making it challenging to design and prototype a cost-effective solution. We have prototyped many different approaches over the years. Finally, a recent prototype shows the long-sought solution for AWA's low-cost button BPM signal detection is becoming feasible. This paper shares the design and test results of this prototype.

Footnotes

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