Contribution ID: **433** Type: **Poster**

Superconducting thin films characterization at HZB with the Quadrupole Resonator

Tuesday, June 25, 2019 3:43 PM (1 minute)

Superconducting thin films have great potential as post-Nb material for use in SRF applications in future accelerators and industry. To test the RF-performance of such films in practice, would require the building and coating of a full RF cavity. Deposition of thin films on such scales in test facilities are challenging, in particular when curved surfaces have to be coated. This greatly complicates their systematic research. In this contribution we report on the method we use to characterize small and flat thin film samples (Deposited onto both Nb and Cu substrates) in an actual cavity named the Quadrupole Resonator (QPR). We also summarize the latest measurement results of NbTiN thin films. The Quadrupole Resonator at HZB is a tool that is able to perform SRF characterizations at frequencies ~415, 847, 1300 MHz with RF fields using an RF-DC power compensation technique.

Primary authors: TIKHONOV, Dmitry (Helmholtz-Zentrum Berlin); KECKERT, Sebastian (Helmholtz-Zentrum Berlin); Prof. KNOBLOCH, Jens (Helmholtz-Zentrum Berlin); KUGELER, Oliver Julius; Dr TAMASHEVICH, Yegor (Helmholtz-Zentrum Berlin); VALENTE-FELICIANO, Anne-Marie (Jefferson Lab)

Presenter: TIKHONOV, Dmitry (Helmholtz-Zentrum Berlin)

Session Classification: Poster session

Track Classification: Superconducting RF & associated technologies