

Minutes of PITZ Physics Seminar, 2019-04-25

Project: PITZ

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1) Agenda

- a) AOB
- b) R. Niemczyk: TDS measurement teaching
- c)
- d)

2) Results:

a.1) Summer students: think about it and give your feedback to Igor until the 20th of June (earlier is later)

a.2) Photoinjector Test Facility at DESY in Zeuthen (PITZ) is the recommended way to nominate PITZ

b) Raffael gives an overview of TDS, TDS calibration procedures, explains why the opposite slopes of rf in the TDS yield different lengths (tune transport to avoid it). To switch on TDS, refer to the RF manuals. GV: use 80% klystron setting in RF5 GUI to prolong the klystron lifetime, if you do not need high streaking. You can turn feedforward on in off at any SP. Hints on the preparations for measurements are given. MK: use h1.q9 to defocus vertically and h1.q10 to focus vertically. A scan range of +3/-3 deg w.r.t zero crossing is enough. Higher TDS power -> higher resolution. Typical resolution is 0.2..1 ps. FS: get a default button which loads standard measurement settings. MK we need to calculate bunch side from combination of two zero crossing phases overlapped. TDS.m asks you to select a zero-crossing phase, but does not goes to it (it stays on the last scan point). TDS.m allows to load data and also to mask certain scan points, if you do not trust them. If you use TDS to crosscheck the OSS measurements, keep in mind that the MMMG gun phase is compressing, and the phase offset is depends on the gradient. Documentation will be placed in an appropriate place.

c) another topic: we need to test new screen with electron beams in addition to visual inspections. The idea is to install a new screen on some not critically important screen station (EMSY3, High1.Scr2?), observe it over one running period and dismount it/install to a more important screen station later. d) FS: do not push buttons to learn the consequences! Trial and error method is discouraged. Think before switching something, you should know what you are doing

Protocol prepared by O. Lishilin