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ET STEERING COMMITTEE

# The Einstein Telescope Scientific Collaboration Bylaws

# The ET Steering Committee

# May 2022

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### G ET Collaboration Ombudsperson

# 1 Preamble

This document serves as initial Bylaws for the founding of the Einstein Telescope (ET) Collaboration, providing the necessary Bylaws that describe the formation of the Collaboration, the Collaboration governance structure and the fundamental rules under which the Collaboration will be initially operating. It also describes the mechanics by which this statute shall be modified or amended by the newly formed Collaboration governing bodies. The first update is expected to happen soon after the forming of the Collaboration. The procedure for forming the new Collaboration is described in Appendix E

Section 2 describes the scope and the main mission of the ET Collaboration and establishes the ethical standards under which it will be functioning. Some important aspects of ET are under the direct responsibility of the ET Project. This document neither dictates the formation nor the structure of the Project, and is limited to presenting the current status of the Project Office and defining its relation to the ET Collaboration in Section A. Section 3.1 describes ET membership and the related rights and obligations, together with the foreseen steps for becoming a member of the ET Collaboration and the procedure for ET membership termination. Section 3 discusses the anticipated internal organization of the ET Collaboration in terms of specific scientific and technical boards, as well as the main building blocks of the ET Collaboration. Section 3.7 describes the role of the specific scientific and technical boards, and Section 3.3 introduces the concept of Science Forum and describes its mission and composition. The aspects related to the Collaboration life and the definition of Collaboration Boards and Services assisting the day-by-day operations of the Collaboration are discussed in Sections 3.6 and 3.8. All changes of the Bylaws require approval of the Collaboration Board. Unless otherwise expressly stated in these Bylaws, we will be guided by the rules set forth in the 12th edition of "Robert's Rules of Order, Newly Revised"

# 2 Scope of the Collaboration

The ET collaboration has the duty to

- propose, design, realise, install, commission and maintain the Einstein Telescope instrument<sup>1</sup>
- define, develop, investigate the science of the ET observatory
- design, develop and maintain the ET computing model and the related software;
- deliver ET science data, once available, according to the data policy as determined by the ET Council (see Appendix A) and the Collaboration Board.
- investigate, elaborate and propose to the Council the ET scientific strategy and future upgrades of the ET observatory.

A limited set of items of the ET research observatory are instead under the  $Project^2$  responsibility as detailed in Appendix A.1

The accomplishment of these tasks is a common goal of the entire Collaboration, to which the individual members contribute according to their skills and resources. Contributions can be made through the provision of equipment (as in-kind contributions) or through intellectual contributions. An appropriate financial contribution to the common funds of the Collaboration is expected from participating institutions (see 5).

The ET Collaboration strives for inclusive workplaces free from discrimination and harassment. It is the policy of the 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. Members will treat each other with respect and consideration to create a collegial, inclusive, and professional environment. It is the responsibility of all members to create a supportive environment that enables scientific discourse.

The ET Collaboration makes every effort to maintain the highest ethical standards. Fabrication, falsification, or plagiarism in proposing or performing research shall not be tolerated. Any output from the collaboration is shared by all members and is subject to rigorous review and fact-checking processes before results are made public. All who made substantial contributions to a work are included as authors. The ET Collaboration gives credit to those who originated ideas used in its research, by methods and policies to be defined within the

<sup>&</sup>lt;sup>1</sup>The ET **instrument** does not include the items listed in Appendix A.1 for which the Project is responsible.

<sup>&</sup>lt;sup>2</sup>The word "Project" is used here to distinguish between the **Collaboration** and the ET Observatory (**Project**), i.e. the part of the ET activities that is managed by the project directorate (through the project office, which will later become the legal ET entity).

Collaboration. Scientific work is reviewed fairly and objectively, maintaining the confidentiality of the work reviewed.

The success of the collaboration is bound by individual commitment to physics and the prospect of exciting new results that can only be achieved with a complete and coherent collaborative effort.

# 3 Collaboration Structure

The Collaboration is organised in different bodies, as depicted in fig 1.:

- the Executive Board (EB)
- the Collaboration Board (CB)
- the Science Forum (SF)
- Specific Collaboration Boards
- Service and Standards Boards and Committees



Figure 1: Collaboration governance overview

The current state of the ET project organisation and its relation to the Collaboration is depicted in Appendix A in fig A.1.

## 3.1 Collaboration Membership

### 3.1.1 Membership Categories

The standard and preferred way to become an ET member is through the affiliation to an existing Research Unit.

**Research Units** Research Units are groups of ET Collaboration members. By default groups belonging to the same university or a local research institution are regarded as a single Research Unit. In case of national or regional research organizations with geographically distributed sections, each local section is defined as an independent RU. Exceptions can be agreed on by the CB with a 2/3 majority. Each RU defines a Research Unit Leader, who is the main responsible for communicating between the Collaboration and the RU. He/she is one of the delegates of the RU on the Collaboration Board (see 3.2). If several research institutions that are members of ET are co-located and there is an affiliation mechanism between them (e.g. between a university and the local section of a national or regional institute), they shall form a single RU. To be eligible for ET membership, an RU must commit at least 1.5 FRTEs in its first year and at least 2 FRTEs thereafter. See details in 3.2.2.

The CB has the flexibility and discretion to adapt the above rules to specific and justified cases. Each RU appoints a Research Unit leader who serves as the point of contact for all RU-specific enquiries from collaboration bodies, the RU members or persons wishing to become a member of the RU.

**Individual members** Individual scientists who do not belong to a Research Unit 3.1.1 can exceptionally become a member of the Collaboration through the ET Science Forum (see chapter 3.3). They will have reduced rights and duties. ET SF members will be exempt of common funds (see 5). The whole Scientific Forum will be represented in the Collaboration Board by one representative.

### 3.1.2 Qualification for Membership; Duties of Collaboration Members

Each ET member has to be an active member of the Collaboration, i.e. usually a member of a working group and declare his/her role in it and the amount of work offered in fractions of an FRTE. The minimal contribution to the ET Collaboration of each member shall be 10% FRTE. RU Leaders shall have at least 30% FRTE of ET Collaboration contribution. It is expected that PhD students, who wish to become an ET Collaboration members, focus a good part of their efforts on ET and hence should dedicate at least 30% FRTE to ET Collaboration work.

Members of the ET Collaboration are expected to

- adhere to the ET Collaboration Code of Conduct and the Collaboration rules (see Appendix F)
- be an active member of the Collaboration, i.e. in most cases actively participating in a research activity which contributes to the ET goals, in a working group or division of one of the Specific Boards
- declare his/her role in the Specific Boards and the amount of work offered in fractions of an FRTE
- Members are expected to communicate to the collaboration and make fully available to the collaboration all ET relevant results of their research activities, especially if they have been produced with ET collaboration resources or the Collaboration's foreground knowledge. For software created in the ET Collaboration, this includes making the source code available. All ET relevant research (as defined in the Core Program) shall be communicated and coordinated in the corresponding working groups.
- do service work for the Collaboration (see Appendix 3.8)

### 3.1.3 Member Rights

- Access to internal information
- Authorship rights in full Collaboration papers
- Participating in setting the goals of the Collaboration through representatives in the ET Collaboration Board.
- Possibility to present ET results on behalf of the whole collaboration
- Access to the shared tools and resources set up by the collaboration through common or project funds

### 3.1.4 Becoming a Member

- The standard way to become an ET member is through the affiliation to an existing RU. The RU leader must confirm that the applicant is a member of the RU, specify the topic the applicant will work on and state the FRTE share committed to the collaboration by entering the required data into the ET membership database. It is the responsibility of the RU leader to forward the information about a new member to the appropriate work units to which the new member contributes.
- Applicants for the inclusion of a new RU in the Collaboration must contact the EB in advance and present their contribution proposal. The EB can delegate the discussion of support of the proposal to a division or a working group of a Specific Board (see B). If the request is supported, the EB proposes the inclusion of the new RU to the CB. The applicant must then present the proposed work, the qualification of the RU, and the pledged FRTEs to the CB. The proposed contribution should serve the objectives of ET as defined in dedicated documents produced by the Core Programme Committee (see C.1) once existent. Exceptions can be decided by the CB. New RU membership applications shall be voted on with a lead time of at least one week at the next CB meeting. If the vote is positive, the new member is accepted into the Collaboration for a one-year test phase, after which the RU's performance is evaluated. Each RU shall sign a Collaboration Agreement Document (see C.7.3, describing the work the RU intends to contribute to the Collaboration and the FRTE percentage of each of the named RU members.
- Individual applicants that are not associated to an ET RU (see 3.1.1) can become members of the ET Collaboration through the Collaboration's Science Forum (see 3.3), although it is an exceptional procedure. Being an exceptional case, applications are dealt with directly by a team consisting of the Chair of the CB, the SP and the Deputy SP. This team can delegate the task to a special committee that will be formed if necessary. Each ET SF member will annually report on the achievements of the previous year and the objectives for the next year. The reports will be reviewed by the Collaboration Agreement Document Committee (see 3.8.7).

In the start-up phase:

- Research Units created by members of the ET Proto-Collaboration, included in the ET membership database (https://docs.google.com/spreadsheets/d/18mp0kNFNpvuTaHjaQen2wPW91I0\_ANDER3a-5Vc2PCE/edit#gid=0 as of 7.6.2022) and fulfilling the above-mentioned requirements are automatically accepted when applying to join the ET collaboration. In the same way, Research Units, applying to participate in the ET collaboration and belonging to institutions who are signatories of the ET Consortium Agreement submitted as part of the ESFRI procedure will be automatically accepted.
- Applications have to be submitted to the ET Steering Committee instead of to the Collaboration Board
- In the first year, only one delegate per RU is allowed to be on the Collaboration Board, to avoid the difficulties of initial FRTE counting, when the FRTE declaration procedure is not yet in place.

### 3.1.5 Legacy Members

Particularly merited members of the Collaboration may be granted a lifetime full membership status (legacy membership) upon application. Such special merits could be: holding a leadership position for a prolonged period of time in the Collaboration, or prior to the formal establishment of the Collaboration. The decision on such applications shall be made by the Collaboration Board.

### 3.1.6 Membership Termination

**Voluntary** Members of the Collaboration may terminate their Collaboration membership at any time at their own request. The details of the existing procedure and the consequences thereof shall be worked out by a committee convened by the Board of the Collaboration.

**Expulsion** In the event of serious or repeated violations of the Code of Conduct or a period of persistent non-performance in Collaboration activities, as evaluated by the CAD Committee, the Collaboration Board may, as a last resort, if other mitigation measures fail, expel members from the Collaboration by a qualified majority of 75%.

### 3.1.7 Role Incompatibilities

Collaboration members, taking on a responsible role in the "Project" section of ET or in the Council, cannot have a responsibility or coordination role in the Collaboration. For example, they cannot be RU delegate on the CB, cannot be members of the Executive Board and cannot chair a division or WG of a Specific Board. In this case, all the active and passive electoral rights in the Collaboration and duties are suspended for the duration of the respective role in the "Project". Also, the contribution to the FRTE counting is suspended. All rights and duties will immediately be resumed when the "Project Engagement" ends. Exceptions can be requested by the interested Collaboration member, evaluated by the Spokesperson and decided by the CB by simple majority vote.

### 3.2 The Collaboration Board (CB)

The ET Collaboration Board is the representative and governing body of the Collaboration. Its decisions on matters of science, policy, and procedure are binding and represent the position of the Collaboration.

### 3.2.1 Collaboration board activities

- The CB elects the Spokesperson (SP) and the Deputy Spokesperson (DSP) for a three-year term.
- The CB elaborates ET's long-term strategy and recommends it to the stakeholders.
- The CB approves and revises the Collaboration Bylaws.
- The CB defines the membership rules for the ET collaboration.
- The CB defines the publication rules for the collaboration.
- Specific Boards and Committees are proposed by the Spokesperson and voted into existence by the Collaboration Board, in an action that modifies the Bylaws. Substructures in the Boards and Committees are handled within the Boards and Committees. In the same way, the CB decides by vote upon proposal by any CB member or chair of the respective Board or Committee on the termination of it.
- The CB decides on the inclusion of new Research Units in the ET collaboration
- The CB approves the main responsibilities and expenditures suggested by the EB and communicates them to the Council.
- The CB proposes the relations with other scientific collaborations and projects for endorsement by the Project Directorate.
- The CB has the duty of verifying the actual full-research-time equivalent (FRTE) participation of each RU using a well-defined analysis method. For this purpose, the EB, through its specific boards, has to provide descriptions (WBS; ...) detailing the activities, the participation and the roles of the members of the collaboration. The contributions are reviewed by the Consortium-Agreement-Document (CAD) Review panel (see 3.8.7) by annually comparing the work reported by each RU with the commitments pledged.
- The delegate/s on the CB of each RU has/have the responsibility to declare the FRTE composition of the RU.
- The CB elects its Chair for a three-year term by simple majority.
- The Chair coordinates the work of the CB. In particular, the Chair calls the meetings of the CB that should take place at least two times a year.
- The CB approves the members and the structure of the Executive Board (EB) (see 3.6) proposed by the Spokesperson.
- The CB elects the chairs of the "specific boards" and panels by simple majority. These chairs will be ex officio members of the EB.
- In the start-up phase:
  - The present chairs of the specific boards keep their role until the end of their mandate.

Specific Board chair	begin of mandate	end of mandate
Andreas Freise, ISB	01.01.2021	31.12.2022
Gianluca Gemme, ISB	01.01.2021	31.12.2022
Marica Branchesi, OSB	18.01.2021	18.01.2025
Ed Porter, OSB	18.01.2021	18.01.2025
Michele Maggiore, OSB	18.01.2021	18.01.2025

Table 1: List of mandate periods

### 3.2.2 Collaboration Board Composition

Each Research Unit (see 3.1.1), contributing more than 2 FRTE<sup>3</sup> to the ET Collaboration, is represented in the CB by at least one delegate. The number of FRTEs may temporarily (up to one year) fall below the threshold of 2 FRTEs without the RU being excluded from the CB. If the reduction in FRTEs remains for

 $<sup>^{3}</sup>$ (FRTE) Full Research Time Equivalent is the ratio of working hours actually spent on ET relevant aspects during a specific reference period (usually a year; in the case of the ET Collaboration between CAD reviews (see C.7)) divided by the total number of hours worked on any research (in contrast to e.g. teaching or administrative work) in the same period by a researcher.

more than one year, the RU members are automatically included in the Scientific Forum until the threshold is exceeded again. For the first year after application, the minimal threshold is reduced to 1.5 FRTEs. PhD students are included in the count, undergraduate students are excluded. A certain level of correlation between the FRTE declared by the RU and the number of its delegates is expected. The proportionality is implemented by the number of delegates sent by the RU, according to the formula whereby the number of delegates per RU is

$$int(1 + nFRTE/m) \text{ if } nFRTE \ge 2, m = 5.$$

$$\tag{1}$$

The definition of the number of delegates should be based on a regular and synchronous verification performed every year. The verification process is described in Appendix C.7.3.

When joining the ET Collaboration, RUs declare their FRTEs; in the first year they have one delegate in the Collaboration Board; from the 2nd year on, once the FRTEs are verified, they will have a number of delegates defined by the formula above.

Each ET RU is responsible for declaring via the ET roster which of their members are CB representatives, updating at least once every year.

After discussion and consensus, the CB may admit (and exclude) observers without voting rights from external projects to the meetings. In this case, the CB should try to agree on reciprocity with the other projects.

CB members have a responsibility to actively participate in the CB's governance process, including staying informed of CB business, discussing CB issues with their respective Research Units, representing their RU's perspective in the CB, and participating in CB decision-making; if this is not possible, a different delegate should be designated.

**Collaboration Board Chair** At the beginning of each Collaboration Board meeting, the CB chair has to check whether a quorum is reached (see 3.2.3).

The ET Collaboration Board elects a CB chair. The Chair has the responsibility and authority to facilitate the governance of the CB. The Chairperson's responsibilities include all aspects of planning, convening and conducting meetings of the CB in consultation with the Spokesperson and documenting the decisions of the CB.

The ET CB Chair motivates and supports CB members in participating in the discussion and in bringing forward motions to the CB. The CB Chair may delegate certain responsibilities to other ET Collaboration members in case of need or conflict. The choice of substitute should be discussed with the Spokesperson (who could take on the role if appropriate for the meeting in question). The position of CB Chair will be for 3 years, and will be phased to alternate with Spokesperson elections. The CB may remove the sitting Chair with a 2/3 majority vote, excluding abstentions. The CB Chair keeps a record of the meeting including the primary decisions made by the CB, a video recording, an audio recording, and a list of the public chat messages. Documents referenced in the meeting are linked to the meeting record.

The CB chair also chairs the Forum of National Representatives (see 3.4).

