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## The Continuous Development of an Operational Diagnostic Instrument in the LHC: The Synchrotron Light Monitors

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Diagnostic tools in general are the eyes of the operation group to run an accelerator. It is of a fundamental importance that such instruments not only fulfil the technical requirements but also allow an efficient and fluid use in daily operation. In fact, the operation of a complex accelerator, such as the LHC, is a continuously evolving task driven by challenging obstacles that may arise, therefore the endowed instrumentation should provide the flexibility to evolve beyond design specifications. The continuous collaboration between operation and instrumentation teams is mandatory in this process. In the following, the case of the LHC synchrotron radiation monitors is chosen as an example to present the continuous upgrades the instrument went through to help operations in the challenge of the beam emittance characterisation, a crucial parameter in the performance assessment of the LHC.

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