

# Minutes of RESULTS, PITZ Physics Seminar, 28.05.2015

Project: PITZ

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## Agenda:

- 1) M.Bakr, "Simulation results of beam emittance from the PITZ 2.5 setup"
- 2) M.Grooss, "Increase laser pulse energy by changing polarization, Effect of beamlet saturation on the emittance measurement."
- 3) RC

## Results:

- 1) - The simulations use Gun4.2 field profile while the Gun4.1 was used in the previous works by M.Khojyan.
  - The simulations results for the case of using Flat-top and ellipsoidal laser pulse shapes with different bunch charge from 20pC to 2nC were presented.
  - The emittance from ellipsoidal case decrease significantly compare to the case of Flal-top
- 2) – By inserting the  $\lambda/2$  wave plate, the laser pulse energy is a bit increase.
  - The beamlet can have some saturation pixels. It doesn't much affect to the measured emittance value.
- 3) - Plasma cell is passed the vacuum test.
  - Next running period will be emittance measurement at 4.5MW in the gun.

## Next steps:

What is to be done ?	By whom ?	Until when?	Done on
Simulate for 4 nC and 50 pC	M.Bakr		
Write report about the simulations	M.Bakr		
Include slice emittance	M.Bakr		
Abstract preparation for FEL 2015	M.Bakr		

Protocol prepared by  
Prach Boonpornprasert, 28.05.2015