Minutes of RESULTS, PITZ Physics Seminar, 07.05.2015

Project: PITZ
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Agenda:

1) C. Garcia: Emission studies
2) Q. Zhao: Beam dynamics simulation study with core/halo contributions
3) G. Kourkafas: Space-charge matching studies at PITZ
4) PITZ contributions to FEL'15 conference

Results:

1. When core+halo initial distribution is utilized, ASTRA shows good agreement with extracted charge.
2. The relationship between the amount of halo in the laser distribution seems to be directly proportional to the extracted charge.
3. 100pC: simulations with halo fits much better to experiment compared to using uniform distribution; for 500pC the other way around (different laser distributions for experiments).
4. Space charge matching of the transverse phase space at PITZ provides reliable results.
5. Excessive emittance growth observed – reason has to be clarified.
6. List with topics to be presented at FEL is prepared.

Next steps:

What is to be done ?	By whom ?	Until when?	Done on
Use video client rms calculation tool to validate core/halo relation	C. Garcia		
100pC: check BSA=0.6mm point for uniform distribution	Q. Zhao		
Simulations with 1nC bunch charge	Q. Zhao	After measurements	
Show spots at measurement points	G. Kourkafas		

Protocol prepared by
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