The election procedure and rules are detailed in C.2. The aim of the election rules is to provide an efficient procedure to elect the Spokesperson and Deputy Spokesperson, avoiding a lack of governance. The election rules and procedures can be changed and refined by the election committee and endorsed by the CB.

### 3.2.3 Motions and Voting

Decisions in the CB shall be taken by consensus wherever possible. If a consensus cannot be reached within reasonable time, the CB chair can decide to call for a vote.

**Motions:** Any member of the CB can bring up a motion at any time of the CB meetings, or by e-mail at times outside the meetings. To become a business of the CB, the motion needs to be seconded by at least one other CB member.

**Voting rights:** All members of the Collaboration Board have equal voting rights and weighting.

**Quorum:** Unless specified otherwise, the required quorum for business is 30% of the entire CB membership and 50% for in-presence voting or elections. For electronic votes (see C.2) or elections, the quorum is granted by the possibility of all CB members being "present".

**Majority:** Unless specified otherwise, a motion is accepted if it gets a simple majority of 50%. Abstentions (declared abstentions or votes not cast) or blank votes shall not be taken into account in determining the majority. Example: If the CB consists of 100 members of which 50 members are present for an in-presence

vote/election (quorum reached) and 10 of them abstain or cast a blank ballot, the simple (50%) majority will be more than 20 votes ((50-10)/2).

Changes of the Bylaws: Changes of the Bylaws can be initiated by

- the ET Collaboration Spokesperson
- the ET Collaboration Board with a motion supported by at least 15% of its total membership

by proposing changes of the Bylaws to the CB. The proposal will be submitted to the CB at least three weeks prior to a CB meeting, where it will be discussed. It may be amended by the proponents following this discussion. The final version of the proposal is again discussed in a CB meeting and then voted on. Accepting a change of the Bylaws requires a qualified 2/3 majority of votes excluding abstentions, votes not cast and blank votes. The vote must be done electronically (see C.2).

**Proxies:** If a member of the Collaboration Board is unable to attend an important meeting, he/she may send a proxy to attend in his/her place. This possibility is limited to exceptional cases and requires the consent of the CB chair.

**Procedures:** Voting can either be done by acclamation in the CB meetings or by electronic vote. The preference for important decision should be electronic voting. The decision on the form of voting shall be taken by the Chair of the CB in consensus with the Board, if necessary, by voting on the procedure by acclamation. An appropriate electronic voting and election system will be set up by the election committee (see 3.8.9). In case of electronic voting, a quorum will be reached by default, as all CB members will be given the opportunity to vote. The basis for the voting/election is provided by the CB Chair making available the recordings of previous relevant meetings and all other relevant documentation.

### 3.3 ET Science Forum

Although the standard and preferred way to participate in the ET Collaboration is through an RU, the Science Forum (SF) allows exceptional individual scientists to participate in ET even if they do not belong to an RU.

If the scientists belong to a national institute, agency or university that is participating in ET through an RU, they should join through this link. If their country participates in the project, they are invited to join through an affiliated institute.

If none of these cases are working, they can apply to join the Science Forum.

After admission, the individual members sign a light CAD (see C.7), such that their contributions can be verified in the CAD review process.

A member of the ET Science Forum has the right to:

- Access to the ET internal documentation and to some common services
- Participate in the ET meetings
- In front of the agencies use this affiliation in order to ask for funds
- ET SF members will be exempt of common funds

A member of the ET Science Forum has the duty to:

- adhere to the Code of Conduct of the Collaboration
- Actively contribute to the science of ET
- Inform the editorial committee in advance about publications on ET (TBD better)
- Respect confidentiality restrictions imposed by the ET collaboration
- Avoid public contradiction of the scientific and technical choices of the Collaboration/Project

If the SF is composed by more than four persons, the ET SF elects one delegate for the CB by a simple majority election. Election will be triggered by the CB chair and the details of the procedure will be defined inside the SF.

Admission to the ET SF is decided by the CB, through simple majority vote. The applicant must contact the **ET SF committee** (the Chair of the CB, the SP and the Deputy SP) in advance and present their contribution proposal. The ET SF committee can delegate this step to a division or a working group of a Specific Board (see B) and base the decision on their recommendation.

# 3.4 Forum of National Representatives

Besides the management of the overall (global) ET Collaboration, there will be a need to organise matters at a national level, e.g. arrange for national R&D programs with funding agencies. For high bandwidth information exchange and coordination, a Forum of National Representatives will be formed. The Forum of National Representatives (FNR) is composed of ET collaboration members elected by the RU leaders on a national basis. There will be one representative per country. Its mandate is to discuss organisational and scientific aspects of the ET collaboration at a higher and more aggregate level compared to the CB. The FNR is chaired by the CB chair and the SP is regularly invited as observer. The FNR meets at least once per year, it only has an advisory role, producing reports or vision documents, without decision power or voting rights in the Collaboration. The national representatives are regularly invited as observers to all CB meetings.

# 3.5 Collaboration Spokesperson and Deputy Spokesperson

The ET collaboration is led by the Spokesperson who is the chairperson of the Executive Board and is responsible for the scientific and technical direction of the Collaboration, following the policies agreed by the Collaboration Board. The Spokesperson is the main representative of ET. He/She interacts with the ET Project Directorate, with the international physics community and the public. The Spokesperson is elected by the Collaboration Board.

The CB elects the Spokesperson (SP) and Deputy Spokesperson (DSP) for a three-year term. The election timing, procedure, and rules will be set by the Election Committee 3.8.9. When standing for election, SP candidates must nominate a DSP. The SP and DSP team shall be elected jointly to ensure optimal cooperation between SP and DSP. Each ET member can be elected for the office of SP at most twice, but not in consecutive election periods. A DSP may stand for election as SP in the election period following his/her term as DSP. In this case, the former SP cannot be nominated as DSP.

### The Spokesperson

- represents the ET collaboration
  - in front of the Agencies
  - in all the ET Project bodies
  - to the external World (the Public, other GW projects, umbrella organisations (APPEC, GWIC, etc.)
- coordinates the Executive Board
- participates in the Collaboration Board activities and acts as the main link to the Executive Board there
- regularly reports the EB activities to the CB

The Spokesperson may delegate responsibilities as needed, including representation to external entities.

**The Deputy Spokesperson** The Deputy Spokesperson collaborates with the Spokesperson in all his/her activities. He/she replaces the Spokesperson in case of absence.

### 3.6 Executive Board

The Executive Board (EB)

- manages the core activities of the ET collaboration. The EB has the duty to coordinate the technical and daily activities.
- is composed by ex-officio members and additional members proposed by the SP and endorsed by the Collaboration Board. Ex-officio members will be the Collaboration Spokesperson (SP), the Deputy Spokesperson (DSP) and one delegate of each Specific Board. By default, the delegate of each Specific Board is the chair; in case there is more than one chair the oldest (in terms of charge) is selected unless there are different agreements in the Specific Board

The Spokesperson can invite (non-EB) members of the ET Collaboration as consultants. The Collaboration Board chair is invited to all meetings of the EB.

- is led by the ET Collaboration Spokesperson.
- members are nominated by the Spokesperson and endorsed by the Collaboration Board.
- submits important decisions to the Collaboration Board for endorsement.
- manages Specific Boards (see Appendix B) that can change according to the different phases of the project. Currently, the following specific boards have been identified (see figure A.1):
  - The Instrument Science Board (ISB)
  - The Observational Science Board (OSB)
  - The Site Characterization Board (SCB)
  - The Computational Infrastructure Board (EIB)
- takes on the duty to realise the various stages of the TDR for ET. The progress will be reported to the CB at every CB meeting.
- proposes, through the SP or DSP, the agenda of the General Assembly meeting to the Chair of the CB.

The work of the Executive Board shall be transparent to the Collaboration. Besides the daily work of the Executive Board, it will hold weekly meetings with as many of its members as possible. Minutes of the meeting will be taken and will be made available to the Collaboration. A standard way of taking minutes will be defined and adopted in the ET Collaboration. Sensitive topics may be excluded from the EB meeting minutes, which will be made available Collaboration-wide.

Decisions of the Executive Board, which do not require endorsement by the Collaboration Board, are taken as follows:

- In general, the Executive Board operates by consensus in making decisions. Consensus is achieved when every member either agrees or is willing to set aside their points of disagreement on a topic.
- When a formal vote is needed, either according to some ET policies or due to a lack of consensus, the decision is by a simple majority vote.

### 3.7 Specific Collaboration Boards

The Specific Boards are a collection of operative elements of ET that deal with the definition, implementation and management of specific aspects of the project. Currently, the Steering Committee has created these Specific Boards: the Instrument Science Board (ISB), the Observational Science Board (OSB), the Site Preparation Board (SPB), the Site Characterisation Board (SCB) and the E-Infrastructure Board (EIB). The organisation of the specific boards is detailed in Appendix B.

The mandate of each of the Boards includes to continuously monitor their own performance and to adapt their internal rules to the needs of ET. Requests for changes in the Board policies and procedures as stated in the Bylaws have to be presented to and approved by the Collaboration Board.

At the end of a mandate and after consultation with the EB, the SP shall propose Board Chairs to the Collaboration Board for endorsement. These mandates are valid for 4 years, with a preference not to renew.

### 3.7.1 Instrument Science Board (ISB)

The ISB deals with all technical and scientific matters of the instruments comprising the ET observatory. The Infrastructure and the beam pipe vacuum system are under the responsibility of the project directorate. The ISB will provide the ET Technical Design Report (ET-TDR) of the detectors in an iterative process starting from the ET Conceptual Design Report (ET-CDR). The timing will be guided by the timetable indicated in the overall project plan. The ISB will also identify missing technologies and suggest a plan for R&D activities. For more details, see B.1.

### 3.7.2 Observational Science Board (OSB)

The OSB will detail the ET science case, evolving from the current conceptual level toward the future implementation of the data analysis environment of ET. The OSB will detail the possible science in ET, will prepare the data analysis requirements, and will indicate the computing requirements for ET. The mandate and the organization of the OSB are described in annex B.2 and in ET-041A-21.

### 3.7.3 Site Characterization Board (SCB)

The SCB will characterise the candidate sites. It will measure the environmental conditions at the sites and determine the impact on the ET project in order to compare the candidate sites on a scientific basis. The mandate and the organization of the SCB are described in annex B.4.

The mandate and the organization of the SCB are described in annex B.

### 3.7.4 Electronic / Computation Infrastructure Board (EIB)

The mandate of the Computational Infrastructure board is to design, create and operate an evolving, efficient and functional e-infrastructure environment at a reasonable cost for the collaboration. Initially, the focus will be the development of a Computing Model for the ET. Details of the mandate and of the organization are available in the ET-0323A-21 document and in annex B.3.

## 3.8 Collaboration Services and Standards Board

The text hereafter is meant as an offer of a possible structure. and is inspired by the LSC bylaws; still needs to be fully adapted...

### 3.8.1 Basic Structure

The Collaboration Standards and Services Board addresses tasks and topics related to the climate within the ET Collaboration, equitable share of visibility, Collaboration organization issues, and Collaboration administrative functions.

The Chair of the Collaboration Standards and Services Board is appointed by the ET Collaboration Spokesperson for a term of two years. The members of the Collaboration Standards and Services Board Steering Committee are the Board Chair and one representative of each of the committees listed in 3.8.4 to 3.8.10. The Collaboration Standards and Services Board will periodically meet at a cadence to be determined.

### 3.8.2 ET Core Program Committee (CPC)

The ET Core Programme Committee defines the tasks that are part of the Collaboration's core research area and that can be counted as contributions when determining full-research-time equivalents (FRTEs). For details on the mandate, policies and procedures, see C.1.

### 3.8.3 ET Early Career Scientists Support Committee (ECSS)

The ETECS2's mandate is to support early career scientists who are members of the collaboration. Early Career Scientists are students or scientists with less than 6 years after PhD The mandate of the Committee will be elaborated by the CB, once formed. An indicative list of tasks could be extracted from previous GW collaborations, like Virgo or LSC.

### 3.8.4 Diversity, Equity, Inclusion, Access and Ethics Committee (DEIAEC)

**The Diversity, Equity, Inclusion, Access and Ethics Committee** oversees and documents the Collaboration's activities relevant to ET members' diversity, equity, inclusion, access and ethics aspects. The definition and mandate of this board will be defined by the CB, once formed.

• Diversity: All the ways we differ

Diversity includes all the ways in which people differ, encompassing the different characteristics that make one individual or group different from another. While diversity is often used in reference to race, ethnicity, and gender, we embrace a broader definition that also includes age, national origin, religion, disability, sexual orientation, socioeconomic status, education, marital status, language, physical appearance, geography, and any other identifiers that make one individual or group different from another. It's important to remember that diversity is less about what makes people different but more about understanding, accepting and valuing those differences.

- Inclusion: All feel welcomed and valued Inclusion is the act of creating environments in which any individual or group can be and feel welcomed, respected, represented, supported, and valued to fully participate. The important distinction is that even in the most diverse teams, there is not always a sense of inclusion.
- Equity: All having the opportunity to fully participate Equity encompasses the policies and practices used to ensure the fair treatment, access, opportunity, and advancement for all people, while at the same time trying to identify and eliminate barriers that have historically prevented the full participation of some individuals or groups.
- Access: Of any and all abilities Access refers to the commitment for everyone to be included in all programs and activities.

To ensure that these issues are properly addressed, a member of the Diversity, Equity, Inclusion, Access and Ethics Committee shall also be a member of the Speakers and Awards Committee.

Some of these issues, as they affect people outside our Collaboration, may be properly addressed by the Communications and Education section.

The Committee prepares and maintains a public document that contains quantitative goals of the Collaboration, and a Best Practices guide for the Collaboration. Both documents should be updated as needed, at least annually.

The Committee prepares and maintains a White Paper (action plan) relevant to the Collaboration's plans and activities towards the goals, with an up-to-date version to be available before the beginning of the annual ET Collaboration CAD review cycle.

The Committee coordinates the projects and wider efforts undertaken by the ET Collaboration diversity working group, membership of which is open to the entire Collaboration.

The Committee Chair is appointed by the ET Collaboration Spokesperson for a term of two years.

**Members** of the committee are appointed by the Committee Chair, with approval of the ET Collaboration Spokesperson, for terms of two years. Terms are staggered for continuity.

### 3.8.5 Speakers and Awards Committee (SAC)

The Speakers and Awards Committee is responsible for promoting ET Collaboration scientific accomplishments by actively cultivating opportunities for ET Collaboration members to present ET Collaboration results to the broader scientific community through invited talks at conferences and meetings. Also, the committee is responsible to broaden participation in these meetings among ET Collaboration members.

The SAC receives requests for speakers, finds speakers to present on behalf of the Collaboration, maintains a list of upcoming conferences, and maintains a database of members speaking at past conferences. The SAC proactively contacts conference organizing committees to seek speaking opportunities for ET Collaboration members.

Invitations received by an ET Collaboration member for talks about the Einstein Telescope at an international workshop or an international conference are regarded as invitations to the Collaboration. Such invitations may not be accepted by members of the ET Collaboration without prior approval of the SAC. All talks given "on behalf of the ET Collaboration" require SAC pre-approval.

Invitations received by an ET Collaboration member for seminars and colloquia are regarded as invitations to an individual. No prior approval is required.

The SAC also has the task of actively seeking opportunities for ET Collaboration members to be nominated for scholarly prizes, awards, and fellowships. The SAC will follow policies and procedures defined in the ET Speakers and Award guidelines. These guidelines will be proposed or updated by initiative of the SAC and endorsed by the CB by simple majority vote.

The chair of the SAC is elected by the Collaboration Board for a term of three years. The SAC consists of 6 members appointed by the Spokesperson for two-year terms. The committee will consist of 2 members from each of the Specific Collaboration boards, such as Observational Science Board, Instrument Science Board.

It is anticipated that at least some members will serve for two or more terms, allowing this committee to establish long-term relationships with meeting organizers and sponsors and to proactively plan ET Collaboration representation in meetings in their earliest planning stages.

### 3.8.6 Editorial Committee (EC)

The Editorial Committee is responsible for maintaining adherence to the Publications and Presentations policy, following the procedure in the ET collaboration publication and presentation policy document, to be realised and updated by the Editorial Committee and endorsed by the CB by simple majority vote. The resulting document will be put into the appendix of these Bylaws: C.6 and replace the draft text there.

This includes maintaining a full and complete list of all Collaboration Publications in any medium, and making that list accessible to the Collaboration and to the general scientific community.

The Editorial Committee consists of a diverse set of persons, including two co-chairs, to be elected by the CB for 2-year terms, preferably staggered. They may call on all members of the ET Collaboration to help them in their tasks.

### 3.8.7 Collaboration Agreement Document Committee (CADC)

The *Collaboration Agreement Document* (CAD) describes the non-legally binding agreements (NBA) between the RUs involved in the collaboration. It defines the level of participation in the ET Collaboration, and it is signed by the head of an RU. Although it is not legally binding, with this document the RU will pledge the promised work and amount of work force to the Collaboration and will be morally bound to the promise.

