eRHIC IR Design Meeting

Draft Minutes for Friday, February 14, 2020

Agenda

1 LTS rehearsal talk—R. Palmer (H. Witte)

Title: "The Electron-Ion Collider Project at BNL"
File: 2020-02-20_LTS.pptx

1. F. Willeke: Remember to point out the different scales for vertical and horizontal axes.

2. E.C. Aschenauer: Circle "(cm)" and "(meter)" in axes' labels to help point out the difference in scales.

2 "Final" eR lattice—J.S. Berg

Title: "IR Matches"
File: JSBerg-200221.pdf

1. Would like opinions on three options.

2. All three options are matched into S. Tepikian's version 5.3 lattice.

3. Crab cavity is shown in green [slide 2].

4. Two dipole styles used in the design.

5. C. Montag: Could compare depolarization rate and synchrotron radiation to narrow down options.

6. H. Witte: In the mean time, confirm the third option fits into the lattice and convert it to RHIC coordinates. Then give it to E.C. Aschenauer for physics simulations.

3 Hadron IR orbit correction—S. Peggs

Title: "Hadron IR correctors"
File: Peggs_IR_mtg_200221.pdf

1. Have max, min, mean, and standard deviations for corrector strengths for four random seeds.

4 Backup IR solution featuring an additional quadrupole–R. Palmer

Title: "2002-close-v3.pdf"
Subtitle: "2/14/20"
File: 2002-close-v3.pdf

1. Add Q00eF inside restricted zone of detector.

2. See also section 5 on the effects of placing such a magnet inside of the detector.

5 Consequence of magnets in the detector—E.C. Aschenauer

Title: "The Consequence of Magnets inside the Detector"
File: eRHIC.MagnetsinDetector.pptx

1. Regarding the Q00eF magnet inside the detector in the backup solution in **??**.

2. Cuts into Q^2 acceptance, reduces both e$^-$ and p acceptance, impedes access to forward micro-vertex detector, and introduces additional background.

3. Will require time consuming simulations to determine the extent of these issues.

    (a) Will take at least half a year to do.

6 All other business

None

7 Draft agenda for Friday, February 28, 2020 from 2:30 to 3:30 p.m.

1. Requirements document for lattice parameters—Q. Wu

2. Update on existing RHIC survey information—M. Llardo

3. Update on low-Q^2 tagger—J. Adam