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Femtosecond bunch arrival time monitoring with precision FMC-ADC modules

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Bunch Arrival time Monitor (BAM) is an electro-optical device used at FLASH accelerator in DESY for the high precision, femtosecond scale, measurements of the moment when electron bunch arrives at the reference point in the machine. The arrival time is proportional to the average bunch energy, and is used to calculate the amplitude correction for RF field control. New MTCA.4 devices, dual FMC carrier and specialized ADC FMC module, has been used to upgrade VME based BAM readout electronics. In this talk new MTCA devices and the first measurement results will be presented and compared with old VME system.

Primary author: Mr SZEWINSKI, Jaroslaw (NCBJ)

Co-authors: Mr SAMER, Bou Habib (ISE WUT); Mr BOŁTRUCZYK, Grzegorz (NCBJ); Mr DOBOSZ, Jaroslaw (ISE WUT); Mr KOROLCZUK, Stefan (NCBJ)

Presenter: Mr SZEWINSKI, Jaroslaw (NCBJ)

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