The Collaboration Board appoints a CAD Review Committee (see C.7) to negotiate the CADs with new member RUs and to annually critically compare the performance of the ET Collaboration Groups against their past pledges as documented in the CAD Annexes and review their proposed work as described in the new CAD Annexes. The CAD Committee keeps track of the contributions of the individual members of the SF. This Committee makes recommendations to sign after specified changes, or not to sign each Group's CAD Attachments. Outcomes of the CAD Review Committee are proposed by the ET SP and endorsed by the CB through simple majority vote. The chair of the CAD Review Committee is appointed by the ET Collaboration Spokesperson for a term of two years. The CAD Review Committee will rotate in membership to the extent possible to guarantee appropriate balance in technical expertise, in interest, and among ET Collaboration groups. The procedure of the review is described in C.7 TBD. In the review process, the CAD Committee also keeps an up-to-date database of the ET Collaboration members.

#### 3.8.8 Standards and Conduct Committee (SACC)

The Standards and Conduct Committee is responsible for advising the Spokesperson, the Collaboration Board, the Executive Board and the Collaboration about issues involving the ET Collaboration code of conduct. The chair of the Standards and Conduct Committee is appointed by the ET Collaboration Spokesperson for a term of two years. Members of the Standards and Conduct Committee are proposed by the ET SP and endorsed for two-year terms by the CB through simple majority vote. Members are chosen from a broad crosssection of the collaboration to minimize conflicts of interest. Matters to be addressed by the Standards and Conduct Committee may be brought to the committee's attention by the Spokesperson or by any member of the Collaboration. The Standards and Conduct Committee will advise the ET Collaboration Spokesperson and other members with administrative duties concerning conflicts of interest and ethical standards, following the procedures detailed in a document that the SaCC prepares as its first task after being formed. The Committee will make decisions on specific issues when its opinion is requested. The Committee shall investigate such requests and will bring the issue to the Collaboration Board if it thinks it needs Collaboration Board action. The Committee will revise, update, or clarify the ET Collaboration Code of Conduct (see Appendix F) and the ET Collaboration Policy for Formal Complaints and Grievances (see Appendix F.1), as necessary.

#### 3.8.9 Elections, Voting and Membership Committee (EVMC)

The Election and Membership Committee organizes and oversees all elections and voting processes, including setting dates for elections, soliciting nominations, carrying out the elections, and informing the Collaboration of results.

The chair of the Election and Membership Committee is proposed by the Spokesperson and endorsed by the CB through simple majority vote for a term of two years.

Members of the Election and Membership Committee are proposed by the Spokesperson and endorsed by the CB through simple majority vote for terms of two years. Terms of Chair and Committee members are staggered.

The Election and Membership Committee oversees the elections for the Collaboration Spokesperson and Deputy, for chairs of working groups, for elected chairs and members of committees, and for other elected ET Collaboration representatives.

The Elections and Membership Committee shall establish an electronic voting and election system to be used for formal voting in all boards and committees of the Collaboration as required.

The mandate, organisation and procedures of the election committee are detailed in Appendix C.2.

### 3.8.10 Meetings and Symposia Committee (MSC)

**The Meetings and Symposia Committee** is responsible for organizing and coordinating the meetings of the Collaboration, following the procedures in the Guidelines for Meetings and Symposia developed and updated by the MSC, proposed by the SP and endorsed by the CB by simple majority vote. In the early phase, the executive board will take the role of the committee.

# 4 Collaboration meetings

Since ET is a European Project and Collaboration, meeting places and times shall preferably be chosen to facilitate participation from the European area. Exceptions can be made in special cases, e.g. for meetings that are connected to other events.

### **Regular meetings:**

- the annual ET Symposium will be open to everyone (internal or external to the Collaboration) wishing to participate. Details (how often, preparation, procedures for announcing, procedures for conducting the meetings, procedure for cancelling or shifting meetings) are defined by the Meeting and Symposia Committee (See 3.8.10)
- additional ET plenary meetings are held at least twice a year and are open to all members of the ET Collaboration. The plenary meetings may be attached to an ET Symposium. At these plenary meetings, internal matters can be discussed that are not (yet) intended for public disclosure. Upon request, the Collaboration Board may approve exceptions and accept external participants. This can be done by acclamation at the regular CB meetings.
- meetings of the Collaboration Board are held every 4 months, once the Collaboration is operative in steady state. In the beginning, CB meetings will be held more often, e.g. every month or even biweekly. The cadence will be set by the CB in the first CB meeting. The CB chair can call for exceptional meetings at any time.
- meetings of the Specific Boards are held at a cadence set by each Board.

Each of the other Collaboration sub-bodies arranges meetings according to their internal rules and procedures. All collaboration meetings are listed (well in advance) in a calendar accessible to all ET Collaboration members. The responsibility of listing the meeting is with the chair(s) of the involved groups (working group, division, board, Collaboration). The meetings shall be as open for participation as possible. Participation rules are set by the chair(s) of the respective groups.

Extraordinary meetings can be called for by all boards and committees based on the need.

The Collaboration will strive to put all the needed technical and human resources in place to facilitate remote and in person access to the meeting.

# 5 Common funds

The main expenses for realising and running the ET observatory will be covered by a common budget realised and managed by the ET Council at the ET Project level. In parallel, the ET Collaboration may establish common funds at the Collaboration level by collecting contributions from the Collaboration members. The Collaboration Board has the power to set the amount and rules for these common funds. Details, including the quorum and majority required to amend these rules, are set out in Appendix D.

# Appendices

# A Appendix ET Project - Collaboration relations

The agencies and institutions that support ET will define the ET governance. The eventual outcome of this activity will be the creation of the legal entity of the ET Observatory. This activity goes beyond the scope of this document and beyond the remit of the ET Collaboration, but for a better overall context, we report here on some key governing bodies of this part of the Einstein Telescope enterprise.



Figure A.1: Governance scheme proposal

# A.1 ET Project Responsibilities

The ET Project is responsible for the following items<sup>4</sup>:

- the engineering design, realisation, assembling and maintenance of the ET civil infrastructures based on a set of requirements supplied by the ET collaboration
- the design, realisation, assembling and maintenance of the beam tube vacuum system based on a set of requirements supplied by the ET collaboration
  - A beam pipe vacuum working group is kept within the ISB Vacuum/Cryogenic division with the mandate to ensure information exchange between the Project and the Collaboration.
  - The rest of the vacuum system is under the responsibility of the Collaboration.
- the preparation of the non-scientific aspects of the site selection process. The site characterisation in terms of seismic noise and stability, including data taking and data analysis is in the responsibility of the Collaboration.
  - land acquisition and building permits
  - mining laws
  - environmental protection aspects of building the ET infrastructure
  - options for establishing a respect zone around the observatory according to the indications given by the Collaboration

– etc.

• the computing resources, requested by the ET collaboration, and provided as facilities owned by the ET project, central computing centres owned by the national agencies and as commercial resources available on the market

# A.2 Verification of the Collaboration Board composition

The composition of the Collaboration Board according to the rules stated in 3.2.2 will be verified in a yearly process, checking the reported number of FRTEs vs the number of CB members according to equation 1. The verification will be part of the annual CAD review process (see C.7).

 $<sup>^{4}</sup>$ This list is preliminary and subject to change following discussions between the Council, the Project and the Collaboration.

# **B** Appendices Specific Boards

# B.1 Instrument Science Board

The first objective of the ISB is to deliver the ET Technical Design Report (ET-TDR) of the detectors, starting from the ET Conceptual Design Report (ET-CDR). The ET-TDR production will be an iterative process, and its timing is defined in the overall roadmap of the project.

The second objective of the ISB is to identify the missing technologies and suggest a plan for R&D activities. This must be a living plan, regularly updated. The first delivering of this plan is expected in March 2021. The original document describing the mandate of the ISB is ET-0085A-20.

The current structure of the ISB is shown in Figure B.1 (ET-0033B-21).



Figure B.1: Instrument Science Board organisation scheme (January 2022)

In the ISB the Infrastructure Divisions and the Vacuum Working Groups have a special role, as their task

is tightly connected to the work done on Infrastructure and Beam tube vacuum inside the Project Office. All scientific work related to these topics will be done inside the collaboration, while the management, financial planning, engineering, legal framework, formal aspects will be done in the Project Office. The mandates, defining responsibilities and detailing tasks will be defined in a separate document (Currently in https://apps.et-gw.eu/tds/?content=3&r=17260, regularly to be updated)

# B.2 Observational Science Board

The current structure of the OSB is shown in Figure  ${\rm B.2}$ 

**OSB: Observational Science Board** Т



Figure B.2: Observational Science Board organisation scheme (March 2022)

The mandate of the OSB is detailed in ET-0401A-21 (https://apps.et-gw.eu/tds/?content=3&r=17675).

### B.2.1 Mandate

The Observational Science Board (OSB) envisages to develop the Einstein Telescope science case, to start building the scientific community around it, and to bring it to a scientific maturity to exploit the data taken

when ET will start operation. The OSB main goals, for an estimated timeline of the next four years, can be summarized as follows:

- Develop the ET science case to help the instrument technical development and implementation, and later to fully exploit the specific capabilities of the ET detector;
- Stimulate the interest of the scientists going beyond the gravitational wave community, for example involving cosmologists, nuclear physicists, high-energy physicists, astronomers and astrophysicists;
- Build the synergy, collaboration and coordination with other gravitational-wave, electromagnetic, neutrino observatories which will operate together with ET or observatories able to give complementary insights into the ET science;
- Identify the specific data analysis and computing needs for ET and begin the development of data analysis tools and algorithms.
- Involve students, post-doc and early career researchers, and contribute to training the young community which will lead the ET data analysis and scientific interpretation when it will be operative;
- Contribute to generate broad public interest in the ET science.

In order to achieve the above goals the OSB stimulates and coordinates activities related to ET in the domain of theoretical physics/cosmology, astrophysics, gravitational-wave data analysis, and synergies with multi-messenger observations; provides and develops theoretical motivations for the ET Science Case, develops ET-related codes and tools and make them available to the community, starts exploratory work toward data analysis, and provides a pool of competences on the theoretical side that can address questions arising from the ET design studies.

Below we discuss specific activities for the OSB to develop the ET science case, build the ET science community, and stimulate the public interest. In order to carry out such activities, the OSB will be supervised and coordinated by three Chairpersons, and will be organized in Divisions (Divs). Division coordinators might further organize their division into Work Packages, if they consider this appropriate.

For the first four year period, the ET Steering Committee has appointed as OSB chairs: Michele Maggiore (Fundamental Science, Blue Book coordination), Marica Branchesi (Astrophysics, relations with the astronomical community) and Ed Porter (computing, data analysis). Division coordinators are in principle appointed for a two-year period. They can be removed earlier in case of lack of progress, or renewed if appropriate.

### B.2.2 Blue Book

The development of the Science Case will be structured around a 'Blue Book', meant as a living document that summarizes and updates original work related to ET. This can be in the form of summary of relevant parts of papers in the literature, as well as original work performed specifically for the Blue Book. The timeline for a first version of the Blue Book is (tentatively) two years from the beginning of the structuring of the OSB. Taking Summer 2021 as a starting date for the activities, this leads (approximately) to Summer 2023.

The Blue Book will be organized in a series of chapters, corresponding to the different Divisions, under the responsibility of the corresponding division coordinators. The division coordinators have the task of organizing the work of the corresponding Division, of contacting and involving in the project the most appropriate persons, and managing the team that will be created through broad calls to the scientific community. The overall coordination of the Blue Book will be ensured by the Chairpersons of the OSB. The proposed structure, possibly subject to evolution in time in response to emerging needs, is as follows.

• Div1: Fundamental Physics. Physics near BH horizon, tests of GR, exotic compact objects.

Coordinators:

Paolo Pani (Italy, Universit'a di Roma 'La Sapienza') Rafael Porto (DESY, Germany) Chris van den Broeck (Utrecht, the Netherlands)

• Div2: Cosmology. Dark energy, dark matter, estimation of cosmological parameters, modifications of gravity at cosmological scales; stochastic backgrounds of cosmological origin.

Coordinators:

Mairi Sakellariadou (King's College, London, UK) Angelo Ricciardone (Padova University, Italy) Archisman Ghosh (Ghent University, Belgium) • **Div3**: Population studies. Predictions for population of astrophysical origins. Predictions for primordial BHs. Stochastic backgrounds of astrophysical origin.

Coordinators: Michela Mapelli (Padova University, Italy) Antonio Riotto (Geneva University, Switzerland) Giulia Cusin (Geneva University, Switzerland and IAP, Paris, France)

• **Div4:** Multimessenger observations. MMO with electromagnetic and neutrino facilities. High-energy, UV-optical-nIR, mm-radio, neutrinos. Coordinators:

Susanna Vergani (Observatoire de Paris, France) Giancarlo Ghirlanda (INAF, Italy) Stephen Smartt (Queen's University Belfast, UK)

• **Div5:** Synergies with other GW observatories. Synergies with 2G detectors, CE, LISA. Studies of the ET capabilities in various ground-based network configurations, such as ET+2G, ET+CE. In collaboration with Div1-Div4, Div6, Div7, work to identify the science case benefits of using a network of ground-based detectors. Studies of the potential of multi-band observations with LISA. Together with Div9, work in collaboration with the CE researchers toward the realization of mock data challenges and to solve common problems for data analysis with 3G detectors.

Coordinators:

Bangalore Sathyaprakash (Penn State, USA, and Cardiff, UK) Nelson Christensen (ARTEMIS, Nice, France) Samaya Nissanke (University of Amsterdam and Nikhef, the Netherlands)

• **Div6:** Nuclear Physics. EoS of neutron stars in isolated and binary systems, nucleosynthesis in BNS merger.

Coordinators:

Tanja Hinderer (Utrecht, the Netherlands) Michaela Oertel (Meudon, France) Tim Dietrich (AEI and Potsdam University, Germany)

• **Div7:** Stellar collapse and isolated neutron stars. Predictions for Supernovae, magnetars, cosmic string bursts, other non CBC transients.

Coordinators:

Marie-Anne Bizouard (ARTEMIS, Nice, France) Pablo Cerda-Duran (Valencia, Spain) Enrico Cappellaro (INAF, Italy)

• **Div8:** Waveforms. Study of waveform relevant for ET. Improvement of the waveforms for BBH, NSBH, BNS. Development of waveforms for IMBHs and IMRIs.

Coordinators:

Harald Pfeiffer (MPI, Germany) Patricia Schmidt (Birmingham, UK) Laura Bernard (Meudon, France)

• **Div9:** Scientific potentials of different detector configurations, and common tools. This Division provides a bridge with the Instrument Science Board (ISB) and works in strong collaboration with it. Given the strain sensitivities in different detector configurations provided by the ISB, Div8 develops publicly available tools to calculate the ET capabilities for astrophysical predictions (eg. horizon, range and detection efficiency for different systems of compact object binary and other gravitational wave sources). It also provides freely available software to calculate standardized and official figures of merits for different detector networks. Div8 is also responsible for 'quickly' responding to needs of the collaboration for presenting plots and results to funding agencies, conferences, etc.

Coordinators:

Ik Siong Heng (Glasgow, UK) Michal Bejger (Warsaw, Poland) Andrea Maselli (GSSI, Italy)

• Div10: Data analysis platform. Div10 will have the role of building a common data analysis platform, identifying the best option for computing resources (eg shared resources, cloud, etc.), developing solutions to ET data-analysis problems, and harmonizing the data analysis work tuned toward different WPs, ensuring the compatibility of the tools used and avoiding duplication of the work. In order to ensure connection and coordination between the development of data analysis and the physics/astrophysics studies, each researcher working on the data analysis for specific science cases or gravitational-wave sources will be asked to be a member of both Div10 and the relevant(s) physics/astrophysics Divisions (Div1 to Div8). Activities toward mock data challenges should also be started. It is advisable to have a strong connection with similar activities in CE (in collaboration with Div5), given the similarity of the data analysis problems for 3G detectors. The study of the computing need will be performed in strong connection with the Infrastructure Board.

Div10 could possibly evolve into a separate Data Analysis Board, after the four-year timeline covered by this document.

