

Femtosecond Radiative Longitudinal Diagnostic Techniques Employed at ARES

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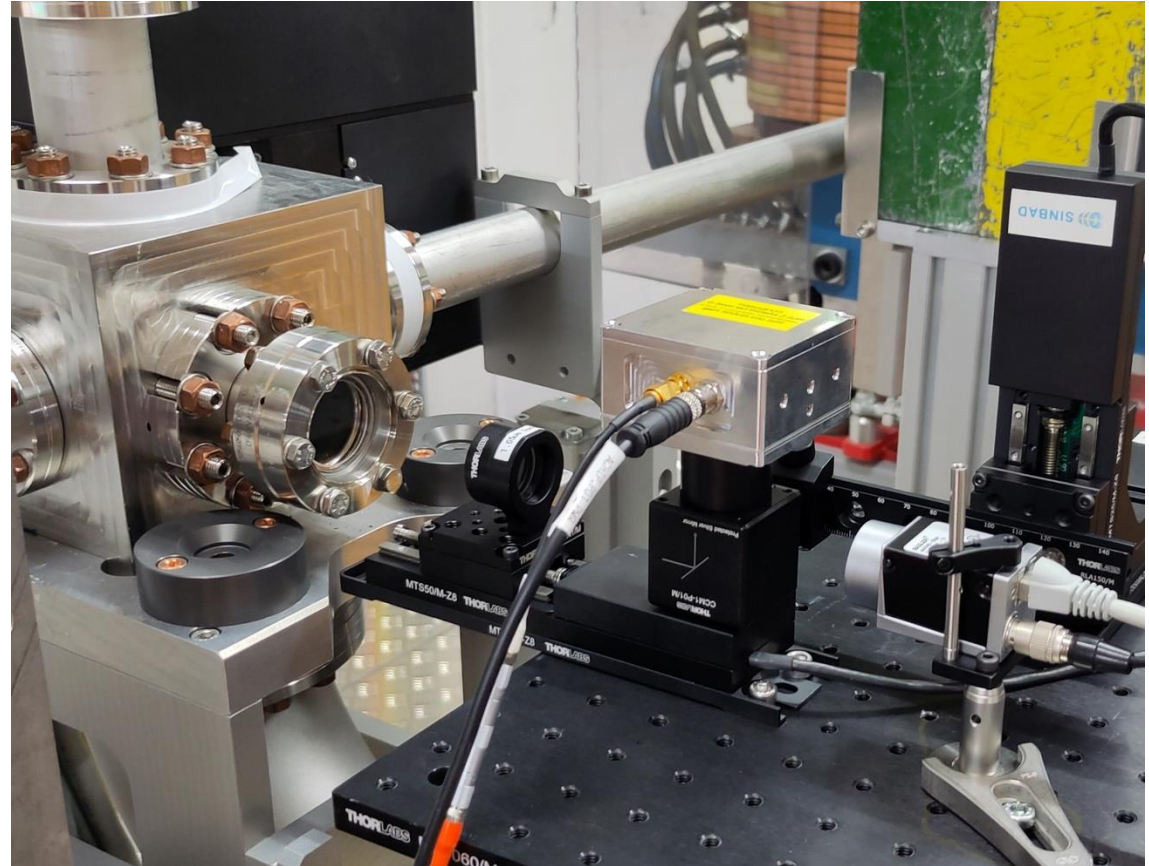
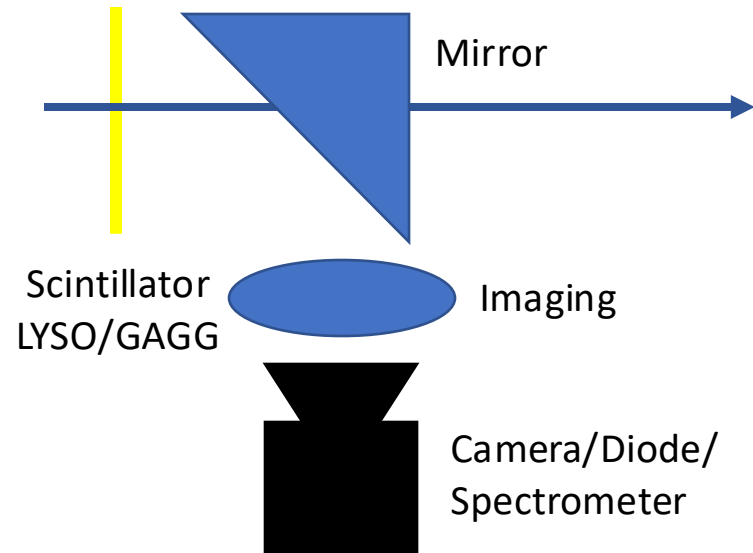


