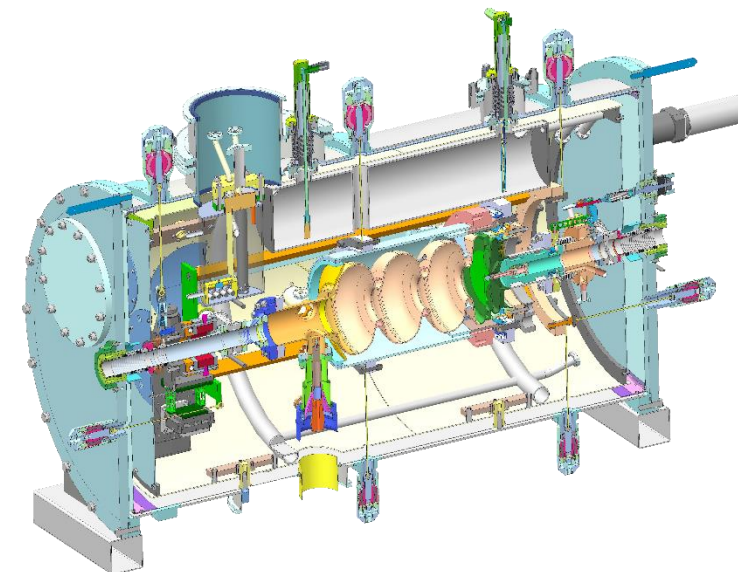
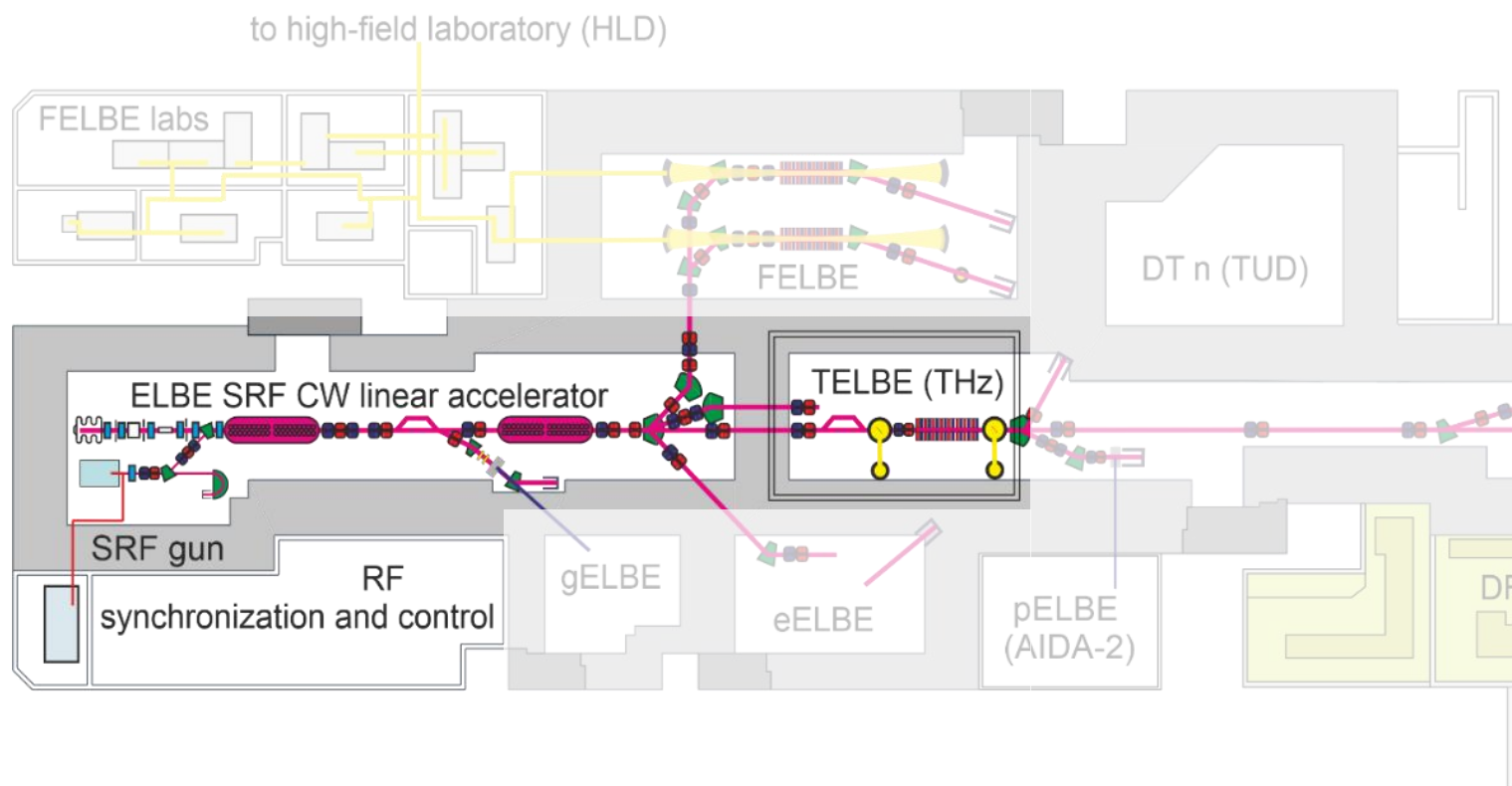


