Contribution ID: **64** Type: **Poster**

Studies on mm-Waves at CLEAR

Thursday, 27 September 2018 18:40 (1 hour)

We report on preliminary experimental studies on mm-waves at CLEAR electron LINAC (CERN). The production of coherent radiation in the (sub-)THz region by using ps-long electron bunches is the first step towards the realization of an intense source for both users and applications in accelerator physics. Some of different mechanisms like coherent transition, diffraction, Cherenkov and Smith Purcell radiation have been already explored and the others will be investigated in the next future.
Coherent radiation has also been exploited for longitudinal bunch diagnostics.
Finally, first results on electromagnetic shadowing are shown.

Primary author: Dr CURCIO, Alessandro (CERN)

Co-authors: GAMBA, Davide (CERN; John Adams Institute (JAI)); Dr GAROLFI, Luca (CERN); PETRARCA, Massimo (ROMA1); Dr BERGAMASCHI, Michele (CERN); CORSINI, Roberto (CERN); Dr MAZZONI, Stefano (CERN); Dr LEFEVRE, Thibaut (cern); DOLCI, Valerio (ROMA1); Mr FARABOLINI, Wilfrid (CEA/IRFU and CERN)

Presenter: Dr CURCIO, Alessandro (CERN)

Session Classification: PS3 - Poster session