

- LIGO SCIENTIFIC COLLABORATION -

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LIGO Scientific Collaboration Charter		
The LSC Bylaws Committee		

WWW: <http://www.ligo.org/>

~~The goal of the charter is to establish the functions and organizational structure of the , to identify its responsibilities, to set guidelines for the role the Collaboration will play in the scientific research and operation of the LIGO detectors and other LSC detectors and for the release of scientific results, and to delineate its relationship with the LIGO Laboratory.~~

1 The LSC and the LIGO Laboratory together make up LIGO Mission

~~LSC Mission~~The LIGO Scientific Collaboration (LSC) is a self-governing collaboration using gravitational ~~waves~~wave detectors to explore the fundamental physics of gravity and observe the universe, as a multi-messenger astronomical tool of discovery. The LSC works toward this goal through ~~research on, and development~~development, commissioning and operation of gravitational wave detectors; through the development and deployment of techniques for ,gravitational wave observation; and ~~the development, commissioning, and exploitation~~through interpretation of gravitational wave ~~detectors~~data. The LSC accepts all groups who exhibit scientific merit, agree to adhere to the LSC Membership Code of Conduct, and propose to participate in and contribute to the LSC as described in this Charter, the LSC Bylaws, and the LSC Scientific Program. No ~~individual or group~~group or individual will be denied membership on any other basis.

~~LSC Responsibilities~~The LSC is the entity within LIGO that carries out LIGO 's scientific research program. ~~Memoranda of Understanding (MoUs) between member groups and the LIGO Laboratory establish the individual group responsibilities to allow the LSC to perform the following functions~~The LSC uses data from gravitational wave detectors in LIGO Hanford and LIGO Livingston Observatories, operated by the LIGO Laboratory. The GEO600 interferometer and the future LIGO India interferometer are operated as LSC detectors. Relationships with groups or collaborations, including those who operate additional detectors, will be governed by agreements with the LSC. The goal is for full sharing of obligations and privileges among all participants.

2 LSC Responsibilities

The LSC has the following responsibilities:

1. to establish and carry out the ~~Astrophysics~~astrophysics analysis of LIGO data, including ~~strategy~~ goals and timelines.
2. to identify priorities for instrument science and the related technology development and undertake the respective research and development program
3. ~~undertake outreach~~to communicate LIGO's s activities and goals to the public ,and to provide educational opportunities for young people
4. to disseminate the results of the astrophysics and instrument science programs
5. to participate in the scientific operations of the LIGO detectors
6. to perform internal evaluation of progress in the LSC program, making adjustments as necessary

~~In support of the above activities, the LSC makes presentations to funding agencies on the level of effort required to support the various elements of the research program, and presents the rationale for the program before advisory, oversight, and review bodies concerned with LIGO.~~

~~LIGO Laboratory Responsibilities~~ The LIGO Laboratory is the group within the LSC that has the ultimate responsibility for the LIGO Hanford and Livingston Observatories, under a cooperative agreement between Caltech and the National Science Foundation. It operates the Observatories and the Caltech and MIT Campus LIGO laboratories, manages the construction and commissioning of new instruments, and provides the administrative and fiscal support for observatory operations as well as administrative support for the LSC. The LIGO Laboratory is the curator for the NSF of the LIGO data, disseminating it both within the collaboration and to the broader research community as described in the LIGO Data Management Plan.

3 Relationship between the LSC and the LIGO Laboratory

~~Because the success of LIGO depends upon the efforts of both~~ In support of the above activities, the LSC and the LIGO Laboratory work in a mutually supportive fashion to accomplish LIGO's goals. ~~Scientists and engineers at the LIGO Laboratory participate fully as members of the LSC in the entire LSC program. The LIGO Laboratory makes full use of the talents of LSC members in carrying out the LIGO Laboratory's responsibilities for operation of the instruments and for the development of new instruments.~~

~~The LIGO Directorate consists of the Director and the Deputy Director of the Laboratory and the Spokesperson and Deputy Spokesperson of the LSC. The LSC produces an annual Program and White Papers that complement the LIGO Laboratory Annual Report and Work Plan.~~

