

Attendees: J Grames, R Sulieman, R Kazimi, A Freyberger, M Poelker, R Legg, M Spata

The intent was to discuss metrics for changes to the injector components, since convincing management to fund changes will require cogent, quantitative reasons.

Arne said the scope was from the gun to the quarter or maybe to Faraday cup 2.

Joe suggested that he and Reza should get together to look at the elements in the gun for they should do. They would start with the existing elements and then review them for changes; e.g. do we need apertures or are they a hangover from the old injector? They also had the option to look at new/different elements.

Reza said they needed to look at the elements and what the elements were accomplishing as an initial analysis.

Joe responded that they needed to provide assessments, and generate questions. They should then approach the parity team about what the specifications for the experiments in the hall look like at 6 MeV. This would allow them to decouple the injector from the downstream sections of the machine.

It also engaged the Parity team in the question about what the injector elements should do.

Reza and Joe will spend the next four weeks looking at the problem together.

There was then some discussion if 6MeV was the correct place for that measurement. Faraday Cup 2?

Arne asked the question how the upgrade benefits all programs? How much time was spent in injector setup time? How will the higher voltages offset the increased charge density caused by the change from 499 MHz to 249 MHz on the pulse streams?

Matt said we needed to be careful about setting a goal of a physics design being complete by Jan. Arne responded he wanted a design in hand so he could be ready to install in summer '17 or '18. Joe and Arne then agreed on a CDR in Aug '16 of the physics design. This would allow the Mech Design to move forward in time to meet the installation schedule.

Reza then started his presentation on loss on apertures seen in his simulations (see slides attached).

It was surprising that there was any loss seen on A3 in the sims. Reza said in the real world he's always been able to correct it by slight adjusting the solenoid, but that wasn't acceptable in the model. So the model wasn't adjustable to the real settings of the machine.

Matt then said one issue in this is that the QWEAK Users are very concerned about the LUMI (sp?) detectors showing a 1 ppm asymmetry well outside the core of the beam.

Joe suggested that we ask for a set of tests from Hall A to characterize the beam there. He also asked Arne about machine development time to do those measurements.

Matt also said we should go to the next Moller meeting to hear their concerns.