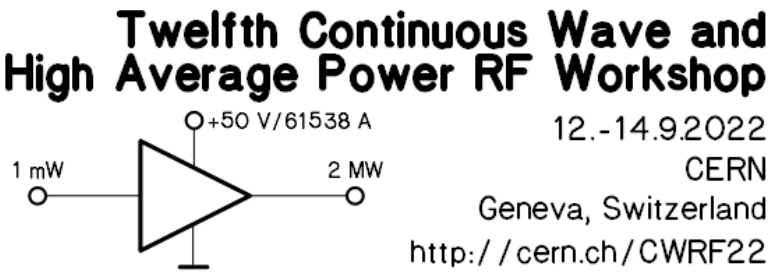

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FLASH HPRF System Upgrade

Wednesday 14 September 2022 11:10 (25 minutes)

FLASH is a free electron laser driven by a superconducting linear accelerator. During the last shutdown for the FLASH2020+ upgrade several modifications have been made to the HPRF system. Two European XFEL type superconducting accelerator cryomodules with tailored RF power waveguide distribution have replaced two old lower performance modules. Another two old accelerator modules have been equipped with tailored RF power waveguide distributions allowing to make use of the maximum achievable accelerating gradient of each cavity. One new RF station with a multibeam klystron has been installed and another RF station has been equipped with a new pulse modulator. In addition to these major changes several other modifications have been made to the RF power waveguide distributions and the RF power stations. The measures will result in an increase of the electron beam energy from 1.25 to 1.35 GeV.
This presentation will report on the modifications of the HPRF system during the shutdown for the FLASH2020+ upgrade.

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