

# RTML progress: update Jan.4,2009

- Lattice design
  - Single stage bunch compressor design and performance study in progress (MM configuration and possible alternative ILC design)
  - Re-designing diagnostic section and matching section
  - Redesign extraction line for the beam with 4% energy spread after single-stage BC
    - Minimum progress
- Design of coaxial coupling section for SC cavity in BC to reduce RF kick and wakefields from couplers
  - RF design is almost done. Multipactoring analysis and mechanical design in progress.
- Magnetic stray field measurements and analysis
  - New hardware for precise measurements received. Software upgrade and calibration tests are in progress. Measurements with klystron are planning for mid-Feb
- Cavity amplitude and phase stability studies for RTML bunch compressor at FLASH
  - Possible first studies during 9mA run in Sept.2009
  - Work on detailed proposal.
- Simulation Tools development
  - CHEF benchmarked vs. Lucretia (excellent agreement in all tests)
  - Coupler RF kick/wake implementation in Lucretia, Placet, CHEF