

**Minutes of the  
AMBER Collaboration Board Meeting at CERN  
on June 27, 2024, 15:00 Geneva time**

**Attendance:** C. Azevedo, B. Badelek, J. Bernauer, A. Cicuttin, S. Dasgupta, O. Denisov, S. Donskov, N. Doshita, H. Fischer, A. Gerbershagen, A. Guskov, E. Kabuß, B. Ketzer, R. Kurjata, J. Lichtenstadt, J. Matousek, J. Novy, D. Panzieri, C. Quintans, S. Smirnov, M. Zavertyaev, P. Zuccon, J. Friedrich, M. Veit, G. Mallot, T. Poeschl

**Guests:** L. Garcia

**Apologies:** J. Berenguer, A. Bressan (replaced by A. Martin), K. Brinkmann (replaced by S. Diehl), M. Chiosso, S. Levorato, A. Sandacz, B. Seitz, D. Neyret, O. Kiselev

**Absent:** A. Dziuba, D. Keller, K. Liu, N. Masi, T. Matsuda, S. Paul, V. Saleev, H. Suzuki

The agenda was:

1. Welcome, Attendance and Apologies
2. Approval of Agenda
3. Approval of Minutes
  - CB meeting March 21, 2024
  - CB meeting May 6, 2024
4. Communications by SPs
5. Shift of high intensity DY test
6. Appointment of FE coordinator
7. Addendum to bylaws: Associate membership
8. PubCom renewal
9. Publication rules
10. Request for Exception from Publication rules
11. Communications by CB chair
12. AOB

## **2. Approval of Agenda**

The items on the agenda were approved without changes.

## **3. Approval of Minutes**

The minutes of the CB meetings on 21.3.2024 and 6.5.2024 were approved without changes.

## **4. Communications by SPs (given by Oleg Denisov)**

### **a) SPSC meeting on 7./8.5.24**

The requested extension of APX and shift of PRM was granted.

## **b) IAC agreement with JINR**

The international cooperation agreement with Dubna was extended by 5 years. But the measures adopted in March 2022 by the CERN council remain in place, meaning no new projects or users from JINR.

## **c) Communications with CERN RD on June 27**

There were three items discussed:

- Decision of IAC with JINR: A dedicated meeting with Joachim Mnich will take place next week.
- A request to support an additional BMBF application for the AMBER TPC project was discussed: Support from CERN would be necessary to be able to submit such an application.  
Mnich was very positive and promised to contact BMBF after receiving some more information.
- TPC risk assessment by external company:  
The project is hampered by very slow response from the company. The problem of contractor's obligations is known to the administration and Mnich promised help.  
There will be a meeting with HSE and EP safety on Friday 28.7. to clarify the status.

## **d) Contacts with GSI/PANDA representatives**

SIS300 at GSI is delayed and the decision for PANDA is expected only in 2026, but there is already quite some hardware existing. There is a considerable push to find an intermediate use of existing components.

To discuss such options for AMBER a series of meetings with PANDA representatives was started in April. The next meeting on July 9 will focus on Si based tracking detectors, DAQ/FE, data reconstruction and software tools.

## **e) Contact with Chinese hadron physics community**

Oleg visited a workshop in China organised by Craig Roberts, where he had positive contacts with several members of Chinese hadron physics community, who showed a clear interest in the AMBER physics programme.

Before continuing any further discussion, there is a **request to all AMBER group leaders** to clarify till September CB whether there are any constraints for collaboration with Chinese groups in your university/institute/country.

## **f) AMBER finance and MoU signatures**

- **spending in 2024:** 240 kCHF
- **collected in 2024:** 149 kCHF
- **current balance:** 235 kCHF

The remaining invoices will be sent out in July.

The list of MoU signatures was presented, the SPs are in contact with remaining groups.

## **g) AMBER hardware**

A mail was sent from TB to the group leaders on 16.5.24 with a list of critical projects: ALPIDE, TPC, FriDAQ, PRM test, future spectrometer

- Urgent actions are needed from the collaboration to secure resources and to make the up-coming physics runs possible!