Coordinators:

Tania Regimbau (Annecy, France) John Veitch (Glasgow, UK) Elena Cuoco (EGO, Italy) (+Chris van den Broeck, Utrecht, the Netherlands)

The work will start by identifying the main open questions that ET is expected to answer and which are not possible to address with the current detectors. No publication policy will be enforced at the current stage of development of the OSB, since this would not be attractive to enlarge the community and involve students. The participating groups will be free to publish separately their original results in the usual forms (journals, etc.) The only requirement asked is that, about a week before posting a paper of relevance to ET to the arxiv/journal, the authors will circulate the draft to the OSB. The OSB chairs and DIV coordinators have the responsibility to check that no wrong or confusing statements concerning ET are made, to verify that there is the right recognition of work done by others within the divisions, and to prevent potentially conflictual situations with other ET members. In order to encourage collaboration and the development of the ET community, the DIV coordinators should encourage people to share ongoing projects well in advance with respect to the paper circulation and create an environment where the members of the OSB feel protected on sharing ideas without being scooped by others. All the members are strictly requested to follow the right code of conduct under penalty of exclusion from the collaboration, and the DIV coordinators are requested to monitor for correct behaviour. In case of conflicts or incorrect behaviour, the members of the OSB are encouraged to contact the DIV coordinators and/or the OSB chairs. The Divisions organized for the writing of the Blue Book are expected to naturally evolve and widen into operative Divisions to be ready for the ET observations. The OSB will monitor and drive this transition.

#### B.2.3 Div-S: Synergies with future electromagnetic and neutrino observatories

In order to maximize the ET science results, it is of strategic importance that there will be electromagnetic/neutrino facilities optimized to work in synergy with ET. This requires to involve the world-wide astrophysical/neutrino communities in the ET multi-messenger science development and be sure that they will undertake all the steps to prepare their communities. As an example, during the discussion with ESO representatives (B. Leibundgut and M. Rejkuba), it has emerged that is timely to start now discussions with the community involved in the present electromagnetic follow-up of gravitational-wave sources (e.g. ENGRAVE) on what are the ESO instruments necessary for the electromagnetic follow-up in the ET era and how to optimize them. The OSB needs to be in tight contact with the other world-wide observers in order to build together science cases and give useful indications to the experimentalists working on the instruments.

In order to enlarge the ET user base is strategic starting to tackle technical issues; for example, start to think with the astrophysicists on how to deal with billions of alerts, and how to make data accessible and usable to a larger and larger community following the FAIR principle. During the discussion with ESO scientists, an interesting example was reported concerning the Atacama Large Millimeter/submillimeter Array (ALMA). The interest in the data and science of ALMA was initially limited to a too small community (mainly due to the difficult data analysis). The strategy to enlarge the interested community was to start immediately working on making scientific data accessible and on developing tools for the data interpretations. ALMA data centres were established well before the ALMA first light. This turned out in a large and diverse community which today uses ALMA data. A similar effort is going on for SKA. The OSB, with the major involvement of Div4 and Div9, has to discuss and define a long term plan for this.

Beside the development of the multi-messenger ET science case, which will be the domain of Div4, the synergies with other observatories can require external activities; for examples, to identify the best instruments to work in synergy with ET, to identify the possible missing synergies and the possible plan to establish a connection, to keep updated information about external experiments, and be sure that other experiments have the correct information about ET, to participate in the development of networking and communication infrastructures, to be updated about synergy fund opportunities, or European project synergy activities. These activities are organized in separate Division, Div-S, which includes the OBS chairpersons, the Div4 coordinators, and reference people from the external experiments. All the activities of the Div-S need to be developed in tight contact and coordination with the ET Executive Board.

# B.3 Electronic/Computational Infrastructure Board Board (EIB)

The e-Infrastructure for the Einstein Telescope is the combination of the actual computing resources (CPUs, storage, network etc.), the middleware to coordinate their operation, the services they provide to the collaboration and the greater astronomy community, and the common frameworks upon which the user software is developed. User software itself is out of the scope of the e-Infrastructure; however, best practices and tools used for its development are within.

The mandate of the Computational/Electronic-Infrastructure board is detailed in ET-0323A-21 (https://apps.etgw.eu/tds/?content=3&r=17593) as follows:

### B.3.1 Scope

The e-Infrastructure for the Einstein Telescope is the combination of the actual computing resources (CPUs, storage, network etc.), the middleware to coordinate their operation, the services they provide to the collaboration and the greater astronomy community, and the common frameworks upon which the user software is developed.

User software itself is out of the scope of the e-Infrastructure; however, best practices and tools used for its development are within.

### B.3.2 ET E-Infrastructure

The functionalities the e-infrastructure should provide to the ET include:

- Data transfer and storage: safely and efficiently transfer all data to custodial storage and processing centres, including low-latency transfers;
- Software packaging and distribution: manage software lifecycle, and make packages available ubiquitously;
- Computing power: provide and manage computing resources (HTC and HPC) for the processing of data, in all computing domains;
- Data distribution: make data available to worker nodes in computing centres anywhere, and possibly also to single workstations, including support to public releases of data;
- High-availability service management: provide a platform for running the collaboration's services (e.g. alert generation services, event databases,...)
- Data cataloguing and bookkeeping: organise all data and metadata and provide querying and discovering capabilities;
- Job lifecycle management: provide a uniform job submission and runtime environment to research groups;
- High-level workload management: keep a database of all jobs and allow the enforcement of priorities and scheduling strategies; provide support for organized large-scale data processing campaigns;
- Monitoring and accounting: monitor local and distributed computing, checking performance and looking for issues, and provide reliable accounting both at the user/job and site level;
- Authentication, Authorisation and Identity management: provide consistent AAI across all domains and activities.
- Collaboration services: provide tools for efficient collaboration management, coordination, and outreach (e.g. document repositories, collaborative tools, administrative databases, communications, ...)

The computing resources include:

- the e-infrastructure for the operation of the interferometers,
- the e-infrastructures for the low-latency and offline analysis of data, including centralized and shared distributed resources,
- the e-infrastructure for the management of the collaboration, including outreach activities.

### B.3.3 EIB Charge

The mandate of the e-Infrastructure board is to design, create and operate an evolving, efficient and functional einfrastructure environment at a reasonable cost for the collaboration. Initially, the focus will be the development of a Computing Model for the ET.

- Prepare a plan of the studies and activities that need to be undertaken for the development of the ET computing.
- Propose a computing model and its updates to the collaboration.

The computing model, in its final version, should include:

- The overall architecture of the e-Infrastructure, either as a single integrated system or as a few separate systems (e.g. instrument control and DAQ, low-latency, and offline)
- A documented way of evaluating the required computing power and storage space from the evolving scientific program of the collaboration
- Estimates of the involved costs and growth timelines
- A description of the data flows, with estimates for the needed network performances
- A description of the User Experience and workflows for relevant activities
- A description of the tools chosen to provide all the required functionalities (foundation libraries, frameworks, middleware,...)
- Separate "Work Breakdown Structure" and "Implementation Plan" documents
- Liaise with the existing shared national and international e-infrastructures (EGI, WLCG, EOSC,...) and with other large scale computing endeavours like the ones by LHC and SKA.
- Track the technology evolution to adapt the computing model and its implementation to exploit new available technologies, both hardware and software
- Interact with the entities defined by the Collaboration (participating institutes, common infrastructures,...) to handle the gradual provisioning of the required resources
- Coordinate the deployment of the required tools and services through succeeding releases
- Adopt a DevOps-like strategy of continuous deployment of tools and services to verify the match between the Collaboration's needs and the functionalities provided by the e-Infrastructure.
- Supervise the ET computing resources and their use
- Organize the interaction with the user community to gather feedback

The EIB will seek constant interaction with the Observational Science and Instrument Science Boards.

### B.3.4 Tasks

- Develop a Work Breakdown Structure for the early stages of the preparation of the Computing Model and Cost Estimates
- Collaborate with OSB to define the initial activities to evaluate actual computing needs
- Collaborate with OSB and ISB to define the data formats (both internal and for public release) and organized data processing workflows
- Liaise with the Numerical Relativity community
- Ensure the accessibility of the data, auxiliary information and the software
- Coordinate the development of the tools for the low-latency analysis and alert generation,
- Participate in the technical development of the alert distribution infrastructure, by liaising with the wider astrophysical community
- Support the development of the tools for the operation of the telescope,
- Coordinate the development of common infrastructural tools and frameworks for the data analysis

- Support the operation of large-scale computing campaigns
- Develop policies and best practices to ensure software quality, and encourage/enforce their adoption
- Organize a continuous training programme for both developers and users
- Provide collaborative tools for communication within the collaboration and to the outside
- Coordinate the operation of the collaborative and administrative tools for the management of the collaboration

Finally, we note that the prioritization of the EIB tasks will evolve with the different phases of the ET project. As such, we anticipate that the organizational structure of the EIB will evolve to match the changing needs. Thus, we do not propose an EIB structure here, but rather defer the organization to the moment when prioritization can be assigned to these tasks under the responsibility of the appointed chairs.

# B.4 Site Preparation Board

The work of the Site Characterisation Board is closely related to the Site Preparation Board under the management of the Project. The mandate of the SPB is described in ET-0070A-22. The concrete definition of the mandate and the distribution of tasks shall be discussed and detailed by the SPC once set up and working.

The mandate of the Site Preparation Board is given in ET-0070A-22 at https://apps.et-gw.eu/tds/ ?content=3&r=17835

# C Appendices Services and Standards

# C.1 ET Core Program Committee

**Mandate:** define a catalogue of relevant ET Collaboration tasks. This catalogue of tasks forms the basis for deciding whether pledged collaboration contributions from RUs or individual members are eligible for the FRTE count.

**Members:** The ET Core Program Committee (CPC) is chaired by the Spokesperson, and it is composed of one delegate for each Specific Board. The chair of the CB participates in the activities of the committee as a permanently invited observer.

**Procedures:** The CSPC defines a set of activities that are considered belonging to the core program of ET. This set is discussed in the executive board, proposed by the SP and endorsed by the CB by a simple majority vote.

## C.2 Election, Voting and Membership Committee and Rules

This appendix describes the rules and procedures for the election of the various bodies in the ET Collaboration. All election rules in the Collaboration are proposed by the Election Committee and endorsed by the Collaboration Board.

### C.2.1 Introduction

The ET Collaboration is a self-governing Collaboration carrying out measurements of gravitational waves, using them to explore the fundamental physics of gravity, and developing gravitational wave observations as a tool of scientific discovery. The ET Collaboration works toward these goals through research and development of techniques for gravitational wave detection, for analysis of gravitational-wave signals, and the development, commissioning, and exploitation of gravitational wave detectors. As part of its operation, the ET Collaboration includes an Election and Membership Committee whose responsibilities are defined in the following subsections.

The purpose of this *ET Collaboration Election*, Voting and Membership Committee Policy and Procedures document is to:

- regulate the procedures followed in carrying out the set of elections in the Collaboration;
- identify an election calendar to standardise the timing of elections. The goals in formulating this policy and set of procedures are to:
  - ensure a fair and transparent election process in the cases where positions are filled by an election process;
  - ensure timely and appropriate election or appointment of candidates to vacant posts, which are filled by an election process.
- provide an electronic voting system for elections and votes in the various boards and committees of the Collaboration. Electronic voting in the context of the Collaboration means that the vote is done offline through a dedicated voting system, where the voting person
  - can electronically access the wording of the motion or election to vote on
  - can access additional information like candidate statements or other supplementary information
  - can cast the vote
  - get confirmation on the reception of the vote cast

Key positions in the ET Collaborations are partly filled in a to-down way and partly in a bottom-up election process:

- Collaboration Spokesperson + Deputy Spokesperson are elected by the CB;
- The Chairperson of the CB is elected by the CB;
- Chairs of the specific boards (ISB, OSB, EIB, SCB) are proposed by the SP and appointed by the CB;
- Chairs of the Divisions are proposed to the SP and the EB by the Specific Board chairs and then endorsed by the CB;

- Co-chairs of Working Groups are proposed to the Board Chairs by the Division Chairs and are then endorsed by the EB;
- the "Communications and Education Board" chairs are appointed by the CB according to a procedure to be defined in consensus with the Project Directorate;
- all Committees in the "Services and Standards Board" will be elected by the CB;
- the members of the ET Early Career Scientists (ECS) Support (ETECS) Committee will be elected bottom-up by the ECSs;
- Acceptance of new RUs is voted upon by the CB. A simple majority is required for acceptance.

An Election and Membership (E&M) Committee is appointed by the ET Collaboration Spokesperson in order to:

- organize and oversee all elections processes, including the nomination process;
- oversee the elections as listed above

The timing of elections and appointments shall be staggered in such a way that new appointments are well spread out in time and massive new appointments are avoided. Positions filled in the top-down procedure shall expire even after replacement of more senior positions until the end of their term (or early exit of the person) and shall only then be refilled. Since many positions are filled at the beginning of the Collaboration, a mechanism must be created to ensure this.

### C.2.2 Election and Appointment Schedule

Every year, several elections and appointments for different positions have to be held within the Collaboration. These are arranged in two Election and Appointment 'seasons':

- January March
- June August

The scheduling of elections to one or the other of these seasons should be done taking into account the terms and staggering of the terms for the relevant posts as specified in the relevant sections of the Bylaws.

### C.2.3 Election Procedures

The recommended procedures for carrying out the various elections are laid out in this section. Voting takes place using the ET Collaboration voting website To be created. Copy from LSC? Is working well. In all elections:

- the Election and Membership Committee will accept all nominations for open positions, and is free to add nominees of their own;
- the Committee will poll all nominees, removing from the election slate only those nominees who do not wish to stand.

Election procedure

- The Election and Membership Committee will accept nominations from the groups specified in C.2.1 for open positions, and is free to add nominees of their own;
- The Committee will poll all nominees, removing from the election slate only those nominees who do not wish to stand.
- Each candidate accepting the nomination prepares a written statement.
- If there are more than five candidates, the CB elects five persons out of the candidates based on the statements only
- The five candidates with the most votes prepare a presentation in addition to the written statements.
- The CB elects the three most voted ones, unless someone has reached an absolute majority in the first round.
- In run-off elections, the CB will elect a winner by subsequently eliminating the one with the least number of votes. If an election does not give a candidate with the smallest number of votes (i.e. the two candidates with the least number of votes have equal votes, the younger candidate will go into the next round)

This method of several "small steps" will yield a similar result as a Condorcet method. (It requires more voting steps, but has the advantage that the CB members feel they have actively chosen the winning candidate.)

### Spokesperson + Deputy Spokesperson election

- The E&M committee should initiate the process by contacting the ET CB (including the incumbent Spokesperson and Deputy), and informing them of the upcoming election due to expiration of term.
- The E&M committee should then contact the ET Collaboration and solicit nominations for the position of Spokesperson and Deputy, giving no less than a 1-week period for response.
- The Committee will contact all nominees to check their willingness to stand, and to request a personal statement from those who are willing to stand.
- The personal statements provided should be posted by the E&M committee on an internal ET Collaboration website.
- If the number of nominated candidates willing to stand is greater than four, the E&M committee will hold a vote by the ET Collaboration Board, open for one week, to determine the 4 candidates receiving the most votes. Once the top four candidates have been determined, the procedures outlined in the paragraph on "Election Procedures" above will then be followed.
- If the number of nominated candidates willing to stand is less than or equal to four, then the slate of candidates will be announced to the ET Collaboration, and the candidates will be asked to attend the ET Collaboration Board Meeting at the next ET Collaboration meeting, where they will be available to answer questions from the ET Collaboration Board. This will be followed by a closed session of CB.
- A vote by the ET Collaboration Board should open the day following the ET Collaboration Board meeting, and remain open for one week. The Spokesperson elections will be by secret ballot, following the ranked voting procedure outlined above.
- The E&M committee will announce the winner and the list of voters who participated in the ET Collaboration Board vote.

### **CB** Chairperson election

- The E&M committee should initiate the process by contacting the ET CB and informing them of the upcoming election due to expiration of term.
- The E&M committee should then contact the ET Collaboration and solicit nominations for the position of CB chair, giving no less than a 1-week period for response.
- The Committee will contact all nominees to check their willingness to stand.
- A vote by the ET Collaboration Board should open the day following the ET Collaboration Board meeting, and remain open for one week. The CB Chairperson elections will be by secret ballot.
- If a candidate receives a simple majority, she/he wins the election. If no candidate achieves a simple majority, there will be a run-off election between the two most successful candidates.
- The E&M committee will announce the winner and the list of voters who participated in the ET Collaboration.

## C.3 Communications and Education Board

- C.3.1 Media Relations Committee
- C.3.2 Educational Committee
- C.4 Diversity, Equity, Inclusion, Access and Ethics Committee
- C.5 Speakers and Awards Committee

# C.6 Editorial Committee

### C.6.1 Introduction

This text is a draft as input for discussion in the Editorial Committee and will be replaced by the document prepared by the Editorial Committee as soon as it is available.

### input from OSB:

The editorial Board is to take a proactive way to plan paper publishing, e.g. per division. EB planning on coll. wide papers, divisions and WG on "smaller" papers. Ask at start of every year what entity intends to publish what. Leave freedom to chairs to define short author lists. EdB planning on what should be presented at conferences and meetings.

