

## Minutes May 31, 2007

Attendants: Yun Luo, Joanne Beebe-Wang, Wolfram Fischer, Natalia Abreu, Christoph Montag

The main topic of the meeting was the status and plans of the beam experiment to test near-integer tunes with Au beam. Christoph gave an overview of what had been achieved during the APEX session on May 30.

During the experiment, tunes of (.93/.94) in Yellow and (.08/.04) in Blue had been achieved. The tune choice was somewhat limited due to model stability issues.

Orbit correction with a single “best corrector” was tested. Scaling the corrector strength by a factor  $-0.5$  in Yellow and  $+0.5$  in Blue resulted in a clear reduction of the closed-orbit distortion. These factors were found empirically, and they agree rather well with the scaling factors expected for these tunes.

Coupling correction resulted in a reduction of  $\Delta Q_{\min}$  from .013 to .002 after three iterations.

The vertical optics was measured in both rings using the AC dipole. Blue agrees extremely well with the model (note the extremely low vertical tune), while Yellow shows some  $\beta$ -beat. The horizontal optics could not be measured due to problems with the horizontal AC dipole.

No signs of the resistive wall instability were seen in either ring, at intensities up to  $1e11$ , though chromaticities were near zero to allow AC dipole measurements.

In future APEX sessions we need to test how close to the integer the tunes can be pushed. This requires some work on the model to allow this; we are therefore not planning any experiments next week.

Christoph suggested to explore the possibility of keeping the tunes above .1 during the ramp to make ramping easier. This requires some spin tracking to determine the strength of the  $1/10$  (and probably  $1/8$ ) depolarizing resonance on the ramp.