

Photonic Band Gap Accelerating Structures Progress Report

2Q FY17

In the second quarter of FY17 the postdoc (Janardan Upadhyay) went to India to renew his visa and spent 3 month in waiting for his visa due to the administrative processing. This considerably slowed down work on the project. The postdoc returned to LANL in March of 2017 and the work resumed.

In preparation for the wakefield experiment at Argonne Wakefield Accelerator the postdoc conducted simulations of wakefields in the PBG structure with the CST Particle Studio. The desired bunch charges and beam parameters for the experiment were discussed with the AWA team. The thin Be window was delivered. The plan for the wakefield experiment is now finalized. The experiment is to be performed in April, 2017.

The PBG structure for high gradient testing planned at SLAC National Accelerator Laboratory is in fabrication. Delivery is scheduled for May, 2017.

The PI (Evgenya Simakov) attended the DOE-OHEP Decadal R&D Roadmap for NCRF workshop at SLAC National Accelerator Laboratory in January, 2017. Dr. Simakov presented the recent results of the project and discussed the near future plans. Dr. Simakov worked with Dr. Sami Tantawi from SLAC to draft the feedback for DOE on Trust 2: Advance cost-capability of NCRF accelerating structures and advanced concepts.