Contribution ID: **27** Type: **On-site project**

Timepix4

Timepix4 is a versatile readout chip with 55 μm pixels, recently developed by CERN on behalf of the Medipix4 collaboration. It can operate both in a photon counting mode with frame readout, and a timestamping mode with event readout. Both of these modes offer higher performance than existing Medipix3 and Timepix3 chips. This makes Timepix4 appealing to a wide range of X-ray experiments at synchrotrons.
At FS-DS, a new readout system is being developed that is designed to cope with the chip's high readout bandwidth (up to 162 Gbps per chip). A single chip carrier board has been designed, and it is currently under production. First tests of these devices are scheduled for Q2/3 of 2022. They will require both hardware skills for the tests of the different parts of the set up, both alone and combined, as well as and software skills for chip communication, and data analysis.
This project constitutes a great opportunity for students interested in scientific instrumentation, and technology.

Field

B3: Development of experimental particle physics equipment (hardware-oriented)

DESY Place

Hamburg

DESY Division

FS

DESY Group

DS

Special Qualifications:

Experience in hardware and some programming languages.

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