

*DATE:*            *October 1, 2004*

**Memo**

*TO:*                RHIC E-Coolers

*FROM:*           *Ady Hershcovitch*

*SUBJECT:*       **Minutes of the October 1, 2004 Meeting**

Present: Peter Cameron, Yury Eidelman (ORNL & BINP Novosibirsk, Russia), Wolfram Fischer, Michael Harrison, Ady Hershcovitch, Dmitry Kayran, Jorg Kewisch, Vladimir Litvinenko, William Mackay, Nikolay Malitsky, Christoph Montag, Thomas Roser, Dejan Trbojevic, Jie Wei.

Topics discussed: Various

**Various:** there was no specific topic on the agenda. Discussions on various topics took place. In answer to Thomas' question, Vladimir reported of the status of test ERL. At this point effort is focused on trying to finalize injection. Dmitry, Xiangyun, and Jorg are finalizing the configuration of the test ERL lattice. Goal is to freeze test ERL lattice design within 2 – 3 weeks. At this point the electron beam size is about or less than 3 mm RMS. It should fit well within the 5-cm pipe. Beam energy spread, however, is still significant.

ERL is being designed for two modes of operation: high bunch charge mode, with bunch charge exceeding 10 nC. And, low bunch charge mode, in which the bunch charge is 1.3 nC. Rep rate of operation is 350 MHz. For the high bunch charge mode, it corresponds to 0.5 Ampere steady state. Hence, electron beam energy in this mode is limited to 2 MeV not to exceed the 1 MW limit of the system.

Cost estimate for the test ERL is nearing completion. There is a choice of six vendors for bidding on the 1 MW power supply. And, preparations are underway to solicit the beam dump from one of three possible vendors by asking them to submit proposals.

Pete described beam profile diagnostics before the cavity using transition screens. A discussion ensued regarding the use of destructive diagnostics. Waldo suggested using laser scattering, which non-destructive and would also yield information on energy spread. The meeting concluded with a long discussion on aligning the cooling solenoids so that their axis are co-linear, as well as aligning both the electron and ion beams to ensure overlapping. A number of issues remain to be resolved; no consensus was reached.