



4th CERN Baltic Group General Meeting
Kaunas, 09-10th of October 2019

Agenda and supporting documents are available <https://indico.cern.ch/event/811370/>

Summary of the meeting

1. CBG was welcomed by Prof. Leonas Balaševičius, KTU Vice-Rector for Research and Innovations. Vice-Rector expressed full KTU institutional support to the CBG activities and *inter alia* underlined strategic priorities of the KTU which are fully coherent with the objectives of the CBG: interdisciplinary research + internationality + innovation/KT + sustainability – long term + attraction of ingenious students.
2. Agenda has been adopted with no additional points. Participants of the meeting are listed in Annex I.
3. Chairman of the CBG Prof. Toms Torims restates the objectives and principles of CBG and sets the objectives for this meeting:
 - to update and openly exchange information among the partners;
 - to see, in detail, the funding opportunities for the CBG and related activities;
 - to move forward with Coordination Team – to reconfirm its members and to put it into action;
 - to discuss and coordinate CMS related cooperation of the involved institutions;
 - to support the CERN proposed HITRI project (H2020) – and to offer partnership;
 - to support the CERN proposed PRISMAS-MAP project (H2020) – and to offer partnership;
 - to give full mandate of CBG Coordination to the RTU Center of High Energy Physics and Accelerator Technologies;
 - Baltic Physics Teachers programme – to engage and coordinate;
 - to discuss and support the CERN Baltic Internship Programme.

Chairman reports on the CBG activities since the last General Meeting, which has set the following CBG priorities for 2019/2020:

- Study Programme Working Group – to continue the development of the international, multidisciplinary doctoral and masters level study programme of High Energy Physics and Accelerator Technologies in the Baltics under the auspices of CBG;
- continuation of the CMS Working Group activities with concrete actions;
- Industry Working Group to be launched as soon as ILOs are identified;
- continuation of dialogue with CERN and CERN Council and representation of CBG in one voice.

These priorities were followed, in particular, the CBG Study Programme Working Group has made considerable progress and the CMS Working Group has had several

coordination meetings. Dialogue with CERN is successfully maintained and even enhanced. It is very beneficial for all parties involved. An important achievement is that the participation in the CBG has opened wider engagement opportunities with CERN to its Partners. For instance, the participation of TalTech and LU in the bid for CERN Coordinated Innovation Pilot project within H2020 (so called Aries2).

4. Each country presented CERN related activities since the last CBG meeting and the current state - of - play.

Estonia: is in the process of joining CERN in the capacity of an Associate Member State in pre-stage to full membership. Subject to relevant governmental, ministerial and CERN Council decisions, Estonia is looking forward to join CERN in mid 2020. CERN EXPO is coming to Tartu in a month: 22.11.19 – 22.03.20. Estonia is continuing its activities within the CMS experiment. Dr. Mario Kadastik informed that Estonia is reconsidering going nuclear [energy] in its goal to become climate neutral by 2050.

Lithuania: Dr Aurelijus Rinkevicius has been elected as the Head of the VU Experimental Nuclear and Particle Physics Centre and represents Lithuania at the CERN Council¹. ILO and deputy ILO has been appointed. Lithuania continues to deeply engage in the activities of the CMS experiment and holds regular Lithuanian meetings at CERN . Recently CERN business incubator centres have been opened in Vilnius and Kaunas. Currently Lithuania is engaged in projects with CERN in the fields of: thin-film coating; isotopes for clinical use / biomarker analysis; radiation damage in semiconductors and AIDA2020 - cryogenic semiconducting sensors. A Lithuanian representative is participating in the discussions related to European Strategy of Particle Physics, which is currently a hot topic.

Latvia: is successfully continuing to build-up its high energy physics community and capacity. The Center of High Energy Physics and Accelerator Technologies was established in 2017 and is fully up-and-running. The Center has been appointed as the National Contact Point vis-à-vis CERN by the Government and is currently composed 9 members². The Latvian Government has outlined considerable multi-annual funding to these activities. In 2020 it is more than 650 000 EUR of direct investment in the field: participation in CMS 136 978 EUR (for 2019) and 178 654 EUR (for 2020) – reaching the level of two senior + two junior scientists permanently based at CERN;

- CERN National Contact point - 99 435 EUR per annum (as from 2020);
- State Research Programme in High Energy Physics and Accelerator Technologies – 300 000 EUR per annum (as from 2020);
- Latvian physics teachers', PhD students', school visits to CERN and participation in the CERN Summer School – 75 000 EUR per annum.

