

*DATE:* March 12, 2004

*TO:* RHIC E-Coolers

*FROM:* *Ady Hershcovitch*

*SUBJECT:* **Minutes of the March 12, 2004 Meeting**

# Memo

Present: Ilan Ben-Zvi, Yury Eidelman (ORNL & BINP Novosibirsk, Russia), Alexei Fedotov, Ady Hershcovitch, Jorg Kewisch, Vladimir Litvinenko, William Mackay, Christoph Montag, Thomas Roser, Triveni Srinivasan-Rao, Dejan Trbojevic, Jie Wei.

Topics discussed: Machine Advisory Committee Meeting

**Machine Advisory Committee Meeting:** Ilan opened this meeting with a summary of the Machine Advisory Committee meeting that took place this week here at BNL. The Machine Advisory Committee is due to issue a final report on its findings by April 15, 2004. Overall, the Machine Advisory Committee had a very positive response. The committee seems to be impressed with the broad aggressive and challenging research that is being presently pursued and the amount of work which has been done in a rather short time, especially in view of the fact that previously there was no cooling expertise residing in BNL. Herewith are the most important of the committee's advises/points of discussion and further considerations:

- Have an alternative electron gun in case the presently considered gun does not meet its design parameters.
- Conduct bench marking experiments at existing storage rings.
- Look into collective instabilities in the cooled beam.
- Need low level electronics for the control of the superconducting cavity.
- Study possible kicks from the cavity.
- Early prototyping of critical components.
- Alternate design for a photocathode.
- Move forward with the Energy Recovery Linac (ERL).
- Test plan for the ERL.
- Non-invasive diagnostics for both the ion and electron beams.
- Diagnostic system must insure electron-ion velocity matching of at least  $10^{-4}$ . Angular matching of a few micro-radians is also needed.
- Good engineering drawing of the whole system, with emphasis on the mechanical stability of the solenoid.
- Design alternate magnetic measuring system for the solenoid.

Ilan pointed out in the ensuing discussion that many of these topics were discussed at our and other group meetings, however, they were not formalized. We need to write down and to convert presentations made in these meeting into an updateable design document.

The meeting ended with a discussion and evaluation of various magnetic field measurement techniques.