



Contribution ID: 47

Type: **Invited**

SparkPix: a family of experiment-specific X-ray detectors for LCLS-II

Wednesday, March 15, 2023 10:55 AM (30 minutes)

As the repetition rate of LCLS-II increases up to 1 MHz, novel detectors are needed to match the repetition rate of the machine. SLAC is developing several detectors belonging to the SparkPix family. Each detector is tailored to the specific requirements of each experiments and dedicated information extraction engines are implemented in each SparkPix ASICs to overcome the data challenge and enable frame-rates up to 1 MHz. This contribution will describe the overall philosophy behind the Sparkpix family, as well as the current developments, namely: SparkPix-ED, SparkPix-T and SparkPix-S.

Primary authors: ROTA, Lorenzo (SLAC); PEREZ, Aldo (SLAC); MARKOVIC, Bojan (SLAC); DRAGONE, Angelo (SLAC); KENNEY, Christopher (SLAC); HANSSON, Conny (SLAC); SEGAL, Julie (SLAC); DOERING, Dionisio (SLAC); GUPTA, Aseem (SLAC); ALEXANDRE, Habib (SLAC)

Presenter: ROTA, Lorenzo (SLAC)

Session Classification: Imaging

Track Classification: Imaging