Contribution ID: **122** Type: **Early Career (Eligible for Oral or Poster)**

Progress with plasma processing and plans

Wednesday, 17 May 2023 11:15 (15 minutes)

Plasma processing can be used to mitigate hydrocarbon-related field emission in SRF cavities in situ in cryomodules. We developed plasma cleaning for LCLS-II 1.3GHz N-doped cavities and we successfully applied it to the LCLS-II High Energy verification cryomodule (vCM). This test demonstrated that plasma processing can be a valuable tool to mitigate both field emission and multipacting in situ in cryomodules. This would result in a significant decrease of the CMs testing time, of the linac commissioning time and cost, and in an increase in the accelerator reliability.
Building upon this successful experience, we are now working on developing plasma processing for different cavity geometries, focusing both on the ignition method and on the gas mixture recipe.

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Session Classification: Accelerator: Superconducting RF

Track Classification: Accelerator: Superconducting RF