

GAMBIT: Global And Modular BSM Inference Tool Policy and Procedures Document

1 Membership

1.1 Collaboration Size

Members will keep in mind that the Collaboration should not grow to a size that makes it difficult to manage, either scientifically or administratively. This present definition of this bound is a maximum size of 30 members.

1.2 Adding members

New members will be proposed to the full Collaboration officially, via email to the Collaboration mailing list. Members will respond either positively or negatively by email, or abstain. Unless a consensus is already reached by email, an EVO meeting will be called to discuss the case, with the goal of reaching consensus. If consensus has not been reached in an hour, a member may call for a vote. If 2 or more members vote against accepting the suggestion for new membership, then the suggestion is immediately rejected. Otherwise, if at least 50% of members vote in favour of accepting the suggestion rather than abstaining, it is conditionally accepted. Votes from members unable to attend the meeting will be accepted for **2 weeks following the meeting**. If 2 or more existing members have officially voted against accepting the membership suggestion by the end of this 2 week period, then the suggestion is rejected; otherwise, it is accepted in full.

Suggestions for new members should be motivated by the following criteria:

1. the new member should bring specific missing physics expertise to the Collaboration, and/or
2. the new member will pull their weight in terms of coding and code design

Whilst both criteria need not necessarily be met in every case, there is a strong preference for prospective members who do meet both.

The workflow for adding a new member is as follows:

1. Email the full Collaboration mailing list with the suggestion, addressing the criteria above
2. Argue the case at the subsequent EVO meeting (if required)

3. Tell a Wiki Manager to add the new member as an editor of the Wiki
4. Tell a Repository Manager to add the new member to the code repository and mailing lists
5. Add the new member's details to the document *Members* in the Collaboration Docs section of the repository

This policy applies equally for all suggested new members, regardless of academic rank. In particular, it applies even if the suggested members are current students of existing members. Membership for students of existing members, whilst generally encouraged if the student meets the criteria, will not necessarily be any more 'automatic' than for any other researcher.

1.3 Removing members

Membership of GAMBIT can be renounced voluntarily at any point, simply by emailing the whole Collaboration and requesting to be removed from the list of members. This may be appropriate if a member e.g. leaves physics, takes a job that leaves them no time to contribute to the Collaboration, or simply decides to pursue alternative research interests.

Members can also be forcibly removed from the Collaboration under the following circumstances:

- Re-release of the GAMBIT code under an alternative name or otherwise against Collaboration wishes
- Publication, presentation or other dissemination of Collaboration work without previously informing the Collaboration, seeking its approval, or appropriately crediting the Collaboration's role in the work – or, grievously misrepresenting the views of the Collaboration in said dissemination
- Significantly damaging the Collaboration's competitive position with regard to other groups
- Becoming inactive or otherwise effectively impossible to work with

WG Coordinators are expected to watch for these and report them to the rest of the Collaboration.

The Collaboration will operate a '2 strikes' policy in general, with a warning typically given for a first infringement, and ejection to result from the second. Extreme cases can however lead to immediate expulsion.

In the case of a claimed breach of the code of conduct implied by the above list, the Collaboration will call a meeting over EVO to discuss the case,

and eventually vote on whether or not to warn/expel the offending member. Issuing a warning or removal will require a majority decision amongst those who vote. Members unable to attend the meeting will be given **2 weeks to submit their vote by email**.

1.4 Classes of membership

Membership will not consist of subclasses for students, affiliates, etc; researchers will either be members or non-members.

1.5 Percentage time commitment

Members are required to give an indication of the percentage of their working time that they intend to devote to Collaboration work when they sign on, and continue to update this commitment as that percentage changes. This requirement exists so that members know what to expect from their collaborators, and so that each member is forced to continuously assess whether or not they are presently fulfilling their stated commitment to their collaborators.

