

LIGO SCIENTIFIC COLLABORATION

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<b>LSC Governance, Collaboration Standards and Services White Paper (Summer 2020 edition)</b>	
LSC	

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## Contents

<b>1</b>	<b>LSC Group Management</b>	<b>4</b>
	Op-1.1 LSC Group Management . . . . .	4
<b>2</b>	<b>Governance</b>	<b>4</b>
	Op-2.1 Council Chair . . . . .	4
	Op-2.2 Spokesperson . . . . .	4
	Op-2.3 Ombudsperson . . . . .	4
	Op-2.4 Management Team . . . . .	4
	Op-2.5 Program Committee . . . . .	4
<b>3</b>	<b>Observational Science</b>	<b>5</b>
	Op-3.1 Observational Science Division Chair . . . . .	5
	Op-3.2 Burst Working Group Chair . . . . .	5
	Op-3.3 CBC Working Group Chair . . . . .	5
	Op-3.4 CW Working Group Chair . . . . .	5
	Op-3.5 Stochastic Working Group Chair . . . . .	5
<b>4</b>	<b>Instrument Science</b>	<b>5</b>
	Op-4.1 Instrument Science Division Chair . . . . .	5
	Op-4.2 Advanced Interferometer Configuraitons Working Group Chair . . . . .	6
	Op-4.3 Control Systems Working Group Chair . . . . .	6
	Op-4.4 Lasers and Auxiliary Optics Working Group Chair . . . . .	6
	Op-4.5 Optics Working Group . . . . .	6
	Op-4.6 Quantum Noise Working Group . . . . .	6
	Op-4.7 Seismic Isolation and Suspensions Working Group . . . . .	6
<b>5</b>	<b>Operations</b>	<b>6</b>
	Op-5.1 Operations Division Chair . . . . .	6
	Op-5.2 Detector Characterization Chair . . . . .	7
	Op-5.3 Calibration Working Group Chair . . . . .	7
	Op-5.4 Low-latency Working Group Chair . . . . .	7
	Op-5.5 Run-planning Committee Chair . . . . .	7
	Op-5.6 Computing and Software Working Group Chair . . . . .	7
	Op-5.7 Support of Observatories Committee Chair . . . . .	7
	Op-5.8 Open Data Working Group Chair . . . . .	7
<b>6</b>	<b>Communications and Education</b>	<b>7</b>
	Op-6.1 Communications and Education Division Chair . . . . .	8
	Op-6.2 Formal Education Committee Chair . . . . .	8
	Op-6.3 Informal Education and Public Outreach Committee Chair . . . . .	8
	Op-6.4 Professional Outreach Committee Chair . . . . .	8
	Op-6.5 LSC Web Committee Chair . . . . .	8
	Op-6.6 Media Relations Committee Chair . . . . .	8
	Op-6.7 LIGO Magazine Committee Chair . . . . .	8

<b>7</b>	<b>Collaboration Standards and Services Division</b>	<b>8</b>
Op-7.1	Collaboration Standards and Services Division Chair . . . . .	9
Op-7.2	Diversity, Equity and Inclusion Committee . . . . .	9
Op-7.3	LIGO Academic Advisory Committee . . . . .	9
Op-7.4	Meetings Committee . . . . .	9
Op-7.5	Elections and Membership Committee . . . . .	9
Op-7.6	Speakers and Awards Committee . . . . .	9
Op-7.7	Editorial Board . . . . .	9
Op-7.8	MOU Review Panel . . . . .	9
Op-7.9	Standards and Conduct Committee . . . . .	10
<b>8</b>	<b>Other Activities</b>	<b>10</b>
Op-8.1	Review Committee Chairs . . . . .	10
Op-8.2	Ad-hoc Committees . . . . .	10
	<b>References</b>	<b>11</b>

This *LSC Governance, Collaboration Standards and Services White Paper* describes roles in the associated with governance, management, and the Collaboration Standards and Services Division of the LIGO Scientific Collaboration (LSC). All of the activities described here are associated with Sec. 2 of the (LSC) Program 2020-2021, LIGO-M2000130.

