

# LSST Dark Energy Science Collaboration Publication Policy

# Contents

<b>Goals</b>	<b>3</b>
<b>Authorizing Body</b>	<b>4</b>
<b>DESC Publication Board and Publication Manager</b>	<b>5</b>
<b>Publications Covered by This Policy</b>	<b>6</b>
<b>Project Announcements</b>	<b>7</b>
<b>Types of DESC Publications</b>	<b>8</b>
1) DESC journal papers . . . . .	8
2) DESC data releases . . . . .	8
3) DESC documentation, including research notes . . . . .	9
4) Conference and seminar material . . . . .	9
5) Conference abstracts and proceedings . . . . .	9
6) Astronomical circulars / telegrams . . . . .	9
7) Theses . . . . .	10
8) Software tools . . . . .	10
<b>Authorship</b>	<b>11</b>
<b>Authorship rights for LSST Builders</b>	<b>13</b>
<b>Database of Author Contributions</b>	<b>14</b>
<b>Publication Review Process</b>	<b>15</b>
<b>Open Access and Public Repositories</b>	<b>17</b>
<b>Science Papers Based on Unpublished LSST Products</b>	<b>18</b>
<b>Recognition of LSST Project Contributions</b>	<b>19</b>
<b>Acknowledgments</b>	<b>20</b>
<b>Appendix 1: Publication and Authorship Guidelines of the AAS and APS</b>	<b>21</b>
AAS Publication and Authorship Practices: . . . . .	21
APS Publication and Authorship Guidelines: . . . . .	21
<b>Appendix 2: Version History</b>	<b>23</b>

*v9, October 2018*

Drafted<sup>1</sup> by the DESC Publication Committee:

Eric Gawiser (chair), Pat Burchat, Will Dawson, Hiranya Peiris, Nicolas Regnault, Tony Tyson, and Rachel Bean

The LSST DESC Publication Policy is licensed for re-use according to Creative Commons CC0 1.0. You can view a copy of this license at <https://creativecommons.org/publicdomain/zero/1.0/>. To help track people's improvements and best practice, please acknowledge "LSST DESC Publication Policy" when re-using this document.

---

<sup>1</sup>This policy is based on the template LSST XYZ Science Collaboration Policy, which was drafted by Pat Burchat and Michael Strauss, and reviewed by the science collaboration chairs and the LSSTC Board in June and July 2015.

# Goals

This LSST Dark Energy Science Collaboration (DESC) Publication Policy applies to all papers produced by DESC members using DESC resources. There are four primary goals for this policy:

- To maximize the quality and ensure the validity of DESC publications by taking full advantage of the scientific and technical expertise within the collaboration.
- To reduce the overall time for a paper to be accepted for publication by providing an effective and efficient review process.
- To recognize the contributions of the individuals leading the analysis described in a DESC paper as well as those who enabled the analysis through their contributions to the collaboration as a whole, with an emphasis on recognizing the contributions of junior members of the collaboration.
- To combine the best publishing practices of scientific cultures represented in the DESC, ranging from astronomy to particle physics.

In addressing these goals, this policy aims to strike a balance between the priorities and expectations of different DESC members and communities. Effective implementation will depend on each member of the collaboration acknowledging that compromise may be necessary to reap the benefits of working within a collaboration that is made stronger by the engagement of scientists with a diverse set of expertise and experiences.

# Authorizing Body

The DESC Collaboration Council is the authorizing agent for this Publication Policy. This Publication Policy can be amended by the Collaboration Council after a reasonable collaboration-wide comment period.

# DESC Publication Board and Publication Manager

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

- developing a detailed implementation of the review process described in a subsequent section;
- overseeing the publication review process;
- resolving disputes over publication content and procedure;
- recommending amendments to this policy to the Collaboration Council if needed.

Quality assurance 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 DESC, which is the purview of the DESC Management Team (Spokesperson, Deputy Spokesperson, Coordinators and Operations Manager).

Publication Board members are appointed for a term of 2 years by the Collaboration Council of the DESC, in consultation with the DESC Spokesperson and Deputy Spokesperson. The number of members at a given time is determined by the Collaboration Council. Members are chosen to bring knowledge and expertise in a broad set of areas relevant to the DESC. The Analysis Coordinator is an ex-officio member of the Publication Board.

