Abstract Submitted
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In-situ Testing of the EHT High Gain and Frequency Ultra-Stable Integrators[1] KENNETH MILLER, TIMOTHY ZIEMBA, JAMES PRAGER, ILIA SLOBODOV, DAN LOTZ, Eagle Harbor Technologies, Inc. — Eagle Harbor Technologies (EHT) has developed a long-pulse integrator that exceeds the ITER specification for integration error and pulse duration. During the Phase I program, EHT improved the RPPL short-pulse integrators, added a fast digital reset, and demonstrated that the new integrators exceed the ITER integration error and pulse duration requirements. In Phase II, EHT developed Field Programmable Gate Array (FPGA) software that allows for integrator control and real-time signal digitization and processing. In the second year of Phase II, the EHT integrator will be tested at a validation platform experiment (HIT-SI) and tokamak (DIII-D). In the Phase IIB program, EHT will continue development of the EHT integrator to reduce overall cost per channel. EHT will test lower cost components, move to surface mount components, and add an onboard Field Programmable Gate Array and data acquisition to produce a stand-alone system with lower cost per channel and increased the channel density. EHT will test the Phase IIB integrator at a validation platform experiment (HIT-SI) and tokamak (DIII-D).

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