

# eRHIC IR Design Meeting

Draft Minutes for Friday, August 23, 2019

**Present:** Holger Witte (Chair), Kyle G. Capobianco-Hogan, Alex Jentsch, Alexander Kiselev, Gary McIntyre, Christoph Montag, Alexander Novocachi, Bob Palmer, Michael Sullivan, Qiong Wu

## Agenda

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|--|----------|
| <b>1 Holger</b>                                | <b>1</b> |
| <b>2 Update on Simulations—Elke (Canceled)</b> | <b>1</b> |
| <b>3 Impedance Analysis (Canceled)</b>         | <b>1</b> |
| <b>4 Bob</b>                                   | <b>1</b> |
| <b>5 Next Meeting</b>                          | <b>2</b> |

## 1 Holger

Title: “Updates”

File: [2019-08-23\\_IRMeeting.pdf](#)

1. Fixed his Bmad simulations. Synchrotron radiation fans now agree with Bob’s.
2. Hadrons arrow is on the wrong beamline [slide 5].
3. Bob:  $\beta$  needs to be small (and dispersion large) at electron tagger. New IR [slide 6] may make  $\beta$  [slide 9] too large at tagger. Will need to talk to Elke about it.
4. Bob: Beam getting bigger pushes out the point where the beam and synchrotron radiation separate.
5. Christoph: If  $\beta^*$  is relaxed, synchrotron radiation fan will get smaller, which may help.

## 2 Update on Simulations—Elke (Canceled)

## 3 Impedance Analysis (Canceled)

## 4 Bob

Title: “SR fan using Steve’s MAD output and Modified e lattice for Crab location”

File: [190823-SR-v2.pdf](#)

1. Reran synchrotron radiation calculations using Steve's MAD output. Got same results as with his code.
  2. ZDC shown on slide 14 is  $\sim 100$  cm wide.
  3. Alexander K.: ZDC is about 70 cm by 70 cm.
  4. Qiong: Bob's estimate of  $R = 30$  cm [slide 14] for radius of crab cavity's "junk" is optimistic, but reasonable.
- 5 Next Meeting:** Friday, September 6, 2019 from 2:30 to "3:30" p.m.