

LSST XYZ Science Collaboration Publication Policy

A Template¹

Background to this template:

The original LSST Publication Policy (Docushare LPM-53) was approved by the LSST Board of Directors in July 2011. An LSST Publication Board was formed in December 2011 and actively reviewed LSST-related journal papers, conference papers, abstracts, and posters into 2015. After the official start of construction of the LSST Project in July 2014, the LSST Corporation Board of Directors recognized that neither the LSST Project nor the LSST Corporation has authority to control review of publications based on public data or to prescribe the addition of authors to those papers. Therefore, the Board recommended that a more limited LSST *Project* Publication Policy be drafted to cover technical and data release papers that contain key numbers and information that must be reviewed for accuracy. The original LSST Publication Board worked with the LSST Project Science Team to draft the LSST Project Publication Policy (Docushare LPM-162).²

The LSSTC Board also recommended that the outgoing LSST Publication Manager and the Chair of the Science Collaborations provide a template Publication Policy (*this document*) for each science collaboration to use, revise, or expand as it sees fit. The purpose of providing the template policy is to take advantage of the experience the LSST Publication Board acquired before the start of LSST construction and to help ensure appropriate recognition is given to those who have worked over the years to bring the LSST project and survey to fruition.

This template is written for a generic LSST science collaboration, called the XYZ Science Collaboration (XYZ SC). It refers to a spokesperson, working groups with conveners, and a collaboration council; however, the template can easily be adapted for a different governance structure.

It is understood that each science collaboration will revise or expand the details of author lists, the review process, etc. However, the LSST Project Publication Manager should be consulted regarding any significant changes to the sections on “Science Papers Based on Unpublished LSST Products” and “Recognition of LSST Builders.”

In the remainder of this document, placeholder text and explanatory notes are identified in *italics*.

¹ This document was drafted by Pat Burchat and Michael Strauss, and reviewed by the science collaboration chairs and the LSSTC Board in June and July 2015.

² LSST Project Publication Policy: <https://docushare.lsstcorp.org/docushare/dsweb/Get/LPM-162>

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Goals

This LSST XYZ Science Collaboration (XYZ SC) Publication Policy applies to all papers produced by XYZ SC members, that are based on collaboration resources, which could include, for example, analysis tools, data sets, or simulation products produced by the XYZ SC. There are two primary goals for this policy:

- To maximize the quality and ensure the accuracy of scientific publications of the XYZ SC.
- To recognize the contributions of both the individuals leading the particular analysis described in a scientific paper and the larger group that enabled the analysis through their significant contributions to the collaboration as a whole, especially the more junior members of the collaboration.

Authorizing Body

The Collaboration Council of the XYZ Science Collaboration is the authorizing agent for the XYZ SC Publication Policy and must approve any future revisions.

XYZ SC Publication Board and Publication Manager

(In smaller science collaborations, the Publication Board could consist of a single individual -- the Publication Manager.)

The XYZ SC Publication Board oversees the logistics of the publication process, including the following responsibilities:

- overseeing the publication review process described in subsequent sections;
- assisting in the development of future publication policies;
- providing initial adjudication of publication-related disputes.

Quality control of the publication is the responsibility of the appointed review committee (see below), with oversight by the Publication Board. The Publication Board is not responsible for scientific management and publication strategy of the XYZ SC.

Publication Board members are appointed for a term of x years by the Collaboration Council of the XYZ SC, in consultation with the leadership of the XYZ SC. Members are chosen to bring knowledge and expertise in a broad set of areas relevant to the XYZ SC. One member of the Publication Board is appointed Publication Manager for a term of y years. The spokesperson of the XYZ SC is an active ex-officio member of the Publication Board.

The Publication Board is responsible for resolving conflicts that arise related to XYZ SC publications. If the Publication Board is unable to resolve publication-related disputes, the final authority rests with the XYZ SC management team, advised by the working group conveners.

Publications Covered by this Policy

This policy covers the public presentation or communication of LSST XYZ SC scientific results. This policy covers all publications that describe XYZ SC-sponsored work, and all publications based on access to nonpublic intellectual property of the XYZ SC. Journal papers, conference papers, conference presentations, public seminars or colloquia, and press releases fall under this policy.

Authorship

The authorship and citation policy for the LSST XYZ Science Collaboration follows common ethical practices as outlined by the American Astronomical Society (AAS) and the American Physical Society (APS):

- AAS Ethics Statement, Publication and Authorship Practices: <http://aas.org/about/policies/aas-ethics-statement>
- APS Ethics and Values, Publication and Authorship Guidelines: http://www.aps.org/policy/statements/02_2.cfm

See the Appendix for the most relevant portions of each statement.

(The following description is based on the practice of some collaborations and is provided here as a template for each science collaboration to use, revise, or expand as it sees fit.)

