Contribution ID: **281** Type: **poster**

Plans for a Transverse Gradient Undulator Experiment at SINBAD-ARES

Wednesday, 18 September 2019 19:00 (1 hour)

Free Electron Lasers (FEL) are commonly regarded as the potential key application of laser wakefield accelerators (LWFA), but up to now the relatively high energy spread has prohibited FEL lasing. In order to overcome this limitation, modified undulator schemes, so-called transverse gradient undulators (TGUs), were proposed and a first superconducting TGU was built at Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany. A collaboration between KIT, HI Jena and DESY was formed to prepare a first experimental test at the ARES Linac at SINBAD at DESY.

This contribution presents the beam optics, integration studies and simulation results. The current status and the timeline will be described in detail.

Primary authors: DORDA, Ulrich (DESY); BURKART, Florian (CERN); JAFARINIA, Farzad (DESY); BERNHARD, Axel (Karlsruhe Institute of Technology (KIT)); ROSSMANITH, Robert (DESY); Mr GETHMANN, Julian (Karlsruhe Institute of Technology); DAMMINSEK, Kantaphon (Karlsruhe Institute of Technology); KALUZA, Malte (University of Jena, Helmholtz-Institute Jena)

Presenter: DORDA, Ulrich (DESY)

Session Classification: Cheese and Wine Poster Session 2

Track Classification: WG4 - Application of compact and high-gradient accelerators