Absences (from both email and direct contact) are *requested* to be reported to the full Collaboration in advance via email for all periods of **a week or more**. Absences of **more than a month** *must* be indicated in advance to the whole Collaboration by email.

1.6 Working Groups

The Collaboration contains multiple internal Working Groups (WGs), centred on different code responsibilities (specific physics modules, scanning, core, etc). Members should sign themselves up to one or more WGs, and are free to move between WGs as they like over the course of their membership in the Collaboration.

WGs will have one or two coordinating leaders (WG Coordinators). Coordinators will have responsibility for:

- setting coding (and later, analysis) goals and priorities for the WG
- dividing tasks amongst WG members
- tracking WG coding (and later, analysis) progress
- tracking contributions of individual members to WG tasks, with particular view to

- ensuring that all *non*-WG members who actually have contributed to a given WG-centric short author paper are offered authorship of that paper
- asking WG members who have not really contributed to such papers to consider not signing them
- identifying inactive members
- prompting inactive members to become active again
- suggesting to the Collaboration that inactive members be asked to leave, or ejected

Although no specific tenure will be set for WG Coordinators, they should be discussed at each Collaboration Meeting, with a view to eventually rotating members through the Coordinator roles.

2 Publication policy

2.1 Code Release

As a general rule, code will be released in full simultaneously with the first paper to utilise it. In the case of individual physics modules, it is intended that each module will have a corresponding code paper written about it, and the paper and module will be released together. This will happen before the full GAMBIT code, accompanying code paper and accompanying first physics paper are released, except in the case of the HEColliderBit module. This module and accompanying code paper will be released simultaneously with the full GAMBIT code, code paper and first physics analysis.

The following publication rules for papers and presentations apply equally before and after the full GAMBIT code has been released.

2.2 Papers

2.2.1 Categories – Long and Short

Papers using parts of the GAMBIT code (except for single modules), or lists of samples produced with it, must be proposed to the whole Collaboration by email before any significant work is done on the project, as either long or short author papers.

Long author papers will contain the entire Collaboration author list, arranged alphabetically. They may also contain external authors (e.g. stu-

dents who are not Collaboration members themselves, but happen to be supervised by a Collaboration member, or external collaborators), pending Collaboration approval. Long author papers will typically involve the first global fit of a particular model, a significant new result, or inclusion of a significant new observable or dataset.

Short author papers will contain the subset of Collaboration members who have directly contributed to the analysis, arranged however the authors prefer. Short author papers may also contain additional external authors, which may be added and removed without subsequent Collaboration approval. Short author papers will typically be more specific or directed analyses, involving no new code, only a small addition to the code, or a less significant spin-off analysis from one of the long-author papers.

There is no default publication mode; each case must be discussed on its individual merits and the category decided within the Collaboration. Within their body of work involving GAMBIT, members are however expected to clearly prioritise long author papers, as the key results to come out of the code are expected to be of this category.

If Collaboration members do not agree by email on the categorisation of a proposed paper as long or short, then an EVO meeting will be called to vote on the paper category. In this case, the category with the greater number of votes will be adopted. In the case of a tie, the paper will be categorised as long author. If a paper is categorised as long, a member can still choose to extract themselves from the project and resulting author list, making it a short author paper, but with all remaining members of the Collaboration as authors.

Module code papers will be published as short author papers. Single modules will be permitted to be used for future analyses without Collaboration permission, or proposal of the corresponding paper to the Collaboration as a short author paper. This applies especially, but is not limited, to the original authors of a module.¹ Using more than one module in a single paper requires proposing the paper to the Collaboration as described above. This requirement is not designed to apply to non-GAMBIT codebases used as backends for multiple modules, only to the module codes themselves. A non-likelihood analysis using e.g. parallel Herwig to calculate better-sampled yield tables for DarkSUSY, and a subsequent comparison of indirect dark matter search limits to direct limits, would not need to be proposed to the Collaboration unless more than one of the GAMBIT modules themselves were used for communication between the different backends. Even if multiple GAMBIT modules were used in such a study, and it therefore required proposing to the

¹A module is defined as one of the code packages referred to as such in the document *Working Groups and Individual Positions*.

