

**BYLAWS  
OF  
THE LSST GALAXIES SCIENCE COLLABORATION**

**1. PURPOSE**

The purpose of the Large-Synoptic Survey Telescope (LSST) Galaxies Science Collaboration (LSSTGSC) is to enable and conduct scientific research on galaxies and galaxy evolution using LSST.

**2.0 RELATIONSHIP TO LSST ENTITIES**

The LSST is a large optical telescope being built in Chile. It will carry out a 6-band imaging survey of the sky over 10 years. The LSST Project (LSSTP) is the entity responsible for constructing the telescope and all the associated subsystems (including software and data management). The LSST Corporation (LSSTC) has been the primary source of private financial support for the project, through private donations, institutional membership, and international membership.

LSST survey data are non-proprietary within the US and Chile, and are available to scientists at institutions outside of the US and Chile through agreements to contribute to LSST operations costs.

The LSSTGSC was created in 2008. Initial members were primarily drawn from LSSTC dues-paying member institutions and individuals working on LSST infrastructure. Scientists from non-member institutions were admitted via a competitive peer-reviewed proposal process administered by the National Optical Astronomy Observatories (NOAO).

The LSSTGSC is now self-governing, but affiliated with the LSSTC and the LSSTP. This affiliation has an influence on the rules for membership.

**3.0 MEMBERSHIP**

The LSSTGSC membership consists primarily of scientists interested in galaxy formation and evolution. LSSTGSC members are expected to contribute to the activities of the collaboration, both before construction of LSST and after the acquisition of science data begins. LSSTGSC members also receive a number of collaboration specific privileges, as described below.

### **3.1 Classes of Membership**

There are two classes of members: voting and non-voting. Voting members are typically faculty, permanent research staff, or in equivalent positions at member institutions, and may hold elected governance positions within the LSSTGSC. Non-voting members participate in all aspects of the collaboration except governance. Non-voting members are typically students or postdoctoral researchers working under the supervision of a voting member. Non-voting members automatically become voting members once they become eligible.

#### **3.1.1 Membership eligibility criteria**

Membership in the LSSTGSC is restricted to individuals who have data rights to LSST data. This includes:

- All those employed or studying at institutions in countries with LSST data rights (e.g., Chile, US)
- Any of those specifically listed individuals who have signed Memoranda of Agreement (MOA) with the LSST Corporation, and their Designees
- Scientists employed by the LSST Project
- Members of institutions that have explicit data rights agreements with LSST, such as IN2P3.

#### **3.1.2 Pre-charter collaboration members**

Members of the LSSTGSC who joined before the origination of these by-laws will be voting members of the LSSTGSC, including students and postdocs.

#### **3.1.3 Loss of membership eligibility**

LSSTGSC members who leave institutions in countries with LSST data rights (e.g., Chile, US) to take positions at institutions in countries without LSST data rights may lose their membership eligibility, and such individuals will need to make arrangements with the LSSTC to retain LSST data rights in order to remain eligible for LSSTGSC membership.

#### **3.1.4 Revocation of membership**

LSSTGSC members who grossly violate the by-laws of this document may have their memberships revoked. In such rare cases, the LSSTGSC (co-)Chair(s) and Executive Committee (defined below) may make a recommendation to revoke the status of a member. Membership revocation will require a valid vote of the LSSTGSC, as defined in Section 5 of this document.

### **3.2 Membership Application Procedure**

The eligibility and application procedure varies depending on an applicant's status relative to the LSSTP and the LSSTC. Applications should be sent to the LSSTGSC

Executive Committee, who will maintain an official application form and make it publicly available.

### **3.2.1 Applications from individuals in countries with LSST data rights**

Applications from individuals at institutions in countries with LSST data rights shall consist of a short (nominally one page) description of scientific interests, possible contributions to the collaboration effort, and an approximate fraction of time that the individual intends to dedicate to the collaboration effort over the subsequent year. Applications are accepted from anyone with a faculty or research (including postdoctoral or student) appointment at the member institution.

