Minutes of RESULTS, PITZ Physics Seminar, 11.7.2013

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Agenda:

1) Run coordination meeting (B.Marchetti)
2) Report on Plasma Cell Optics (J.Good)
3) AOB

Results:

1. Discussed problems in the run coordination meeting
   - stability of the gun: to be tested in more shifts in parallel to measurements
   - power drops: strange (comb-like) 10MW dir. coupler readings (report by W.Koehler); observation not understood; further steps were discussed
   - discussion of remaining measurement tasks on the last shifts with Gun4.3
2. Results from the Plasma Cell Optics studies
   - for Lithium more than 5 passes are of no benefit for an increase of the plasma density; beamfolder mostly adapted (and cheap!) but limited by mirror absorption
   - for Rubidium a clear benefit from multiple passes (>5) can be seen, but less than 10% absorption losses are needed for a wanted plasma density above 1E15/cm^3
   - 3 options to be studied in more detail: beam folding, multi pass, pulse trap
3. Summer student tasks:
   - Benchmark of image analysis; possible supervisors: Marek, Galina
   - IL recovery tool; possible supervisors: Igor, Grygorii (just introducing)
4. AOB:
   - for getting the PhD at Uni HH you have to be enrolled and need a “Zulassung”

Next steps:

What is to be done?	By whom?	Until when?	Done on
Measurement shifts at 200 us for 6 MW and 5.5 MW (1 shift each)	Shift crew	a.s.a.p.	
Run without FB	Shift crew	End of run	
Inspect 10MW dir. coupler	RF group	when dismounting	
Inform Hamburg (F.Brinker) on the problem and possible consequences	A.Oppelt	a.s.a.p	
Compare multiple scattering for Rubidium / Lithium with GEANT4	D.Richter	a.s.a.p	
Plasma cell simulations with HIPACE/ ASTRA input for further beam transport	G.Pathak	a.s.a.p	
Make good beam matching for beam transport after PIC simulations	D.Malyutin	a.s.a.p	

Work out in more detail Rubidium pulse trap case (EO components, feasibility)	J.Good	a.s.a.p	
Check that you have PhD-Zulassung and are enrolled at Uni HH	All PhD students at Uni HH	a.s.a.p	

Protocol prepared by A.Oppelt, 11.07.2013