Deutsches Elektronen-Synchrotron DESY
Ein Forschungszentrum der Helmholtz-Gemeinschaft



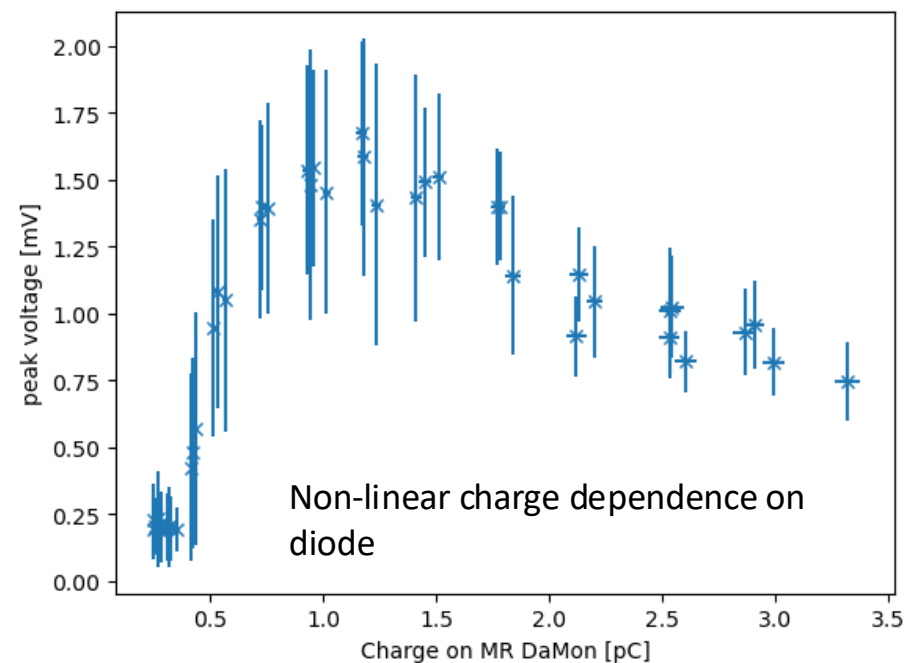
