From: **Aschenauer Elke-Caroline** elke@bnl.gov
Subject: A workable solution for Athena
Date: September 14, 2021 at 21:27
To: Ullrich Thomas thomas.ullrich@bnl.gov
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Dear Silvia, All,

so I think we do have a nice solution, which works for all detectors and reduces the forces on the magnet as the flux return locations are symmetric.
I checked also with the engineers and they think we can built support structures which work, for this setup.
I sent the info to the magnet guys so they can check they are happy.
The "only thing" which needed to be done was to shift the magnet by 25 cm towards the electron endcap.
this gives enough space for the rich, I used Alexanders latest info.
We can have all the service gaps we need and we can support the heavy barrel ecal.

So the only thing, which needs to be done from our side is to take the magnetic field map shift it by 25 cm and check what the impact on the tracking is.
My guess in the electron direction it will be better and most likely a bit worth in the hadron direction. Of course I will ask for a new field map from Valerio et al.

The one thing we cannot easily check is the field at the DIRC readout but maybe we can cross this bridge if we come there. For this we need Valerio's new field map.

I have not included the trackers in my figure nor in the spreadsheet as I do not have the numbers available.

I hope you like this. We can of course discuss it in the integration meeting tomorrow.

Cheers elke with a lot of help from Alexander, Oleg and Roland

summary.Det.Details.v2.xlsx

Note: Please do not feel obligated to respond to this message outside of your work hours.


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