

Minutes of RESULTS, PITZ Physics Seminar, 18.10.2012

Project: PITZ

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Agenda:

- 1) B. Marchetti: Long. phase space at gun exit – “linearization” issues
- 2) M. Gross: Summary of the SLAC meetings
- 3) AOB

Results:

ad 1:

- Longitudinal phase space has been simulated for different laser temporal and transverse profile combinations to find the settings providing most linear long. phsp.
- Measurement at PITZ proposed
- Use the booster is probably a good idea
 - Better time resolution of TDS
 - Space charge suppression
 - By changing booster phase we get more cases for back-tracking towards the gun exit
- Problems:
 - Small beam size: video-system resolution limit
 - Small iris -> transverse laser spot inhomogeneity (diffraction)
 - May be fixed by introducing of simple telescope after the iris.

ad 2:

- Suggestion: Test emittance growth with polymer window in the beamline: do not use any VII.(F,Cl, Br..) element containing plastic, check the using Capton foil with vacuum experts.

ad 3: AOB

- 3 papers distributed to Igor, Dmitriy, Roman
- Always contact the right person:
 - Measurement program + simulations: Mikhail
 - Technical issues: Anne
 - Laser plasma acc. issues: Matthias
- DPG: suggestions
- Unwanted beam workshop: suggestions
- Next PITZ collab. meeting 27-28. November
- ¼ -year-PHD-reports should be submitted to supervisors
- There will be a set of lectures of Mikhail about Electrodynamics of plasma and beams
 - Date(s) should be defined

Next steps:

What is to be done?	By whom?	Until when?	Done on
Repeat simulations with Gaussian transv. laser spot profile	B. Marchetti		
Contact Alberto concerning the PIC simulations	M. Gross		

Protocol prepared by
Marek Otevre, 18.10.2012