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## MuCol Governing Board 15/09/2023 – (02)

**Date:** 2023-09-15

**Project/Activity:** MuCol WP1

**Attendees:** Anton Lechner (CERN), Carlo Carrelli (ENEA), Chris Rogers (STFC UKRI), Claude Marchand (CEA), Cristina Riccardi (UNIPV), Daniel Schulte (CERN), Dario Giove (INFN), Donatella Lucchesi (UNIPD), Elias Metral (CERN), Federico Meloni (DESY), Gianluigi Arduini (CERN), Graeme Burt (ULA), Jian Tang (SYSU), Kenneth Long (Imperial/ STFC UKRI), Massimo Sorbi (UMIL), Michela Lancellotti (CERN), Mike Lamont (CERN), Nadia Pastrone (INFN), Natalia Milas (ESS), Philip Burrows (UOXF), Pierre Vedrine (CEA), Roberto Losito (CERN), Steinar Stapnes (CERN), Steve Boyd (UWAR), Yifeng Yang (SOTON).

Total: 25

### **Description:**

The meeting was held on Zoom. The MuCol Management Committee members and the IMCC Coordination Committee members were invited to participate as observers.

Institutes represented : 16 ( 15 with voting rights )

Total institutes with voting rights on 15<sup>th</sup> September 2023 : 27

**Chair:** M.Lamont (CERN)

## Agenda:

10:30 AM	→ 10:35 AM	<b>Welcome</b> Speaker: Mike Lamont (CERN)	5m	
10:35 AM	→ 10:45 AM	<b>Milestones and deliverables status, hiring status</b> Speaker: Roberto Losito (CERN) Status report MuCol... Status report MuCol... Status report MuCol... Status report MuCol...	10m	
10:45 AM	→ 10:55 AM	<b>Data management plan and web page</b> Speaker: Roberto Losito (CERN) h2020-tpl-oa-data-... h2020-tpl-oa-data-...	10m	
10:55 AM	→ 11:10 AM	<b>New WP6 leadership</b> Speakers: Claude Marchand (Université Paris-Saclay (FR)), Daniel Schulte (CERN), Dario Augusto Glove, Roberto Losito (CERN) Vote on WP6 Leader WG_6.pdf WG_6.pptx	15m	
11:10 AM	→ 11:25 AM	<b>Publication and Speakers Board</b> Speaker: Daniel Schulte (CERN) PSC.pdf PSC.pptx	15m	
11:25 AM	→ 11:40 AM	<b>Parameters and interim report</b> Speakers: Chris Rogers, Daniel Schulte (CERN) 2023-09-15_parame... InterimReport_GB.pdf InterimReport_GB.p...	15m	
11:40 AM	→ 11:50 AM	<b>Publications</b> Speaker: Elias Metral (CERN) IMCCandMuCol_Pu... ListOfAllPublication...	10m	
11:50 AM	→ 12:05 PM	<b>Gender matters</b> Speakers: EJ Bahng, Roberto Losito (CERN)	15m	
12:05 PM	→ 12:15 PM	<b>Annual meeting</b> Annual_Meeting.pdf Annual_Meeting.pptx	10m	
12:15 PM	→ 12:20 PM	<b>Date of next meeting</b> Speaker: Daniel Schulte (CERN)	5m	
12:20 PM	→ 12:30 PM	<b>AOB</b>	10m	

**Indico page (including presentations) :** <https://indico.cern.ch/event/1307393/>

### Materials:

**Prepared by:** M. Lancellotti

**Date:** 2023-09-25

**Revised by:** A. Augier

**Date:** 2023-09-26

**Approved by:** MuCol GB members

**Date:** 2023-10-10

**Distribution List:** Standing members of the meeting and participants

## ACTIONS

ISSUE	RESPONSIBLE	DEADLINE
Vote for the Endorsment of new WP6 Leader (D. Giove, INFN). Link for voting: <a href="https://limesurvey.web.cern.ch/385923?lang=en">https://limesurvey.web.cern.ch/385923?lang=en</a>	All	6 <sup>th</sup> October 2023
Review and comment the PSC document within 3 weeks	All	8 <sup>th</sup> October 2023
Send info related to the Data Management Plan to R. Losito	All	30 <sup>th</sup> September 2023
Comment on the date for the next GB meeting	All	asap

## DISCUSSION

### Highlights during this MuCol GB meeting:

TOPIC	WP/ISSUE	COMMENT
Welcome (M. Lamont)	Minutes of MuCol GB 1	The Minutes of last GB were circulated and no comments were received. The main point was the appointment of WP Leaders, the Gender Advisor, and the Dissemination officer. As nobody else has comments, the minutes are considered approved. They will be available on the Indico page in a pdf version.
	Project reputation	There is an evident interest in muon colliders in the scientific community, as it was visible during the recent MT28 conference in Aix-en-Provence, where L. Bottura had a talk on muon collider requirements for magnets, and M. Lamont had a plenary talk on future colliders mentioning the muon collider together with FCC.

<p><b>General status - Milestones &amp; Deliverables, hirings, website (R. Losito)</b></p>	<p>General status</p> <p>Hirings</p> <p>Work Packages</p> <p>Specific meetings</p> <p>Deliverables status - Year 1</p>	<p>R. Losito reminds to the GB members the general structure and timeline of the project. The first 3 milestones have been achieved. The management requested a delay for all Deliverables &amp; Milestones due in summer, as the start of MuCol was delayed of 2 months. This delay was accepted by the EU Project Officer, Angela Lahuerta Marin. She also participated in person to the IMCC annual meeting 2023 in June (Orsay, FR) to show support.</p> <p>Positions are published on the MuCol <a href="#">website</a> (currently 3). The institutes are invited to inform the project about any other open position to advertise. Moreover, R. Losito invites the GB members to send him a list of all students hired or being hired in their institutes within the project, so that the management team can have an idea of who is involved.</p> <p>Good progress were made on all WPs, regular meetings are being held and in general there is an enthusiastic participation. Some examples of the technical progress are presented on the “spare slide” part of R. Losito’s <a href="#">presentation</a>.</p> <p>WP7 organized a Review of the Magnet programme during the IMCC annual meeting. The draft report was presented to the Muon Magnet Working group and is available at the following Indico page: <a href="https://indico.cern.ch/event/1313015/">https://indico.cern.ch/event/1313015/</a></p> <p>Two Deliverables have to be completed in year 1. Both of them are in progress:</p> <p><b>1)Data Management Plan</b></p> <ul style="list-style-type: none"> <li>• New deadline: M8</li> <li>• Coordinator: WP1 (CERN) + info from all WP</li> </ul> <p><b>2)Preliminary ESPPU report No. 1 (Interim Report)</b></p> <ul style="list-style-type: none"> <li>• Deadline: M12</li> <li>• Coordinator: WP1 (CERN) + info from all WP</li> </ul> <p>The Preliminary ESPPU report No. 1 is the first annual report of the project. <b>The approval of this will provide the green light to CERN’s administration to proceed with the second payment (about 15% of total).</b></p>
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<p><b>New WP6 leadership (D. Schulte, C. Marchand, D. Giove)</b></p>		<p>Claude Marchand (CEA) retires. D. Schulte thanks him for his important contribution to the success of MuCol. The candidate to replace WP6 leadership is Dario Giove (INFN), who was already WP6 Deputy Leader. D. Giove makes a short presentation about himself to the GB members . More details about his career can be found in his <a href="#">slides</a> on Indico.</p> <p>As the quorum hasn't been reached for this MuCol GB meeting, the endorsement will be carried out by email. An online voting system was put in place to let the Institutes express their preferences. The eligible GB members can vote at this link: <a href="https://limesurvey.web.cern.ch/385923?lang=en">https://limesurvey.web.cern.ch/385923?lang=en</a>. The link is also available on Indico. Deadline for voting: <b>6<sup>th</sup> October 2023</b></p> <p>D. Schulte states that in the meantime D. Giove is appointed as interim WP6 Leader to ensure a proper progress on the work needed to submit the upcoming Deliverables &amp; Milestones.</p>
<p><b>Publication and Speakers Committee PSC (D. Schulte)</b></p>	<p>Presentation of the current PSC document</p>	<p>There have been a number of discussions about the Publication and Speakers Committee (PSC) in previous meetings. The PSC rules document is based on the procedures of the CLIC study adjusted to the needs of IMCC and MuCol. In the early drafts the PSC was referred as <i>Publication and Speakers Board (PSB)</i> , but it was changed because there is a strong feeling that it should be called a committee, and not a board. D. Schulte presents the current version of the PSC Rules to the GB members. More details are available in his <a href="#">presentation</a> on Indico.</p> <p><b>Validity:</b> The rules need to be endorsed by the ICB to be officially valid. The GB should also endorse the rules, once they are approved by the International Collaboration Board (ICB). However, D. Schulte declares that the rules presented during this GB meeting are <b>now effective as tentative rules</b> to ensure a correct progress on important issues (i.e. the submission of Milestones &amp; Deliverables).</p> <p>PSC MEMBERS</p> <p>The PSC consists of a Chair and at least five other members. The PSC chair is proposed by the Study Leader (SL) and approved by the ICB. The other members are selected by the SL in consultation with the chair of the PSC. A certain degree of rotation in the chair and membership roles of the PSC is desirable. Currently the SL is D. Schulte, while the tentative PSC chair is E. Metral.</p>

For the moment there will be only 1 committee for both IMCC and MuCol.

#### PSB FUNCTIONS

The PSC is responsible for implementing policy with regards to all types of publication from the International Muon Collider Collaboration (IMCC) and for maintaining the internal documentation/web pages. The PSC will define its internal process. For the reviews it will seek support from experts.

The PSC will report to the SL, the ICB, the GB, and other relevant governing bodies. This will ensure a broader involvement of the community, even from the institutes that might not be formally part of the collaboration.

The PSC is also responsible for organising conference presentations on behalf of the IMCC:

- The PSC is responsible for maintaining a list of talks from the members of the IMCC. For plenary talks and other particularly important public presentations, the PSC proposes the name of the speaker. In the case where a specific person has been asked to speak at a conference, they should inform the Chair of the PSC. For important presentations, slides should be made available for comments at least two days before the talk will be given; important project managerial reports should also be approved by the SL.
- The PSC is responsible for ensuring that the collaboration is aware of significant conferences where results from the muon collider study could be presented and is responsible for lobbying for talks at major meetings; the PSC should propose a list of possible contributions to optimise the visibility of the study, and be responsible to submit abstracts on behalf of the IMCC.

#### PUBLICATION RULES

Everyone can publish and talk “on behalf of the International Muon Collider Collaboration”, provided that they follow the project’s review procedures. The idea is to make this very open, as there are institutes that are not formally part of IMCC or MuCol, but are still involved in the project.

**Publication types:** Five types of publication are covered, each with specific rules: Collaboration-wide papers, Single/multiple author papers, Notes (publicly available), Conference proceedings, and Community Papers (the PSC will manage the process to call for authorship and support for this kind of papers). In addition there will be 2 categories of papers which will not be reviewed by the PSC : Internal Notes (not publicly available, such notes are intended solely) and Thesis (PhD and Master).

**Journal Publications** (single/multiple authors, or collaboration-wide type):

The PSC is responsible to organize the review (open review process) and the formal sign-off of the publication. Such papers should acknowledge the IMCC study. Main features:

- Authorship: the author list will be determined by the authors, but is subject to review by the PSC; Collaboration-wide publications will use the IMCC author list.
- Procedure: The PSC will assign two reviewers for publication. After the two-week review period the authors will produce a final draft paper based on the comments received.
- Submission: the PSC has to formally approve the paper for submission to the journal; once approved, it is the responsibility of the authors to submit the paper to the journal and place it in the archive.

**Conference Proceedings**

- Authorship: will be submitted under the name of the presenter and will include the words “on behalf of IMCC”. The presenter can add additional names as authors if relevant.
- Procedure: It is the responsibility of the PSC to initiate the one-week review process; then author(s) should prepare the final document – no further iteration is necessary.

**Notes**

- Authorship: Notes appear under the names of the author(s);
- Procedure: It is the responsibility of the PSC to initiate a two-week review process; At the end of the two-week review period, the author(s) should prepare the final document.



### Collaboration Author List

The PSC will maintain the official collaboration author list and ensure that it is updated every six months.

The ICB representatives are responsible to provide a list of authors from their institute to the PSC. The PSC is responsible to ensure that the list is reasonable. The PSC will seek author names from institutions that are not formally part of the IMCC but are contributing to the study, and they can add authors from other institutes if relevant.

The complete author list is approved by the SL and distributed to the ICB for a final check. → this is made because to not have to wait for the ICB, that doesn't meet that often, while still giving them the opportunity to complain about things not being correct.

For Community Papers, the author list will include the official Collaboration Author List + additional authors that wish to express their support.

Comments from the GB  
members.

### Comments by the GB

N.Pastrone comments about 2 points:

- 1) Membership: she suggests to modify the nomination of the members of the committee. For the example, she suggests to have an initial nomination by the Institute Leaders, then a selection by the Study Leader and Project Management proposed for approval.
- 2) Authorship : the right to provide the list of authors belongs to the ICB representatives, but also to the Institutes, so she would like to propose a different formulation to take this into account, possibly letting other bodies to provide their own list of authors as well. This would help to keep the community as large as possible, as it would be beneficial to the project in the future. Her main concern is the PSC could become the committee that has the ownership of the authorship for the IMCC project, which should not be the case in her view.

		<p>Regarding her second point, D. Schulte and S. Stapnes point out that her concerns should be already covered by the present document. In fact, the document already foresees the possibility for Institutes and individuals that are not formally part of the collaboration to be involved in the authorship. Also, it is stated that it's not the PSC to the the final word on the official author list, as this is a responsibility of the SL, who will also needs to inform the ICB for comments. However, it remains an open point for discussion, that will be addressed more specifically after having received the comments by the other Institutes.</p> <p>An updated version of the PSC document is sent by email to the GB members for comments. Deadline for comments : <b>Sunday 8<sup>th</sup> October 2023</b> .</p>
<p><b>Interim Report - Preliminary ESPPU report No. 1</b></p> <p><b>(D. Schulte)</b></p>	<p>General purpose</p> <p>Structure</p> <p>Key messages</p>	<p>D. Schulte presents the current status of the Interim Report. In a nutshell, the report should cover physics, detector, accelerator and technologies to show that the project is on a good track and motivate further support. It should report the progress since the Roadmap and present the current planning, that will be used as a reference for the next report. It should also identify the key missing efforts, earmark key elements of the study, and help managing the expectations for next reports.</p> <p>D. Schulte shows a tentative a general structure of the document and a possible layout for each section. More details are available in his <a href="#">slides</a> on Indico. Further details and changes in the structures will be discussed in next IMCC Coordination Committee meetings.</p> <p>The document should highlight the following key elements:</p> <ul style="list-style-type: none"> <li>- Strong interest in the collaboration</li> <li>- Substantial increase in resources (EU Design Study + contribution from institutes)</li> <li>- Good progress in studies</li> <li>- Existing technology synergies (in particular for HTS magnet development, among others)</li> <li>- What do we focus on with the existing resources</li> <li>- What should we be able to achieve by 2025</li> <li>- What would be important to add</li> </ul>

	Status and deadlines	<p>The Interim Report must be submitted as a Deliverable at the end of February 2024 (Preliminary ESPPU report No. 1), but it has also been promised for the US Roadmap for the end of this year. So it should be finalised by <b>December 2023</b>. They will try to have a version ready to circulate by November 2023. D. Schulte reports that S. Steinar (Steering Board Chair) proposes the Advisory Committee to review this report as their first task.</p> <p>The timeline appears to be very strict, as M. Lamont points out. D. Schulte agrees, but the work needed for the Tentative Parameters (deadline: end of October) will actually help to have in mind all the requirements for the preparation of the Interim Report. Moreover, D. Schulte highlights that the idea is to keep it short, avoiding to go into too much detail when not relevant.</p>
<b>Tentative Parameters</b>  <b>(C. Rogers)</b>	General status	<p>The aim of the Tentative Parameters document is to describe the parameters of the facility, including the equipment parameters and assumptions. This should imply a discussion between working groups to set down a facility baseline, so that they can have a good starting point for future work. This document, which is important to prepare the Interim Report, also constitutes a MuCol milestone due <b>end of October</b>.</p>
	Structure	<p>C. Rogers shows an example of a parameters document made by another insitute, which is composed by:</p> <ul style="list-style-type: none"> <li>- a top level parameter sets for the RCS</li> <li>- a detailed description of the parameters (in the form of an Excel spreadsheet here, but can be changed)</li> <li>- background assumptions calculations for why the parameters are set as they are</li> </ul>
	Timeline	<p>The project started the discussion on the parameters during the IMCC Annual Meeting in June 2023, and has now been going on for a few months. Working groups leaders will present their parameters at the upcoming IMCC weekly Monday meetings, scheduled on September and 18<sup>th</sup> and 25<sup>th</sup>. The aim is to have the report ready by the end of September, to allow the necessary discussions and iterations to finalize the document. The final version must be ready no later than Friday October 27<sup>th</sup>, 2024.</p>
<b>Publications</b>  <b>(E. Metral)</b>	Dissemination and IMCC Publications status	<p>E. Metral informs the project about the recent publication “Particly Physicists Dream of a Muon Collider” published in Scientific American in late August 2023, which might be interesting for the community. Here the link to the publication: <a href="https://www.scientificamerican.com/article/particle-physicists-dream-of-a-muon-collider/">https://www.scientificamerican.com/article/particle-physicists-dream-of-a-muon-collider/</a></p>

	IMCC related papers	<p>After that, E. Metral reports about the ongoing discussion for MuCol Dissemination purposes (website, publications, presentation templates). He shows the latest draft of the MuCol PPT template, which still needs to be finalised.</p> <p>Then, he shows a list of IMCC- related papers actually on CDS, together with other papers that should be added. The complete list of identified IMCC publications is available on his second <a href="#">presentation</a> on Indico. The first step to organise properly these publications is to create a specific series of documents on CDS, where all IMCC and MuCol related papers will be published, and tag these documents as IMCC. E. Metral considers “IMCC” all papers related to the collaboration published from January 2021 (formal start of the collaboration). E. Metral then proposes a chronological appearance of IMCC-tagged documents on CDS, including 3 papers from 2019 that are considered a fundamental contribution to the start of the collaboration. E. Metral kindly asks the board to inform him about any other relevant paper or contribution which is not mentioned in his list.</p>
<p><b>Gender matters</b> <b>(R. Losito)</b></p>		<p>The Gender Advisor E.J. Bahng couldn't be present to the meeting, so R. Losito reports on her behalf. There is no major news to report, but R. Losito reminds the GB members that the Institutes can ask E.J. Bahng to help and give her advice on gender equality matters, for example in hiring boards.</p> <p>K. Long (Imperial) points out that it would be important to talk about diversity inclusion in a broader sense, not only in terms of gender but also in terms of other variables, i.e. nationality, which would be beneficial. He also raises the issue of lack of funding for inclusion&amp;diversity initiatives, even if everyone believes in those values. D. Schulte agrees and says it would be interesting to have dedicated discussion on this topic.</p>
<p><b>Annual Meeting 2024</b> <b>(D. Schulte)</b></p>		<p>The project management made several attempts to find a host for next annual meeting. Italy and UK were mentioned as possible hosts, but it appears difficult for those institutes to host the meeting in 2024. Therefore, it is proposed to organise the <b>IMCC and MuCol Annual Meeting 2024 at CERN, from March 12<sup>th</sup> lunch time to March 15<sup>th</sup> lunch time</b>. This would also allow WP2 to attach a milestone to the annual meeting (MDI workshop). No objections are made to this dates during the GB meeting.</p>



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		For the year after ( Annual Meeting 2025), there is an interest in UK to be the host. Potential hosts for 2025 should already start preparing and proposing.
<b>Next GB meeting (D. Schulte)</b>		D. Schulte proposes to link the next MuCol GB meeting to the Annual Meeting in March, which would allow the project to organise it in person. Several options are given, but the most suitable one seems to be the evening of a meeting day, possibly prior to the IMCC ICB meeting. The date of March 12 <sup>th</sup> is formally proposed by email to the GB members.

Next MuCol GB: The proposed date is Tuesday 12<sup>th</sup> March 2024, during the annual meeting. TBC.