- There are a number of unattended detectors in the spectrometer.
- The preparation of the phase-2 proposal has to be resumed urgently.
- There is a need for a detailed list of the required spectrometer configurations for the different planned measurements.

AMBER should also prepare input for next European strategy process for March 25. Bernhard pointed out that the next NUPECC report for 7 years is just ready, in which AMBER plays a prominent role. This should be communicated to CERN.

An intense exchange of opinions took place. **SPs will collect detailed information from all groups** on their current activities and manpower in AMBER and the plans for the next year(s) till September CB meeting.

#### **h) AMBER manpower**

AMBER has good physics data to be analysed and it was pointed out that we received support from several CERN groups. We have to get the analysis going and obtain good physics results. Also there were many new students doing shifts who should be integrated into the collaboration.

In order to make the organisation of analysis possible there is a **request to all group leaders**: It is mandatory to make new students known to SPs, PC, AC and TC, and explain the scope of their work.

#### **i) AMBER 2025 run coordinator**

Next Scientific Associate application dead-line is 2.9.2024

**Please consider to be a candidate**

#### **j) Proposal for CM in September 25**

The attendance of the last AMBER CM and CB meetings in person was very low. The SPs propose to have the September 2025 collaboration meeting at Chateau de Bossey sponsored by AMBER in order to reach better attendance and a more focused meeting. This proposal will be discussed in the September CB when the meeting dates for 2025 will be fixed.

### **5. Shift of high intensity DY test (report by Thomas Pöschl)**

Thomas reported on the bad beam delivery during the last two weeks and explained the reduction of the planned measurements to (280, 80, 160 GeV) for H and (160, 80 GeV) for D. Still the expected end would be after the 13.7., the time for the planned DY test.

The possibility to shift the DY test was discussed with the PRM and DY physics groups and also with BE department. There are some implications:

- Removal of MuOnE and re-installation of CEDARs necessary
- Required detectors are the beam telescope plus FI02 in CEDAR area
- Rest of spectrometer can stay in winter mode
- Triggered DAQ has to run for a few days
- Shifts for about 5 days

**After a short discussion the shift was unanimously supported by the CB members.**

### **6. Appointment of FE coordinator (report by Moritz Veit)**

FE meetings were resumed in April 2024 on initiative of Maxim and Moritz. In the last meeting

on 3.6.24 the FE coordination was discussed and Luis Garcia was proposed as FE coordinator. Luis shortly introduced himself stating that he is available for AMBER with 50%. **Luis was unanimously appointed by the CB members and he accepted.**

## **7. Addendum to bylaws: Associate membership (prepared by Thomas Pöschl)**

There are some urgent requests from Spanish collaborators of Oleg Kiselev, who are interested to work e.g. on TPC tracking. Thomas was asked to prepare a new paragraph for the AMBER bylaws that is inspired by the paragraph for associate membership in COMPASS:

### **AMBER Associated Membership --- Draft**

Associated Members (AM) may extend the AMBER Collaboration for cooperation in time-constrained, well specified projects of data analysis and software development where additional external expertise strongly enhances the scope and significance of AMBER publications. The establishment of such a cooperation will be suggested to the CB by an AMBER member, who is in charge of the project, and decided upon by the CB on a case-by-case basis. After approval by the CB, AM may get access to AMBER data, MC productions, and software tools for specific common analysis and software development. Resulting publications are AMBER publications and as such they are subject to the standard AMBER publication policy. It is the responsibility of the AMBER member who initially proposed the above cooperation to report to the Collaboration on its progress and closure. The exclusive usage of the data for the purpose of the above/mentioned scientific cooperation (ethic rules implicit) will be formally agreed. Fees to the Common Fund or shift dues during data taking periods will not be requested. AM have no voting rights or representatives in the AMBER Collaboration Board (CB).

