

# Summary of Technical Board

- General comment (N. Nobuhiro, KEK)
  - Submitted plan for future ATF beyond 2014
- Compton cavity (D. Jehanno, LAL & T. Omori, KEK)
  - Improvements of JP 4-mirror cavity and description of plans / aims and beam requirements for operation until Summer
  - Description and status LAL 4-mirror cavity, laser mode locking failures in 07/2011, new laser from other maker, with 10000 gain and 100 kW, to be installed in April, request 5 shifts, some uncertainties in plan “best guest”
- 1-2 pm DR emittance R&D (K. Kubo, KEK)
  - Simulated influence of BPM offset error (100 micron), magnet misalignment (30 micron), quad strength (0.5% for random errors – adjustment in tune diagram can make it looser).
  - Re-aligned after earthquake, BBA and ORM
  - Measured emittances ~ 10-15 pm, problem list → new method to minimize vertical normal mode in BPMs can get 1-2 pm with 10% BPM scale error
  - will need more alignment and effort on emittance measurement, try new method

- ATF2 status (G. While, SLAC & T. Okugi, KEK)

- Hardware status and highlight of important needs / future improvements
- Optics matching in different configurations, sensitivity for lower beta\*
- Extracted emittance growth (X4), proposal for beam pitch diagnostic
- Backgrounds are too large in BSM, several investigations needed
- Steering + dispersion mature, coupling still challenging, issues for IP tuning
- Many software tools developed, user documentation, archived data access

OTR resolution study (P. Karataev, RHUL, A. Aryshev, KEK)

- Motivations is simulation tool for OTR tool development. Use of Point Spread Function. Careful exploitation of information to reduce distortion and better resol.
- Team up with CERN CTF3 diagnostic group: Zemax simulation and ATF2 beam.

Beam halo & Compton recoil spectrum (P. Bambade, LAL)

- Overview of LAL activity and plan. Motivations, preliminary visibility study for Comptons in the presence of halo
- Plans to investigate semi-conductor sensors, first testing maybe end of 2012 or early 2013, depending on overall funding / support

## CLIC R&D proposals for ATF2&3(R. Tomas, CERN)

- CLIC issues which can be investigated at ATF
  - 1) Sensors to correct GM effect on ATF2 beam orbit data (fluctuation analysis), already bought (54 k-euros) at LAPP and will be shipped (with LAPP/LAL)
  - 2) Ultra-low beta to push the beam size down below 37 nm, designing new QD0/QF1 with tiny multipoles (92 kCHF), needs goal 1 to be confirmed !
  - 3) CLIC DR kicker specs, but not OK for ATF, but new compatible design may be possible (rise time from 1000 to 100 ns) (with IFIC, CIEMAT)
- General plan and schedule: 2012 for (1), design and fabricate quads for (2) in 2012-2013 for installation mid 2013, manufacturing / install (3) in 2014
- Need info on ATF future planning

## DISCUSSION

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