### **3.2.2 Applications from LSSTC institutions in countries without LSST data rights**

Applications from individuals at LSSTC member institutions in countries without LSST data rights shall be considered only for individuals named in the institutional Memorandum of Agreement (MOA) with the LSSTC. These applications consist of a short (nominally one page) description of scientific interests, possible contributions to the collaboration effort, and an approximate fraction of time that the individual intends to dedicate to the collaboration effort over the subsequent year. If the applicant is faculty at a LSSTC member institution, they may additionally indicate the student and postdoctoral researchers covered by their MOUs as non-voting member Designees on their proposal.

## **3.3 Membership Renewal**

All members of the collaboration (voting and non-voting) shall be required to submit a brief membership renewal on an annual basis, one year after the establishment of the by-laws for pre-existing members or a year after the date when new members join the collaboration. That membership renewal will briefly summarize the individual's collaboration-related activities over the past year and plans for the next year. The renewal shall include an estimate of the fraction of the individual's time that will be devoted to collaboration activities for the coming year. The renewals will be solicited and reviewed by the Executive Committee (see Section 4). Individuals not submitting membership renewals by the deadline shall be required to re-apply for membership.

## **4.0 COLLABORATION CHAIR AND EXECUTIVE COMMITTEE**

The LSSTGSC Chair shall be responsible for managing the affairs of the collaboration. There may be two equal co-Chairs. The (co-)Chair(s) responsibilities includes:

- Representing the collaboration to the LSSTC, LSSTP, and other entities
- Initiating collaboration activities
- Maintaining regular communications with collaboration members via meetings, conference calls and emails.

The Executive Committee (EC) will support the (co-)Chair(s). Responsibilities of this committee include:

- Reviewing applications for membership
- Reviewing membership renewals
- Enforcing collaboration policies
- Revising the bylaws as needed
- Soliciting nominations for EC membership annually

The executive committee shall consist of 5 members. Members of the executive committee must have voting rights.

Members of the EC and the (co-)Chair(s) will be determined via election. The nominal term is 3 years, with 1-2 members elected each year.

When potential conflicts of interest arise that affect the LSSTGSC (co-)Chair(s) or EC members, they are expected to recuse themselves as appropriate from decision-making roles.

## **5.0 VOTING**

Votes of the general voting membership of the collaboration will be required for the following:

- Electing Chair
- Electing the co-Chair if there is a candidate
- Electing members of the EC
- Revising the bylaws

All other issues are delegated to the EC, who may ask for an advisory vote to gauge consensus from time to time.

Voting will generally be via email. A vote will be considered valid if 50% of the collaboration has participated. A proposition will be considered to have passed if the majority of the votes cast are in favor of it.

## **6.0 COLLABORATION INTELLECTUAL PROPERTY**

The LSSTGSC may develop Collaboration Intellectual Property, in the form of Level 3 data products, or analysis software, or computer models. This section describes the official LSSTGSC policy for such intellectual property, and covers official scientific projects and efforts of the LSSTGSC regardless of their publication status.

### **6.1 Level 3 Software**

The software created by LSSTGSC members in support of the production of LSSTGSC Official Level 3 Data Products or any Level Data Products of the LSSTP may be endorsed as Official LSSTGSC Level 3 Software. Such a designation must obtain the

prior approval of the (co-)Chair(s) and Executive Committee. Scientific papers describing Official LSSTGSC Software products must be Official LSSTGSC Publications and are subject to the Scientific Publication Submission and Authorship Policy described in Section 7 of this document. The LSSTGSC will attempt to enable as possible, and possibly in conjunction with the LSSTP or LSSTC, the hosting or distribution of Official LSSTGSC Level 3 Software. The LSSTGSC advocates for an open software model, where LSSTGSC members will gain access to Official LSSTGSC Software source code. However, individual Official LSSTGSC Software products may be open internally to the collaboration but closed to the public. Scientific papers using publicly unavailable but Official LSSTGSC software are subject to the Scientific Publication Submission and Authorship Policy.