## **1 LSC Group Management**

### **Op-1.1 LSC Group Management**

The LSC Principal Investigator (LSC-PI) is responsible for ensuring that all individuals in their Group understand and comply with the rules of the LSC, is responsible for the Group's performance against the commitments delineated in the Group's annual work plan, and manages their group members accordingly.

## **2 Governance**

### **Op-2.1 Council Chair**

The LSC Council Chair has the responsibility and authority to facilitate the governance process of the Council. The Chair's responsibilities include all aspects of planning and conducting Council meetings in consultation with the Spokesperson and documenting the Council decisions. See Sec. 2.1.4 of the LSC Bylaws (M050172-v21).

### **Op-2.2 Spokesperson**

The Spokesperson leads the LSC, and is empowered to represent the LSC to the public and to the broader scientific community. See Sec. 2.2 of the LSC Bylaws (M050172-v21).

### **Op-2.3 Ombudsperson**

The LSC Ombudsperson provides confidential, informal, independent, and neutral dispute resolution advisory services for all members of the LIGO Scientific Collaboration. See Sec. 2.3.1 of the LSC Bylaws (M050172-v21).

### **Op-2.4 Management Team**

The Management Team is the group that implements the policies created by the Council and coordinates the activities of the LSC. See Sec. 2.4 of the LSC Bylaws (M050172-v21).

### **Op-2.5 Program Committee**

The Program Committee is charged with formulating the Science Program of the LSC. See Sec. 2.5 of the LSC Bylaws (M050172-v21).

### **3 Observational Science**

The Observational Science Division is responsible for coordinating, overseeing, and reviewing observational science work.

#### **Op-3.1 Observational Science Division Chair**

The Observational Science Division Chair coordinates the activities of the Division. See Sec. 3.1.2 of the LSC Bylaws (M050172-v21).

#### **Op-3.2 Burst Working Group Chair**

The Burst Working Group is devoted to searching for transient gravitational wave signals without re-lying on accurate knowledge of the waveforms. The Burst Working Group has two co-chairs. See Sec. 3.2.2 of the LSC Bylaws (M050172-v21).

#### **Op-3.3 CBC Working Group Chair**

The Compact Binary Coalescence (CBC) Working Group searches and characterizes modelled gravitational wave signals from compact binary mergers. The Compact Binary Coalescence Working Group has two co-chairs. See Sec. 3.3.2 of the LSC Bylaws (M050172-v21).

#### **Op-3.4 CW Working Group Chair**

The Continuous Waves Working Group is tasked with searching for the signatures of continuous gravitational waves. The Continuous Waves Working Group has two co-chairs. See Sec. 3.4.2 of the LSC Bylaws (M050172-v21).

#### **Op-3.5 Stochastic Working Group Chair**

The Stochastic Working Group focuses on searches for the stochastic background of gravitational waves. The Stochastic Working Group has two co-chairs. See Sec. 3.5.2 of the LSC Bylaws (M050172-v21).

### **4 Instrument Science**

The Instrument Science Division is responsible for organizing and documenting the Collaboration's instrument science research for the current detector, planned detector upgrades, and future detectors.

#### **Op-4.1 Instrument Science Division Chair**

The Instrument Science Division Chair coordinates the activities of the Division. See Sec. 4.1.2 of the LSC Bylaws (M050172-v21).

#### **Op-4.2 Advanced Interferometer Configuraitons Working Group Chair**

The Advanced Interferometer Configuration Working Group carries out theoretical and experimental research towards upgrades of the LIGO detectors as well as for future gravitational-wave detectors. This Working Group has one chair. See Sec. 4.2.2 of the LSC Bylaws (M050172-v21).

#### **Op-4.3 Control Systems Working Group Chair**

The Control Systems Working Group covers fundamental and applied research in control systems as it relates to gravitational-wave interferometers. This Working Group has one chair. See Sec. 4.3.2 of the LSC Bylaws (M050172-v21).

#### **Op-4.4 Lasers and Auxiliary Optics Working Group Chair**

The Lasers and Auxiliary Optics Working Group addresses all types of classical lasers and other optical auxiliary systems encompassing all technologies which are not part of any of the other working group. This Working Group has one chair. See Sec. 4.4.2 of the LSC Bylaws (M050172-v21).