The proposed paragraph caused an intense exchange of opinions. There were requests to have associate membership not only for data analysis and software developments, but also for hardware projects. For such an addition the text has to be scrutinized very carefully. Bernhard made some text from the ALICE collaboration available.

It was decided that a small group (Thomas, SPs, Bernhard ..) should work over the text and prepare an updated version. As the associate membership is needed urgently it was decided unanimously to have an e-mail vote on the updated paragraph.

Note that 2/3 majority of voting members is mandatory for changes of the bylaws.

## **8. PubCom renewal**

The current PubCom members are Michela Chiosso (chair), Horst Fischer and Marcin Stolarski. Alexei Dziuba left PubCom.

Marcin's first mandate ended in May 24. PubCom proposed a second mandate for him.

**Marcin was unanimously appointed for a second mandate by the CB members and he accepted.**

As new member PubCom proposed Stefan Diehl. After a very short discussion **Stefan was unanimously appointed by the CB members and he accepted the appointment.**

## 9. Publication rules

The publication rules were discussed in detail in the March CB meeting, where few corrections and additions were proposed. The updated draft was available before the meeting on the indico page.

Michela prepared a very nice contribution explaining the content of the publication rules in detail. Unfortunately she was not available for this meeting, but the slides were read during the meeting.

After a short discussion it was decided to vote on the publication rules and ask Michela to give the presentation of the publication rules in the next collaboration meeting in September.

**The CB members agreed to the publication rules with one abstention.**

## 10. Request for Exception from Publication rules (reported by Thomas Pöschl)

The first AMBER data analysis is being performed by Davide Giordano (see his talk on CM 26.6.24) for antiproton production on proton-helium collisions at  $\sqrt{s} = 18.9$  GeV.

A release of performance plots is planned for ICHEP24, no physics results yet. The analysis note is being prepared, the release discussion is planned for 12.7.24.

The problem is that no cross check is available. Therefore an exception from the publication rules was requested. It is understood that PubCom will carefully follow the whole release.

**After a short discussion the CB members agreed unanimously to the exception.**

**Please note:** It is very urgent to find a cross checker for the first AMBER results. Please consider to contribute to the analysis!!

## 11. Communications by CB chair

### Dates of 2024/2025 collaboration meetings

3. CM meeting Wed 18.9. – Fri 20.9.24 and CB Thu 19.9.24 15:00 Geneva time
4. CM meeting Week 49 (details to be agreed with COMPASS)
  
2. PAW25 Mon 2.6. – Wed. 4.6.25 in Kloster Irsee  
CM meeting Thu 5.6. – Fri 6.6.25 in Garching, CB Thu 5.6.25 15:00 Geneva time

The remaining dates for 2025 meetings will be decided in the September CB.

**Note:** The CB chair mandate ends in September. Please consider to be available.

## 12. AOB

In March 24 a small group (Catarina, Barbara, Jorge, Michela) was formed to investigate the possibilities to apply for European grant programmes. Catarina gave a very nice report. The

group concentrated on two programs:

### **1. Marie Skłodowska-Curie Doctoral Networks**

- program to implement and fund doctoral programs including partnerships of organisations and mobility of young researchers
- at least 3 participating organisations (countries)
- doctoral network for 4 years, maximum 10 PhD students, will be paid for 3 years
- prestigious and attractive program ....
- complicated and lengthy application procedure, low approval rate

### **2. COST Actions**

- European funding organisation for research networks
- funding network activities like workshop, conferences, schools, meetings
- proponents from at least 7 countries (including 50% from specific list), larger consortia seem to be preferred
- duration of 4 years, approved actions are funded with about 125 kEuro per year
- application of 15 pages needed, call ongoing until October 23, 2024

In the discussion it became clear that there is interest to apply for a COST action e.g. create a network on hadron physics with AMBER, COMPASS, PANDA colleagues plus theoreticians. Also a participation in COST facilitates successful application in other programmes, e.g. M.S-C.

**It was agreed that Catarina will invite AMBER members to start the discussion and prepare a COST application.**

**End of meeting: 18:50**