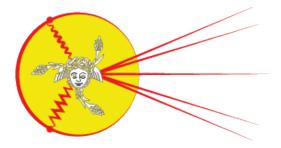
Diffraction 2016



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Turning the LHC Ring into a New Physics Search Machine

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The LHC Collider Ring is proposed to be turned into an ultimate automatic search engine for new physics in three consecutive phases: (1) Searches for heavy particles produced in Central Exclusive Process (CEP): $pp \rightarrow p + X + p$ based on the existing Beam Loss Monitoring (BLM) system of the LHC; (2) Extensions to the current BLM system to facilitate precise registration of the selected CEP proton exit points from the LHC beam vacuum chamber; (3) Integration of the BLM based event tagging system together with the trigger/data acquisition systems of the LHC experiments to facilitate an on-line automatic search machine for the physics of tomorrow.

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