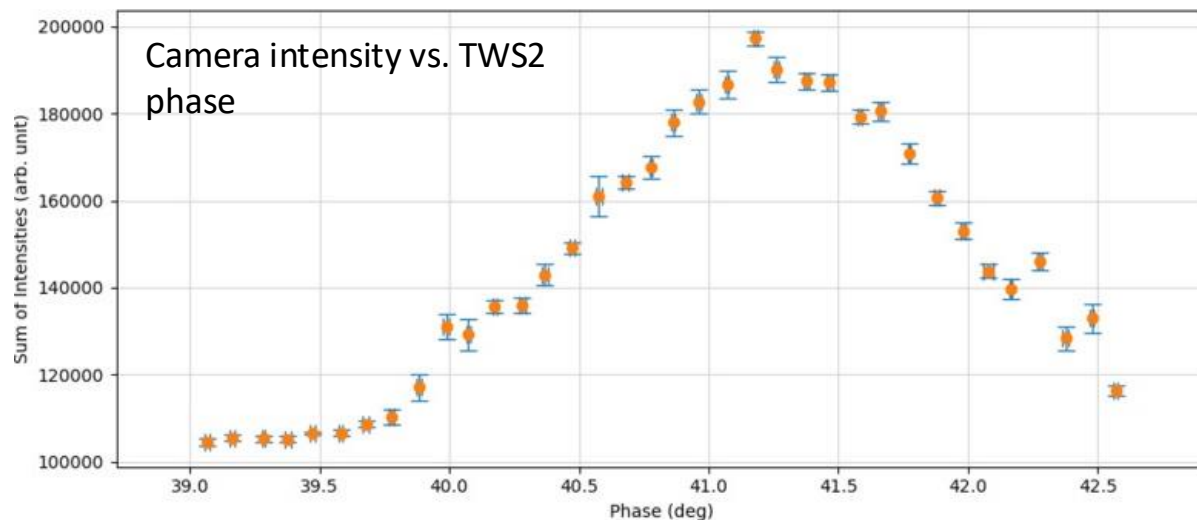
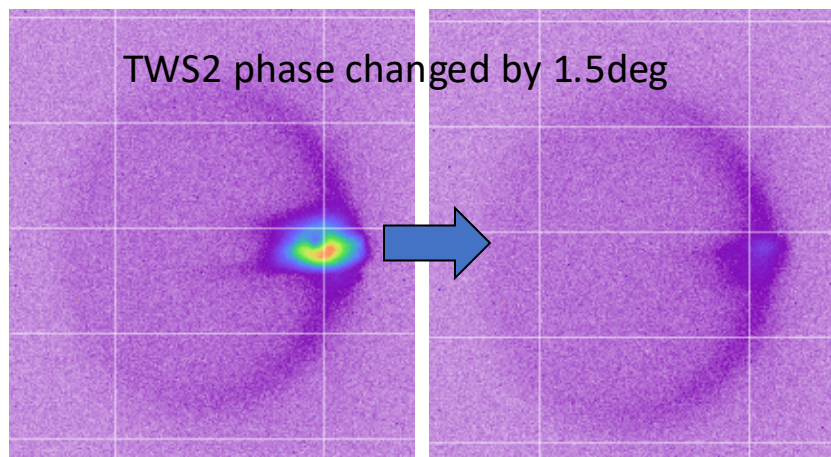
TR Bunch Compression Monitor

