

Photonic Band Gap Accelerating Structures Progress Report

1Q FY16

In the first quarter of FY16 the PI (Evgenya Simakov) continued simulations of PBG resonators with CST Microwave Studio and CST Particle Studio to design an 11.7 GHz PBG resonator with elliptical rods. The PI also visited Niowave, Inc. to participate in the final superconducting tests of 2.1 GHz five-cell cavity with a PBG coupler. The test was a success. The graduate student who worked on this test as a part of his PhD dissertation will be graduating from MIT in Spring 2016. The student is preparing two papers to report the results of his research. The PI also re-submitted a revised paper to Physical Review Letters to report on the results of the wakefield testing at Argonne Wakefield Accelerator (AWA) in Spring of 2015. The paper was accepted to Physical Review Letters to appear in February 2016. The PI held a teleconference with AWA to plan more tests of PBG structures in Summer, 2016. The PI identified a potential postdoctoral candidate to join the project. The candidate is coming for an interview in January, 2016.