**Editorial Board composition** it should be composed of a small group of people who are largely dedicated to the activity and a group of delegates of the specific boards, bringing the different needs of the boards to the discussion at least at the beginning it acts both as editorial board and as speaker bureau

**Aims** We want to define a very small set of rules, preserving the freedom of the groups as much as possible (at least in the early phase of the project)

**Principles** We need to distinguish between full collaboration papers and short author list papers.

Full collaboration papers will be mainly, at the beginning, a few proceedings of the conferences on the status of the project. At least in the early phase they will just be signed by the speaker "on behalf of the ET collaboration". This kind of publication must pass through the SC (now), the Editorial Office (tomorrow) and the whole collaboration.

The short author list papers, having in the author list a member of a board/WP (and in the future a member of the ET collaboration), should be circulated within the WP in advance. WP and/or Division chairs have the responsibility to check for misleading statements about the ET project, possible violations of the collaboration principles, confidentiality, ... and in case of problems inform the SC and/or the Editorial Office. No filter on the scientific content is applied, but we expect that people with leading roles in the ET organisation do not participate in publications that contradict the views of the ET collaboration. It is desired that a continuously updated set of slides with essential information (participating institutions, governance, official project timeline, key milestones...) and also a set of "standard references" is provided in the central database (ET TDS).

Papers should be uploaded in a central Database. Articles that are full author list and Articles that are endorsed by the collaboration through the SC/CB or the Editorial Office have the "quality stamp" ET and published in a page of the collaboration

### The following text is taken from the LSC policies. it needs to be adapted to the ET Collaboration requirements including the OSB policies above.

Implementing policies regarding publications and presentations by ET Collaboration members is the responsibility of the Editorial Committee including the responsibility of direct editorial review of full-collaboration publications.

Access to the ET data is defined in Collaboration Agreement Documents (CAD) between the ET Collaboration and the ET Collaboration member's RU. Broadly, rights to ET data are gained by making a substantial and recognized contribution to ET designs, construction, commissioning, operation and/or software development. By signing a CAD, the participating ET Collaboration RU agrees to abide by the ET Collaboration Editorial Committee policies.

The purpose of the ET/ET Collaboration Editorial Committee Policy is to:

- Ensure scientific integrity of ET scientific and technical results
- Ensure appropriate recognition of individual and institutional contributions

The goals in formulating the policy are to:

- Promote the timely publication of results
- Promote the visibility of ET scientists and engineers, and especially, to encourage younger scientists and engineers to participate in the presentation and publication of results.

- Provide an efficient mechanism for the internal review and be conducive to publication.
- Promote open and free exchange of ideas and information within the ET Collaboration while research projects are being formulated and carried out.

During the course of free scientific exchange in a collaborative effort involving multiple institutions, privileged information is disseminated. It is the intent of this policy to ensure that members of the ET Collaboration can present their work in an environment where that privilege is preserved. ET Collaboration reviews are intended to provide a constructive evaluation of publications by the ET Collaboration and its participating institutions.

Publications authored by the full ET Collaboration are subject to strict policy and review, while publications by subsets of the collaboration ("short-author-list publications") may be subject to some restrictions and review, as prescribed in detail below.

In general, these policies apply to collaborative work of the ET Collaboration carried out in the ET Collaboration Boards/committees as it bears on the scientific mission of the ET Collaboration. Work originating in the individual groups of the Collaboration that is not part of the collaborative program, not significantly influenced by interactions in the ET Collaboration or collaboration meetings, or not specifically identified in the Memorandum of Understanding is not subject to these policies. The policies, when applicable, concern scientific articles, presentations at conferences, press releases and other popularizations.

Editorial Committee policies concerning publication and presentations will be prescribed in concurrence with the ET Project Directorate.

As a provision of the ET Collaboration bylaws, an Editorial Committee (EB) is appointed by the ET Collaboration spokesperson in order to:

- carry out editorial review of full-collaboration papers
- manage the reviews of ET Collaboration technical publications and conference proceedings
- manage reviews of abstracts and presentations at conferences
- maintain a public archive of publications and presentations
- maintain the publication and presentation policies

### C.6.2 The ET Collaboration Author List

The author list of the scientific publications of ET Collaboration observations will include all members of the ET Scientific Collaboration who have earned that status. The author list will be alphabetical and will include engineers and technicians who have contributed in an important way to the design, construction, installation, commissioning and operation of the detectors and of major ET Collaboration facilities. As only few full-collaboration papers are expected in the initial phase of ET, the threshold for authorship is set relatively low in the beginning, at 20% FRTE, averaged over a period of one year, with the intention of adjusting it according to the development of publication revenues. Authorship will later be gained with a higher percentage (e.g. 50%) of the FRTE spent on core ET activities. Once earned, authorship is retained for at least one year after leaving the Collaboration (in good standing) or after the ET Collaboration portion of the research falls below the percentage required for authorship, as described in detail below.

The CAD Committee of the ET Collaboration will publish new versions of the author list twice each year, on February 15 and August 15. Each list will be assembled from information provided by an individual in each ET RU designated as the ET RU leader. Individuals meeting the following criteria will be included: <sup>5</sup>

- The August list will contain the names of current ET Collaboration members who joined the ET Collaboration prior to Dec 15 of the previous year and who have devoted more than the percentage required for authorship since that date. It will also contain the names of past ET Collaboration members who had earned authorship but have left the collaboration (or whose research effort fell below the percentage required for authorship) after Aug 15 of the previous year.
- The February list will contain the names of current ET Collaboration members who joined the ET Collaboration prior to June 15 of the previous year and who have devoted more than the percentage required for authorship since that date. It will also contain the names of past ET Collaboration members who had earned authorship but have left the collaboration (or whose research effort fell below the percentage required for authorship) after February 15 of the previous year.

 $<sup>{}^{5}</sup>$ The specific dates chosen in this implementation ensure that no member of the collaboration must wait longer than 14 months to appear on the author list, and no member will join the author list with less than 8 months of participation (a six-month window skewed slightly in favour of new authors). For authors leaving the ET Collaboration, the minimum time authorship is retained is 12 months and the maximum is 18 months (again a six-month window skewed slightly in favour of authors leaving the collaboration). Since a large number of ET Collaboration members' appointments are synched to an academic year beginning in September, it is expected that the extremes in these ranges will be realized relatively rarely.

Each list will be approved by the Spokesperson, who may consult with others to arrive at an equitable decision. Papers written for the full ET Collaboration will use the most recent list published by the CAD Committee at the time of their initial submission to the ET Collaboration for review. The author list will be alphabetical.

The addition to the author list of ET Collaboration members who have less than the percentage required for authorship for special reasons should be brought up to the spokesperson for approval. The addition of such members to the author lists will be valid until the ET Collaboration membership status of the person in question changes, and does not need to be reviewed before the publication of each biannual author list.

Any special arrangements or conflicts concerning authorship should first be brought to the attention of the author contact from the relevant group (typically the PI) who can bring them to the Editorial Committee. The Editorial Committee will make a recommendation to the ET Collaboration Spokesperson, who will make the final decision, consulting with others as needed. Any conflicts on authorship on ET publications will be resolved by the Spokesperson in consultation with the ET Collaboration Board.

Individual ET Collaboration members who have made significant contributions to a particular observational paper, but who are not on the ET Collaboration author list, may be added to the author list of that paper. Petitions for such authorship additions should be included by the Writing Team when presenting the paper to the ET Collaboration Board Team for final approval. Consent of the ET Collaboration Board Team is required for inclusion of these additional authors.

Individual ET Collaboration members eligible for authorship may request their names not to be included in specific papers. This request will not be interpreted as a statement that the member does not endorse the paper or the science it represents, unless that reason is explicitly stated.

### C.6.3 Determining Appropriate Authorship of Publications in Archival Journals

By default, all archival journal papers reporting on ET observations and astrophysics results based on non-public ET data shall list all eligible ET Collaboration members (the "ET Collaboration author list") as authors, but exceptions are permitted as described below. The author list shall be in alphabetical order. If a corresponding author representing the ET Collaboration appears in the final journal article, it should be the "ET Collaboration spokesperson" (with a position-related e-mail address like "ET.Spokesperson@et-Col.eu"), without any specific name attached to the address.

In keeping with the goal of the ET Collaboration to promote the visibility of its members to the scientific community at large, there may be cases where a limited author list is more appropriate. The publication policy therefore allows for exceptions to this rule by petition, which include publications describing:

- Algorithm development with non-public data
- Data quality veto studies
- Hardware injections
- Calibration studies

Such papers shall contain no new observational results, but related quantities of interest, such as detection efficiencies and background estimations, e.g., using unphysical time shifts may be permitted. Instrumentation papers shall avoid quantifying detector performance over large fractions of an observing run.

Decisions on whether or not a petition is granted will rest with the Editorial Committee Co-chairs, in consultation with the Spokesperson.

Procedural detail(s): In some cases, instead of granting a limited author petition, the Spokesperson may decide to alter the alphabetical authorship listing by putting the main authors at the front of the list, followed by the remainder of the ET Collaboration author list. A brief written record of the reasoning for such exceptions will be posted on the ET Collaboration Editorial Committee **TBD** page for the publication. If the petition is granted, the paper shall contain an acknowledgment to the ET Collaboration for access to the data and the statement of acknowledgment to the funding agencies.

Certain projects carried out on the ET interferometers are related specifically to commissioning and/or improving detector performance, or to exploring instrumental physics that falls outside the realm of the ET Collaboration mission. Papers that fall into this category derive from the work of two groups – a set of researchers (Group 1) who conceived and implemented the core research project (typically but not necessarily a small number) and a much larger group of people who built, maintain, and operate the interferometers that enabled the project to be carried out (Group 2). For these classes of papers, the authorship is assigned as follows. Group 1 authors are listed first in the byline in an order determined by the Group 1 authors, followed by Group 2 authors, listed alphabetically.

The Group 2 author list consists of scientists, engineers, and technicians who made tangible contributions to the design, development, installation, commissioning, and operation of the interferometers. The Group 2

author list will be maintained by the ET Laboratory Operations Management Team (OMT) and will include any eligible members of the ET Collaboration. As of the O3 Observing Run, these lists are designated as O[N]Detector Author Lists, starting with N=3, which are assembled by the OMT via petition and in coordination with the ET Collaboration Editorial Committee. To be included on the O[N] ("current") Detector Author List, the author must have performed significant work on the current ET detectors, in one or more of the following areas:

- R&D, design, or fabrication of detector improvements for the current observing run
- Installation of components for the current run
- Commissioning of the current detectors
- Operation and maintenance of the current detectors.

By default, ET Collaboration members may write short-author-list publications using public ET data that have been released in bulk or released in short epochs that include published exceptional events, but publications that would pre-empt collaboration publication plans are not permitted. The appropriate working group chairs advise the Editorial Committee and Spokesperson on potential cases of pre-emption. If a determination of pre-emption is made, then the public release of the short-author-list article shall be delayed appropriately.

Short-author-list papers originating from individual or collaborating ET Collaboration institutions shall assign authorship in accordance with generally accepted principles. Specifically, authorship rights shall be assigned to a paper based upon their participation in the work. Individual groups have the responsibility of properly determining authorship for their papers.

In some cases, short-author-list papers originating from a specific working group or involving collaborations between multiple working groups may have a large number of authors. In such cases, the proposed author list shall be drawn up by the corresponding author and circulated to all working group members, who may contact the corresponding author if they consider their name to be inappropriate for the author list or to have been missed in the preliminary listing. A final list shall be generated and re-circulated for a final check before submission to the ET Collaboration for review.

Should the author list exceed 10% of the ET Collaboration membership, then the paper can reasonably be said to represent the entire ET Collaboration in that it significantly advances data analysis or advanced detector development. In this case, all current eligible ET Collaboration members will be listed as authors, where with the consent of the Spokesperson, the author list may be split into a main group of authors, followed by an alphabetical list drawn from the ET Collaboration Author List. Exceptions may be made when, for example, two working groups collaborate on a paper with a narrow focus, or for O[N] detector author lists described above.

### C.6.4 Authorship of Conference Proceedings and Review Articles

The authorship of conference proceedings reporting on previously published ET observations and observational results need only list the speaker as the author and state that he/she is writing for the ET Scientific Collaboration in the byline, e.g., "J. Speaker for the ET Collaboration".

In some cases, the collaboration may decide to publish as a conference proceeding an astrophysics or observational result that will not be published elsewhere. In this case, the paper should use the ET Collaboration Author List and should be reviewed as an observational paper.

Review articles that do not use non-public ET data and cite only public-domain results, such as could be written by a gravitational wave expert outside the ET Collaboration, shall carry a short author list.

The authorship of conference proceedings reporting on technical and/or methods papers involving ET Collaboration instruments and data should follow the same rules as for archival journal articles, with either a short author list (if a petition is granted by the Editorial Committee) or the byline. "J. Speaker for the Einstein Telescope Collaboration".

Technical conference papers originating from individual or collaborating ET Collaboration institutions, but not using ET Collaboration instrumental data, shall assign authorship in accordance with generally accepted principles.

### C.6.5 Review Procedures for ET Full-Collaboration Publications

The ET Collaboration publication review procedures for full-collaboration papers are meant to ensure appropriate scientific scope and presentation quality.

Procedural detail(s): The information below is an elaboration of and takes precedence over a highly condensed flow chart posted on the P&P wiki page: https://pnp.ET.org/ppcomm/reviewerguidelines.html. Proposals to write full-collaboration papers may originate in one of the working groups of the Observational Science, Instrument Science, Operations or Communication and Education Divisions of the ET Collaboration and are subject to approval to proceed by the ET Collaboration Program Committee. The procedures below assume that a paper has been approved and that a Paper Writing Team (PWT) has been appointed.<sup>6</sup>

There are three required circulations of each full-collaboration paper, each allowing at least one week for ET Collaboration comment:

Initial circulation – The initial draft need not be mature. Not all results may be ready, and text may be missing. The intent of the circulation is to ensure collaboration review of overall scope and relation to other full-collaboration papers. The date of this initial circulation defines the appropriate author list to use:

- February 20nn list for February 16, 20nn to August 15, 20nn circulation or
- August 20nn list for August 16, 20nn to February 15, 20(nn+1) circulation.

Procedural detail(s): Prior to this full-collaboration initial circulation, it may be wise to circulate a draft to the appropriate working group(s) for preliminary comment, in keeping with the policies of the working group(s).

Mature circulation – there should be at least one mature circulation with complete results and polished text, in coincidence with or preceded by a presentation to the full ET Collaboration/LVK (in-person at a collaboration meeting or via teleconference). Procedural detail(s): At the presentation there should also be brief comments provided by one or more representatives of the results reviewers and comments from a representative of the Editorial Committee.

Final circulation – Following approval by the ET Collaboration Management Team, a circulation with a final 1-week comment period allows authors to opt out or opt in. At this stage, comments should be limited to serious errors, errors in the author list, etc. It is too late for issues of style or suggestions on what should have been done.

Editorial Committee members are assigned to each full-collaboration paper, drawn from the EB pool. Assignments take into account reviewer constraints, preferences and expertise.

Procedural detail(s): Guest reviewers are recruited when too many papers are in simultaneous circulation for adequate review by the EB, or when particular expertise is needed.

Editorial Committee review is meant to ensure collaborations papers with the following virtues:

- Appropriate emphasis and balance, especially in abstracts, introductions and conclusions
- Clear scientific context for searches or measurements described
- Clarity and concision of text
- Clarity of equations, including notational choices
- Clarity of tables and figures, including captions
- Self-consistency among text, tables and figures
- Consistency among companion publications and with prior publications
- Appropriate citation to previous work, including to publications by non-collaborators on public

#### ET data

EB reviewers are asked to review each circulated draft carefully and provide comments via the paper's git repository.

Procedural detail(s): Those comments come in graded categories:

- We suggest... (default if not explicit)
- We recommend...
- We urge...
- We insist...

Internal EB discussion should precede comments posted within the last two categories.

If the paper announces a new discovery, there should be a limited public release on the GWOSC web server of the gravitational strain data relevant to the discovery, e.g., 1 hour of h(t) containing each transient event or 1 Hz of h(f) containing each persistent narrowband source.

 $^{6}$ The PWT is designated as the "Editorial Team" in some contexts; that terminology is not used here, to avoid confusion with the Editorial Committee.

Procedural detail(s): Preparations for GWOSC data releases should begin early, to allow time for review, preferably before or during the mature paper circulation.

The ET Collaboration Management Team (MT) acts on behalf of the ET Collaboration Council in approving papers for public release. Before that approval is sought, there must be confirmation from the appropriate representative of the results reviewing team that all presented results, including figures, have been validated. There must also be a confirmation from the ET Collaboration Editorial Committee that the presentation of the results is satisfactory.

Procedural detail(s): The PWT and the EB will be asked to answer a brief survey addressing paper status and recent changes, along with any authorship petitions. The answers are provided to the MT before its review begins.