Measurements of the transverse emittance for 200 pC bunch charge at the ELBE SRF Gun

Raffael Niemczyk

ELBE Center for High-Power radiation Sources



- CW SRF gun
- 200 pC, typ. 50 kHz
- Compression phase
- THz pulse energy & beam loss

Emittance measurements

Scheme and image analysis routine

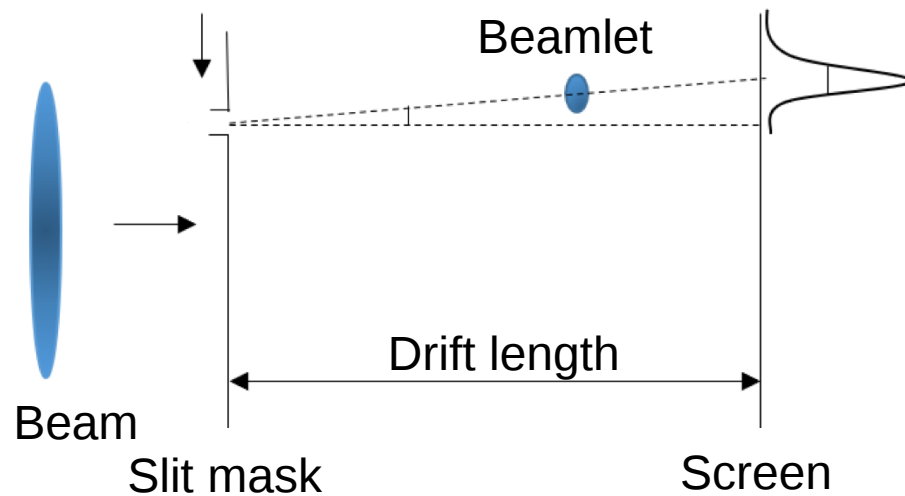
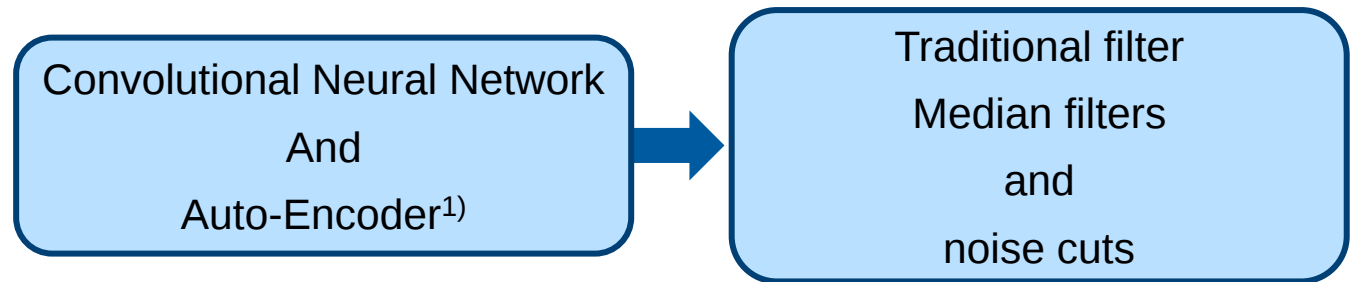


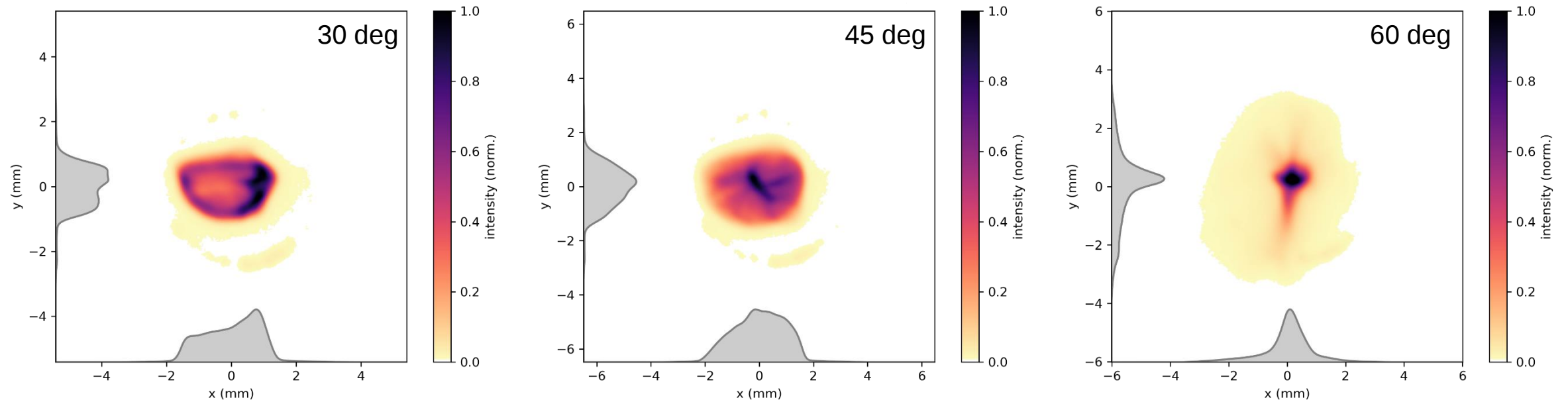
Image analysis routine



1) S.Ma, PhD thesis, University Hamburg, (2022)