## **6.2 Level 3 Data Products**

The production of Level 3 Data Products is envisioned as a primary role of the LSSTGSC for improving the scientific return of the LSST as a whole. The LSSTGSC can officially endorse data products with the approval of the (co-)Chair(s) and Executive Committee. Scientific papers describing the origin of Official LSSTGSC data products must be Official LSSTGSC Publications and are subject to the Scientific Publication Submission and Authorship Policy described in Section 7 of this document. The LSSTGSC will attempt to enable the hosting or distribution of Official LSSTGSC Level 3 Data Products. Such efforts may be undertaken in conjunction with the LSSTP or LSSTC. While all Official LSSTGSC Level 3 Data Products will be open to LSSTGSC members, some such products will be closed to the public. Scientific papers using publicly unavailable but Official LSSTGSC data products is subject to the Scientific Publication Submission and Authorship Policy.

## **6.3 Confidentiality Agreement for Collaboration Intellectual Property**

Membership in the LSSTGSC may enable access to private, internal documents, software, and data products. Additionally, members may have access to internal prepublication scientific results. Members agree to keep such information confidential, and not to redistribute such information outside the collaboration. Violation of this confidentiality agreement may result in a revocation of membership.

## **7.0 PUBLICATIONS AND PRESENTATIONS POLICY**

The publications and presentations policy will cover scientific and reporting communications delivered on behalf of the collaboration, and the authorship and collaboration endorsement of scientific publications.

### **7.1 Private Documents and Presentations Internal to LSST**

Internal communications, documents, or presentations internal to LSST (to the LSSTP, LSSTC, within the LSSTGSC, or to other LSST Science Collaborations) delivered “on behalf of the LSSTGC” may be authored by the (co-)Chair(s) with input from the Executive Committee. This category is intended to cover scientific or collaboration-wide

grant reporting communications about the status of the collaboration, but not scientific publication in journals.

## **7.2 Private Documents and Presentations to Federal or Government Agencies**

Communications, documents, or presentations delivered to member nation or non-member nation Federal or other Government Agencies may be authored and delivered on behalf of the LSSTGSC by the (co-)Chair(s) with approval of the Executive Committee. These communications are intended to include presentations to Federal funding agencies that may support collaborative grants to fund LSSTGSC activities, or communications in support of the LSSTP or LSSTC to which the LSSTGSC contributes. Communications by LSSTGSC members to Federal or Governmental Agencies regarding funding opportunities in which an official position of the LSSTGSC is stated (e.g., an endorsement of the LSSTGSC) must be approved by the (co-)Chair(s) and the Executive Committee. This category is intended to cover grant applications where an agreement between the proposer and the LSSTGSC is claimed or implied, but not individual investigator grants where LSSTGSC membership is simply noted without further endorsement.

## **7.3 Public Communications or Presentations External to LSST**

The (co-)Chair(s) serve as the official public spokespersons for the collaboration. Members of the Executive Committee may also serve as spokespersons if the (co-)Chair(s) cannot be reached. In communications about scientific publications led by collaboration members, spokespersons will always refer inquiries to the publication lead scientists (the lead author of the publication, and their designees or advisors). Public communication or presentations delivered “on behalf of” the LSSTGSC may be delivered by the (co-)Chair(s) or members of the Executive Committee, or by collaboration members with permission of the Executive Committee. The (co-)Chair(s) and Executive Committee may request to approve in advance any publications or presentations delivered “on behalf of” the LSSTGSC.

## **7.4 Pre-publication Scientific Projects**

The following details the how “official” pre-publication scientific projects of the LSSTGSC are enabled. These projects may lead to official LSSTGSC publications (see Section 7.5 below) or Level 3 data products or software, or thesis projects of LSSTGSC members.

