Status of High Order Modes Spectra Measurements in 1.3 GHz Cavities for LCLS-II

Monday, 1 October 2018 16:30 (30 minutes)

Production and testing of 1.3 GHz cryomodules for the LCLS-II project is ongoing at Fermilab. Each cryomodule is assembled of eight superconducting TESLA-shape elliptical cavities equipped with two High Order Mode (HOM) coupler ports. Measurement of the HOM spectrum is a part of the cavities incoming quality control inspection and the final cryomodule qualification cold test at the Cryomodule Test Facility (CMTF). In this paper we describe the procedure of HOM spectrum measurement and present the accumulated statistics of HOM frequencies and quality factors relevant to multiply cavity vendors.

Primary author: LUNIN, ANDREI (FNAL)
Co-authors: SUKHANOV, Alexander (Fermilab); SOLYAK, NIKOLAY (FNAL); KHABIBOULLINE, Timergali (FNAL); YAKOVLEV, VYACHESLAV (FNAL)
Presenter: LUNIN, ANDREI (FNAL)
Session Classification: HOM Measurements, Beam Effects, and Diagnostics