Collaboration, this project would be an obvious example of one appropriate for publication as a short author paper.

Users of modules will be asked to cite both the relevant module code paper, and main (long author) code paper.

2.2.2 Review

Long author papers will be officially reviewed internally within the Collaboration before posting to the arXiv or submission to a journal. One internal reviewer will be selected for this task, for each paper. The reviewer will have **2 weeks** to carry out the review, and must officially approve a version of the paper before submission to the arXiv or a journal. The paper will also be sent out to the whole Collaboration for comment during **the same 2 week period**.

The Publication Manager will be responsible for selecting internal referees, and giving the final approval or otherwise for posting/submission following the review process and comment period. If serious concerns arise either in the review or comment process, they are expected to be resolved before a paper is approved for posting/submission.

Short author papers do not require internal review, although it may be requested. Circulation of the short author paper within the Collaboration for comment will only be required in advance of posting to the arXiv or submission to a journal, if it was explicitly decided at the time the project was originally classified as short author, that this would be desirable. In this case the period for circulation will be **one week**. Authors of short author papers are nonetheless encouraged to seek the full Collaboration's comments on drafts before submission in any case.

2.2.3 Submission

Papers will usually be submitted simultaneously to the arXiv and a journal.

2.2.4 Conduct

At the very least, all authors of any GAMBIT paper (long or short author) are **required** to read the paper in full and give feedback to the lead authors. Members unable to do this will be asked to remove themselves from the author list.

In general, gaming of the Collaboration paper publication policy is understood to result in a severe ass kicking.

2.3 Presentations

Talks to be given on behalf of the Collaboration are to be circulated for comment (to the full Collaboration) a minimum of **72 hr in advance** of the talk. It is expected that talks circulated in this way will be very close to complete. All the potentially controversial bits **must** be sufficiently fleshed out to allow useful comment. Members are expected to take on board criticisms and suggestions for modifications from other members.

The final form of all talks given on behalf of the Collaboration should be uploaded to the Wiki.

The Publication Manager will be responsible for ensuring that talks are circulated sufficiently far in advance, and appropriately archived. He/she can also enforce the removal or modification of content in talks if truly necessary.

If the talk is not officially on behalf of the Collaboration, but touches on Collaboration work, sending it out would be a nice courtesy to the rest of the Collaboration, but is not compulsory. The Publication Manager has no power to compel the speaker with regard to content in this case.

The Publication Manager will also keep track of upcoming conferences, identify those where a GAMBIT contribution would be desirable, and encourage relevant members to submit an abstract. The Publication Manager will likewise serve as a central administrator of invitations to present; members who have been invited to give a presentation on GAMBIT but cannot, and cannot identify a suitable replacement, should pass the invitation on to the Publication Manager, who will attempt to find a member who can accept the invitation.

3 Meetings

Full Collaboration Meetings will be held approximately every 9 months. Although no specific tenure is given for WG Coordinators, all positions mentioned in the document *Working Groups and Individual Positions* (i.e. WG Coordinators and non-WG individual positions) will be discussed at each Collaboration Meeting, with the goal of establishing an orderly rotation of roles.

All-Collaboration EVO meetings will be held every 4 weeks.

WGs should meet/discuss amongst themselves on a shorter timescale.

4 Wiki

The GAMBIT Wiki should contain

- lists of current papers/projects (both short and long author, approved and proposed)
- past talks given on behalf of the Collaboration (.ppt or .tex+.pdf+associated files)
- resources for preparing grant applications relating to GAMBIT (including copies of past grant applications)
- code progress
- bug tracking
- member list
- recorded outcomes of official votes (new member decisions, etc)
- information about / links to coding resources (OpenCL, OpenMP, etc)