

Draft Minutes of the ILIMA Collaboration Board Meeting

December 17, 2015, at GSI (KBW building, room 2.27)

Start of Meeting: 13:05

Minutes: W. Plaß

Present: Thomas Faestermann (TF), Christophor Kozhuharov, Wolfgang Plaß (WP), Phil Walker (PW), Helmut Weick (HW)

On invitation: Christoph Scheidenberger (from 13:20), Udo Weinrich (until 14:30)

Apologies: Klaus Blaum, Hans Geissel, Roman Gernhäuser (invited), Yuri Litvinov, Xinwen Ma, Zygmunt Patyk (Skype connection could not be established), Haik Simon (invited), Markus Steck, Takayuki Yamaguchi

Proxis:

Yuri Livinov → Phil Walker

Xinwen Ma → Christophor Kozhuharov

(Markus Steck → Yuri Litvinov)

1. Membership and previous minutes

PW contacted 17 people on the ILIMA list concerning their future membership and received 4 positive responses (Rani Devi, Matej Lipoglavsek, Sissy Körner, Tomohiro Uesaka). In addition, Almudena Arcones and René Reifarth would like to join the collaboration. They will be added to the collaboration list.

The minutes of the last meeting (02.03.2015) were accepted.

2. Current status of the planned storage rings at GSI-FAIR

UW reports on the status of the CR. The responsibility for the CR was transferred to BINP. Rearrangements in the ring were made. A workshop was held at BINP. The specifications for the dipole magnets are ready. Evgeniy Levichev has become deputy director of BINP. The TDR for the CR will be rewritten in the next months. The contracts for the dipole magnets are expected to be signed in Q2/2016. The request for the CR building (Bauantrag) will be submitted in 2017.

HW asks about change requests. UW reports that they are being worked on. HW asks about decisions concerning the ring itself (e.g. flanges). UW says that the ion optical design of the CR was fixed in spring. The vacuum design is being worked on. Probably welded connections will be used.

UW reports that a BINP office will be installed at GSI on site. Yuri Litvinov was contacted on questions concerning the Schottky detectors. The status of the space and location for the TOF detectors and other detectors needs to be clarified. CS says that the project manager should be the contact person in the future. WP points out that the performance of measurements with the TOF detectors will depend on the available space and the location of the detectors. UW states that detailed drawings for the ring will be available soon.

PW points out that it is important that the CR and HESR are part of the reaffirmed MSV.

UW reports that a staged approach for the building of FAIR will be followed, but that it is not clear yet what that means for the time plan for the CR and the HESR. Jürgen Henschel plans to present a plan for the overall schedule by March 2016.

HW reports on simulations of the CR. The isochronicity depends on the homogeneity of the dipoles ($\sim 2 \times 10^{-4}$). This would lead to a relative time spread $\sigma_T/T = 1.2 \times 10^{-4}$. We want $\sigma_T/T \sim 10^{-6}$. Therefore compensation magnets are needed, i.e. extra decapoles. The required field strength is very weak (~ 2 mT). Coils can be superimposed on sextupoles or quadrupoles. CK suggests that external coils could be used. CS suggests that surface coils could be used. Space for this option should be foreseen.

UW says that this information should enter the TDR. Persons to be contacted for communication are Dmitriy Shwartz and Ivan Koop (technical project leader for the CR). Communication for ILIMA should be through HW.

UW reports on the status of the HESR. For the building the situation is the same as for the CR; the request for the building (Bauantrag) will be submitted in 2017. The procurement is well advanced, and 14 dipoles are on site at Jülich. All dipoles will have been delivered by the end of 2017. There is a discussion on where the equipment will be stored. One issue is that the contract between GSI and Jülich will end in 2018.

PW asks about the beamlines to the rings. UW states that it is difficult to discuss the beamlines/connections to the rings at present without an overall integrated schedule. This can be done perhaps in half a year.

3. Schottky pick-ups

CK reports on work regarding where to put the Schottky pick-ups in the CR. The pick-ups are now foreseen to be smaller. A thesis on the R&D work on the Schottky pick-ups has been completed in Heidelberg (X. Chen). There is development work on a new TCAP.

UW states that Yuri Litvinov probably plans for the TDR on the Schottky pick-ups to be written in Q1/2016. HW asks if there will be one or two TDRs on the Schottky pick-ups.

CK answers that this has not been decided yet. The questions on the available space in the CR should be solved first.

4. TOF detectors

WP reports that a thesis on the design of the TOF detectors has been completed (Marcel Diwisch). Several publications are under preparation, which can also be used as a basis for the TDR for the TOF detectors. HG performs simulations on the isochronicity of the ESR. UW says that it will be a challenge to restart the ESR (with the old control system) in 2016 and (with the FAIR control system) in 2019.

5. Other detectors

TF reports that a pocket detector has been built at TU Munich. The postdoc working on the detector has left Munich in the summer. A paper on the detector has been submitted; currently the manuscript is being revised. The TDR will be written afterwards.

6. Financial planning

HW reports on the financial planning. There is a difference in the escalation factors between GSI (1.311) and FAIR (1.24). Additional contributions besides the PMA are needed, e.g. additional magnet coils will be asked for, which are not included in the cost book.

WP reports on the application for BMBF funding through the JLU Giessen. No investment money for the TOF detectors has been granted, but there may be a possibility to use funds for a PhD student for IMS. TF reports that no new money could be acquired through TU Munich.

UW points out that there should be contracts between GSI and FAIR for GSI in-kind contributions before the money is spent.

7. Schedule for TDR writing

Already discussed (see above).

8. Conferences and workshops

PW discusses the collaboration meetings during the NUSTAR Annual Meeting 2016. There will also be an EXL meeting on Tuesday afternoon. Therefore ILIMA meetings could take place on Monday afternoon and Tuesday morning. It is suggested to have the

ILIMA open meeting on Monday afternoon and the board meeting on Tuesday morning. PW will ask the collaboration about the suitability of the dates.

Suggestions for speakers for the ILIMA open meeting are collected: Uesaka (mass measurements at RIKEN), Phil Walker (KISS at RIKEN), Klaus Blaum (ISOLTRAP mass measurements), N.N. (measurements at IMP Lanzhou), Shahab Sanjari (Schottky developments), Achim Schwenk (theoretical calculations vs. measurements).

9. Date of next ILIMA CB meeting

Already discussed (see above) – 1st March (morning).

End of meeting: 14:50