### **7.4.1 Definition of “Official” LSSTGSC project**

An “official” LSSTGSC project is a scientific effort that is conducted “on behalf of” the LSSTGSC OR a project in which the LSSTGC is intended to participate collectively OR a scientific project where proprietary Collaboration Intellectual Property (as defined in Section 6) will be used to produce the scientific results OR a scientific project that is somehow otherwise endorsed by the LSSTGC. Such documents will be referred to as Official LSSTGSC projects.

#### **7.4.2 Designation of “Official” LSSTGSC project**

LSSTGSC members seeking to have a scientific effort designated as an Official LSSTGSC project should first notify the (co-)Chair(s) and Executive Committee. Once the (co-)Chair(s) and Executive Committee approve, the member will announce their project to the entire LSSTGSC and note whether the project is confidential. A two week comment period will then begin. If the (co-)Chair(s) and Executive Committee take no action by the end of the two week period or if they approve, the project will become an Official LSSTGSC project. If the (co-)Chair(s) and Executive Committee disapprove, the project will not be endorsed.

### **7.5 Scientific Publication Submission and Authorship Policy**

The following details the publication submission and authorship policy for “official” scientific publications of the LSSTGSC and its members, including the timeline for submitting official LSSTGSC publications.

#### **7.5.1 Definition of “Official” LSSTGSC publications**

An “official” LSSTGSC publication is one that is submitted “on behalf of” the LSSTGSC OR a publication where the LSSTGC is listed as a collective author (e.g., “...and the LSSTGC”) OR a publication where proprietary Collaboration Intellectual Property (as defined in Section 6) is used to produce the scientific results OR a scientific publication that is somehow otherwise endorsed by the LSSTGC. Such documents will be referred to as Official LSSTGSC publications.

#### **7.5.2 LSSTGSC Official publication submission procedure**

Members wishing to submit an Official LSSTGSC publication must notify all members of the collaboration, enabling members to request authorship if justified (see below). This internal LSSTGSC announcement of the intent to submit may use the official LSSTGSC email list. Once authorship requests have been considered (see Section 7.4.3 below), the submission of an Official LSSTGSC publication must be approved by the (co-)Chair(s) and Executive Committee within an additional two weeks. If the (co-)Chair(s) and EC take no action within two weeks, the publication may be submitted. If the (co-)Chair(s) and EC disapprove, the authors will be expected to make reasonable requested changes to the paper before submission. Upon revision, the two week approval period resets. The use of the LSSTGSC as a collective author (e.g., “and the LSSTGSC”), or as an endorser of the publication (e.g., “on behalf of the LSST”) must also be approved by the (co-)Chair(s) and Executive Committee.

#### **7.5.3 LSSTGSC Official publication authorship policy**

Official LSSTGSC publications must accommodate justified authorship requests from LSSTGSC members. An authorship request will be considered justified if the member provided meaningful input or real scientific content to the Official

publication (including but not limited to infrastructure and analysis code). The (co-)Chair(s) and Executive Committee will provide final adjudication on authorship lists of Official publications within two weeks of the internal LSSTGSC announcement of the intent to submit, and must approve the use of the LSSTGSC as an author or endorser. LSSTGSC members added to author lists may appear in alphabetical order after the primary authors of the paper. The LSSTGSC authorship policy is not intended to extend in any way to the authorship of individual papers by members outside the context of the LSSTGSC.

#### **7.5.4 LSSTGSC Official publication timeline**

- 1) Member notifies entire LSSTGSC of the intent to submit (i.e., by the LSSTGSC email list).
- 2) Authorship requests will be considered for a subsequent two-week period, and adjudicated by the (co-)Chair(s) and EC. Authorship requests after this two-week period may not be considered.
- 3) After the authorship request period ends, the (co-)Chair(s) and EC have an additional two weeks to approve the publication submission.
  - a) If the (co-)Chair(s) and EC approve during this time, the publication may be submitted.
  - b) If the (co-)Chair(s) and EC take no action during this time, the publication may be submitted.
  - c) If the (co-)Chair(s) and EC disapprove during this time, reasonable revision requests must be considered. The two-week approval period resets once the authors provide a revised publication to the (co-)Chair(s) and EC.