Another 100 000 EUR of relevant EU funding is granted to the National Contact point (until end of 2022) to strengthen the high energy physics and accelerator technology community in Latvia and to facilitate the engagement of research institutions and business entities in the CERN activities.

Additionally, 100 000 EUR of relevant EU funding is allocated to the development of international doctoral multidisciplinary study programme in high energy physics and accelerator technologies – it will be of direct benefit to the CBG and the Baltic region capacity building. Similar amount is envisaged for the masters level study programme in the near future.

¹ <https://www.ff.vu.lt/en/cern/about>

² <https://www.rtu.lv/en/hep/contacts-hep>

In July 2019 Latvian Government took a decision to continue collaboration with CERN and to join CERN as an Associate Member State. The Center is tasked with the preparation of an Application Questionnaire. The relevant roadmap and timeline have also been elaborated with the aim to submit the application to the CERN Council in Dec 2019. Thus, Latvia is looking to become a CERN Associate Member State in 2021.

There are at least five Latvian hi-tech companies with a large R&D potential that would be interested in an immediate cooperation with CERN. One of them is already collaborating within the CMS framework.

5. CERN representative, Dr. Christoph Schaefer, expressed clear CERN support to the CBG activities. He also outlined the HITRI (Heavy Ion Therapy and Research Infrastructure) design study proposal.
6. CMS activities of Partners and points of the CBG collaboration within CMS were discussed - see relevant decisions below. It is foreseen that the CMS Deputy Team Leader for Latvia, as from 1 January 2020, will be Dr. Kārlis Dreimanis of RTU. He shall take also active role within the CBG CMS Group and to coordinate Latvian Team working for CMS.
7. Industry engagement in CERN, CMS and CGB activities was discussed - see relevant decisions below.
8. The multilateral collaboration possibilities of the member of CBG and participation in joint projects/calls was discussed, and the following projects were considered:
 - HERTIS: RTU, UT, CERN;
 - ARIES2 or Innovation Pilot (CERN/ARIES2) - RTU, TalTech, LU, CERN;
 - PRISMAS-MAP (CERN/MEDICIS);
 - HITRI (CERN);
 - AIDA++;
 - COST Action.
9. Dr. Kalvis Kravalis provided a status report on the CBG Study Programme Working Group. It was mostly devoted to the above-mentioned doctoral study programme of high energy physics and accelerator technologies. Overall, the content of the study programme was presented, along with the subjects, credit points, competences, etc. The next steps and the timescale were agreed. Expert group, also encompassing representatives of the CBG Members, has been established. CBG was also informed about the overall budget distribution of the said project. EU funding is secured and the Study programme/curricula development shall commence in January 2020. Further actions were agreed during the discussion – see decisions below.
10. CERN schools in the Baltics and the CERN Baltic Internship were discussed. KTU presented upcoming CERN Accelerator School, which will take place during the week of 22.03.20-04.04.20 in Kaunas. CBG Partners are welcome to participate with their students. It was agreed to organise an annual dedicated CERN Baltic School under the auspices of CBG – see decisions below.
11. The tasks and members of the CBG Coordination Team were discussed – see decisions below.

12. The Chairman of the CBG provided oral summary of the meeting and received no comments, apart from a remark regarding the early starting hour of today's session.

