Recent progress of Simulations Group

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- Discussions of collaboration with CLIC (meeting with CLIC, CLIC WS)
  - Several items and common issues are listed up.
  - Discussion is still continuing.
- Coupler Wakes and Coupler RF kicks of SC cavities (from asymmetries)
  - Wakefield is much weaker than what had been estimated (factor ~1/10), for short bunch (i.e. in Main Linac, 0.3 mm bunch length)
  - Present (“old”) coupler configuration is fine, in both Main Linac and Bunch Compressors.
  - Alternating configuration (with two different types of cavities or cryo-modules for compensation) is not necessary.

(Progress is slow.)

Vertical emittance growth due to coupler kicks

(unit nm, nominal ε_y=20 nm)

No errors,

ML: dispersion free, BC: 1-to-1 correction

Original coupler configuration,

	ML	BC1	BC2
RF kick	0.2	0.7	0.3
Wake	0.4	1.6	1.3
RF kick + Wake	0.1	1.2	1.0

New coupler configuration

	ML	BC1	BC2
RF kick	3.3	15	52
Wake	0.0	0.2	0.2
RF kick + Wake	3.3	15	45

From A. Latina, et.al., ILC-LET meeting Sep.16, 2008