

Magnet Discussion Meeting

GSI, Auditorium Side Room

Wednesday 5th March 2008

1 Attendance

Present:- Andrea Bersani (Genova), Daniela Calvo (Turin), Valery Dodokhov (Dubna), Evie Downie (Glasgow), Alexander Efremov (Dubna), Inti Lehmann (Glasgow), Edward Lisowski (Krakow), Yuri Lobanov (Dubna), Jost Lühning (GSI), Alexander Makarov (Dubna), Renzo Parodi (Genova), Dieter Prashun (Jülich), Andrea Raccanelli (Jülich), Günther Rosner (Glasgow), Mauro Savrie (Ferrara), Jerzy Smyrsky (Krakow), Alexander Vodopianov (Dubna)

2 Minutes

The Magnet Group met on Wednesday 5th March at GSI. The meeting focused on the financial issues related to the design and construction of both dipole and solenoid magnets and the distribution of work throughout the Magnet Group in the form of work packages.

I. Lehmann showed a spreadsheet that he had constructed detailing a suggested breakdown of the Magnet Group responsibilities into work packages, with a list of tasks associated with each work package heading. These work packages were then discussed and distributed amongst the Magnet Group members. It was agreed that JINR would be responsible for the solenoid yoke and that Genova would take care of the solenoid coil and cryostat. Glasgow accepted responsibility for the dipole. Krakow intends to take responsibility for the mounting of the detectors in the Forward Spectrometer. Some rearrangement of the items in the coil and cryostat related work packages was suggested and it was agreed that I. Lehmann and R. Parodi would liaise to achieve this.

It was suggested that the external cryogenics work package be part of the HESR responsibilities and so would not form part of the Magnet Group budget, D. Prashun accepted that this was a sensible consideration and responsibility for this was provisionally allocated to Jülich. The external cryogenics system will not be required for testing until the cryostat reaches GSI as alternate equipment will be available for pre-transit tests. The construction of a rail system in the experimental hall for the magnet systems was suggested as a fair responsibility for GSI to undertake. It was agreed that this suggestion would be made to GSI management. All groups agreed to take responsibility for the installation and commissioning of the magnet systems in GSI, with the suggestion that GSI take primary responsibility for the field-mapping of the magnet systems as this is a

labour intensive job and could be most economically carried out by the local group with local manpower, however the task could be overseen by another of the Magnet Group responsables. As the magnets will form part of the HESR lattice, it was suggested that the magnet alignment should be an HESR responsibility (supervised by Jülich, performed by GSI). It was suggested that, in addition, GSI carry out the alignment of the detectors as this is an area in which they have specific expertise.

It was agreed that the work package spreadsheet should be distributed amongst the group leaders for the input of cost information. The completed document with full cost breakdown details would be private to the Magnet Group as these details are both preliminary and commercially sensitive in the lead up to the tendering process. However, an edited version showing all work package details, responsible individuals and a total cost will be made available to those within the Collaboration and / or relevant funding agencies outside of the Magnet Group, as appropriate.

It was reported that Dubna, Genova and Glasgow have all sought complementary funding to cover the costs of magnet system and that the total funding sought should cover the estimated investment costs of 5M EUR for the solenoid and 2.2M EUR for the dipole. It was reported that the cost of the solenoid yoke had increased due to the the increase in mass and complexity of the solenoid design and that the dipole cost had increased due to the requirement for lamination of the return yoke and machining of the inner faces of the yoke. J. Smirsky reported that Krakow have sought funding for the forward tracking system. There was a question with regard to whether the imported magnet components will incur tax liabilities. This is not yet clear.

I. Lehmann reported that it is planned that all dipole components will be on-site by 2012. The Genoa Group said that the coil and cryostat complex would take three years from the date of ordering to be delivered to the site. Thus, starting procurement, as planned, in January 2009 would lead to delivery of the solenoid to the site by the end of 2012. D. Prashun reminded the meeting of the necessity of HESR control of the dipole and I. Lehmann promised to liaise with him to ensure that all dipole power supply, control and safety parameters comply with HESR, GSI and FAIR requirements. The need to have input from all detector groups in order to finalise the designs of both dipole and solenoid, especially information on the tracking chambers in the forward region, was emphasised.

3 Required Actions

Individual / Group Responsible Agreed responsibility.

I. Lehmann & R. Parodi Revision of classifications in cryostat- and cryogenics-related work packages.

I. Lehmann & D. Prashun Liaison to ensure compliance of dipole control and safety mechanisms with HESR, FAIR and GSI standards.

I. Lehmann & G. Rosner Circulation of work package and finance spreadsheet to heads of groups for completion, and distribution of spreadsheet once complete.

Heads of Groups Completion of work package spreadsheet.