The MT is asked to respond within one week and may demand further revisions before approval or make suggestions for PWT consideration.

Every paper authored by the ET Collaboration/LVK will be accompanied by a "science summary": a short text, written in a language suitable for the general public, which complements the paper's scientific abstract.

Procedural detail(s): A draft science summary should be made available during the MT approval period (or earlier) by the PWT for consideration by the Education and Public Outreach (EPO) Committee.

The MT approval period is also an appropriate time during which relevant data products should be produced for public release via the DCC. Such products may include, for example, data values behind key figures in the paper or posterior samples. If the paper announces a new discovery, the associated GWOSC data release should be ready or near ready, including reviewer sign-off, by this time.

Once the MT approves the paper (and subject to approval from Virgo / KAGRA, as appropriate), the final 1-week circulation can begin.

Procedural detail(s): Normally, arXiv and journal submission, along with public visibility in the DCC, should follow the final week of circulation and incorporate authorship opt-outs and opt-ins. In special cases for which an external time constraint applies, such as presentation of the paper's results at a conference, collaboration management may authorize arXiv and/or public DCC visibility during the final circulation, in which case the initially public author list should display only the collaboration names, e.g., The ET Scientific Collaboration, the Virgo Collaboration and the KAGRA Collaboration.

Procedural detail(s): The science summary should be finalized and approved by the EPO before journal submission.

Procedural detail(s): Detailed instructions on submitting papers to arXiv and to journals are maintained by the Editorial Committee in this document: https://dcc.ET.org/ET-M1900017.

When a journal editor requests revisions in response to referees, the referee comments should be circulated to the appropriate working group(s) and posted in the paper's git repository. The drafted response to the referee should also be posted in git and the link circulated to the working group(s) when ready, with at least one business day given for comment.

Procedural detail(s): In the event that major revisions are requested, the Editorial Committee should be consulted before resubmission.

### C.6.6 Review of Short-Author-List Publications with ET Collaboration Authors

The ET Collaboration publication review for short-author-list papers is meant to provide constructive feedback to authors, as well as to ensure the authorship is appropriate and the ET Collaboration/LVC/LVK work is properly represented. The review process is managed by the Editorial Committee. This policy document lists the triggers for a review and general guidelines. Below are descriptions of the triggers for review, procedures for review, including guidelines for authors and reviewers, and special considerations for use of proprietary ET data. This information is an elaboration of and takes precedence over a highly condensed flow chart posted on the P&P wiki page.

**Triggers for Review** Given the diverse and overlapping science carried out collectively by the ET Collaboration/LVC/LVK and by individual ET Collaboration members, it is difficult to delineate precisely which short-author-list publications warrant formal review, but the following criteria form the core for a review "trigger":

- 1. The article has used data from an ET Collaboration instrument, be it the detectors or physical monitors. Examples include, for example, instrumental studies, data analysis or astrophysical interpretation.
- 2. The article presents research described in the ET Collaboration Program, in the ET Collaboration CAD for an author institution, or in an ET Collaboration white paper. Examples include articles describing search methods, parameter estimation or astrophysical interpretation on which full-collaboration publications depend.

- 3. The article has used ET Collaboration software or hardware resources made available through the membership in the Collaboration.
- 4. The article has used resources to which the ET Lab or non-author ET Collaboration institutions have contributed significant resources for the purposes of collaborative ET Collaboration/LVC/LVK research. Examples include but are not limited to optical coating and substrate development efforts, ET Collaboration laser development programs, and control system development. Any work performed under the auspices of direct funding from ET Laboratory or from joint funding with ET Lab and/or ET Collaboration institutions is subject to the policy.
- 5. The article contains statements that can reflect on the ET Collaboration. ET Collaboration colleagues should have an opportunity to comment on factual statements made about ET Collaboration/LVC/LVK results or instruments. Whether or not the papers need a review by the ET Collaboration will be at the discretion of the Editorial Committee Co-chair. Examples in this category include review articles that discuss ET results or performance.
- 6. The article competes with a prior LVC publication. Examples include, but are not limited to refined parameter estimation or astrophysical conclusions drawn from publicly released data and Hubble constant measurements using newly available data sets from electromagnetic astronomy. Drawing conclusions that differ from or even contradict LVC publications, based on new information or analysis, is permitted, but, again, the ET Collaboration must be allowed to review statements that characterize its measurements. Articles that compete with or otherwise pre-empt upcoming LVC publications are prohibited from public release, including journal submission, as discussed above. Relevant working group or subgroup chairs will be consulted by the Editorial Committee when a potential competition or pre-emption question arises.
- 7. The author(s) cannot guarantee that standard review criteria for short-author-list papers are satisfied: These criteria are the following:
- 8. Is the author list appropriate?
- 9. Are any ET Collaboration data used in any point/form? This category includes data from auxiliary channels and "hidden" usage of data for simulations etc.
- 10. Are there statements of what the ET Collaboration will or will not do? (this includes searches and hardware). If so, are those statements accurate?
- 11. Are proper references made to related work within the ET Collaboration/LVC/LVK?
- 12. Are references to ET instruments/results up to date?
- 13. Is there an acknowledgement of computing resources accessed through the ET-Virgo Collaboration?

Procedural detail(s): The Editorial Committee maintains lists of key references and other relevant resources on the P&P wiki page.

The group leader of any participating ET Collaboration institution, including the ET Laboratory, has primary responsibility for determining when a scientific work should be submitted to the ET Collaboration for review. The group leader here is defined as the signatory on the ET Collaboration Memorandum of Understanding or the Director of the ET Laboratory. This determination must be made prior to submission for publication or posting on any public archive (e.g., arXiv.org).

Procedural detail(s): Even when the above trigger criteria are not explicitly satisfied, the ET Collaboration group leader is encouraged to consult with the ET Collaboration Editorial Committee Co-Chairs on the need for an ET Collaboration review when there is any uncertainty. If a review is warranted, every effort will be made to ensure the ET Collaboration review process adds value to the paper without introducing unreasonable delays and while protecting the interests of the ET Collaboration.

Procedural detail(s): For papers that do not directly overlap with science topics in the ET Collaboration/LVK Program, there is still the concern that ET Collaboration/LVK work is not properly cited. Authors are strongly encouraged, when they cannot confidently guarantee that the standard review criteria above have been satisfied, to circulate papers for informal comment to the appropriate working group(s) and to give ET Collaboration members two business days to comment. Such circulation can be efficient in revealing incomplete citation. **Procedures for Review** Procedural detail(s): If the above guidelines determine that an ET Collaboration review is necessary, a member of the participating ET Collaboration institution may submit a manuscript to the Editorial Committee's Publications&Presentations (P&P) website (https://pnp.ET.org) for review. With the exception of review articles, P&P review requires a prior or imminent presentation of the paper to an appropriate ET Collaboration/LVC/LVK working group.

Procedural detail(s): Whether the presentation has occurred or is scheduled for a future date, its date, time and venue should be provided in the submission information for inclusion in the circulation announcement email.

When the paper is submitted, it will be listed on a public ET Collaboration database maintained on the ET Collaboration home page listing the title of the paper, author list, date and time of submission, and date of completed ET Collaboration review. The reviewer(s) will be asked to provide feedback to the authors within one week of the manuscript submission.

Procedural detail(s): In practice, prompt review is more likely when the authors arrange in advance for a qualified expert to agree to serve as a reviewer.

Concurrent with the formal review, the manuscript will be posted electronically on a secure, password protected website for general ET Collaboration review. A notification will be sent to all ET Collaboration members announcing the title, author list, and deadline for receiving comments. Members of the ET Collaboration will have a minimum of one week for short-author-list papers to log their comments on the relevant page of the P&P system.

Procedural detail(s): In the event of disagreement amongst the reviewers or between the reviewers and the authors, the issue is to be resolved by the Spokesperson who may choose to bring it to a vote of the Collaboration Council, or of the Management Team on behalf of the Council.

The Editorial Committee, in consultation with the reviewer(s), will approve the final version of the manuscript prior to public release or journal submission.

**Guidelines for authors** Procedural detail(s): Authors are strongly encouraged to submit papers for ET Collaboration review only after they are in a 'publishable' state. Premature or incomplete "work-in-progress" drafts will cause unnecessary delays and use up goodwill on the part of the reviewers.

Procedural detail(s): Submissions to the ET Collaboration Editorial Committee should include information regarding the target journal(s).

Procedural detail(s): To aid the Editorial Committee, authors are encouraged to suggest appropriate reviewers within the ET Collaboration/LVK. The Editorial Committee in turn will inform the authors of the reviewers name(s).

**Guidelines for reviewers** Procedural detail(s): Reviewers will be selected by the Editorial Committee based on expertise in the topic of the submitted paper and on the number of ET Collaboration reviews the potential reviewer has already carried out for the ET Collaboration. This is meant to ensure that the burden of peer review is spread most evenly across ET Collaboration members.

Reviewers are strongly encouraged to complete reviews within 7 calendar days and will be given a strict 14-day period in which the review must be completed.

The review should evaluate the paper according to the standard criteria above. Comments on the scientific relevance and correctness of the work are also helpful and encouraged.

Procedural detail(s): Reviewer's comments should be posted on the P&P review page for the paper.

If the reviewer wishes to re-review the paper after the reviewer's recommendations are addressed by the authors, the reviewer must complete the re-review within three calendar days.

**Use of proprietary data** (gravitational strain data that are not yet public or auxiliary channel data) is normally prohibited for publicly released short-author-list papers, but there are situations in which such use is allowed, such as papers focused on detector characterization, calibration or other instrumentation topics.

If no observational results are reported, the author(s) may petition the Editorial Committee Co-chairs for a waiver, which can be granted in consultation with the Spokesperson.

Procedural detail(s): Papers that directly support prior or future full-collaboration publications are most likely to receive such a waiver.

If observational results are reported, then such a waiver requires the unanimous support of the Observational Science co-chairs (including from Virgo and KAGRA, as appropriate) and of the relevant working group co-chairs before seeking the approval of the Spokesperson in consultation with the Management Team.

Timing of review of short-author-list papers containing results based on proprietary data It is common for short-author-list papers to arise based on proprietary knowledge of not-yet-published events, including events for which low-latency public alerts have been issued for electromagnetic or neutrino astronomer follow-up. Such papers may, for example, address event consistency with gravitational waveform models different from those used in an upcoming full-collaboration publication, or astrophysical interpretations, including formation processes, that are too speculative or new to be included in the full-collaboration publication. Many of the most contentious P&P issues arise from such papers, particularly in cases where ET Collaboration authors worry they will be "scooped" by non-ET Collaboration authors who are unconstrained by ET Collaboration publication publication publication publication authors who are unconstrained by ET Collaboration publication policies once data have been made public.

The default handling of these papers is simply to require that they be posted on the P&P web site after public release of the corresponding full-collaboration paper. In addition, working groups may impose further conditions, such as the default CBC group requirement that any analysis be started (or re-performed) after public release, starting from the data released on the GWOSC server. An important motivation for these restrictions is deterrence of ET Collaboration members from carrying out short-author-list analysis that interferes with their ET Collaboration responsibilities to contribute to full-collaboration publications. It can be especially discouraging for busy contributors to ET Collaboration publications, working under deadline, to see other colleagues using their own time and their proprietary knowledge of ET detections to pursue papers for personal credit.

Procedural detail(s): Waivers of the post-release minimum 1-week timeline, however, can be granted by the Editorial Committee co-chairs in consultation with the appropriate working group chairs if the short-author-list paper serves as support for a full-collaboration publication and is cited by it.

### C.6.7 Theses

PhD and Master theses that use data differ from publications, as they are, by default, single authors and are bound to a tight schedule that may not be met by the review process. Ideally, an observational result in a thesis should be reviewed to the same standard as an ET Collaboration publication. This goal may conflict, however, with review priorities and potentially introduce unwelcome delays in the graduation schedule. Instead, the following guidelines shall be used:

An analysis claiming a new detection on proprietary data (not yet released publicly) cannot be published in a thesis until an official announcement has been made by the ET Collaboration and the ET Directorate.

When possible, other new observational results in a thesis shall be reviewed to the typical standard for presentation of preliminary results at conferences. The fallback scenario, in the case of a controversial analysis, is to only present "playground" results based on using public data. The thesis shall also contain a statement of acknowledgment to ET, the ET Collaboration and to the funding agencies. A statement that results are under ET Collaboration review and potentially subject to change may be appropriate. A written record will be posted by the Editorial Committee on its web pages, together with a statement from the advisor and the review committee chair, listing which data were used, and how.

If the thesis does not undergo a review or does not meet the above criteria, a disclaimer shall be added to the introduction, stating that the work does not reflect the scientific opinion of the ET Collaboration, and it has not been reviewed by the collaboration.

Procedural detail(s): Students and advisors uncertain how to proceed should consult the Editorial Committee Co-chairs for guidance. In some situations, publication embargo arrangements may suffice.

#### C.6.8 Presentations (talks and posters)

The Speakers and Awards Committee manages the distribution, review and archival of ET Collaboration presentations. Detailed review procedures and timelines are outlined in the DCC document ETM060334. The remainder of this section outlines some specific guidelines for invited and contributed talks/posters.

**Determining authorship and necessary review of presentations or posters** Presentation of unpublished or first-time presentation of newly published ET Collaboration observational results requires that the authorship be denoted on the title slide as "Firstname Lastname for the ET Scientific Collaboration". This authorship designation also applies to presentations by the Spokesperson, by working group co-chairs or for conference presentations when the speaker has been invited to represent the collaboration(s). Any presentation on behalf of the ET Collaboration must be reviewed.

Other presentations of ET Collaboration results are normally authored by the speaker (and close collaborators), but authors should consult the Editorial Committee Co-chairs for guidance when in doubt. ET Collaboration members who do not present explicitly for the ET Collaboration should acknowledge and thank the ET Collaboration (and Virgo / KAGRA if appropriate).

Procedural detail(s): Inclusion of the ET Collaboration logos slide is a natural way to insert this acknowledgement and thanks: https://dcc.ET.org/ET-G1300394.

Presentations of ET Collaboration results not explicitly on behalf of the ET Collaboration do not normally require formal review, but authors should, at a minimum, circulate slides to the appropriate working group(s)

for comment, and submission to the P&P website for review is strongly encouraged for conference presentations. Presentation submissions to the P&P website are always welcome.

**Review of presentations** For presentations on behalf of the ET Collaboration, any required abstract should be posted to the P&P site at least two business days and circulated to the appropriate working group(s) before submission. Working groups may have policies with additional restrictions.

For presentations on behalf of the ET Collaboration, the draft slides should be posted to the P&P site and circulated to the appropriate working group(s) at least five business days before submission. Working groups may have policies with additional restrictions

Only public observational results or results that have been approved by the working group chairs and results reviewers may be shown publicly at invited talks and appear in proceedings. The preference is that the results will have been written and reviewed as for publication. Working groups may have policies with additional restrictions, such as requiring that an approved paper be publicly available at the time of the presentation.

Procedural detail(s): The Editorial Committee Co-Chairs will assign a reviewer with appropriate expertise to review submitted abstracts and slides. Reviewers will be asked to respond promptly. As with short-author-list publications, prompt review is aided by pre-arrangement of a qualified reviewer by the author.

Procedural detail(s): Special procedures are available for job interview presentations, in consultation with and at the discretion of the ET Collaboration Spokesperson.

Guidelines for the publication policy of the OSB

This is a reference text which reflects the basic spirit of ET publication policy. The publication policy will be formalized when the general collaboration policy will be finalized. The principles that inspire the publication policy of the OSB are, on the one hand, to guarantee the complete freedom needed for theoretical work (intended in a broad sense as work leading to papers without real ET data) and, on the other hand, to foster a spirit of collaboration within the OSB. The following guidelines will be applied in the current phase of development of ET, and are expected to be reconsidered as and when the need arises.

1. Members of the OSB are free to work and publish separately their original results according to their standard procedures. The members (or research group) of the OSB are highly encouraged (but not obliged) to share ongoing projects well in advance with respect to the paper circulation (see point 2), and to make use of the pool of expertise within the OSB. This is meant to strengthen and stimulate collaborations and contribute to the development of the ET community. The OSB chairs and division coordinators will take care of creating and maintaining an environment where the members of the OSB feel protected on sharing ideas without being scooped by others.

2. When common tools developed within ET are used, the authors are requested to cite the corresponding public repositories, publications and/or technical reports. The OSB wiki page will indicate what needs to be cited when using a specific public tool. For recognition of work under development (e.g. use of codes, simulations, population catalogues) not yet published, the authors of the paper should ask the owners (single members or groups) to indicate how they have to be cited as a small group of authors and/or with a link to private repositories.