~~To support the Laboratory in optimizing the operation of the detectors at the Observatories and Lab's other facilities, the LSC offers guidance on:~~

- ~~1. optimization of scientific returns;~~
- ~~2. the relative distribution of observing and development time of the detectors;~~
- ~~3. priorities for improvements;~~
- ~~4. the timing and readiness of major instrumentation changes for the detectors.~~

~~The LSC contributes to the complete range of tasks associated with the effort to meet LIGO's goals. Specific responsibilities will be agreed to in the MoU between groups and LIGO; the objective is that LSC members in and outside of the LIGO Laboratory will share fairly in these efforts. All MoUs between member groups and LIGO will be co-signed by the Laboratory Director and the LSC Spokesperson.~~

~~The LIGO Program Advisory Committee is expected to advise the LSC in carrying out its responsibilities.~~

~~The LSC also uses data from gravitational wave detectors other than those operated by the LIGO Laboratory. Appropriate Memoranda of Understanding (MoUs) with LIGO make these data available to the LSC and make LSC data available to collaborating detector groups. Relationships with groups, or collaborations, around these additional detectors can be established to support the sharing of instrument science and astrophysical exploitation of the combined detector array. The goal is for full sharing of obligations and privileges among all participants. The GEO600 interferometer and the future LIGO India interferometer are operated as LSC detectors.~~

~~More limited arrangements for cooperation with external detectors and collaborations are also handled through MoUs with~~ makes presentations to funding agencies on the level of effort required to support the various elements of the research program, and presents the rationale for the program before advisory, oversight, and review bodies concerned with LIGO.

3 Organizational Structure of the LSC

Membership in the LSC is by groups, affiliated with institutions. MoUs between groups and LIGO, with regularly updated attachments, establish the commitments. Individuals in the group have the rights and obligations of membership as indicated in this Charter, the Bylaws, and ~~the Policies and Procedures document~~other Council-approved documents.

The Collaboration Council, with proportional representation from each group, votes on all policy matters, and elects the Spokesperson. The Collaboration Spokesperson has the responsibility for the proper functioning of the LSC and representing it to the outside world.

~~LSC research is coordinated through Working Groups focused on each of the main research topics. Working Groups and their research area are represented in the executive management body of the collaboration. Other committees, described in the Bylaws, guide the analysis effort, instrument science, and education and public outreach, and insure the proper running of the Collaboration.~~

~~The Program Committee, with membership proposed by the Spokesperson and ratified by the Council, will formulate the Program~~The LIGO Directorate consists of the Director and the Deputy Director of the Laboratory and the Spokesperson and Deputy Spokesperson of the LSC, ~~identifying the current priorities of the Collaboration and updating the program annually.~~

~~The Management Team, led by the Spokesperson, will implement the policies and priorities of the Collaboration and include representation from the major areas of research of the Collaboration. The membership of the Management Team is defined in the LSC Bylaws.~~

~~The MoU Review Panel is proposed by the Management Team and approved by the Spokesperson. The annual review of MoUs evaluates the contributions by each LSC group and ensures that the priorities and scope defined by the Program are reflected in each group's plans. The details of the MoU assessment and evaluation process are described in the LSC Bylaws~~work of the LSC is coordinated through working groups and committees across observational science, instrument science, education and communication, operations and standards and services.

The LSC is responsible for reviewing and approving the presentation and publication of all major results of LSC research. ~~A Publication and Presentations policy and associated committee maintains appropriate review and approval mechanisms.~~

Authorship rights on LSC-wide publications are determined by Council-approved policies.

~~Adoption and subsequent modification of the Charter requires a~~ Further details on responsibilities and rights of members and LSC organization are in the LSC Bylaws.

Adoption of changes to this Charter requires presentation of proposed changes in a duly called Council meeting and approval by 2/3 majority vote of those present at a duly called Council Meeting of LSC Council members voting, excluding abstentions. Adoption and subsequent modification of the Bylaws ~~and of the Policies and Procedures document~~ requires a majority vote ~~at a Council Meeting, excluding abstentions, by the Council.~~