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Progress of High Power FPC development for ERI SRF Cavities

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The EIC to be built at BNL is a unique high-energy, high-luminosity, polarized electron-proton/ion collider. The EIC accelerator complex consists about 10 new RF and SRF systems operating with frequencies spanning 24 MHz to 1,773 MHz, requiring at least 60 new high power fundamental power couplers (FPCs). These couplers will operate in either pulsed mode or CW modes with peak traveling wave power ranging from tens to 380 kW. A 1 MW broadband RF window suitable for all the EIC RF and SRF systems up to 591 MHz was designed and under prototyping. This paper will present the status on FPC window development, FPC airside and vacuum side components for 591 MHz test, 591 MHz high power conditioning box, and FPC testing plan.

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Footnotes

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Yes

Primary authors: ZALTSMAN, Alex (Brookhaven National Laboratory); HOLMES, Douglas (Brookhaven National Laboratory); DALY, Edward (Thomas Jefferson National Accelerator Facility); FITE, Jesse (Brookhaven National Laboratory); SMITH, Kevin (Brookhaven National Laboratory); RIMMER, Robert (Thomas Jefferson National Accelerator Facility); XU, Wencan (Brookhaven National Laboratory); CONWAY, Zachary (Brookhaven National Laboratory)

Presenter: XU, Wencan (Brookhaven National Laboratory)

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