Coherent and resonant transition radiation as bunch compression monitors towards Smith-Purcell studies



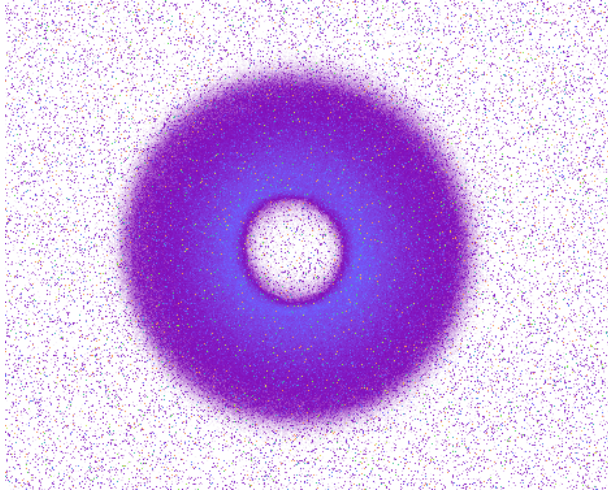
In-Vacuum TR Bunch Compression Monitor

Coherent and resonant transition radiation as bunch compression monitors towards Smith-Purcell studies

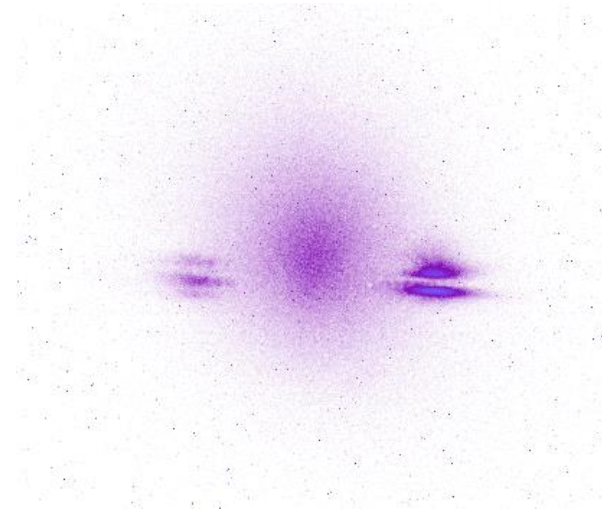


In-Air TR Bunch Compression Monitor

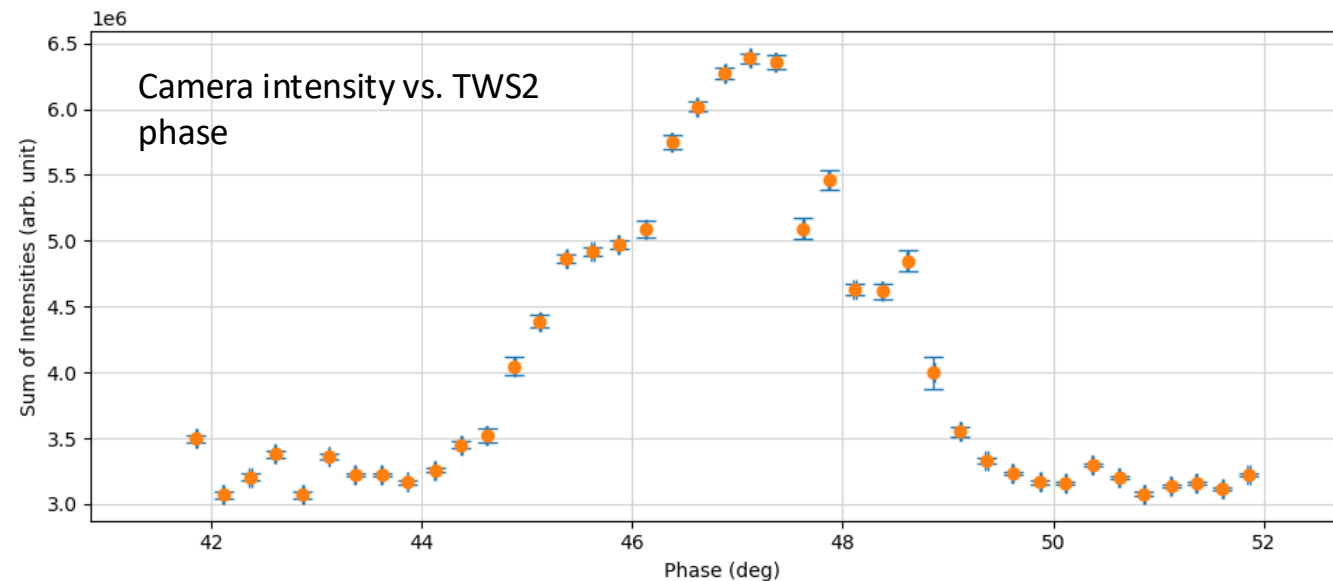
Coherent and resonant transition radiation as bunch compression monitors towards Smith-Purcell studies



- Dielectric mirror;
- TR from 50μm Ti window blocked.