3. Upon termination of a project leading to a publication relevant for ET (i.e., a work that makes predictions or develop tools for ET), OSB members have to circulate their draft within the ET Collaboration, at least one week before posting it to the arXiv (or submitting to a journal, whichever comes first). The circulation of drafts will be performed by uploading the paper to the ET Documentation System (whose access is restricted to collaboration members), which will produce a daily alert to the ET collaboration members, with the list (authors-title) of the papers uploaded. This procedure is meant first of all as an opportunity for the authors to directly reach an audience of interested readers and obtaining feedback, and will make everybody more aware of the activities going on within the OSB. In some cases, it could also be a way to resolve internal controversies, so that the ET OSB does not speak to external communities (including funding agencies) with contradictory voices. However, it is acknowledged that controversies are also part of the normal scientific debate and might require discussions within the broader scientific community. It is also understood that, in situations that involve different groups, possibly in competition for the same project (which is a legitimate situation for groups within the OSB), a group could ask to restrict the broad circulation of sensitive papers. The OSB chairs and/or division coordinators have to be informed of it, and this should be a motivated exception, and not the rule.

4. Again one week before posting the paper to the arXiv (or submitting to a journal, whichever comes first), the authors are also required to provide the draft to the coordinators of their division. This will allow the division coordinators to be aware of results that could be selected and inserted in the Blue Book. The division coordinators are asked to perform a check that there are no sensitive collaboration issues that might be harmful to the ET project (in particular in the delicate phases leading to it approval), for instance by significantly misrepresenting some aspects of its scientific case, or providing incorrect information on ET (e.g., use of wrong or old sensitivity curves, etc.), and verifying that there is the right recognition of work done by others within the OSB. This step is meant as a rapid check to avoid particularly flagrant situations. It is not the role of the

division coordinator to refere the paper. The rapid check is expected to be done within a few days, and at most one week. The authors could be asked to postpone the paper submission in case of significant conflicts recognized by the division coordinators and the OSB chairs.

5. The papers that have gone through the broad circulation at point 2 and the rapid check at point 3 will have an ET preprint number (given by the code of the ET Documentation System), that qualifies them as 'official' papers of the ETOSB. Besides being uploaded to the ET Documentation System (whose access is restricted to ET members), after submission to the arXiv they will also be added (in the form of authors, title, and a link to the arXiv) to a publicly accessible database that will be maintained on the ET-OSB Wiki page, organized according to the OSB divisions. This is meant to increase the visibility of the papers and to provide to the community a readily accessible and complete database of ET-OSB papers. In the acknowledgements (when appropriate) the sentence "the research leading to these results has been conceived and developed within the ET Observational Science Board" should be added.

6. All the members are strictly requested to follow the code of conduct under penalty of exclusion from the OSB. In case of conflicts or incorrect behaviour, the members of the OSB are encouraged to contact the DIV coordinators and/or the OSB chairs

7. For any special situation that might arise, and is not covered by the above guidelines, the division coordinators and the OSB members are invited to contact the OSB chairs.

# C.7 CAD Committee

Each ET group must have an up-to-date, approved Collaboration Agreement Document (CAD) with the Collaboration, describing the agreed upon contributions of the group to the activities of the Collaboration in the near future. The CADs are revised regularly. They are reviewed by a dedicated committee, the CAD Committee, and approved by the ET CB upon a recommendation from the CAD committee. Each ET Research Unit group must report annually about its contributions to the activities of the Collaboration in the recent past, so that they can be assessed against the CAD commitments. Financial contributions are outside the scope of this document, and the word "contribution" is used to mean a scientific or technical contribution throughout the document.

### C.7.1 Mandate

The CAD Committee

- negotiates CADs with RU that wish to become a member of the ET Collaboration
- evaluates and revise existing CADs
- determines number of FRTEs for each RU
- is responsible for maintaining the membership roster of the Collaboration, and the authorship list.
- maintains the list of Collaboration authors.

### C.7.2 Composition of the CAD Committee

### C.7.3 CADs

**CAD content** The CAD proposal submitted by a RU shall describe the work pledged for the Collaboration and the FRTE percentage of each of the named RU members. The description shall distinguish between "scientific" and "service" work, where administrative or organisational activities within the Collaboration or the RU are accountable as service work. The CAD description must describe how the RU is embedded in the organisational structure of the Collaboration, i.e. which Board, division and working group the work of the RU contributes to.

**CAD revision** The CAD revision rules must strive to find a good balance between verifying good performance of the RUs on the one hand and minimising the workload both on the reporting and on review teams.

For each CAD, the Committee will provide the Spokesperson with an evaluation of both the output delivered compared to that promised in the CAD of the previous year, and of the relevance to the ET Collaboration of the research program proposed within the current CAD. The evaluation may also consider research that was not proposed in the previous CAD, but is clearly beneficial to the mission of the ET Collaboration.

In the course of reviewing the FRTEs provided against the FRTEs pledged, the Committee will compile a list of the current FRTEs per RU, which will be used to annually adjust the number of RU representatives on the Collaboration Board.

These evaluations will be graded Satisfactory, Marginal, or Unsatisfactory, and will be confidential to the CAD Review Committee and the ET Collaboration Board. Taking account of these evaluations and the associated grades, the Review Committee will also recommend to the Spokesperson on the readiness of the CAD to sign, as detailed below.

The Review Committee will make extensive use of the ET Collaboration white papers on Instrument Science, Data Analysis and Education and Public Outreach in evaluating the relevance of the work, and only work directed towards items described in the white papers will be considered as CAD contributions. Technical publications may be considered as a contribution to the ET Collaboration only if they have been sent for ET Collaboration review prior to publication.

CADs are evaluated at the level of the submitting RU. However, the personnel associated with each of the previous and proposed tasks must be clearly identified. In cases where the CAD Review Committee deems the proposed work to be outside the scope of the ET Collaboration, the Review Committee will recommend that the relevant points be removed from the CAD and the individual FRTE contributions be adjusted to reflect this. In some cases, this will have implications for authorship for individuals on ET Collaboration papers.

In detail, the Review Committee is asked to consider the following questions:

1. Is the output from the previous year

• consistent with the work that was proposed in the previous CAD Committee or, if not, clearly beneficial to the mission of the ET Collaboration, and

- commensurate with the FRTE count?
- 2. Is the proposed work
  - relevant to the ET Collaboration mission (use white papers as reference),
  - realistic, and
  - commensurate with the FRTE count?

The Review Committee will provide evaluations for each of the bullets, and give an overall grade for each of the two questions based on those evaluations.

Taking account of these evaluations and the associated grades, the Review Committee may recommend that the Spokesperson either:

- 1. Signs the CAD immediately; or
- 2. Signs the CAD after minor changes; or
- 3. Signs the CAD after major changes; or
- 4. Does not sign the CAD.

Examples of "minor changes" include editing factual errors or omissions, and clarifying the scope of the intended research. Examples of "major changes" include de-scoping or re-scoping of the proposed program.

A recommendation of "do not sign" indicates that there are serious problems with the proposed work such that it is unacceptable in its current form.

The Spokesperson will maintain a record of the evaluations, associated grades and Review Committee's recommendation on readiness of the CAD Committee to sign. In cases where an unsatisfactory grade has occurred on several occasions, the Spokesperson may use these records to give warning about persistent non-performance.

The Spokesperson will inform each RU of its performance grades and the recommendation on readiness of the CAD Committee to sign.

For a "sign after minor changes" recommendation, a member of the Review Committee or the Spokesperson will contact the RU PI with a specific request for changes to the CAD Committee. Other members of the Review Committee may be involved as needed. Once those changes have been made, the CAD Committee will be signed.

For a "sign after major changes" recommendation, the Spokesperson will contact the RU PI, on behalf of the Review Committee, to discuss the necessary changes. Once changes have been made to the satisfaction of the Spokesperson, the CAD Committee will be signed.

In all cases, CAD Committees are signed by the ET Collaboration spokesperson and then sent to the LIGO Laboratory Director to sign.

For a "do not sign" recommendation, the Spokesperson may

- 1. request that the RU withdraw, without prejudice, from the ET Collaboration (in which case, re-admission would require an ET Collaboration Council vote);
- 2. propose expulsion of that RU at a Council meeting; or
- 3. provide a set of specific milestones the RU must meet in order to resume membership in the ET Collaboration with good standing.

The Spokesperson may appoint an ad hoc committee to assist in determining the best course of action, and if appropriate, to assist in defining and evaluating progress in milestones to be met. Failure of a RU to meet such milestones within a time deemed reasonable by the Spokesperson may lead to expulsion by vote of the ET Collaboration Board.

The Review Committee may provide individual grades for the different affiliated RUs in a large multiinstitutional ET Collaboration RU. A "do-not sign" recommendation for a single affiliated RU in a large multiinstitutional ET Collaboration RU will be discussed with the PI of the ET Collaboration multi-institutional RU, allowing sanctions to be applied to that affiliated RU if the PI agrees. The same will apply if there are problems with timely response to requested changes by an affiliated RU in a multi-institutional RU.

The ET Collaboration Board will be informed of all "do not sign" recommendations made by the CAD Committee Review Committee, as well as of the Spokesperson's proposed actions. The Collaboration Board will be asked to endorse or revise the Spokesperson's proposed actions.

In the event of prolonged failure to meet conditions for CAD signing, Bylaws 3.1.6 will apply: "A period of persistent non-performance in Collaboration activities may be grounds for expulsion." The best actions will be discussed at the next Collaboration Board meeting.

CADs will be signed within 4 months after RU PIs receive the report from the Review Committee. After 4 months, ET credentials and ET Collaboration authorship eligibility may be suspended for those RUs with unsigned CADs, unless an extension is explicitly granted by the Spokesperson. The credentials, good standing and authorship will be reinstated at the time the CAD is signed.

### C.7.4 Activity report template

An example, to be refined....

# Activity report of the Research Unit

Name of the RU: .....

Reporting period: dd.mm.yyyy - xx.yy.zzzz .....

Name of the Researcher	FBTEs	FRTEs	fore-	if different why?
	.1 1		1010	ii amorono, wily.
	provided	cast	last	
		year		
Alex Example	0.1	0.3		unforeseen, temporary increase in
				teaching load
Dr. Brianna Noname	0.5	0.5		

Table C.1: List of RU members and FRTEs spent on average during the reporting period.

The total average contribution of this RU to the Collaboration work during the reporting period has been: XXX FRTE.

The following research tasks, listed below in bulleted form according to the activities listed in the table in the Collaboration Agreement Document, have been carried out by the RU and the following milestones have been achieved:

- Activity 1: contributors [FRTEs]: Abby [0.6], Belen[0.3], Brianna[0.5]
  - task 1: description 1, milestones
  - task 2: description 2, milestones
- Activity 2: contributors [FRTEs]: Abby[0.1], Alex[0.5], Xavier[0.2]
  - task 1: description 1, milestones
  - task 2: description 2, milestones
- Activity 3: contributors [FRTEs]: Abby[0.1], Xavier[0.4], Zander[1]
  - task 1: description 1, milestones
  - task 2: description 2, milestones

# D Appendix Common Funds

The ET Collaboration foresees some limited Common Funds for common services and tools for the Collaboration. Indicative examples are:

- collaboration repositories
- remote conferencing tools, e.g. Zoom
- common authentication tools
- common editing tools
- common CAD (Computer Aided Design) software
- some funds for meetings and workshops, which are otherwise hard to get
- ...

The annual amount to be levied per person, the determination of the Collaboration members liable to contribute and an indicative list of eligible uses shall be determined by the Collaboration Board at the request of the Executive Committee. The resulting decisions will be included in this appendix of the Bylaws. A 2/3 majority at a 60% quorum is required for amendments to the common fund. The organisational procedures (e.g. legal entity through which payments are made, fees collection procedure) are set by the CB.

# E Procedure for forming the ET collaboration

- 1. The Bylaws Writing Team (BWT) completes the draft and sends it to the SC within the 8th of April
- 2. The document is discussed by the BWT members in front of the SC the 11th of April
- 3. Amendments and suggestions are collected until the 23/04
- 4. The final version must be approved by the SC the 2nd of May
  - Usual consensus approval is the preferred method
  - But, if we aren't able to achieve a consensus, we cannot have "one person one vote" in the SC because the membership of the SC is ill-defined. We can have one country-one vote + chairs of the SC. Country delegates will be defined before (internally by each country)
- 5. The Bylaws are published on the ET web site (http://www.et-gw.eu/) and in the ET TDS; major mailing lists are used to share the info
- 6. The candidate RUs send their applications;
  - if belonging to the ESFRI+INFRA-DEV institutions (listed below) they will be accepted, otherwise they will be queued
  - the queued proposals will be reviewed by a committee.
  - accepted RUs (queued or immediately admitted) will sign a Collaboration Agreement Document, in which the pledged contributions and FRTEs at the moment of acceptance will be listed.
- 7. The newborn CB will meet the first time during the ET symposium, chaired by a delegate of the SC. Each RU will have one representative in the Collaboration Board.
- 8. A list of candidates for the role of CB chair is formed, names are circulated in the CB
- 9. In a next meeting (about 1-2 months later) the CB elects the CB chair
- 10. The Spokesperson candidatures are presented in October 2022
- 11. The election will be made within the end of 2022
- 12. Until the election of the Spokesperson, the chairs of the SC and the chairs of the Specific Boards will act as interim Executive Board.

# E.1 List of countries whose institutions have signed the consortium agreement for ESFRI:

Italy, Netherlands, Belgium, Spain, Poland, Germany, Norway, UK

### E.1.1 Additional countries in the INFRA-DEV

France, Austria

## E.2 List of participants, listed in the ESFRI proposal:

- COORDINATOR:
  - COUNTRY/ENTITY: ITALY
  - INSTITUTION NAME: Istituto Nazionale di Fisica Nucleare
  - COUNTRY/ENTITY: THE NETHERLANDS
  - INSTITUTION NAMES: Nikhef, Maastricht University
- PARTICIPANTS:
  - COUNTRY/ENTITY: ITALY

INSTITUTION NAME: Istituto Nazionale di AstroFisica, Istituto Nazionale di Geofisica e Vulcanologia, Università degli Studi di Cagliari , Università degli Studi di Sassari, European Gravitational Observatory

- COUNTRY/ENTITY: SPAIN

INSTITUTION NAME: Universitat de Barcelona, Institut de Ciències de l'Espai, Institut de Física d'Altes Energies, Universitat de València, Universitat de les Illes Balears, Instituto de Estructura de la Materia, Agencia Estatal Consejo Superior de Investigaciones Científicas 17, Instituto de Física Teórica UAM-CSIC, Agencia Estatal Consejo Superior de Investigaciones Científicas 28 INSTITUTION

- COUNTRY/ENTITY: GERMANY

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- COUNTRY/ENTITY: United Kingdom
   INSTITUTION NAME: University of Birmingham, University of Glasgow, University of Portsmouth, Cardiff University, University of Strathclyde
- COUNTRY/ENTITY: SWITZERLAND INSTITUTION NAME: Université de Geneve
- COUNTRY/ENTITY: BELGIUM

INSTITUTION NAME: Vrije Universiteit Brussel, Fonds Wetenschappelijk Onderzoek - Vlaanderen, Fonds de la Rechercheur Scientifique - FNRS, Université de Namur, Université de Mons, Universiteit Antwerpen, Université catholique de Louvain

- COUNTRY/ENTITY: POLAND

INSTITUTION NAME: University of Warsaw, Copernicus Astronomical Center, National Centre for Nuclear Research, Institute of Mathematics

- COUNTRY/ENTITY: NORWAY INSTITUTION NAME: Norwegian University of Science and Technology
- COUNTRY/ENTITY: HUNGARY
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   List of additional participants, listed in the INFRA-DEV proposal:
- COUNTRY/ENTITY: FRANCE INSTITUTION NAME: CNRS
- COUNTRY/ENTITY: AUSTRIA INSTITUTION NAME: ??

# F Code of Conduct

The Code of Conduct defines the behaviour of people within the ET collaboration. It is the foundation of the  $\mathbf{CO}$  llaboration.

The ET Collaboration strives for workplaces free from discrimination and harassment. It is the policy of the Collaborations 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. Members will treat each other with respect and consideration to create a collegial, inclusive, and professional environment. Creating a supportive environment to enable scientific discourse is the responsibility of all members. Members 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, or educational background. Disruptive or harassing behaviour of any kind will not be tolerated. Harassment includes but is not limited to inappropriate or intimidating behaviour and language, unwelcome jokes or comments, unwanted touching or attention, offensive images, unwelcome photography, and stalking. Disruptive behaviour includes instances of disrespect and lack of civility in interactions with colleagues. All members are expected at all times to deal with and address their fellow colleagues with respect and courtesy. This includes, but is not limited to, behaviour in in-person meetings, virtual (remote) meetings, chats, social media, email communications and other communication formats.

Any professional relationship or action that may result in a conflict of interest in the context of ET must be fully disclosed. When objectivity and effectiveness cannot be maintained, the activity should be avoided or discontinued.

