



Opening Remarks

28th Geant4 Collaboration Meeting,
25th - 29th September 2023,
Hokkaido University,
Marc Verderi (LLR) & Alberto Ribon (CERN)

A Geant4 Meeting in Hokkaido



- This is always a **great pleasure** to come to Japan !
 - Even though many of our flights have to make a big detour to avoid conflict zones...
- I guess also that Hokkaido is a first time for many of us
 - Including me !
- Organizing a Collaboration Meeting is always **full of complications**
 - And this one does not make an exception ! ;)
 - In particular, the “**Geant4 tutorial course for medical applications**”, from Tuesday to Thursday, had to be organized in parallel !
- So let us first express our **deepest appreciation** to our host and to the meeting and tutorial organizers, as **they dealt with both events** !
 - **Takashi Sasaki (KEK)**
 - **Koichi Murakami (KEK)**
 - **Shogo Okada (KEK)**
 - **Taeko Matsuura (Hokkaido University)**
 - **Chen Ye (Hokkaido University)**
- I wish also to tell our appreciation for the platinum **sponsoring by MPEXS LLC** !



Program Committee



- The **Program Committee** was formed after an open call to the Collaboration
 - Encouraging young generation to contribute !
- The program committee was formed of:
 - **Ben Morgan, Jonas Hahnfeld, Alexei Sytov**
 - A big thank to them !
 - ex-officio: Alberto Ribon, Marc Verderi
- We met on 10th and 19th of July
 - As usual, discussions were constructive !
 - The **future of Geant4** and the **transition from “old” to “young” generations** were again the two items put forward !
 - But other questions were also raised :
 - eg, could it be conceivable to move to a “plenary only” format ?
- Elaboration of the Collaboration Meeting program had the special constraint to not “collide” with the **“Geant4 tutorial course for medical applications”**
 - **This is our pleasure to participate to this tutorial !**
 - But we had to be careful about speakers not to be at two different places at the same time ;)
- **Both events share the same Technical Forum meeting**, on Thursday afternoon:
 - Following the tradition to focus on the host domain, this meeting will have **medical as the main users’ topic**
 - **Marilena** took care of this program, and will be courageous enough to drive the meeting remotely !

Plenary 3 & Plenary 8 [1/2]



- Similarly to last year, the Program Committee opted for two plenary sessions for collaboration wide discussions:
 - **Plenary 3: Feed-back on Collaboration Evolution (today)**
 - **Plenary 8: Future Looking (Thursday)**
- **Plenary 3: Feed-back on Collaboration Evolution**
 - We had intense discussions last year on the “Collaboration Evolution” topic
 - They were followed by the creation of two new bodies, who both report at each SB meeting:
 - The **“Early Career Researchers Committee”** (ECRC)
 - a “forum” for new & young Geant4 members
 - held by **Lorenzo Pezzotti** (elected) and Carlo Mancini Terracciano (deputy)
 - The **“Collaboration Evolution Task Force”** (CETF ← my acronym, not official ;))
 - held by **Anna Zaborowska**, nominated by the SB
 - whose task is to make recommendations about the “type b.” proposals
 - see minutes of the 2022 September SB meeting : <https://geant4-internal.web.cern.ch/node/2007>
 - Remember :
 - A survey was organized, together with a list of proposals to evolve the Collaboration, with votes on these proposals
 - The SB made three categories out of these:
 - Type a. : Proposals with high degree of consensus (some were implemented right away, some others are pending...)
 - **Type b. : Proposals with substantial consensus, but with actions which require more discussions and evaluations**
 - Type c. : Proposals with rather divisive outcome
 - **So, we’ll discuss the status of these new bodies, their findings, the possible issues, the possible improvements, etc.**

Plenary 3 & Plenary 8 [2/2]

- Plenary 3: Feed-back on Collaboration Evolution (con't)
 - During last year discussions, **“generation transfer knowledge”** was also discussed at length
 - Where do we stand wrt to this ?
 - **Last but not least:** next year will be an election year
 - WG coordinators will have to be elected to form the new SB
 - Certainly **an excellent opportunity** to have new faces at the SB



▪ Plenary 8: Future Looking

- Idea is to raise medium / long term issues
 - And discuss them
- **Organizing a new form of “co-development” with users**, on “interfaces” (python, Julia, etc.) in an “open development software” way will be debated
- An issue that may fall on us at some point is the **power/energy consumption**
 - We can expect that, one day, someone will come to us, asking to demonstrate we use power in an optimally way...
 - **Our Japanese colleagues**, “thanks” to the Fukushima disaster, have **already acquired experience on the topic**, and will report on this, to initiate the discussion
- A very popular, but rather “uncertain” item for what simulation is concerned, is the **Differentiable Programming**
 - **Mihaly was solicited for the MODE** (Machine-learning Optimized Design of Experiments) workshop, 24-26 July, and will share his view on this.

Some General Information



- A **Geant4 internal assessment of the GPU R&D projects, AdePT & Celeritas**, will take place on 13 & 14th of December
 - This will essentially follow the process as defined in https://geant4.web.cern.ch/collaboration/working_groups/task_force_rd/fte_and_assessment
 - Which mainly consists of :
 - A written document, with key points, results and plots reported, together with issues and future plans
 - Presentations on 13 & 14th of December
 - A document issued at the end of the assessment
 - More details will be circulated later on about this assessment
- The **users' requirements are now taken care by Krzysztof Genser !**
 - **Many thanks to Krzysztof** for having volunteering for this task !
 - After ~14 years with that, I'm happy to pass the baton ! ;)
 - Trend with requirements these last years was a **big bunch** of them coming at the CM session
 - And taking forever to be analyzed (because this is a fragmented activity, to be dealt with fragmented working time...), which is not a good signal to requesters...
 - A group of **experts per domain** (HEP, IF, Space, medical...) is being formed to analyze requirements, with Krzysztof coordinating
 - The way requirements are classified & labelled is being revised too
 - Eg : even "invalid" requirements will be entered in JIRA... to avoid the same requirements being re-asked...

Regular CM Aspects



- As for each Collaboration Meeting, and as **one of the primary meeting goal**, most of our time will be dedicated discussing regular software aspects:
 - Status and progress of developments
 - Possible issues
 - And how to tackle them
 - Anticipated / adjusted content of next release : 11.2
 - Etc.
- We will be having the **Technical Forum** (Thursday) and the **Steering Board** meeting (Friday)
- And very important, **we will take advantage of being together for whatever additional discussions !**

Let's start !



- So, let's thank our host again and let's open our

28th Geant4 Collaboration Meeting in Hokkaido University !

