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## High-bandwidth Electro-Optic BPMs and an optical time-stretch technique

*Thursday, 11 May 2023 16:30 (2 hours)*

An electro-optic beam position monitor is in development for the HL-LHC to enable high-bandwidth monitoring of crabbed bunch rotation and intra-bunch instabilities. Following in-air beam tests of a prototype at HiRadMat and the Clear facilities at CERN in 2021 and 2022, a new in-vacuum version is being prepared for operation in the SPS during LHC Run 3. We report on progress toward the design aims and investigate a novel method of readout of single shot pulsed bunch signals at high bandwidth, while acquiring data at lower bandwidths using an optical time-stretch technique.

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UKRI, CERN and Royal Holloway University of London

### Footnotes

### I have read and accept the Privacy Policy Statement

Yes

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