

# Minutes of RESULTS, PITZ Physics Seminar, 04.04.2013

Project: PITZ

Participants. Mikhail Krasilnikov, Martin Khojoyan, Grigoriy Vashchenko, Matthias Gross, Frank Stephan, Roman Martin, Galina Asova, Georgios Kourkafas, Prach B, Gaurav Pathak, David Kalantaryan

## Agenda:

- 1) M. Gross: Investigations with a camera at the cathode position (20min speech / 30min total expected)
- 2) M. Krasilnikov: Photoemission studies at PITZ in February 2013

## Results:

- 1) VC2 gives a representative image of the laser light going to the photocathode, reflectivity after the Double Diagnostics Cross lower than expected, intensity inhomogeneities for small BSA sizes, critical point: beam must hit the center of the vacuum mirror.
- 2) Photo emission is a transient effect: temporal profile influence, flat top at 4MW gives the same charge as short Gaussian at 7.7MW, field enhancement is determined also by peak field and is strongly dependence on space charge, adding halo tails improves slightly the results.

## Next steps:

What is to be done?	By whom?	Until when?	Done on
Further check of the mirror/windows, replace when available	M. Gross		
Include phase front in simulations	M. Gross		
Contact M University, simulations to be continued	M. Krasilnikov		
Try to fit 3D distribution fits in laser pulse energy scans			

Protocol prepared by  
Georgios Kourkafas, 04.04.2013