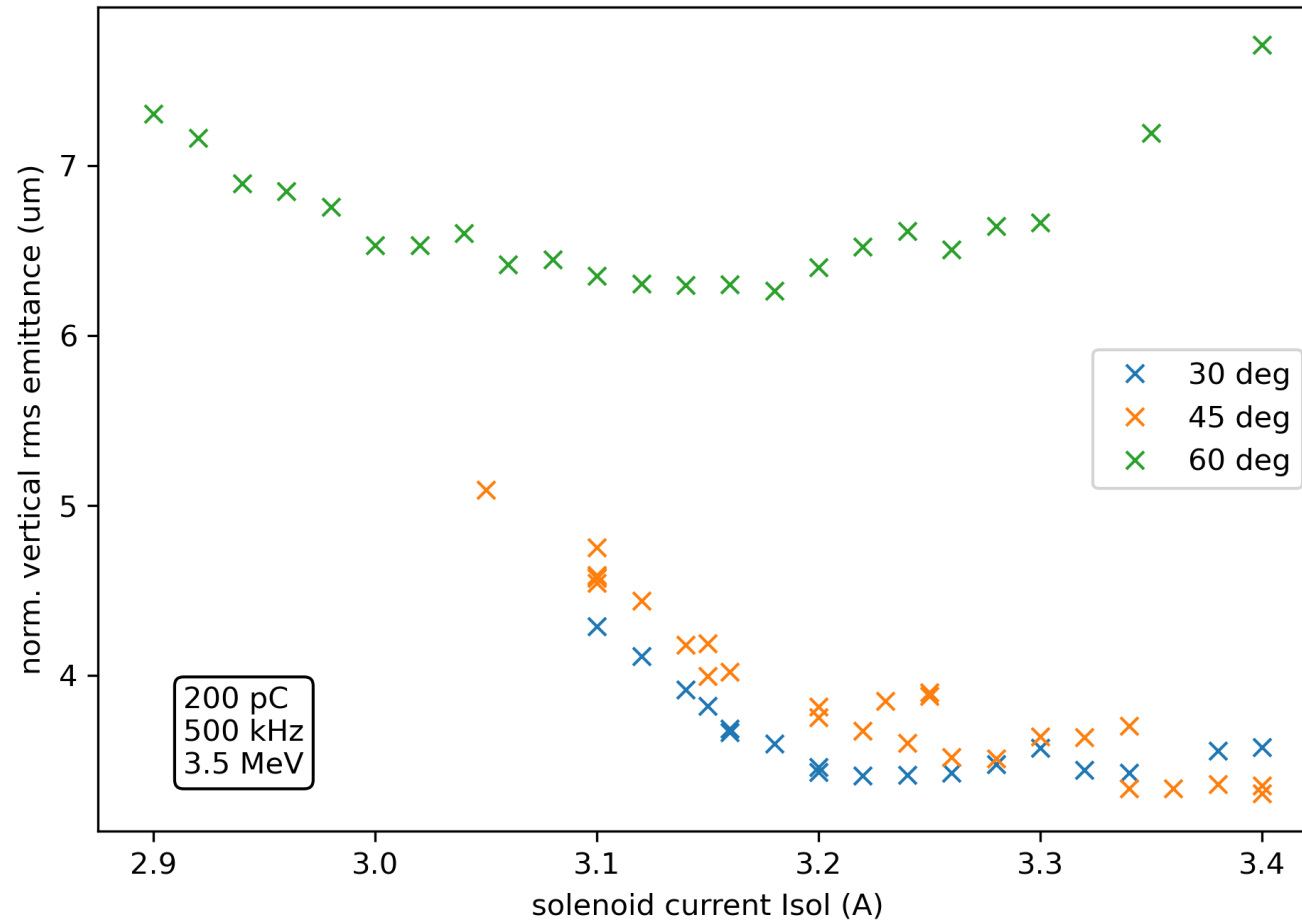
Real space images

Beam distribution for different emission phases



Emittance results

Scan of solenoid focusing and emission phase



Meet me at poster for discussion 😊

Contact

Helmholtz-Zentrum
Dresden-Rossendorf

www.hzdr.de

Raffael Niemczyk
Institut für Strahlenphysik
r.niemczyk@hzdr.de
+49 (0) 351 260 2205