During the meeting, **the following decisions have been taken and further actions collegially agreed:**

Policy actions - strengthening and development of the Baltic High Energy Physics community

1. LV and EE representatives agreed to liaise and closely coordinate the procedures, actions and timing of their **accession to CERN**. LT representative in the CERN Council will be kept up-to-date and informed accordingly.
2. CBG will seek to proliferate its ideas within the **Baltic Assembly**. CBG mandated the Chairman to liaise with the Latvian Government (MFA) that currently holds the Presidency.
3. CBG is supporting the **HITRI project**. Chairman was mandated to express CBG support to the project and to inform the HITRI coordinator at CERN and the TIARA committee accordingly. The Baltic countries could potentially be a beneficial region for the large scale ion/hadron therapy infrastructure centre. Several CBG Partners are willing to engage in this project within their fields of expertise (in particular RTU and KTU). Partners are invited to indicate their interest to the CBG Chairman via e-mail by 16th of Oct.
4. CBG is supporting the **PRISMAS-MAP project**. Chairman was mandated to express CBG support to the project and to inform the PRISMAS-MAP coordinator at CERN accordingly. Several CBG Partners are willing to engage in this project within their fields of expertise (in particular RSU, RTU and KTU). Partners are invited to indicate their interest to the CBG Chairman via e-mail by 16th of Oct.
5. CBG mandated Dr Andrijus Jodugalvis from VU to represent its interests vis-à-vis **COST Action**. In particular in the proposal preparation relevant to the high-energy physics. Dr. Kadastik, having great expertise in the field, will initially advise.
6. CBG mandated the Chairman to liaise with CERN regarding the **Baltic Internship Programme** creation at CERN – dedicated to the masters and doctoral students of the CBG members.
7. CBG mandated Dr Aurelijus Rinkevicius to liaise with Vilnius Gediminas Technical University and Lithuanian University of Health Sciences and to invite them to join CBG.
8. CBG, in collaboration with CERN, agreed to establish as dedicated Action of the CBG annual **Baltic School on High Energy Physics and Accelerator Technologies**. The Baltic School should last one week and *inter alia* cover topics of particle physics, accelerator technology, medical physics and computing. CBG will undertake a joint effort to obtain the COST Action funding to run this School – see above. Otherwise, other national funding possibilities are to be investigated. This school is to be open for all masters and doctoral level students. However, CBG members will aim to cover the participation of two students from each CBG institution, e.g. via the COST Action funds. Detailed content of the course, technical details and the list of lecturers to be elaborated by the Coordination Team. Conveyor – the responsible person of this Action - is to be appointed by the Chairman on the basis of suggestions of the Coordination Team. It was agreed to organise the 1st Baltic School in the last week of August 2020. The proposed venue is the RTU Campus “Roniši” – to be confirmed.

CMS actions

9. CBG shall nominate its representative to the **CMS Computing Resources Board**. This person will have the mandate on behalf of the CBG and its relevant members of the CMS experiment. Dr. Kadastik, having great expertise in the field, will initially advise. CBG members are invited to nominate their candidates before the end of October. He or she

should be then approved by the CBG via simple e-mail exchange (if before the next bi-annual CBG General Meeting).

10. CBG CMS members will seek to collaborate and align their efforts for the **CMS Phase 2 upgrade**. An agreement was reached to look for in-kind contribution via national industries and research entities, instead of any cash payments. It was agreed as common CBG policy vis-à-vis CMS. The chairman was mandated to convey this information to the CMS management and to persuade them of this strategy during the Dec 2019 CMS week in Bangkok.
11. CBG **CMS Working Group** Conveyor will call for a dedicated Group meeting before the end of this year.
12. Dr Kadastik will organise a dedicated **CBG CMS Tier2 and computing** coordination meeting in Tallinn before the end of this year. CBG members agreed to coordinate, including at technical level, their Tier2 computing activities vis-à-vis CMS with the aim to create a single integrated platform in the future.

Coordination actions

13. CBG confirmed the following **Coordination Team** members:

- Prof. Mārcis Auziņš, University of Latvia
- Dr. Aurelijus Rinkevicius, Vilnius University
- Dr. Mario Kadastik, National Institute of Chemical Physics and Biophysics
- Dr. Jevgenijs Proskurins, Riga Stradins University
- Ms. Aija Rūse, Riga Technical University
- Dr. Kalvis Kravalis, RTU/LU

The following Coordination Team members were approved, pending confirmation of their Institution:

