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## Why do BLMs need to know the quench levels?

The LHC beam loss monitoring system is based on the detection of secondary shower particles, which deposit their energy in the accelerator equipment and finally also in the monitoring detector. To protect the equipment and to prevent quenches the likely loss locations have to be identified by tracking simulations or by using low intensity beams. To keep the operational efficiency high, the calibration factor between the energy deposition in the coils of the magnets and the energy deposition in the detectors has to be accurately known.

The likely loss locations will be discussed and the envisaged detector location will be shown. The beam loss measurement system will be explained and the implementation of varying quench levels with loss duration and with beam energy will be pointed out.

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