

# EIC IR Design Meeting

Draft Minutes for Friday, April 3, 2020

## Agenda

- 1 Update on existing RHIC survey information—M. Ilardo 1
- 2 All other business 2
- 3 Draft agenda for Friday, April 10, 2020 from 2:30 to 3:30 p.m. 2

### 1 Update on existing RHIC survey information—M. Ilardo

Title: “Survey & Alignment Group”

Subtitle: “Capabilities & Accuracies”

File: [Survey & Alignment Accuracies.pptx](#)

1. Cannot reach the accuracy level achieved with NSLS II due to the lesser degree of temperature control in the RHIC tunnel compared to the NSLS II tunnel.
2. Laser scan system can run autonomously. Does not currently output a CAD model, but the survey team is working on implementing this.
3. The last vertical adjustment of the arc magnets was in 2013.
4. The seasonal variation in alignment occurs more in the IRs than arcs.
5. F. Willeke: What is the uncertainty on the position of magnet centers or fiducials inside cryostats based on the position of the cryostats? What is the effect of cooldown on magnet position? What accuracy could we expect for new IR magnets?
6. B. Parker: Some aspects of the corrector scheme will be more complicated than it normally would be due to magnets with shared cryostats and common magnets (i.e. magnets common to electron and proton/hadron beamlines). Superconducting Magnet Division (Mechanical Engineering in particular) would need to weigh in on alignment accuracy of magnets in cryostats after cooldown.
7. Q. Wu: Will share references regarding how CERN handled pre and post-cooldown alignment.  
Title: “Microsoft Teams”  
File: [CERN\\_CrabCavitySurvey\\_AlignmentMonitoring\\_20170405.pdf](#)
8. Q. Wu: A wire measurement is used to measure the electric center of the RF cavities. Could the survey team measure the wire positions and if so, to what accuracy?
  - (a) M. Ilardo: Will have to confirm the scanners can measure such a thin wire; if it can, then the accuracy would be 50  $\mu\text{m}$ .

**2 All other business**

None

**3 Draft agenda for Friday, April 10, 2020 from 2:30 to 3:30 p.m.**

1. Deuterium tracking—A. Jentsch
2. All other business