One member of the Publication Board is appointed Publication Manager for a term of 2 years. The Publication Manager is responsible for coordinating the activities of the Publication Board and has specific responsibilities described in the section on Publication Review Process.

The Publication Board is responsible for resolving conflicts related to DESC publications that cannot be resolved in the relevant working group (except for authorship issues, as described in the Authorship section). In consultation with the review committee members and the working group convener(s), the Publication Board will arbitrate disputes on the scientific or technical content of the paper. If the Publication Board is unable to resolve publication-related disputes, the final authority rests with the DESC Management Team, and ultimately the Spokesperson.

# Publications Covered by This Policy

A publication is covered by this policy if it (1) uses DESC resources<sup>2</sup>, DESC expertise (see below), or non-published/unreleased DESC products<sup>3</sup> and (2) is authored by one or more DESC members.

- In line with striking a balance between the priorities and expectations of different DESC members and communities, this policy recognizes that external collaborations which some DESC members are also part of may benefit from general conceptual or methodological insight (i.e., expertise) gained through interactions within DESC. In cases which do not involve the use, analysis or findings with LSST data, DESC members may translate such general conceptual or methodological insights gained within DESC Projects to external (non-DESC) projects, provided that no external paper involving the translated expertise is published until the relevant DESC paper has been published. The external publication is expected to credit the DESC publication for the relevant insight or finding.
- In addition, the DESC Policy on Software Development defines a procedure by which unreleased DESC software can be provided to specific outside individuals or groups for joint development or application to non-DESC data; publications resulting from such shared unreleased DESC software are not covered by this policy unless they are developed jointly with DESC. Products principally developed outside of DESC, that did not use DESC resources, and are then made available to DESC, are not considered DESC products. In particular, mature software that was developed outside of DESC and then further developed or improved by DESC members does not typically become a DESC product.

- Although LSST data are not DESC products, any publication based on cosmological studies with LSST data by a DESC member is covered by this policy.

The process for making a DESC product publicly available includes preparing an associated internally reviewed, citable journal publication or DESC Note approved for public release. DESC software products that are publicly released must have been developed to DESC standards for “publication code” (or higher, depending on the role of the code; see Sec. 4.3 of the CI2 report). The standards are anticipated to include internal review of the code itself. DESC software will typically be released from the LSSTDESC GitHub organization.

Publicly released DESC products may be used, in their released versions, for follow-up studies that are not considered DESC papers provided that the studies do not use LSST data, non-published/unreleased DESC products, DESC resources, or DESC expertise. Independent follow-up studies like these are not expected to be the standard procedure for further work with DESC results by DESC collaboration members but may be appropriate in some circumstances, e.g., application of released DESC code to external data sets. To avoid misunderstandings, DESC members planning to use released DESC products for an independent publication should consult the conveners of the relevant Working Group and the Publication Board. Members are encouraged to advertise such follow-up papers to the relevant WGs for discussion and informal comment.

Publications that do not satisfy both of these criteria are considered “external publications” and are outside the purview of this policy.

---

<sup>2</sup>DESC resources are computing, storage, and communications tools (e.g., Confluence, Slack, Zoom), supplied or made available through DESC.

<sup>3</sup>DESC products include data, analysis methods, simulations and software developed within the DESC or using DESC resources.

# Project Announcements

Projects are scientific investigations that are expected to lead to a publishable paper. Projects are proposed to the relevant working group(s) at inception of the intent to carry them out, announced to the entire collaboration, and added to a searchable database of announced projects. Members of the working group(s) announcing the project, as well as any other DESC members with expertise relevant to that project, will have the opportunity to join the project and contribute directly to it. Openness within the DESC will prevent surprises where multiple groups turn out to be working on the same topic; it may prove desirable to have competing analyses, but that should not be accidental. A project that constitutes a graduate student thesis should be identified as such at the time of project announcement, and DESC members are expected to coordinate with the student, advisor, and relevant working group conveners to avoid unnecessary duplications with thesis projects.



# Types of DESC Publications

LSST DESC publications fall into these broad categories: (1) *journal papers*, (2) *data releases*, (3) *research notes*, (4) *material presented at conferences and in research seminars*, (5) *conference abstracts and proceedings*, (6) *astronomical circulars*, (7) *theses*, and (8) *software*. The level of review relevant to each category is described below. This policy does not cover proposals for grant funding or telescope observing. It also does not cover press releases or other dissemination of results to the general public, including via social media.