The author list will consist of two parts. The first group of authors consists of the individuals who were primarily responsible for doing the reported work and writing the paper – hereafter the “primary authors”. This first tier will typically consist of three to five authors, but there is no minimum or maximum number. The primary authors will determine amongst themselves the order in which they are listed.

The remainder of the author list (“contributing authors”) will be alphabetical. It is important that the XYZ SC recognize the individuals whose contributions have been vital to the development of the specific XYZ SC infrastructure and overall LSST infrastructure; these individuals will be designated as “core members” (see later section). All relevant core members will automatically be invited to join the list of contributing authors of XYZ SC papers that depend on areas to which the core member contributed. Scientists who are not core members may request authorship on XYZ SC publications if they have made significant contributions to the paper. These requests are submitted to the lead author.

No one will be listed as a coauthor without his/her explicit permission.

XYZ SC publications may include authors who are not members of the XYZ SC if they made a significant contribution to the paper. These may include authors who do not have LSST data rights -- e.g., individuals who contributed theoretical, computational, or simulation results; executed related analyses of non-LSST data; or developed or implemented statistical methods for use with LSST data.

Potential contributing authors should be engaged in the review of the content of the paper as early in the production of the paper as practical. Each coauthor is expected to review the manuscript before its submission.

Publication Review Process

Internal paper review is a critical aspect of the LSST XYZ Science Collaboration publication process for science papers. It is in the interest of the XYZ SC to ensure that only reliable and accurate results are published and that all interested XYZ SC members have an opportunity to contribute to the publication through a constructive internal review process. The benefits to the primary authors are the engagement of XYZ SC members with relevant expertise and the increased confidence in the results, generated by the collaboration review process.

(Science collaborations may choose to include in all papers -- in the acknowledgement section, for example -- a statement that the paper has gone through internal review by the XYZ Science Collaboration.)

We outline the review process for XYZ SC science papers here:

(This process is essentially that which was used by the LSST Publication Board and is provided here as a template for each science collaboration to use, revise, or expand as it sees fit.)

1. When a first draft of the paper exists, the team of primary authors should notify all relevant XYZ SC members who will be given the opportunity to join as contributing authors.
2. When a project or analysis and the corresponding paper have been reviewed within the relevant working group, and the working group convener agrees that the paper is ready for review by the Publication Board (i.e., ready for publication in the view of the authors and the working group convener), the lead author requests an internal review.
3. The Publication Manager, in consultation with the Publication Board, appoints a review committee for the paper consisting of typically three (at the Publication Manager's discretion) members of the XYZ SC.

4. The review committee members will aim to submit their initial feedback to the authors and the Publication Manager within two weeks.
5. The authors should explicitly respond to the feedback from the review committee and post an updated draft of the paper.
6. Once the review committee members are satisfied, the Publication Manager will post the paper to an internal XYZ SC site and announce it to the entire collaboration for a two-week comment period by the collaboration.
7. The primary authors are responsible for responding to comments and feedback from XYZ SC members. The Publication Manager, in consultation with the review committee members and the working group convener, will arbitrate disputes on the scientific or technical content of the paper.
8. The Publication Manager is responsible for verifying that the review process is followed, that the process is efficient and feedback is given in a timely manner, and that all appropriate XYZ SC and LSST Project documents are cited.
9. The paper may not be submitted for publication without final approval by the review committee and the Publication Manager.
10. Once the paper has been approved for submission, the lead author is in charge of the logistics of the publication and will submit the paper.
11. All referee reports, responses to the referee(s), and paper revisions will be made available to the collaboration on an internal web site.

To the extent possible, the authors will archive notes and software related to the published work in public or internal XYZ SC repositories or document systems. These notes could include relevant details not included in the paper, descriptions and locations of simulations and test data, relevant presentations, analysis code, communications between the analysis team and the review committee, etc. This material will provide an institutional memory of the work and will serve as an aid to future XYZ SC work.

Adjustments to the review process may be necessary due to practical considerations. For example, if a contribution is severely limited in page length or is submitted as a conference paper, then a large number of authors, an extensive reference list, or a full acknowledgment may not be feasible. The Publication Manager has the authority to grant partial exceptions in such cases. When a large number of conference contributions are being prepared with a limited timeline for submission, shorter review periods with fewer internal reviewers may be necessary. These modifications to the review process will be at the discretion of the Publication Manager.

Science Papers Based on Unpublished LSST Products

Before LSST operations begin, we can expect to see scientific papers from the LSST XYZ Science Collaboration based on LSST products, such as the output of the operations simulator, the input catalog of stars and galaxies from which LSST simulations are generated, the simulated images of stars and galaxies, the output catalogs of the processed images, and possibly commissioning data. Some of these

papers will focus on LSST performance and science reach; others will focus on topics that are not specific to LSST.

If the LSST product is public and described in a citable publication, the publication is referenced and no review by the LSST Project is necessary.

If the product is public but no citable reference exists, or the product is not yet publicly available, then the following review process should be followed, as described in the LSST Project Publication Policy. The benefit to the XYZ SC authors in following this review process is the engagement of LSST Project members with relevant expertise.