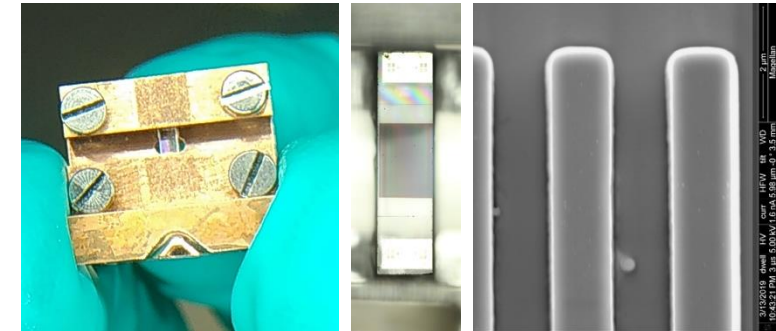
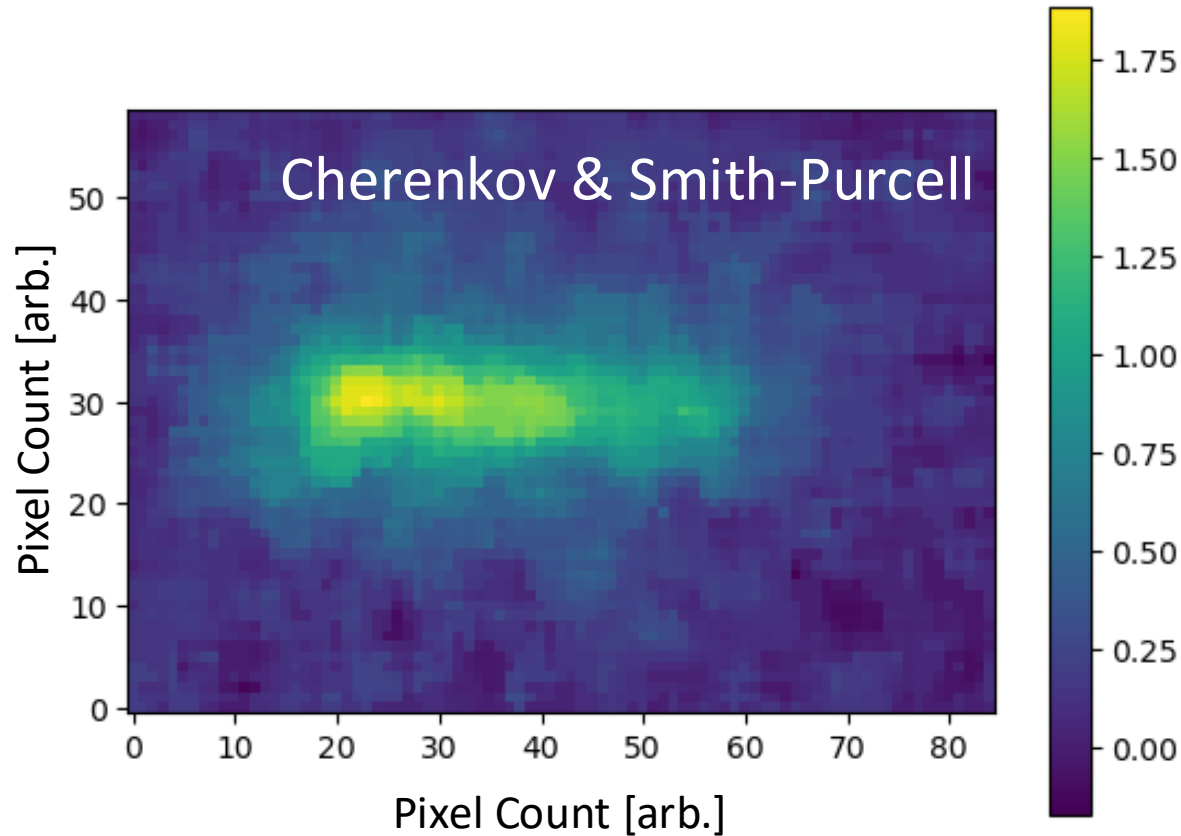


- 50μm Ti foil;
- Incoherent signal from mirror.



Smith-Purcell Longitudinal Diagnostic

Coherent and resonant transition radiation as bunch compression monitors towards Smith-Purcell studies



2.05 μm fused silica grating
installed in EA chamber
with 30% transmission
through 1 μm aperture