

## **Minutes of RESULTS, PITZ Physics Seminar, 2017-11-02**

Project: PITZ

Participants:

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### **1) Agenda**

1. I. Isaev: Gun quadrupole test at the European XFEL
2. AOB: M. Krasilnikov: list of conferences-2018

### **2) Results:**

1. The quads were tested at the EXFEL. Emittance was measured against different normal and skew quad currents. The smallest relative XY emittance does not correspond to the roundest (  $\text{abs}(\text{EmitX}-\text{EmitY})/\text{EmitX}$  ) emittance. The gun quads can improve (decrease) emittance by 20%. However the solenoid current was not optimized for the best emittance. At the solenoid current lower than 327 A there are some beam losses in the injector section. The transverse profile of the photoinjector laser is not perfectly round as well. The gun phase was not optimized for the best emittance during the measurement. DCM and FC were not set for the dark current measurement – no measurements done. The XFEL bucking solenoid is not coupled with the main solenoid. MK criticized the emittance measurement (matching for the measurement) procedure. Conclusion: we can improve XFEL operation with PITZ group experience. Short presentation with the discussion took 45 minutes.
2. M. Krasilnikov: list of conferences-2018. Two deadlines are coming: DPG and IPAC. We should make our minds on who is going.

Protocol prepared by  
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