#### **Op-4.5 Optics Working Group**

The Optics Working Group covers research in all areas of gravitational-wave detector optics. This Working Group has one chair. See Sec. 4.5.2 of the LSC Bylaws (M050172-v21).

#### **Op-4.6 Quantum Noise Working Group**

The Quantum Noise Working Group covers research (experiment and theory) involving squeezed light sources, quantum-non-demolition topologies, and research on quantum radiation pressure effects. This Working Group has one chair. See Sec. 4.6.2 of the LSC Bylaws (M050172-v21).

#### **Op-4.7 Seismic Isolation and Suspensions Working Group**

The Seismic Isolation and Suspensions Working Group covers research in seismic isolation, suspension design, and suspension thermal noise. This Working Group has one chair. See Sec. 4.7.2 of the LSC Bylaws (M050172-v21).

## **5 Operations**

The Operations Division plans, organizes and manages all LSC activities related to, and necessary for, detector operation.

#### **Op-5.1 Operations Division Chair**

The Operations Division Chair coordinates the activities of the Division. See Sec. 5.1.3 of the LSC Bylaws (M050172-v21).

### **Op-5.2 Detector Characterization Chair**

The Detector Characterization (DetChar) Working Group is responsible for organizing and documenting the Collaboration's efforts in detector characterization and the development of tools for that purpose. This Working Group has two co-chairs. See Sec. 5.2.2 of the LSC Bylaws (M050172-v21).

### **Op-5.3 Calibration Working Group Chair**

The Calibration Working Group is responsible for organizing, delivering, and documenting the calibration information for the detectors in the Collaboration. This Working Group has two co-chairs. See Sec. 5.3.2 of the LSC Bylaws (M050172-v21).

### **Op-5.4 Low-latency Working Group Chair**

The Low-latency Working Group plans, organizes and oversees analysis activities necessary to provide and disseminate low-latency event information within and outside the LSC. This Working Group has two co-chairs. See Sec. 5.4.2 of the LSC Bylaws (M050172-v21).

### **Op-5.5 Run-planning Committee Chair**

The Run Planning Committee is charged with the strategic planning of engineering and observing runs and advises the OMT on proposed observing run start dates, run duration, and other relevant activities. This Committee has one chair. See Sec. 5.5.2 of the LSC Bylaws (M050172-v21).

### **Op-5.6 Computing and Software Working Group Chair**

The Computing and Software Working Group is responsible for organizing and documenting the Collaboration's computing hardware and software infrastructure and for formulating plans for its evolution. This Working Group has two co-chairs. See Sec. 5.6.2 of the LSC Bylaws (M050172-v21).

### **Op-5.7 Support of Observatories Committee Chair**

This Committee is responsible for coordinating contributions by LSC members in direct support of Observatory activities. This Committee has two co-chairs. See Sec. 5.7.2 of the LSC Bylaws (M050172-v21).

### **Op-5.8 Open Data Working Group Chair**

The Open Data Working Group is responsible for the release of instrumental data and associated documentation to the public. This Working Group has one chair. See Sec. 5.8.2 of the LSC Bylaws (M050172-v21).

## **6 Communications and Education**

The Communications and Education Division is responsible for overseeing and documenting the Collaboration's activities in education and public outreach.

### **Op-6.1 Communications and Education Division Chair**

The Communications and Education Division Chair coordinates the activities of the Division. See Sec. 6.1.2 of the LSC Bylaws (M050172-v21).

### **Op-6.2 Formal Education Committee Chair**

The Formal Educational Committee coordinates educational activities taken on by LSC entities. This Committee has one chair. See Sec. 6.2.1 of the LSC Bylaws (M050172-v21).

### **Op-6.3 Informal Education and Public Outreach Committee Chair**

The Informal Education and Public Outreach Committee supervises the Collaboration's informal education and public outreach activities. This Committee has one chair. See Sec. 6.3.1 of the LSC Bylaws (M050172-v21).

