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Implementation and first test results of the STRIDENAS beam profile monitor

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Electron bunches with charges in the order of 10 fC can be produced at the ARES linac and are used for experiments with medical applications or studies of novel acceleration techniques. To characterize such bunches, sufficient sensitivity of the diagnostics devices is required. The STRIDENAS beam profile monitor is designed to measure such sub-10 fC charge beams. The device is based on silicon strip sensors from the ATLAS inner tracker upgrade, which feature a pitch of 75 micrometers. A detector prototype has been built and installed in a dedicated experimental chamber at ARES. First beam profile measurements have been performed. In this talk, the detector setup and first measurement results are presented.

Summary

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