

8th Beam Telescopes and Test Beams Workshop



Contribution ID: 58

Type: not specified

First performance results of the Lycoris large area strip telescope

Thursday, 30 January 2020 17:40 (20 minutes)

The Lycoris high precision large area silicon telescope was designed and commissioned for the DESY II Test Beam Facility as part of the AIDA2020 project.

The telescope was designed to be complementary to the existing EUDET-type telescopes, providing a large active area with only a minimal support structure while still providing a single point resolution better than $10\ \mu\text{m}$. As such, the telescope consists of six $9.35 \times 9.35\ \text{cm}^2$ hybrid-less silicon micro-strip sensors with a strip pitch of $25\ \mu\text{m}$. The choice of sensor allows a full arm of the Lycoris telescope to fit within a space with width of 3.5 cm allowing the testing of, for example, large DUTs together with a telescope within the PCMAG superconducting solenoid. The full system was completed in 2019 and tested in multiple test beam campaigns. First results of the telescope performance, including the achievable signal over noise ratio, plane hit efficiency, as well as the achievable single point resolution of the system will be presented.

Primary author: KRAEMER, Uwe (DESY)

Presenter: KRAEMER, Uwe (DESY)

Session Classification: Beam Telescopes