Charge to the Committee

Objectives for the ATCA based LLRF system

- Meet technical performance goals
  - Field regulation, cavity resonance control
  - Interfaces to other subsystems, specifically control system, machine protection and personnel safety
- Basic rf control functionality implemented
  - Operable by machine operators (not rf experts), basic automation, basic exception handling
- Build-in diagnostics
- Serves as platform for for LLRF software development for the European XFEL
- Performance demonstrated at FLASH with beam
- Project time line: January 2008 - December 2008

Project Timeline (Milestones)

- 01/08‘ Routing of most boards completed
- 02/08‘ Prototype boards ready for debugging
- 04/08‘ Setup in digital lab:
  ATCA system with carrier, ADC, vector-modulator, timing MO, timing, external downconverter, rf cavity simulator
  Note: System for 8 cavities
- 05/08‘ Closed loop operation in digital lab with cavity simulator
  Evaluation of signal integrity
- 06/08’ Setup at Module teststand with piezodriver and RTM module with downconverters
  Demonstration of vector-sum control of 8 cavities
- 08/08’ Installation at ACC1
- 09/08’ RF Control demonstration with beam
  Evaluation of performance with beam
- 11/08’ Installation at ACC4,5,6

Charge to the committee

- Comment on LLRF requirements for the llrf evaluation system and for the XFEL
  - Technical performance, operability, availability, maintainability
  - Adequacy for XFEL
  - Completeness
- Is the ATCA standard adequate for the LLRF system for the XFEL?
- Identify potential flaws in the llrf concept

Charge to the committee (Cnt'd)

- Determine whether the LLRF design will be able meet XFEL requirements
- Identify missing technical issues
- Suggest improvements
- Evaluate creditbility of schedule for the evaluation system
- Write report
  - Summary for crate standard review today (Dec. 3, 2007)
  - Draft report by Dec. 20., 2007
  - Final Report by January 15., 2008

Challenge for Review

- Keep time schedule
  - Strictly maintaining the schedule is essential.
  - Rule: 2/3 of scheduled time presentation, 1/3 for questions. Remaining questions can be discussed individually during the coffee break or during the discussion session. More time is available during the social event.
  - Speaker will be reminded 1 min. before time is up.
- Writing the summary report for the crate standard workshop from 18:00 – 19:00 requires good organization.