The lead author should contact the LSST Project Publication Manager, who will identify the expert within the LSST Project for the LSST data product used in the paper. The LSST Project Publication Manager and the relevant expert will evaluate whether the proposed use of the product is appropriate. If the analysis described in the paper makes a statement about LSST performance, then the expert for the product (or his or her designee) will be given the right to review the paper to determine whether the data product was used appropriately. Authors should consider acknowledging the contribution of any reviewer who has had a particularly significant impact on the content and quality of the paper.

Recognition of LSST Builders

To ensure that the contributions of those responsible for the design, construction, and operation of the hardware, software, and other infrastructure of the LSST are recognized, all XYZ SC publications based on LSST data or metadata (images, derived data products, simulations, code) should reference the appropriate LSST technology and data release papers -- i.e., those LSST publications that describe the LSST infrastructure and data relevant to the study in question. This implies, in general, that every science publication based on LSST data must reference at least the primary LSST technical overview paper and the data release paper that describes the data used in the analysis. Key LSST papers are listed on this web page: www.lsst.org/scientists/publications/citable

Acknowledgments

All those who have made significant contributions should be offered the opportunity to be listed as authors; other individuals who have contributed to the study should be appropriately acknowledged in an acknowledgement section of the paper. These may include, for example, individuals whose unpublished work served as input to only a piece of the analysis or a reviewer who had a particularly significant impact on the content and quality of the paper.

Publications based directly on products of the LSST Project, including data products, simulations, and software, should acknowledge support of the Project. See LSST Doc-3607³ for detailed guidance on acknowledgement text.

³ LSST acknowledgement text: <https://docushare.lsstcorp.org/docushare/dsweb/Get/Document-3607>

Other possible sections:

Science collaborations may wish to include discussions of the following topics at appropriate points earlier in the Publication Policy or, in some cases, in a separate membership policy.

Projects and Key Papers

Some collaborations require that projects be announced when initiated. The Publication Policy may include guidelines for openness and for situations when multiple groups are working on the same topic, with special attention paid to the case of projects that correspond to the thesis topic of a graduate student.

Some collaborations define “key projects” and associated key papers, with different openness guidelines and authorship policies for these papers.

Membership Status and Authorship

Some collaborations require members to contribute a defined amount of service to the collaboration before being eligible for authorship on collaboration papers.

Core Members

Some collaborations define a list of “core members” who can request co-authorship on papers to which they have contributed through their established history of significant contributions to the greater good of the collaboration, consistent with the guidelines of the AAS and APS (see Appendix).

Requests for Use of LSST XYZ Science Collaboration Intellectual Property

See the LSST Project Publication Policy for sample text.

Press Releases

See the LSST Project Publication Policy for sample text.

Additional topics that might be addressed in a publication policy

- *Types of publications*
 - *Preliminary vs. final results*
 - *Presentations*
 - *Proposals for funding*
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Appendix: Publication and authorship guidelines of the AAS and APS

AAS Publication and Authorship Practices: http://aas.org/about/ethics_statement

All persons who have made significant contributions to a work intended for publication should be offered the opportunity to be listed as authors. This includes all those who have contributed significantly to the inception, design, execution, or interpretation of the research to be reported. People who have not contributed significantly should not be included as authors. Other individuals who have contributed to a study should be appropriately acknowledged. The sources of financial support for any project should be acknowledged/disclosed. All collaborators share responsibility for any paper they coauthor, and every coauthor should have the opportunity to review a manuscript before its submission. It is the responsibility of the first author to ensure these.

Proper acknowledgement of the work of others should always be given, and complete referencing is an essential part of any astronomical research publication. Authors have an obligation to their colleagues and the scientific community to include a set of references that communicates the precedents, sources, and context of the reported work. Deliberate omission of a pertinent author or reference is unacceptable. Data provided by others must be cited appropriately, even if obtained from a public database.

All authors are responsible for providing prompt corrections or retractions if errors are found in published works with the first author bearing primary responsibility.

Plagiarism is the presentation of others' words, ideas or scientific results as if they were one's own. Citations to others' work must be clear, complete, and correct. Plagiarism is unethical behavior and is never acceptable.

These statements apply not only to scholarly journals but to all forms of scientific communication including but not limited to press releases, proposals, websites, popular books, and podcasts.

APS Publication and Authorship Guidelines:

http://www.aps.org/policy/statements/02_2.cfm

Authorship should be limited to those who have made a significant contribution to the concept, design, execution or interpretation of the research study. All those who have made significant contributions should be offered the opportunity to be listed as authors. Other individuals who have contributed to the study should be acknowledged, but not identified as authors. The sources of financial support for the project should be disclosed.

Plagiarism constitutes unethical scientific behavior and is never acceptable. Proper acknowledgement of the work of others used in a research project must always be given. Further, it is the obligation of each author to provide prompt retractions or corrections of errors in published works.