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## The SPS Beam Loss Monitoring System renovation plan

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The Super Proton Synchrotron (SPS) beam loss monitoring (BLM) system at CERN, operational for several decades, currently comprises 286 Ionisation Chambers (ICs) around the SPS ring and approximately 144 additional detectors along various extraction lines (TT20, TT40, TT60, etc.). A complete renovation of the system is planned during Long Shutdown 3 (LS3), encompassing detectors, cabling, and acquisition electronics. The upgraded architecture will adopt a design similar to the current LHC BLM system—featuring front-end and back-end electronics housed in separate crates and connected via optical links—ensuring compatibility with the LHC upgrade scheduled around LS4. This paper presents an overview of the proposed architecture for the SPS ring and transfer lines, detailing the key components and expected improvements in performance, modularity and reliability.

### Footnotes

### Funding Agency

### I have read and accept the Conference Policies

Yes

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