The ET Collaboration also will not tolerate instances of scientific misconduct, which is characterized by any of fabrication, falsification, or plagiarism in proposing or performing research in the ET Collaboration. Fabrication means making up data or results. Falsification means manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record. Knowingly reporting or reproducing fabricated or falsified results of others is also considered as misconduct. Plagiarism means the appropriation of another person's ideas, processes, results, or words without giving appropriate credit.

Violations of this code of conduct policy should be reported as soon as possible to meeting organizers, working group chairs, or the ET Leadership – whatever is most appropriate in the situation. If desired/required, the Ombudsperson (see section G) can be called on and assist in finding an appropriate complaints procedure.

Any violations of the Code of Conduct will be pursued through discussion with the party or parties involved, if desired, with the help of a mediator chosen by the disputing parties. Significant violations can result in immediate consequences in access to ET Collaboration activities; repeated marginal violations also will be addressed. Sanctions for violations of this Code of Conduct will be determined following the grievance procedure, and may result, in serious cases, in the permanent exclusion of an individual or group from the ET collaboration.

Conflicts which cannot be resolved through collaboration procedures will be referred to the institution of the person(s) who may have violated the Code of Conduct. The Collaboration may take action based on the institution's findings. Retaliation for complaints of inappropriate conduct will not be tolerated. If a member observes inappropriate comments or actions and personal intervention seems appropriate and safe, they should be considerate of all parties before intervening. This Code of Conduct is the defining document for the ET Collaboration.

A policy for formal complaints in case things do not work as expected is given in the appendix F.3.4.

# F.1 ET Collaboration policy for formal complaints

### F.1.1 Overview

This chapter describes the policy of the ET Collaboration for formally addressing interpersonal concerns or problems that may arise when an ET Collaboration member perceives that, in the performance of ET Collaboration activities, an unfair act has occurred which leads to an injustice or harm.

Although the ET Collaboration encourages open communication between its members, in order to provide fairness and equity in the Collaboration's work environment, the ET Collaboration has established a formal Grievance Procedure that is accessible to all members and serves as the Collaboration procedure for the resolution of ET Collaboration-related complaints and grievances.

There will be no negative consequences, and no retaliation tolerated, for ET Collaboration members using or participating in the Collaboration problem resolution process in good faith.

### F.1.2 Definitions

For purposes of this policy, a grievance is defined as any difference arising between two ET Collaboration members as peers or in the ET Collaboration organization hierarchy, as to the interpretation or application of an ET Collaboration rule, policy, or procedure.

An ET Collaboration activity is defined as any work activity performed by ET Collaboration members in support of the ET Collaboration mission in the form of presence at the Observatories for commissioning and observation, outreach, service work, and technical and/or analysis contributions.

### F.1.3 Applicability

The intent of this procedure is to provide ET Collaboration members with a way to discuss and address work-related concerns or problems involving the Collaboration.

This procedure applies only when other formal processes do not exist. It does not take the place of ET institution grievance procedures, nor is it intended to replace reporting to appropriate law enforcement agencies.

In particular, ET Collaboration members who believe they have been subject to discrimination in matters of employment or matters of sexual harassment should take the matter to the attention of the appropriate office of the institution where the injustice or harm has occurred. In these cases, ET Collaboration members may also seek informal advice from the ET Collaboration Spokesperson and/or the ET Collaboration Ombudspersons (see Section 7).

### F.1.4 Issues not addressed by this policy

This policy does not apply to (a) grievances unrelated to ET Collaboration activities and (b) grievances between members from the same ET institution. Where there is a question of applicability, the ET Collaboration Spokesperson will determine whether or not an issue may be dealt with through this grievance process. If a matter is found non-grievable, the ET Collaboration Spokesperson will inform in a timely fashion all parties involved.

### F.1.5 Eligibility

This procedure is available to all ET Collaboration members during the performance of their ET Collaboration activities as described in the ET Collaboration Bylaws.

### F.1.6 Effect of grievance on ET Collaboration member

Filing a grievance will not itself jeopardize the grievant's position in the ET Collaboration. This policy forbids retaliation against any ET Collaboration member based upon the ET Collaboration member's participation in the grievance procedure.

An ET Collaboration member shall not be coerced by any other ET Collaboration member to proceed (or not to proceed) with a grievance.

## F.2 Additional Resources

Should the aggrieved ET Collaboration member not wish to pursue this formal grievance process, the ET Collaboration also offers the option of seeking confidential, informal discussion outside this formal grievance process for resolving complaints. Those seeking this option for assistance should check with the ET Collaboration Ombudspersons, who has his/her own mandate and guidelines for providing help.

## F.3 Exception

Any exception to this policy requires the approval of the ET Collaboration Spokesperson.

### F.3.1 Informal resolution

The mutual interest of all the parties involved in a grievance is best served when there is regular, forthright communication.

An ET Collaboration member who believes a justifiable ET Collaboration-related complaint exist shall take steps to resolve the problem in a discussion with the other party. The ET Collaboration Ombudspersons may provide confidential non-binding advice in the informal resolution. Should informal attempts at resolution not be satisfactory, the ET Collaboration member may then file a formal grievance according to this Procedure.

The ET Collaboration member may seek the assistance of the ET Collaboration Spokesperson and/or the ET Collaboration Ombudspersons in the use of the mediation. The ET Collaboration Spokesperson and the ET Collaboration Ombudspersons are available to assist the Collaboration members involved in any ET Collaboration-related problem or concern and provide free and non-binding advice on matters of policy interpretation, rights of ET Collaboration members and use of the formal grievance procedure.

### F.3.2 Records

The official records of the progress of a grievance and the established time limits are kept by the ET Collaboration Spokesperson or by the ET directorate for grievance filed against the ET Collaboration Spokesperson. A dated copy of the grievance form must be provided to the ET Collaboration Spokesperson (or ET directorate) each time a section has been completed by the parties involved.

CHECK: IS THERE A FORM FOR GRIEVANCES?

### F.3.3 Time Limitations

This grievance procedure sets forth time limits for initiation of action on each step of the procedure. If a grievance is not forwarded by the ET Collaboration member within the time allowed in any step, the grievance will be considered discontinued, and no further review will take place. A written grievance which is not answered within the time allowed may be sent on to the next step within the allotted time frame by the ET Collaboration member. The ET Collaboration Spokesperson may extend any time limit in the grievance process with the mutual agreement of the parties.

### F.3.4 Grievance Procedure

All ET Collaboration members may consult with the ET Collaboration Spokesperson for assistance at any time. During the problem resolution process, interviews and/or meetings with ET Collaboration members and management may be conducted. No external legal representatives, such as attorneys, will be permitted to attend interviews or meetings. No tape or other recordings will be made of interviews or meetings.

Formal complaints against the ET Collaboration Spokesperson follow the special procedure described at the end of this section.

**STEP I** In order to use this process, an ET Collaboration member must bring a work-related concern or problem to the attention of his or her group ET Collaboration-PI (working group chair, division chair, board chair, spokesperson) or ET Collaboration-PI-PI's designated representative in writing within 30 calendar days of the original incident or event about which the ET Collaboration member wishes to complain or when the pertinent facts became known to the ET Collaboration member.

The ET Collaboration-PI will inform the ET Collaboration Spokesperson of the receipt of the grievance. The ET Collaboration-PI will look into the concern or problem and make a reasonable effort to resolve the grievance within a reasonable time. The ET Collaboration-PI will provide the ET Collaboration member with a written answer within 10 working days after the matter has been brought to his or her attention.

Upon completion of this process, the ET Collaboration-PI will forward a copy of the grievance and answer to the ET Collaboration Spokesperson. If the circumstances of the complaint are such that it would be inappropriate for the ET Collaboration-PI to address the complaint, the ET Collaboration member may bring his or her complaint directly to his or her working group co-chair(s) as defined in the ET Collaboration Organizational Chart (step II), or directly to the ET Collaboration Spokesperson (step III). **STEP II** If the ET Collaboration member is not satisfied with the ET Collaboration-PI's resolution and would like additional review, or the circumstances of the complaint are such that it would be inappropriate for the ET Collaboration-PI to address the complaint, the ET Collaboration member must request in writing the co-chair(s) of the working group that most closely relates to the complaint to review his or her concerns within 10 working days of receiving the response from his or her ET Collaboration-PI or within 30 calendar days of the original incident or event about which the ET Collaboration member wishes to complain or when the pertinent facts became known to the ET Collaboration member.

Within 10 working days from receipt of the written grievance, the working group co-chair(s) or designated representative(s) will schedule a meeting with the ET Collaboration member, the group ET Collaboration-PI, and any other individuals the working group co-chair(s) determine will assist in the research into and resolution of the problem. The meeting shall be held within 10 working days from receipt of the written grievance. The meeting will be closed. If possible, the working group co-chair(s) will resolve the problem at this meeting. If a resolution is not possible, the working group co-chair(s) will have 10 working days in which to make a final decision. The decision will be promptly communicated to the ET Collaboration member and the ET Collaboration-PI in writing by the working group co-chair(s).

Upon completion of this process, the working group co-chair(s) will forward a copy of the grievance and decision to the ET Collaboration Spokesperson. If the circumstances of the complaint are such that it would be inappropriate for a working group co-chair(s) to address the complaint, the ET Collaboration member may bring his or her complaint directly to the ET Collaboration Spokesperson (step III).

**STEP III** If resolution is not reached between the ET Collaboration member and the working group cochair(s), and the ET Collaboration member wishes further review of his or her concerns, or the circumstances of the complaint are such that it would be inappropriate for the ET Collaboration-PI and working group cochair(s) to address the complaint, within 10 days of receiving the working group co-chair(s) response, or within 30 calendar days of the original incident or event about which the ET Collaboration member wishes to complain or when the pertinent facts became known to the ET Collaboration member, the ET Collaboration member must submit a written appeal, or file a grievance, to the ET Collaboration Spokesperson.

The ET Collaboration member's appeal or grievance should include:

- 1. a description of the concern or problem, the policy that he or she believes was not followed or violated,
- 2. the ET Collaboration member's suggestions about ways in which the problem or concern may be resolved,
- 3. the ET Collaboration-PI and working group co-chair(s)' proposed resolution, if any,
- 4. a copy of the ET Collaboration-PI or working group co-chair(s)' written response, if any,
- 5. any other related written material the ET Collaboration member received from the ET Collaboration-PI and working group co-chair(s),
- 6. and any other pertinent documents or information.

The Spokesperson will review the information provided by the ET Collaboration member, evaluate the basis of his or her request, determine if the appeal should be considered further, and inform the ET Collaboration member of the decision. In the case that the Spokesperson deems that no further action is necessary, the decision becomes final.

If the Spokesperson determines that the ET Collaboration member's appeal should be continued further, the appeal will be considered by a review committee comprised of a senior ET Collaboration member or designee in the ET Collaboration member group, a senior ET Collaboration member outside the member's group and selected by the ET Collaboration Spokesperson, and the ET Collaboration Spokesperson. The meetings of the review committee will be closed. The ET Collaboration Spokesperson will take steps to ensure that the complaint is heard in a timely fashion. The review committee will review the ET Collaboration member's complaint and make a decision as to the complaint.

The decision will be communicated to the ET Collaboration Spokesperson and the ET Collaboration member in writing within 30 days. The decision of the review committee is final.

# Grievance against the ET Collaboration Spokesperson or Deputy (NEED TO CHECK HOW TO ADAPT THIS TO ET!!!

In order to file a formal grievance against the ET Collaboration Spokesperson, a ET Collaboration member must bring the concern or problem to the attention of the ET directorate in writing within 30 calendar days of the original incident or event about which the ET Collaboration member wishes to complain or when the pertinent facts became known to the ET Collaboration member. The ET Directorate will inform the ET Collaboration Board of the receipt of the grievance. The ET Directorate will look into the concern or problem and make a reasonable effort to resolve the grievance within a reasonable time. The ET Directorate will provide the ET Collaboration member with a written answer within 10 working days after the matter has been brought to his or her attention.

If the ET Collaboration member is not satisfied with the Executive Director's resolution and would like additional review, within 10 days of receiving the Executive Director's response, the ET Collaboration member must submit a written appeal to the Executive Director. Within 10 working days from receipt of the written appeal, the Executive Director or designated representative in consultation with the ET Collaboration Executive Committee (minus the Spokesperson) will schedule a meeting with the ET Collaboration member, the ET Collaboration Spokesperson, and any other individuals the Executive Director determine will assist in the investigation and resolution of the problem. The meeting shall be held within 10 working days from receipt of the written grievance. The meeting will be closed. If possible, the Executive Director will resolve the problem at this meeting. If a resolution is not possible, the Executive Director will have 10 working days in which to make a final decision in consultation with the ET Collaboration Executive Committee (minus the Spokesperson). The decision will be promptly communicated in writing by the Executive Director to the ET Collaboration member and to the ET Collaboration Spokesperson.

Upon completion of this process, the Executive Director will forward a copy of the grievance and answer to the ET Collaboration Executive Committee.



Figure F.1: Formal ET Grievance Procedure

# G ET Collaboration Ombudsperson

The ET cooperation will have two Ombudspersons, a female and a male, in an attempt to keep the threshold for contacting them as low as possible, especially in the case of gender-related conflicts. The ET Collaboration Ombudspersons provide confidential, *informal*, independent, and neutral dispute resolution advisory services for all members of the ET Collaboration. The Ombudspersons assist all members in identifying and evaluating options for resolving and managing conflicts, provides various types of informal mediation services, and makes referrals to other appropriate academic and community resources. The ET Collaboration Ombudspersons are meant to help with conflicts that arise in ET Collaboration working groups or events, not in problems internal to an academic institution, which usually can be mediated by the appropriate offices in the host institution.

The Ombudspersons are familiar with the organizational structure of the ET Collaboration and can provide current information about services, programs, policies, and procedures. Due to its informal, confidential, and independent role outside the administrative structure of the Collaboration, notice to the Ombudspersons about a problem does not result in the generation of records, nor does it constitute legal notice to the member host institution about the existence of a problem. For those interested in making official complaints to the university about a problem, the Ombudspersons can assist by making appropriate referrals.

The ET Collaboration Ombudspersons report only to the ET Collaboration Spokesperson, but they do not share any confidential information. The ET Collaboration Ombudspersons may be members of the ET Collaboration, but they should not have any other leadership or supervisory role that may compromise the Ombudspersons' impartiality.

The ET Collaboration adopts the role definitions from the International Ombuds Association copied below from http://www.ombudsassociation.org/resources/what-ombuds :

#### The Organizational Ombudsman—Role and Function

The primary duties of an organizational ombudsman are (1) to work with individuals and groups in an organization to explore and assist them in determining options to help resolve conflicts, problematic issues or concerns, and (2) to bring systemic concerns to the attention of the organization for resolution.

An organizational ombudsman operates in a manner to preserve the confidentiality of those seeking services, maintains a neutral/impartial position with respect to the concerns raised, works at an informal level of the organizational system, and is independent of formal organizational structures. Successfully fulfilling that primary function in a manner consistent with the IOA Standards of Practice requires a number of activities on the part of the ombudsman while precluding others.

Activities and functions most frequently undertaken by an ombudsman include, but are not limited to:

- Listens and understands issues while remaining neutral with respect to the facts. The ombudsman doesn't listen to judge or to decide who is right or wrong. The ombudsman listens to understand the issue from the perspective of the individual. This is a critical step in developing options for resolution.
- Assists in reframing issues and developing and helping individuals evaluate options. This helps individuals identify the interests of various parties to the issues and helps focus efforts on potential options to meet those interests.
- Guides or coaches individuals to deal directly with other parties, including the use of formal resolution resources of the organization. An ombudsman often seeks to help individuals improve their skill and their confidence in giving voice to their concerns directly.
- Refers individuals to appropriate resolution resources. An ombudsman may refer individuals to one or more formal organizational resources that can potentially resolve the issue.
- Assists in surfacing issues to formal resolution channels. When an individual is unable or unwilling to surface a concern directly, the ombudsman can assist by helping give voice to the concerns and /or creating an awareness of the issue among appropriate decision-makers in the organization.
- Facilitates informal resolution processes. An ombudsman may help to resolve issues between parties through various types of informal mediation. Identifies new issues and opportunities for systemic change for the organization.
- The unique positioning of the ombudsman serves to provide unfiltered information that can produce insight to issues and resolutions. The ombudsman is a source of detection and early warning of new issues, and a source of suggestions of systemic change to improve existing processes.

#### What an ombudsman does not do:

Because of the informal, neutral, confidential and independent positioning of an ombudsman in an organization, they typically do not undertake the following roles or activities: Participate in formal investigations or play any role in a formal issue resolution process Serve in any other organizational role that would compromise the neutrality of the ombudsman role Receive notice for the organization Make binding decisions or mandate policies Create or maintain records or reports for the organization