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# Development of a Beam Profile Monitor based on Silicon Strip Sensors for Low-Charge Electron Beams at ARES

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Novel accelerator techniques such as dielectric laser acceleration (DLA) will be studied at the SINBAD facility (DESY Hamburg) using the ARES linac. Due to the low charge of the accelerated beams, charge densities below 1 aC per square micron are expected at the spectrometer screen, which are challenging to measure with conventional techniques used in multi-pC accelerators. Therefore, a dedicated beam profile monitor, based on silicon strip sensors originally developed for the ATLAS inner tracker upgrade, was developed to measure these distributions with a sufficient spatial resolution of around 100 micron. Here, the design of the device and experimental tests with a prototype are presented.

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