

Beam phase measurement

- Goal: Measurement of beam phase/bunch arrival time with electro-optical methods
- Part of EuCARD project
- Running until 2012
- Prototype system at PSI injector – interest in doing beam tests and experiments post-EuCARD?

Multi purpose X band structures

- Goal: Fabrication of general purpose X band structure suitable e.g. for FELs
- Currently series of four structures under production for use at SwissFEL and FERMI
- Discussion under way to produce 1-2 more, also possible expansion into collaboration on C band technology.
- If OK by respective managements, project for 2012/2013 involving PSI, ELETTRA, CERN

Wake field monitors

- Goal: Develop pickups and RF front ends to measure beam to structure alignment (and possibly internal structure alignment) using internal wakes
- Part of the proposal for EuCARD 2

Diagnostics for RF breakdown

- Goal: Develop RF based measurement methods to get high resolution data of breakdowns in the CLIC structures on e.g. localization, charge densities (possibly also in the pre-breakdown, field emission dominated phase).
- Project in discussion phase between CERN, PSI, Valspace, ESA. PSI would offer theoretical support.