Minutes of ILIMA Collaboration Board

26 February, 2019, GSI (10:00 — 12:10)

Attendants: Yuri Litvinov, Hans Geissel, Roman Gernhäuser, Markus Steck, Baohua Sun, Taka Yamaguchi, Phil Walker, Helmut Weick

Proxies: Roman for Thomas Faestermann; Hans for Zygmunt Patyk; Yuri for Klaus Blaum, Xinwen Ma

Apologies : Christophor Kozhuharov, Wolfgang Plaß,

1. ILIMA collaboration membership:
The board membership for B. Sun from Beihang University was approved. It was suggested to update the list for the ILIMA collaboration (board) member. Some of the board members are not active or retired in the past years. Yuri agreed to ask Georgios Lalazissis and Karl-Ludwig Kratz for confirmation of further membership, and to ask Dave Lunney as possible replacement of Georges Audi. In case not confirmed contribution of the corresponding institutes to the ILIMA collaboration within the next three months their CB membership will be moved to an observer status.

2. Previous minutes (approve the minutes)
September and December minutes accepted after a few minor corrections.

Not Benno Franczak but Bernhard Franzke should be removed from the member list.

3. Current status of the planned storage rings at GSI-FAIR:
Markus/Yuri introduced the beam commissioning using Xe beam last year (a few days' run). However, a full ESR commissioning (including full control system) has to wait for the ESR test this spring. Further development of control system needed (need the ESR commissioning)

UNILAC-SIS working well, although UNILAC cannot go for heavy ions like U, C/Sn et al. are possible.

Second Schottky detector was mounted in ESR last September and signals were seen.

There are plans to replace the 30 years old high voltage power supply of the electron cooler. Budget for 2020 is requested, but not decided yet.

Beam commissioning planned for Nov. - Dec. (RG: As parallel operation at the SIS18 is currently not implemented we should encourage Markus to insist on sufficient time for the engineering run scheduled in March April. If this is hindered we may need a letter to get sufficient time in November.)

Decapole correctors: TY should send reminder to the CR spokesperson

Hans: is there a preliminary beam schedule?
Markus: Only a rough schedule, but no details.
Yuri: It depends on the FRS status. The approved experiments (bound state decay, (p,g) exp.) need the full operation of FRS.
program in 2020.
-Start with proton beam in 11 Feb.-17 Feb,
-124Xe: first ESR for (p,g), 400 MeV/u, 5 MeV/u, then the other terminals; 12C; 238U; 208Pb (April-May, bound state decay); Kr beam;

Hans: all the dipoles for FRS have to be tested before.
Markus: ESR will be stopped in April and will be open. So, one can use this time to install detectors et al. into the ESR.
Yuri: Munich detector will be installed then. Schottky pick up was further optimized.
Phil: How about CRYRING?
Markus: Some experiments using Mg beams are planned.

4. New scenario? and FAIR review

TY: (info at CC@Milan) new scenarios are considered because SIS 100 may be delayed, but no official announcement. Option 1: SIS18-SuperFRS
Option 2: HESR could come first. SIS18-FRS-ESR-HESR
FAIR review: no confirmed information

5. Day1 physics (up to 2025)

Next PAC call may be in 2020, but should be after the successful runs of the already approved PAC experiments.
Is CRYRING also be considered as part of ILIMA?
EXL did not get any funding.
Hans: Is it possible to merge EXL (Nuclear reaction in the ring) with ILIMA?
Yuri: So far ILIMA already has too many duties. While for most of the ILIMA experiment, like beta delayed Pxn and (p,g) reactions, only heavy ions detectors are enough.
As for EXL, Phil Woods built a silicon chamber, which can be installed around the target area.

6. Financial planning

Going for contracts with approved money first,
for Detectors: 2 TOF detectors (magnet) + 4 Schottky + 2 pockets;
Octupole corrector magnet is not in budget, also not in CR by BINP.

7. TDR status

All TDRs were approved, available on web.

8. Schottky pick-ups

Good offline results have been obtained. It is expected to have ms sensitivity (working frequency: 400 MHz, bandwidth ~ full range of isochronous mode) for cooled single ion.

9. ToF detectors

Need to make two, cannot build only one or only 2/3.

10. Other detectors

Roman: The pocket detector (DSSD, 4cmx6cm) after the dipole (ESR) can be delivered, installed and operated in few months.

Taka: GAGG beam test will be performed with Xe@400 MeV/u (heaviest beam available at HIMAC) for an option for a CsI(Tl) crystal in the ESR pocket detector.

Yuri: May test solar cell as detector in UHV: