MOLLER Collaboration: Bylaws and Governance

July 21, 2025

The MOLLER experiment aims to precisely measure the weak mixing angle as a search for Physics Beyond the Standard Model. The experiment is a US Department of Energy Project, funded by the DOE Office of Nuclear Physics (DOE/SC/NP), the National Science Foundation (NSF), and the Canada Foundation for Innovation (CFI).

This document collects the governance conventions for the MOLLER collaboration. These conventions are agreed upon by the collaboration and are meant as a framework for conducting business associated with the construction, commissioning, and running the experiment, and for disseminating the results.

Revision and Approval History

8 Aug 2022	Initial draft
18 Aug 2022	Revisions including EB makeup and election specifics
31 Aug 2022	Revisions in preparation for first IB Meeting to discuss bylaws
12 Sep 2022	Added Indiana and removed CMU from IB
10 Jan 2023	Many updates following 2 Sep 2022 IB meeting
10 Apr 2023	Final updates before May 2023 collaboration meeting
17 Jul 2025	Working Group updates prior to July 2025 ERR

Contents

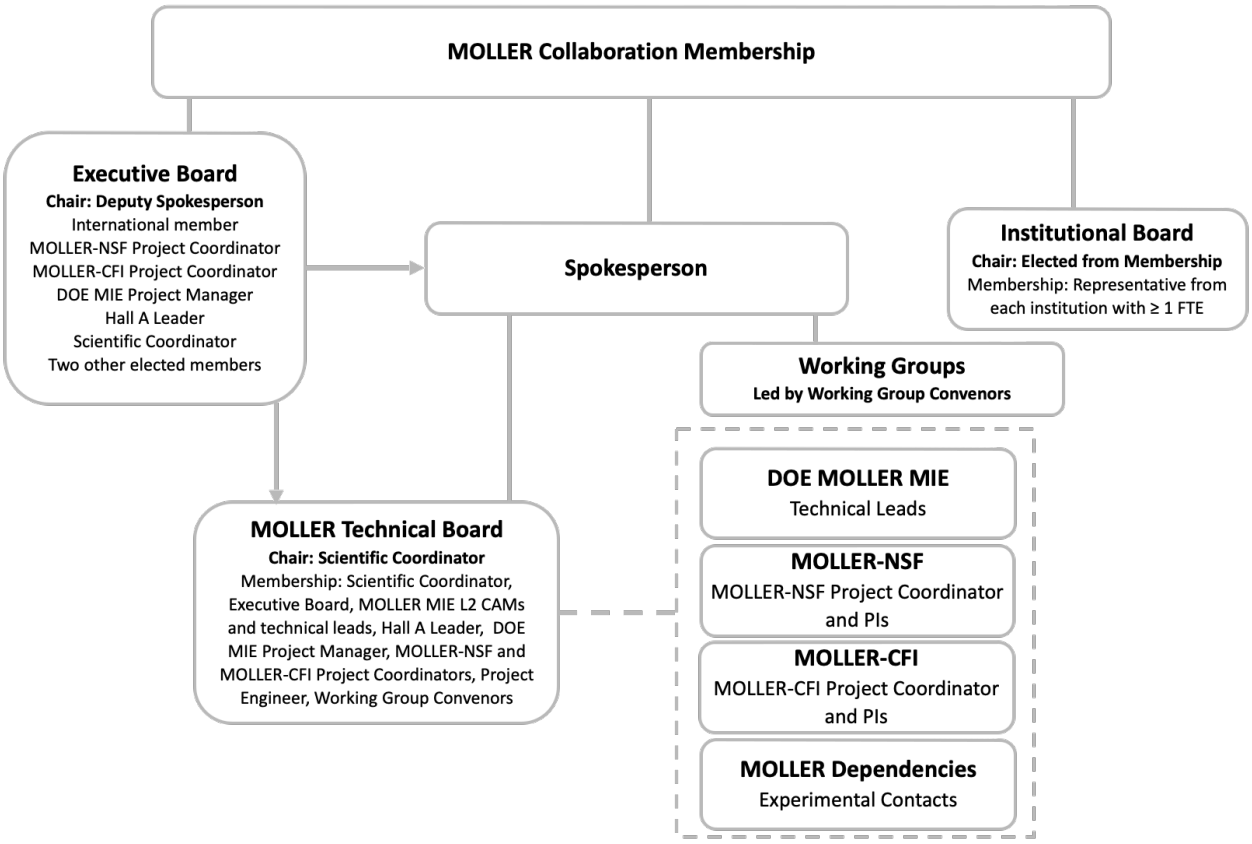

Figure 1: MOLLER Collaboration organization chart and relation to MOLLER project. Here a solid line indicates reporting to the box above, a solid line with an arrow indicates oversight role, while a dashed line indicates an advisory role.

1 Overview of the Collaboration Structure

Figure 1 diagrams the overall structure of the collaboration. The **Spokesperson** will be the principal point of contact between the collaboration, JLab management and the larger physics community. The Spokesperson also coordinates the necessary **Working Groups**, each led by a specific **Working Group Convener**. The **Executive Board** (EB) is led by the **Deputy Spokesperson** and advises the spokesperson on scientific, financial and organizational options. The **Technical Board**, led by the **Scientific Coordinator**, is a group of senior collaborators who represent the full range of required technical expertise. Collaboration policy, including maintenance of this governance document, is the responsibility of the **Institutional Board** (IB). Subcommittees, with chairs, can be set up to realize policies established by the IB, including **Publications Committee** and **Talks Committee**, as well as oversight of **Collaboration Documentation**. The DOE MIE Project Manager (PM) oversees all schedules and coordinates all activities towards the commissioning of MOLLER.

The rest of this document sets down the details of these leadership posts and committees, including how these entities can evolve, as well as other policies worked out through the IB.

2 Spokesperson and Deputy Spokesperson

The **Spokesperson** oversees all aspects of the experiment. The spokesperson will be the principal point of contact between the collaboration, JLab management and the larger physics community. The spokesperson will be advised by the EB and is expected to discuss all major decisions and any significant external interactions with the EB. The spokesperson has close communications with lab management, funding agencies, and the DOE Nuclear Physics Facilities and Project Division via the DOE MIE Project Manager.

The **Deputy Spokesperson** is in close contact with the Spokesperson and serves as the principal point of contact if the Spokesperson is unavailable. The Deputy Spokesperson chairs the EB.

2.a Spokesperson and Deputy Spokesperson Election

Both the Spokesperson and Deputy Spokesperson are initially appointed by the Collaboration leadership and serve for no specific term. An election to replace either would be held at the request of the EB, and the IB can recommend an election to the EB by a 2/3 vote. The elections would be decided by a majority of the collaboration, where all qualified MOLLER collaborators each get one vote.

3 Executive Board

The EB advises the spokesperson on scientific, financial and organizational choices and policies and provides oversight on all matters pertaining to the day-to-day running of the experimental collaboration and its activities pertaining to the experiment. The EB establishes procedures for making strategic choices, for assigning various leadership roles as specified in the bylaws, and for operating the experiment. The EB may establish ad hoc or standing committees as needed. The EB should work by building consensus but perhaps major decisions might require a majority vote.

3.a Executive Board Leadership

The Chair of the EB is elected by the current EB membership, and serves as the Deputy Spokesperson. The Chair is responsible for running EB meetings (setting agenda, minutes

etc). The EB has the authority to request that an election be initiated to elect a new Spokesperson or Deputy Spokesperson. See Section 2.a.

3.b Executive Board Membership

Members of the EB must be collaborators with a substantial and clear research commitment to MOLLER. If the Chair needs a vote to decide an issue, the voting members have one vote each.

In addition to the Deputy Spokesperson, the voting members of the EB include the Scientific Coordinator, one member representing international collaborators, and two other elected members.

The Spokesperson is expected to attend all meetings of the EB, as a non-voting participant.

In addition the above, non-voting members of the EB include the MOLLER-NSF Project Coordinator (or their delegate), the MOLLER-CFI Project Coordinator (or their delegate), the DOE MOLLER MIE Project Manager (PM) (or their delegate), and the Hall A Leader (or their delegate).

The initial EB membership (see Section 9.c) is appointed by the initial leadership team. Other than the ex-officio members (the Deputy Spokesperson, the Scientific Coordinator, and the three Project Coordinators), members serve a renewable term of one year, after ratification of the bylaws, after which these members serve two year terms. New members must be endorsed by the EB. The international member is recommended by the international collaborators through a mechanism by which they see fit. The IB nominates the collaboration members as recommendations to the EB, and their election is decided by a majority vote of the Collaboration.

In order to stagger the terms of the collaboration members, the EB will ask one of the two initial members to stay on for a second year, while the other may stand for reelection to two year term.

Changing the makeup of the EB (See Section 3.c) should be based on a recommendation by the IB, although the EB might first recognize the need and ask for the IB recommendation. The EB change will be recorded in the collaboration bylaws.

3.c Evolution of the Executive Board

As MOLLER is executed over time, it is possible that the EB will see a need for including members from other parts of the collaboration. Examples might include

- Termination of the roles of some or all of the three Project Coordinators as the construction phase of MOLLER concludes
- The addition of an Analysis Coordinator position as we begin to take production data,

and the SC is focussed on running the experiment (see Sec 5)
- The need for more general collaborator input as physics output is realized, leading to additional elected members of the EB.

4 Working Groups

The collaboration also has a Working Group (WG) structure. The WG are initially focusing on the physics requirements and their subsequent focus will be on individual subsystem commissioning and performance once the construction project is completed.

The current WG and conveners are given in Section 9.d.

As MOLLER moves from installation into commissioning into running and data analysis, it is expected that the WG will evolve to meet tasks that arise and deal with those that sunset. Discussion on WG evolution will be initiated in the IB, likely with prompting from the EB or Spokesperson. The IB will make recommendations to the EB on how the WG might be modified.

I have in my notes that Paul King will give me some text regarding how we will handle the evolution of software tools.

5 Scientific Coordinator and Technical Board

The **Scientific Coordinator** SC will chair the Technical Board and provide support and advice to the PM during the construction and commissioning phases of the experiment. This role potentially could transition to an overall run manager role during the physics phase of the experiment. This transition will be further developed at a later point by the EB. The SC is expected to be located onsite at JLab or close vicinity once COVID restrictions are lifted (i.e. senior lab scientist or faculty member at the lab on sabbatical or within easy driving distance), and the MOLLER project should be the major activity of the SC during their term. The SC will be appointed by the EB with a nominal term of 6 months that is renewable under mutual agreement between the EB and SC. The EB can remove the SC via a two-thirds vote of its membership.

The **Technical Board** TB will have a group of senior collaborators who represent the full range of required technical expertise. The membership of this group includes the Scientific Coordinator, EB, the MOLLER DOE MIE L2 CAMs and technical leads, the Hall A Leader, the DOE MIE project manager (PM), the project coordinators for MOLLER-NSF and MOLLER-CFI, the Project Engineer, the Working Group convenors. The TB advises the PM on all aspects of the Project including changes in cost, scope or schedule. Its role spans the projects, providing integrated technical oversight across the entire MOLLER enterprise, from design through transition to operations. The TB membership can be periodically

adjusted by the EB as the situation warrants.

The Scientific Coordinator will serve as the chair of the TB. Oversight of the SC and TB will be provided by the Spokesperson and the EB.

6 Institutional Board

The **Institutional Board** (IB) controls the overall framework of the collaboration. It is the ultimate policy forming body, including membership, admission of new institutions, organization of elections, development of publication policies, establishment and maintenance of a speakers board, development, maintenance, and amendment of bylaws, etc.

All institutions participating at the level of about one FTE total (integrated over all levels) will have one IB representative. Smaller institutions will be represented as a bloc by one IB member.

The IB will oversee several subcommittees that aim to maintain standards and ensure the necessary communication between different arms of the collaboration.

6.a IB Meetings

The IB Chair will convene a meeting at each Collaboration Meeting. The IB Chair will announce the meeting agenda at least one week prior to the Collaboration Meeting.

In some special cases, in consultation with the EB, the IB Chair might call a meeting of the IB outside of the regular Collaboration Meeting schedule. In this case, the agenda will be circulated to the IB members at least one week prior to the special meeting.

If the IB Chair requires a vote on a particular matter, the motion will pass by a simple majority. If an IB member is not present, or otherwise unavailable, then they may give their proxy vote to another IB member, or to another senior member at their institution.

6.b IB Chair

The first IB Chair is appointed by the EB and will serve a term of one year following the ratification of the Bylaws. Following that, the IB will elect a chair from among its membership, for a two year term. Nominations for the IB Chair will be taken from the collaboration, and the election will take place at the next collaboration meeting. The election will be decided by a majority of the IB.

The EB has the authority to call a special election for a new IB Chair if they feel it is warranted.

6.c IB Representation

All collaborating institutions with individual funding to contribute to MOLLER, or otherwise with an effectively full time equivalent commitment, will have a specific IB representative. Smaller institutions and institutions funded together will be represented on the IB with a representative from their bloc. In special cases, IB representation for some collaborators will be through a specific separate institution.

Individual institutions or blocs are encouraged to communicate their preferred representatives to the EB. The EB will endorse these representatives based on their substantial and clear research commitment to MOLLER.

If a collaboration member leaves an institution, their IB representative is responsible for notifying the IB chair so that the person can be removed from the central database.

6.c.1 Designated IB Blocs

Section 9.e lists the designated Blocs of the Institutional Board.

6.c.2 Special IB Representation

Section 9.e lists the collaborators with special representation on the Institutional Board.

6.c.3 Change in IB Status

If an institution that is a member of a bloc has a change in commitment level to MOLLER that warrants being categorized as an individual institution with its own IB representative, then they may apply to the EB. The procedure is the same as for a new institution application. See Section 6.d.2.

If an institution sees its level of commitment drop, then the EB can decide to assign them to an appropriate Institutional Board bloc.

6.d Collaboration Membership

The initial collaboration list is based on the authorship of the MOLLER Conceptual Design Report (CDR) dated August 2020, with a few deletions and additions since then. This initial list is frozen starting 1 July 2022.

Three membership classes are recognized, namely Senior, Postdoc, and Graduate Student. Senior members are typically faculty members (including tenure, tenure track, and long term contract) or laboratory staff members. Postdoctoral research fellows are attached to a specific institution, typically supported on research funds. Graduate Students are students

who have passed whatever requirements are in place at their home institution in order to start research, as declared by their IB representative. Unless otherwise specified, graduate students will be assumed to be PhD candidates.

Undergraduate students may become members, depending on the level of their commitment and contribution. These cases would be taken up individually within the IB.

6.d.1 Addition of New Members

New Postdocs or Graduate Students are added to the collaboration at the request of the IB member who represents that institution. It will be understood that the IB representative acknowledges that these new members will be contributing to that institution's responsibilities on MOLLER.

A potential collaborator who wishes to join MOLLER as a new Senior member needs to submit to the IB Chair in writing a short summary of the contributions for which they will take responsibility. This summary should follow informal discussions with MOLLER leadership on how these contributions are well suited and necessary for the successful completion of MOLLER. The IB will take up and vote on the submission at a subsequent IB meeting, followed by a recommendation to the EB.

6.d.2 Addition of a New Institution

New institutions can apply for membership through the endorsement of an existing IB member. The existing IB member should notify the IB chair of the request and provide a specific statement of commitment to the experiment prepared by the applicant institution. The applicant institution should also specify whether they are proposing to join as an individual institution or part of a bloc of institutions. Final decisions on new memberships for institutions and the categorization (individual or as a member of a bloc of institutions) will be decided by a majority vote of the IB, followed by a recommendation to the EB.

6.d.3 Termination of Membership

Membership is terminated immediately if a collaborator leaves their institution. Authorship rights will continue as determined by the policy in Section 6.e.

It may arise for whatever reason that senior leadership at any particular institution is no longer available, but leaving postdocs and/or students intact and working on MOLLER. In this case, the default would be for the junior collaborators to be adopted as part of a different collaborating institution, and represented on the IB by the senior leadership there. However, we recognize that special circumstances are likely to apply, and will always work towards the most appropriate solution.

6.d.4 Transfer of Membership

If a Senior collaboration member moves to a new institution, and intends to continue with their designated responsibilities on MOLLER, then no formalities are necessary to transfer their membership.

Membership transfers for Postdocs and Graduate Students are only possible if they are joining a group that is already a MOLLER collaborator, or otherwise applies for membership.

6.e Publications

We anticipate several different kinds of peer-reviewed publications arising from the MOLLER experiment. These include

1. Physics papers
2. General instrumentation papers
3. Subsystem instrumentation papers.

It is appropriate that the procedures for defining authorship and for collaboration review of these three kinds of papers should differ, so we outline our expectations here. The policy for conference proceedings is presented in Section 6.f.4, and so is not discussed here.

For all MOLLER publications, all potential authors must reply positively (e.g., via an email) that they have read and approve the paper in order for their names to appear on the submitted paper.[1]

6.e.1 Physics papers.

These include measurements of asymmetries (parity-violating, transverse, inelastic, etc.) and any other physics observable that may arise. Candidates for authorship of these papers will be proposed by the institutional representatives. Authorship eligibility would be based on some combination of substantial contributions to the experiment, which may be in the form of the following:

- Building the apparatus
- Operating the apparatus (shift taking, run coordinatorship)
- Software development and maintenance
- Data analysis or theoretical support

The Institutional Board (IB) will create guidelines for the expected level of contributions

[1]This is an AIP policy (see https://publishing.aip.org/resources/researchers/policies-and-ethics/authors/). Although not always followed in nuclear physics, the IB believes it to be a valuable practice to aspire to. Obvious exceptions will be made for deceased authors, for example. However, no living author should ever be surprised to discover themselves listed as an author on a paper they have not seen and approved, nor to find themselves not included on a paper based on work they have substantially contributed to.

that would meet the threshold for authorship eligibility. The IB will provide oversight to the author lists, to ensure that individuals who may have been at different institutions during the course of the experiment are not overlooked.

The IB can veto inclusion of authors proposed by an institutional representative. In the case of people who have contributed solely to hardware aspects, it may be more appropriate to recognize their contributions via instrumentation papers (see below). Individuals can petition to the IB for authorship eligibility. Once authorship eligibility is reached, the eligibility for authorship will remain for all future physics papers from MOLLER.

Once a physics result is ready for publication, the IB will appoint a "writing team" which will be responsible for drafting a publication-quality draft. Once ready this draft will be circulated to the entire collaboration for comments. A reasonable time (three weeks) should be allowed for collaboration members to submit their comments and corrections. The writing team will consider these suggestions and revise the draft appropriately, and re-circulate the revised draft, allowing at least one week for final comments, unless the revisions are significant, whereupon a longer comment time would be appropriate.

If there is internal disagreement as to whether a paper is ready for submission, the IB will decide. The IB will decide on the journal to which the paper will be submitted. After comments from referees are received from a submitted paper, the writing team will circulate the comments, and prepare a revised draft. In the case of minor revisions, the collaboration will be given at least one week to respond to the revised draft. In the case of major changes, the collaboration will be given at least three weeks to provide input to the writing team. Physics papers should include the collaboration name at the bottom of the alphabetically listed author list, and would normally be referred to as "MOLLER Collaboration: A.A. Aardvark, et al."

Any unblinded asymmetry or other physics result presented in anything other than a refereed paper from the collaboration (i.e. in a talk, conference proceedings, review article, grant proposal) must be clearly labeled as "preliminary," unless it refers to an already published collaboration paper. "Preliminary" results are discussed in more detail below.

6.e.2 General Instrumentation Paper(s)

This refers to a description of the entire experimental apparatus, or at least a majority of the equipment and the experimental technique, intended for, e.g., Nuclear Instruments and Methods, or Review of Scientific Instruments. Authorship would include anyone that is nominated by an institutional representative as having made substantial contributions to the design, construction and commissioning of the apparatus, therefore might include individuals who did not actively participate in data-taking or data analysis. Procedures are otherwise the same as for the physics papers, and this paper or papers would also be official MOLLER Collaboration papers.

6.e.3 Subsystem instrumentation and other technical papers

These would be papers, intended for, e.g., Nuclear Instruments and Methods, IEEE Transactions in Nuclear Science, etc. and which focus on a particular subsystem. The collaboration encourages publications of this type, examples of which might include detectors, electronics, spectrometer magnets, the cryogenic target, the DAQ, polarimeters, beamline instrumentation, etc. Here the author list would generally be those who contributed significantly to that subsystem, and might include people (engineers, designers, technicians, students) who might not be MOLLER collaboration members. The authorship list would be defined internally by that subsystem group and is not a matter for the collaboration. Such papers will not be generally considered as "collaboration publications" and would not list "MOLLER Collaboration"at the bottom of the author list. They must not include any "physics results" (i.e., unblinded asymmetries, cross sections, etc.), unless those have been previously published by the collaboration.

Since such papers reflect on the collaboration, and since they may involve the presentation of, e.g., detector performance results obtained by the collaboration as a whole, the collaboration reserves the right to exercise some quality control. Authors should alert the IB that they are preparing such a paper. Once a publication-quality draft is ready, the paper's authors will submit it to the IB. The IB will circulate it to the whole collaboration for comments and will appoint a "review team" of at least three collaboration members who are not coauthors on the paper. The review team will be responsible for a careful "fact check" and proofreading of the paper, and will be responsible for providing feedback to the authors within two weeks. The collaboration reserves the right to veto any presentation of data taken with beam during MOLLER data-taking and to exercise editorial control over any statements about the performance of other systems in the experiment. After they have addressed any concerns, the authors should submit a final version of the draft to the IB for approval; the IB will respond within two weeks.

6.e.4 Preliminary Results

The collaboration should define at most one "preliminary" physics result (be it a number, plot or table of numbers) for a given data set which can be publicly presented before publication. Such preliminary results should be properly documented (via an analysis note, the macros used to produce the plot, etc.) The decision to make public a preliminary result should be made by the collaboration. Student theses are an exception. Students can present their own result(s) without collaboration review, but plots, etc. need to be labeled with something like "this thesis" to distinguish from official Preliminary or Final results. No student may unblind an asymmetry before the collaboration does. Another exception would progress reports to funding agencies or review committees, and academic progress reports of students given within their institutions. These may use supplemental, unreleased figures illustrating the analysis status. Such reports should clearly indicate that these are for internal consumption only and must not be made publicly accessible, e.g., the slides cannot be made accessible on

a web page.

The collaboration should ensure that figures and images for Preliminary (and Final) results are produced in standardized and publication-quality formats.

6.f Speakers Committee

The Speakers Committee is charged with implementing the MOLLER Collabortion policy on invited and contributed talks. Specifically, this section articulates the means by which the MOLLER collaboration will

- Distribute speaking opportunities fairly within the collaboration
- Maintain a database of talks and conference publications
- Actively promote the dissemination of information, data and results of the experiment

6.f.1 Talks Coordinator and Database

A member of the collaboration will be appointed by the IB as the MOLLER Talks Coordinator (TC). The initial term of the TC will be for 2 years, and is renewable upon recommendation of the IB. TC responsibilities will include active promotion of speaking opportunities on the MOLLER experiment; coordinating contributed and invited talks on MOLLER; recommending a choice of speakers to the MOLLER spokespersons; and ensuring that up to date records of invited and contributed talks and associated conference publications are maintained for the MOLLER collaboration. These records will be maintained on the MOLLER a wikpage (or other method, to be decided) and will include

- A spreadsheet indicating the conference name, date, location, speaker's name, title of talk, and citation data for conference proceedings if applicable
- A link to the slides posted in DocDB
- A link to the abstract posted in DocDB
- A link to the conference paper posted in DocDB (if applicable)

It is preferable that each talk be contained in its own DocDB entry, updated as necessary with changes and additional information.

Individuals who agree to give conference talks are responsible for uploading required documents to the DocDB and provide information to the MOLLER Talks Coordinator for posting it on the relevant wiki page. The TC will remind delinquent speakers to provide this information as necessary. Invited seminars and colloquia which are not part of a formal conference or workshop need not be entered in the database, but collaborators are invited to submit this information for posting in any case.

6.f.2 Promotion of Speaking Opportunities

The MOLLER Talks Coordinator will also post and maintain a calendar of relevant upcoming conferences and workshops. This can be a wiki page or shareable google calendar. Individual collaborators can submit TC any additional conferences or workshops to be included in this calendar. Individual collaborators are responsible for checking the calendar on a regular basis for talk opportunities. The calendar information will include

- Name, date and location of conference
- Abstract submission deadline
- Type of talk (see below), talk title, and name of intended speaker (if available)

Contributed Talks Individuals are encouraged to volunteer to give contributed talks on the MOLLER experiment. Talks on technical subjects should be discussed within the relevant working groups, and proposals should be sent to the TC. Proposals for general MOLLER contributed talks will be reviewed using the guiding principles outlined below. If more than one individual volunteers to speak on the same topic, the TC will make a recommendation to the spokespersons. The spokespersons will make the final decision on speaking opportunities. In the case of a conflict, the individual(s) not selected will be given priority at the next opportunity. Conflicts are not expected to arise in the normal course of events, since any given conference can accommodate several contributed talks on different aspects of the experiment.

Invited Talks Invited talks provide an important opportunity to showcase the experiment and make funding agencies and influential members of the physics community aware of our work. Members of the collaboration who serve on conference program committees should take an active role in promoting invited talks on MOLLER.

Invited talk requests from outside the collaboration will be shared among collaboration members, through their IB representative, in advance of the abstract deadline. Individuals who are specifically invited to give a talk on MOLLER should inform the conference organizers that the talks are distributed amongst the collaboration according to our talks policy, and that they may contact the MOLLER TC if they have a specific speaker preference. (In rare cases – e.g., a plenary session at a large meeting – the TC may have to allow a queue-jump if the invitation is contingent upon a specific person giving the talk.) When a generic invited talk on MOLLER is available, the TC will call for volunteers and make recommendations to the spokespersons, who will make the final decision on speaking opportunities, based on the principles outlined below.

Note that this policy does not apply to invited review talks which might include reference to MOLLER in the context of a broader presentation.

Seminars and Colloquia Members of the collaboration are encouraged to give research seminars and colloquia to promote the experiment wherever possible. These arrangements may be handled by individual collaboration members at their discretion and will not be reviewed by the TC. However, speakers are requested to post their slides on the MOLLER DocDB and forward talk information to TC. Presentation of data and results for seminars and colloquia are subject to the same guidelines as for conference talks, as outlined in Section 6.f.4 below.

6.f.3 Guiding Principles for Selection of Speakers

Speaking opportunities should be broadly distributed among the collaboration. Contributed talks on instrumentation development and testing are particularly encouraged during the construction phase of the experiment.

For invited talks, special consideration should be given to individuals who are specifically approached by an organizing committee, although the final decision should be based on what is best for the collaboration as a whole.

Special circumstances to be considered for the allocation of invited talks include job opportunities for students, post-docs and other personnel, tenure and promotions for faculty and laboratory personnel, and individuals under consideration for grant renewal.

Other factors to be considered for the allocation of invited talks include the impact of the contributions that have been made to the experiment and the quantity and quality of previous talks delivered by the individuals.

6.f.4 Presentation of Data and Results

Data and measurements that illustrate the performance of the MOLLER apparatus, beam quality etc., may be shown during the development stage of the experiment at the speakerÕs discretion. However, MOLLER physics results must not be presented publicly without the consent of the collaboration.

Conference papers shall be made available to the collaboration for review before being submitted for publication. Authors shall make every effort to circulate drafts ahead of the submission deadline, ideally allowing 2 weeks for feedback from the collaboration. The TC shall approve final drafts prior to submission.

For talks at which MOLLER physics results are to be presented, a draft talk with data should be circulated for comment in advance of the talk preferably a month. The decision to present the data must be made at a IB meeting prior to the presentation of the talk; the circulation of draft talk is intended to provide opportunity for useful feedback to the speaker from the collaboration at large rather than to be used as a basis for deciding what may or may not be presented in public.

6.g Information Management

The MOLLER collaboration consists of nearly 200 collaborators from over 30 institutions from the United States, Canada, Germany and Italy as of the writing of this document. In order to keep the collaboration up to date as well as coordinate between subgroups, it is necessary to accurately document information about the collaboration including, but not limited to, the membership list, email lists, reports of ongoing simulation or analysis, technical reports and meeting minutes. In addition, it will be necessary to keep a record of presentations, publications and invited talks as well as the presenters. A set of policies for the keeping of such records is included below.

Guiding principles for these policies include the following:

- Collaboration information includes anything that is written down relevant to MOLLER, including technical notes, informal and formal presentations, eLog entries, and third party documentation in the form of technical specifications and similar information.
- A procedure must be defined through which all collaborators can access all collaboration information, even if not necessarily through direct access to the records.
- A procedure must be defined through which all collaborators can add or amend any collaboration information, even if not necessarily through direct access to the records.
- A curator must be identified for each piece of collaboration information.
- A version must be included on each piece of collaboration information that is expected to change. All versions are expected to be stored in a single location.
- All collaboration information should be preserved for archival purposes.
- Raw data should be considered to have GPL3 license: any derived products must be shared under the same access requirements as the original data.
- A mechanism will be established so that software versions used to produce any result are stored in a way so that reproducibility can always be achieved.

To this end, the Collaboration agrees that DocDB and eLog servers for MOLLER will reside at one of the university collaborating institutions. Other information management tools, such as a Wiki, possibly set up at JLab as accessibility permits.

Examples of the types of information to be maintained are the official collaboration list, individual mailing lists, technical reports and reports on simulation and analysis results, agendas and minutes of meetings of the various boards and subcommittees within the collaboration, and announcements of collaboration meetings.

6.g.1 Information Curator

An Information Curator will be appointed to manage the data of different types that are stored by and for the collaboration. The curator will also be responsible for managing the various external resources uses by the collaboration, such as github and Slack.

This will be a single person appointed by the IB for a two-year term. As the tasks grow, the

EB might consider adding people to this effort, forming a substructure under the Curator.

6.g.2 Collaboration List Maintenance

An accurate, official collaboration list is an especially important responsibility of the Information Curator. A database needs to set up and maintained with includes each collaborator's name, email contact, and institution, as well as the dates on which they enter or leave the collaboration, or change institutions. This database should be the source for the collaboration-wide mailing list.

The collaboration list will be used to generate the author list for MOLLER publications. Any additional information needed for this, including, for example, a preferred author name for publications, will be included in the database.

The Curator will maintain a public posting of collaboration list that includes name and institution, but excludes details of contributions. The list will be web accessible, with a public-facing format, and including a Collaboration slide.

An InspireHep collaboration will be established for MOLLER. For details, see
https://help.inspirehep.net/knowledge-base/adding-a-new-collaboration-experiment-theory-to-inspire/

Collaborators will have easy access to a CSV file or spreadsheet to help them deal with whatever administrative necessities arise.

6.g.3 Data Management Tools

There are a variety of tools that are used for data storage and communication between collaboration members. Ideally these tools would be free and/or accessible by everyone in the collaboration, whether or not they have a CUE username and password. The tools should be searchable and have reasonable archiving.

The following are recommended tools and their primary uses:

- JLab mailing lists are to be used for meeting announcements and updates to the collaboration or subgroups. Files or reports should not be sent through email alone; messages should have links to an archived location. Slack (or other similar communication tool) should not replace use of the mailing list.
- A JLab Wiki will be maintained, viewable by anyone, and able to be edited by anyone with a CUE username and password. The Wiki would be the primary location to find info about the running experiment for shifters, agendas and minutes, with possible pages for subgroups. It would also contain an Frequently Asked Questions (FAQ) page for common tasks, as well as a list of Frequently Encountered Problems (FEP).
- DocDB is the primary archival documentation repository for the experiment. It will contain public documents that are viewable by anyone. All collaborators will have full access to posting and accessing documents on DocDB.

- eLog (or alternative) is the primary repository archival information relating to the ongoing installation, commissioning, and running of MOLLER. It will contain public documents that are viewable by anyone. All collaborators will have full access to posting and accessing documents on DocDB.

Use of other tools are up to individual collaborators, but they will not be considered archival for the purposes of MOLLER. If something needs to be kept for posterity, it must use one of the tools listed above. Note that the MOLLER collaboration webpage is the "public face" of the experiment, and while it has useful links to the archival and communication tools, it is not meant to store documentation.

6.g.4 Public versus Private Documents

One guiding principle is that information should be as easily accessible as possible. In addition to whether we consider information "Public", namely accessible to anyone, or "Private", namely behind the JLab CUE firewall, we need to categorize information that needs to be "Accessible" to all members of the collaboration.

A DocDB server will be established and maintained at one of the collaborating universities. Documents in this DocDB application will be either Public or Accessible. This will be the default documentation repository for the collaboration.

Private documents, such as proprietary information from companies for quotes, will go into the MOLLER project SharePoint database maintained by JLab.

6.g.5 Scientific Data Management

When commissioning approaches, we will need to create a system for collaboration-wide access to the data. This work will be in concert with facilities at JLab, but might also include data replication to offsite locations.

It will be the responsibility of the Information Curator to propose and institute a policy for data archiving and release. This policy will become a standard document that collaborators can use for proposals to their funding institutions that require a Data Management policy.

7 Code of Conduct Policy

The following Code of Conduct for the MOLLER Collaboration is adapted from the APS statement on conduct at meetings, located at

https://engage.aps.org/dnp/governance/code-of-conduct

It is the policy of the MOLLER Collaboration that all members will conduct themselves in a professional manner that is welcoming to all participants and free from any form of

discrimination, harassment, or retaliation. Participants will treat each other with respect and consideration to create a collegial, inclusive, and professional environment at all functions during the life of the experiment. Creating a supportive environment to enable scientific discourse at meetings is the responsibility of all participants.

Participants will avoid any inappropriate actions or statements based on individual characteristics such as age, race, ethnicity, sexual orientation, gender identity, gender expression, marital status, nationality, political affiliation, ability status, educational background, or any other characteristic protected by law. Disruptive or harassing behavior of any kind will not be tolerated. Harassment includes but is not limited to inappropriate or intimidating behavior and language, unwelcome jokes or comments, unwanted touching or attention, offensive images, photography without permission, and stalking.

The IB will appoint an Ombudsperson who will serve as safe point of contact for any collaborator who feels the need to communicate a potential violation of the code of conduct policy. The Ombudsperson will be elected by a two-thirds majority of the entire collaboration.

Violations of this code of conduct policy should be reported to the Ombudsperson. A collaboration member can contact the Ombudsperson directly, or through the member's IB representative, the Spokesperson, or a member of the EB. The Ombudsperson has the responsibility to follow up in a timely fashion, privately discussing the situation with the relevant parties, and reporting a summary and recommendation to the Spokesperson or EB.

First offenses will result in a verbal, private admonition from the Spokesperson. Successive offenses will be made public, and could result in ejection from the Collaboration. Retaliation for complaints of inappropriate conduct will not be tolerated. If a participant observes inappropriate comments or actions and personal intervention seems appropriate and safe, they should be considerate of all parties before intervening.

At some point, the Collaboration may decide to institute a more comprehensive policy for conduct and adoption of policies concerning diversity, equity, and inclusion. In that case, this section of the bylaws will be superseded by this new organizational structure.

8 Bylaws Adoption and Revision

These bylaws are adopted by a two-thirds majority vote of the IB. The drafted bylaws will be circulated to the collaboration at least two weeks prior to the IB vote. Collaborators are asked to bring any comments to their IB representative, or directly to the EB.

Bylaw revisions will follow a similar procedure, including a two-thirds majority IB vote for approval. Any collaborator who proposes modifications to the bylaws will bring this to the attention of their IB representative. This representative will circulate the modifications to the IB. A vote on the revision will be held at the next IB meeting that is part of the general Collaboration Meeting.

9 Summary of Current Leadership Positions

This section summarizes the various leadership positions within the Collaboration, as well as the people holding them as of July 21, 2025. Refer to Figure 1 for the organization.

9.a Senior Collaboration Leadership

Senior position	Holder	Institution
Spokesperson	Krishna Kumar	UMass Amherst
Deputy Spokesperson	Mark Pitt	Virginia Tech
Scientific Coordinator	Kent Paschke	Virginia

9.b Project Management

Senior position	Holder	Institution
DOE Project Manager	Jim Fast	Jefferson Lab
NSF Project Coordinator	Mark Pitt	Virginia Tech
CFI Project Coordinator	Michael Gericke	Manitoba

9.c Executive Board

Position	Holder	Institution
Chair	(Deputy Spokesperson)	
Scientific Coordinator	(Scientific Coordinator)	
DOE Project Coordinator	(DOE Project Manager)	
NSF Project Coordinator	(NSF Project Coordinator)	
CFI Project Coordinator	(CFI Project Manager)	
International member	Juliette Mammei	Manitoba
Hall A Leader	Mark Jones	Jefferson Lab
Elected Member	Paul Souder	Syracuse
Elected Member	David Armstrong	William & Mary

9.d Working Groups and Convenors

- Polarized Source: C. Palatchi (Indiana) and K. Paschke (Virginia)
- Beam Instrumentation: M. Pitt (Virginia Tech)
- Hydrogen Target: S. Covrig (JLab)
- Spectrometer: J. Mammei (Manitoba)
- Integrating Detectors: M. Gericke (Manitoba) and D. McNulty (Idaho State)
- Tracking Detectors: D. Armstrong (William and Mary) and N. Liyanage (Virginia)
- Hall Integration: C. Gal (JLab), D. McNulty (Idaho State), and P. Souder (Syracuse)
- Compton Polarimetry: K. Paschke (Virginia) and D. Gaskell (JLab)
- Møller Polarimetry: J. Napolitano (Temple) and D. Jones (JLab)
- DAQ and Slow Control Electronics: P. King (Ohio)
- Integrating Analysis Software: P. King (Ohio) and Zuhal Demiroglu (JLab)
- Counting Analysis Software: Chandan Ghosh (JLab) and Sayak Chatterjee (UMass)
- Online Monitoring Software: (Ole Hansen)
- Simulations: R. Beminiwattha (Louisiana Tech)
- Physics Extraction: Y. Kolomensky (UC Berkeley)

9.e Institutional Board Blocs and Special IB Representation

As of July 21, 2025, there are three designated IB blocs. These are the Canadian Bloc (Winnipeg, Northern BC, Memorial, and TRIUMF), the INFN Bloc (Catania, Bari, Rome, and Sanita), and the College Bloc (NC A&T, Longwood, CSULA, Hendrix, and Duquesne.)

Note that Manitoba has its own IB representative, distinct from the representative of the Canadian Bloc.

Some collaborators will have specific, special representation on the IB. The MIT Bates collaborators will be represented by UMass Amherst. Jaideep Singh (Michigan State University) will be represented by Virginia.

9.f Institutional Board

Institution	IB Representative	
College of William & Mary	Dave Armstrong	
Hendrix College	Damon Spayde	College Bloc Rep
Idaho State Univ	Dustin McNulty	
Indiana Univ	Caryn Palatchi	
INFN Rome	Guido Urciuoli	INFN Bloc Rep
Jefferson Lab	Ciprian Gal	
LBNL/UC	Yury Kolomensky	
Louisiana Tech Univ	Rakitha Beminiwattha	
Mississippi State Univ	Bill Li	
Muskingum Univ	Chandika Annasiwatta	
Ohio Univ	Paul King	
Stony Brook Univ	Abhay Deshpande	
Syracuse Univ	Paul Souder	
Temple Univ	Jim Napolitano	IB Chair
Univ Mainz	Frank Maas	
Univ Manitoba	Michael Gericke	Canadian Bloc Rep
Univ Manitoba	Juliette Mammei	
Univ Massachusetts	Krishna Kumar	
Univ Virginia	Kent Paschke	
Virginia Tech	Mark Pitt	

9.f.1 Special Positions

Position	Collaborator	Institution
Talks Coordinator		
Information Curator		
Ombudsperson		