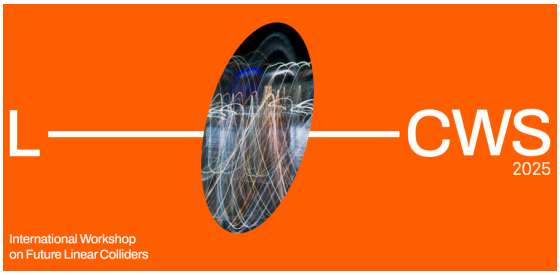


Contribution ID: **129** Type: **Talk**

# Update on C-band activities at LANL

This talk will report on the status of commissioning of the Cathodes And Radio-frequency Interactions in Extremes (CARIE) high gradient C-band RF photoinjector test stand at Los Alamos National Laboratory. We are assembling and testing the high gradient photoinjector capable of producing electric fields at the cathodes up to 250 MV/m. The photoinjector is powered by a 50 MW, 5.712 GHz Canon klystron. The klystron, the circulator, and the waveguide line are fully commissioned. The all-copper photoinjector is fabricated and cold-tested and undergoes high gradient testing. The second version of the photoinjector with replaceable high quantum-efficiency cathodes is fabricated and cold-tested. We also recently fabricated and cold-tested a high gradient C-band cavity with Nichrome absorbers. The cavity is awaiting high gradient testing which will study the behavior of nichrome at high electromagnetic fields. The status of the CARIE facility, its high-power operation, and the results of various high gradient tests will be presented.

**Authors:** Dr ALEXANDER, Anna (LANL); Dr KIM, Donsgung (LANL); SIMAKOV, Evgenya (LANL); Dr XU, Haoran (LANL); Dr KAEMINGK, Michael (LANL); Dr ANISIMOV, Petr (LANL); Dr HAYNES, W. Brian (LANL); Dr CHOI, Wonjin (LANL)

**Presenter:** SIMAKOV, Evgenya (LANL)

**Session Classification:** Normal-conducting RF systems

**Track Classification:** Accelerator: Normal-conducting RF systems