

Minutes of the Mounting of Detectors to the Yoke

GSI, 30 Oct. 2008, 10:00-11:00

Inti Lehmann

2nd November 2008

5 This meeting was held *ad hoc* on 30th Oct. 10:00-11:00 for the sole purpose to address the issue of how the detectors can be mounted onto the inside of the flux return yoke, specifically the downstream end cap of the EMC.

Participants

Rimme Bergsma, Andrea Bersani, Alexander Efremov, Inti Lehmann, Yuri Lobanov, Jost
10 Lühning, Renzo Parodi, Jerzy Smyrski, Edward Lisowski, Herbert Löhner and Henk Smit.

Minutes

Herbert showed a mounting frame with rails which would hold the EMC end cap and could be used to slide the end cap into the yoke. Once in place the end cap would be mounted on whatever attachment points available inside the yoke. The rail system and
15 frame would be removed after the installation. The rails would not require an attachment to the yoke. Henk Smit has foreseen mounting rods at the centre-of-mass of the EMC end cap, which is 260 mm from the inner surface of the door. As it is envisaged to mount the Disc DIRC to the same attachment points (either in one system with the EMC end cap or separately) the centre-of-mass of the total mass of about 6 t would be about 300 mm
20 from the door, i.e. at $z = 2185$ mm. It seems favourable to suspend most of the weight by the lower attachment points rather than the upper ones.

This is far away from the cut outs foreseen by the Dubna group which reach in only by 140 mm, i.e. to $z = 2345$ mm. Alexander and Yuri retrieved that the screws which connect the octagons of the yoke are roughly on that lateral extend, i.e. 315 mm from the
25 door at $z = 2170$ mm. It was suggested that one could possibly use the same screws to hold a hook which can be used as attachment point. It was pointed out that it would also be no problem to hold this kind of mass with some additional screws somewhere in the iron. Hence, it was decided that both the Dubna and KVI groups would come up with a proposal, which could be discussed via e-mail.

30 Andrea sketched the idea he and Yuri had developed on the attachment of the cryostat to the yoke. The suspensions would be about 150 mm from both ends of the cryostat housing, i.e. at $z = -1040$ and $+1750$ mm. The total load would be about 40 t and a maximum longitudinal force of 10 t. The Dubna and Genoa groups agreed to design the suspension in some more detail.

35 It was pointed out that one should foresee identical attachment points in the upstream end of the yoke as for the downstream end cap. Though no support structure is designed

yet, these could serve as mounting points for anything to be attached there. Clearly a system designed for 6 t would easily hold the DIRC Readout box with less than 1 t. (During the meeting it was not clear that the EMC plug may be attached there as well.)