

# Minutes of RESULTS, PITZ Physics Seminar, 02.02.2016

Project: PITZ

Participants: F. Stephan, C. Saisa-Ard, Q. Zhao, M. Krasilnikov, I. Isaev, H. Huck, M. Gross, A. Oppelt, G. Loisch, O. Lishilin, T. Rublack, Y. Renier

## Agenda:

- 1) F. Stephan: Accelerator R&D at PITZ in 2016/17, ff
- 2) M. Krasilnikov: Investigations on beam imperfections
- 3) Q. Zhao: Beam imaging studies

## Results:

1. Introduce plan, scientific goals and proposals which were presented to M-division in Lueneburg
  - a. **Demonstrate stable operation at XFEL specification-parameters with Gun 4.6 in 2016/17** (*with 2 and maybe 1 RF-window later*)
  - b. **Develop commonly agreed operation procedures for PITZ, FLASH and XFEL** (*startup, recovery, etc.*)
  - c. **Detailed beam characterisation and ellipsoidal laser pulses** (*emittance as function of various parameters, collaboration with laser department HH and Nizhny Novgorod, full TDS commissioning*)
  - d. **Gun 5** (*finalise physics design, start construction design, produce gun until end 2017/2018*)
  - e. **Plasma acceleration** (*reach parameters for successful self modulation and high transformation ratios experiments in mid 2016 and 2017+ maybe first experiments on lab astro physics depending on simulations*)
  - f. **Pave the way for CW RF guns for XFEL/FLASH** (*2017+ improve beam par.s for reduced RF gradient, optional: "green" cathodes 2016+, 2017+ development of 216MHz NC CW gun*)
2. Beam imperfections studies ongoing, evidence for coupler kick as well as for quadrupole component in solenoid field
3. Contributions for R. Heller's retirement present should be addressed to Anne
4. Teaching for PETRA III operators on Friday 5.2. (talk by F. Stephan 12:00)
5. LinAC contributions due on 4th of April

## Next steps:

What is to be done ?	By whom ?	Until when?	Done on

Protocol prepared by  
G. Loisch, 02.02.2016