### **Op-6.4 Professional Outreach Committee Chair**

The Professional Outreach Committee manages the collaboration's interaction with the scientific community, such as at conferences and meetings. This Committee has one chair. See Sec. 6.4.1 of the LSC Bylaws (M050172-v21).

### **Op-6.5 LSC Web Committee Chair**

The LSC Web Committee maintains and hosts internal LSC web pages (ligo.org) as well as the LSC public pages. This Committee has one chair. See Sec. 6.5.1 of the LSC Bylaws (M050172-v21).

### **Op-6.6 Media Relations Committee Chair**

The Media Relations Committee is the LSC forum for coordinating media activities, particularly those associated with formal announcements of scientific results. This Committee has one chair. See Sec. 6.6.1 of the LSC Bylaws (M050172-v21).

### **Op-6.7 LIGO Magazine Committee Chair**

The LIGO Magazine Committee publishes twice a year the LIGO Magazine, which details the latest research, news and personalities across the diverse group of LSC members. This Committee has one chair. See Sec. 6.7.1 of the LSC Bylaws (M050172-v21).

## **7 Collaboration Standards and Services Division**

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



### **Op-7.1 Collaboration Standards and Services Division Chair**

The Collaboration Standards and Services Division Chair coordinates the activities of the Division. See Sec. 7.1.2 of the LSC Bylaws (M050172-v21).

### **Op-7.2 Diversity, Equity and Inclusion Committee**

The Diversity, Equity, and Inclusion Committee oversees and documents the Collaboration's activities relevant to LSC members' diversity, equity, and inclusion. This Committee has one chair. See Sec. 7.2.2 of the LSC Bylaws (M050172-v21).

### **Op-7.3 LIGO Academic Advisory Committee**

The LSC Academic Advisory Committee (LAAC) is responsible for overseeing and documenting the Collaboration's activities in representing and protecting the interests of students and postdocs. This Committee has two co-chairs. See Sec. 7.3.2 of the LSC Bylaws (M050172-v21).

### **Op-7.4 Meetings Committee**

The Meetings Committee is responsible for organizing and coordination the Collaboration's meetings. This Committee has one chair. See Sec. 7.4.2 of the LSC Bylaws (M050172-v21).

### **Op-7.5 Elections and Membership Committee**

The Election and Membership Committee organizes and oversees all elections processes, including setting dates for elections, soliciting nominations, carrying out the elections, and informing the collaboration of results. This Committee has one chair. See Sec. 7.5.2 of the LSC Bylaws (M050172-v21).

### **Op-7.6 Speakers and Awards Committee**

The Speakers and Awards Committee (SAC) is responsible for promoting LSC scientific accomplishments by actively cultivating opportunities for LSC members to present LSC results to the broader scientific community through invited talks at conferences and meetings. This Committee has one chair. See Sec. 7.6.2 of the LSC Bylaws (M050172-v21).

### **Op-7.7 Editorial Board**

The Editorial Board is responsible for maintaining adherence to the Publications and Presentations policy. This Committee has two co-chairs. See Sec. 7.7.2 of the LSC Bylaws (M050172-v21).

### **Op-7.8 MOU Review Panel**

The MoU Review Panel evaluates the contribution of each LSC Group to the LSC program and how it applies to details in the relevant white papers. This Panel has one chair. See Sec. 7.8.2 of the LSC Bylaws (M050172-v21).

### **Op-7.9 Standards and Conduct Committee**

The Standards and Conduct Committee is responsible for advising the spokesperson, Council, and Collaboration about issues involving the LSC code of conduct. This Committee has one chair. See Sec. 7.9.2 of the LSC Bylaws (M050172-v21).

## **8 Other Activities**

### **Op-8.1 Review Committee Chairs**

The LSC uses review committees as part of its process to ensure the highest quality instrumentation and science is produced. The work of review committees should general be captured as part of the activities of the Division in which the work is carried out. Review Committee Chairs play a special role.

### **Op-8.2 Ad-hoc Committees**

The functioning of the LSC requires Ad-hoc Committees to be appointed to accomplish one-time tasks related to governance, policies, and proper running of the Collaboration. This Committees are generally appointed by the Spokesperson with one chair.

## References