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Elettra 2.0 eBPM: Complete System Overview

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Beam position monitors (BPMs) are fundamental diagnostic tools for lightsources: thanks to their data read-out, machine orbit can be stabilized and corrected by control systems. New generation machines need better performances on these diagnostic devices due to increased demands, such as smaller photon beam size and long-term stability. This article outlines all the devices that will make up the future Elettra 2.0 BPM system, based on pilot tone compensation. The entire signal acquisition chain will be described, from the pickups to data delivery to the control system. After a brief introduction about the electronics (analog signal conditioning, digital conversion and processing), more emphasis will be given to the description of timing and synchronization functionalities, machine protection system integration and machine feedback

Funding Agency

Footnotes

I have read and accept the Privacy Policy Statement

Yes

Primary author: Dr BRAJNIK, Gabriele (Elettra-Sincrotrone Trieste S.C.p.A.)

Co-authors: GAIO, Giulio (Elettra-Sincrotrone Trieste S.C.p.A.); DE MONTE, Raffaele (Elettra-Sincrotrone Trieste S.C.p.A.); BASSANESE, Silvano (Elettra-Sincrotrone Trieste S.C.p.A.); CLEVA, Stefano (Elettra-Sincrotrone Trieste S.C.p.A.)

Presenter: Dr BRAJNIK, Gabriele (Elettra-Sincrotrone Trieste S.C.p.A.)

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