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## **【354】 The W-Si high precision pre-shower detector of the FASER experiment at the LHC**

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The FASER experiment at the LHC aims at searching for Long Lived Particles (LLP), not predicted by the Standard Model, produced in the very forward direction. The current detector is designed to identify LLP decaying into charged leptons, but is almost insensitive to neutral decay products.

Instrumenting the detector with a high precision W-Si pre-shower will allow for identification and reconstruction of electromagnetic showers produced by  $O(\text{TeV})$  photons from LLP decays, at distances down to  $200\mu\text{m}$ . A description of the pre-shower and its expected performance will be presented along with results from pre-production prototypes of the SiGe HBT-based monolithic silicon pixel ASIC.

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