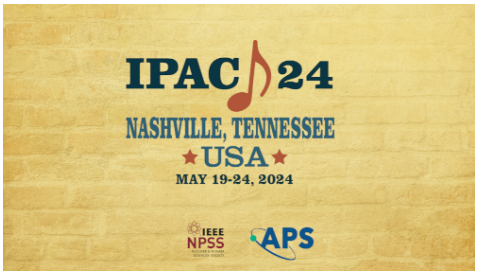

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LCLS-II-HE cavity acceptance testing progress

Monday, 20 May 2024 15:40 (20 minutes)

LCLS-II-HE is an ongoing project to upgrade SLAC's superconducting linac. The upgrade will add 23 cryomodules with a total of 192 nine-cell 1.3 GHz nitrogen-doped niobium cavities. The production and qualification testing of these cavities is nearly complete. To date, they have achieved an average maximum gradient of 27.0±3.5 MV/m and an average Q0 of 3.24±0.38e+10 at the nominal operating gradient (21 MV/m). Here we present an update of the performance statistics and an outlook on the final stages of cavity qualification. We also report on issues and lessons learned during the industrial production process.

Footnotes

Funding Agency

Paper preparation format

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North America

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