- Dr. Brigita Abakevičienė, Kaunas University of Technology
 - Dr. Fjodor Sergejev, TalTech
 - Dr. Laur Järv or Dr. Vallo Mulk, University of Tartu
14. CBG Chairman will organise a dedicated **Coordination Team meeting** by end of this year, in order to implement the decisions of the CBG. Tentative date is 28th of October. Subsequently, the Coordination Team should have virtual meetings on a regular basis (sequence to be decided).
 15. CBG mandated the RTU Center of High Energy Physics and Accelerator Technologies to take-up the coordination tasks and to support the CBG Chairman and the General Meeting. The Center thus has been mandated to perform the **CBG Secretariat** tasks as a dedicated Activity under the auspices of the CBG. Conveyor of this Activity will be Ms Aija Rūse assisted by Ms Elīna Grate.
 16. CBG mandated said Secretariat to maintain and support **CBG web presence**.

Industry engagement Activities

17. The CBG Secretariat will support the CBG Industry Group by **mapping CERN-relevant industries** in the Baltic States. Dr. Mario Kadastik and Dr. Aurelijus Rinkevicius will provide to the Secretariat the information regarding their respective countries, by end of this year. This matter is to be followed-up and discussed in detail within the next CBG General Meeting.
18. CBG and its Industry Group agreed to coordinate the **CERN Industry Road Show** in the spring of 2020 to promote the Baltic Industry engagement in CERN and CMS. This event should be organised by CERN and the relevant ministries/entities. It is envisaged that it will happen sequentially in all three Baltic countries as an exhibition and a discussion panel. This has to be an agenda item for the next CBG General Meeting.

19. CBG and its Industry Group agreed to coordinate the **Baltic Industry Days at CERN in 2021**. The CBG Chairman and Deputy-Chairman, jointly with Prof. Schaefer, are tasked to liaise with the CERN Procurement Office. A meeting is set for the 29th October at CERN in order to discuss the details and scope of such an event. This has to be an agenda item for the next CBG General Meeting.

Study programme actions - the development of the Baltic international multidisciplinary masters/doctoral level study programme in High Energy Physics and Accelerator Technologies

20. The Conveyor of the CBG Study Programme Group will organise in February 2020 a **virtual expert meeting** to continue elaboration of the said study programme.
21. A dedicated (in-person) **meeting of the CBG Study Programme Group** will be held on the 6th of April in Riga, jointly with the CBG General Meeting.
22. The Study Programme shall be a permanent agenda point in the CBG General Meeting agenda.

CBG agreed to organise the **next General Meeting in Riga** under the auspices of the University of Latvia on **7-8th of April 2020**.

17.10.2019
By CBG Secretariat
hep@rtu.lv

Participants of the **4th CERN Baltic Group General Meeting**
Kaunas, 09-10th of October 2019

The Representatives of CBG Members with the voting rights

1. Prof. Toms Torims, RTU – Charman of the CBG
2. Dr. Mario Kadastik, NICPB – Deputy Chairman of the CBG, Conveyor of the CBG Industry Group
3. Prof. Mārcis Auziņš, UL– Conveyor of the CBG Study Programme Group
4. Dr. Aurelijus Rinkevicius, VU – Conveyor of the CBG CMS group
5. Prof. Kristina Ukvalbergienė, KTU
6. Prof. Fjodor Sergejev, TalTech (by delegation from Prof. Renno Veinthal)
7. Dr. Jevgenijs Proskurins, RSU
8. Dr. Laur Järv, UT – remotely (by delegation from Prof. Marco Kirm)

The Representatives of CERN

9. Prof. Christoph Schaefer
10. Dr. Thierry Stora – remotely

Other contributors designated by Members

11. Prof. Leonas Balasevicius, KTU, Vice-Rector for Research and Innovations
12. Prof. Vygintas Grinis, KTU
13. Prof. Brigita Abakevičienė, KTU Prof. Diana Adliene, KTU
14. Prof. Sigitas Tamulevicius, KTU
15. Dr. Andrius Juodagalvis, VU
16. Dr. Thomas Gajdosik, VU
17. Dr. Kalvis Kravalis, RTU/UL
18. Ms. Aija Rūse, RTU
19. Ms. Elīna Grate, RTU
20. Dr. Kārlis Dreimanis, RTU
21. Dr. Stefan Groote, UT - remotely