

Characterization and Calibration of 2nd Gen AGIPD Electronics

The Adaptive Gain Integrating Pixel Detector (AGIPD), a megahertz frame-rate, high-dynamic range integrating pixel detector, was developed for photon science experiments at the European X-Ray Free Electron Laser (European XFEL) and tailored to its unique specifications. Two 1-Megapixel AGIPD detector systems have been installed at the European XFEL and are producing numerous scientific publications. Two completely new AGIPD detector systems are currently being developed for the European XFEL: one 1Mpixel detector for the HED Instrument and one 4Mpixel AGIPD as a second detector for the SPB/SFX instrument.

This summer student project deals with the characterization and calibration of the new detector electronics (readout electronics and ASIC).

For this purpose, various measurements will be performed on our laboratory system as well as on the 500k prototype system, that is in operation at the HED instrument at European XFEL. Data analysis will be performed on Desy's HPC cluster Maxwell.

Field

A4: Development of experimental techniques (methodology oriented)

DESY Place

Hamburg

DESY Division

FS

DESY Group

FS-DS

Special Qualifications:

data analysis
no fear for electronics

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