## 1) DESC journal papers

*DESC journal papers* are refereed scientific publications that are based on DESC data products or intellectual property. They are written within one or more DESC working groups and endorsed by the DESC collaboration after review. DESC papers include science papers primarily based on DESC data products, papers that document a specific DESC data release, papers based on simulations performed within the DESC, and papers documenting specific methods and algorithms developed for the DESC.

*Key DESC papers* (“*Key Papers*”) describe data releases and scientific analyses identified as core goals of the DESC. They are authoritative and comprehensive papers that represent the consensus of the DESC. Key science papers can be proposed by any DESC member after consultation with the relevant working group conveners. Other journal papers are referred to as “*Standard Papers*”.

The list of Key Papers will be established by the Leadership Team (Management Team plus the working group conveners) well in advance of the relevant LSST data release, generally in anticipation of the DESC data release (see below) to which they are connected. No DESC Standard Paper may be published on the *specific* science analyses that are to be included in a Key Paper, and a Standard Paper that builds upon a particular Key science Paper should not be submitted for publication before that Key Paper. No paper previously designated as a Standard Paper may be re-labeled as a Key paper later in the publication process without the agreement of all primary authors.

To the fullest extent possible, the authors will archive research notes, software, and other documentation related to the published work in public or internal DESC repositories. The archived material should include notes describing relevant details not included in the paper, descriptions and locations of simulations and test data, relevant presentations, analysis software, 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 DESC work.

## 2) DESC data releases

The *DESC data releases* consist of material produced within the DESC and made available to the community in machine-readable form after submission of the corresponding data release paper (and no later than its publication). This includes processed (or reprocessed) data and results of numerical simulations, along with their documentation. The refereed journal papers that document DESC data releases are *Key Papers*.

### **3) DESC documentation, including research notes**

Documentation of the steps followed to obtain the results of a DESC study constitutes one component of “reproducible research,” as long as the documentation is comprehensive enough that the authors and others can repeat the procedures and obtain the same results. Documentation also serves to justify key choices made in the analysis and allows researchers to verify and build on each other’s work. This documentation may take the form of formal research notes, documented software, wiki pages, and documentation created with emerging tools.

Research notes and other forms of documentation can also describe aspects of DESC operations, data processing, or analysis techniques, and may be relevant to more than one research study.

Since documentation (in the broad sense described above) is essential to verifying the results and conclusions of an analysis, documentation supporting each DESC journal paper will be made available to members of the DESC for the publication review process described in a later section. Authors are expected to provide sufficient documentation that the analysis (including any steps not described in the paper) can be reviewed efficiently by their collaborators. The DESC will establish the necessary infrastructure for viewing and archiving the documentation associated with each published paper.

The authors of supporting documents such as research notes will be the active contributors to the study that the document describes. Research notes may be posted to a public web site maintained by the DESC (and possibly the arXiv as well) after they are reviewed for that purpose within the working group and after the corresponding DESC paper is public. Public research notes can be cited in DESC journal papers.

### **4) Conference and seminar material**

This category refers to all DESC materials (figures, tables, results) presented during conference presentations and scientific seminars (including colloquia). Two cases need to be considered: unpublished and published material. If new, unpublished material is associated with a Key Paper, then the results will be reviewed by the relevant working group(s) and a Review Committee assigned to the project. If new, unpublished material is associated with a Standard Paper, then the presentation will undergo review by the relevant working group(s) (in consultation with the Review Committee if one has already been assigned to the analysis). In either case, approval leads the unpublished material to be termed “DESC preliminary results”. Preliminary results should only be made public with the consent of the primary authors. On the other hand, if all of the material is already published in refereed publications or has already been approved as DESC preliminary results, then only the relevant working group(s) needs to review conference presentations, and no review is needed for a scientific seminar. Both preliminary and final research results will be developed into official plots and archived in a repository for use in presentations.

### **5) Conference abstracts and proceedings**

Public conference abstracts and proceedings must be developed in consultation with the relevant working group(s) but are not subject to the publication review process described below.

### **6) Astronomical circulars / telegrams**

Astronomical circulars refer to information disseminated to the community through channels designed to share time-critical information (usually about transients) -- e.g., International Astronomical Union (IAU) circulars or The Astronomer’s Telegram (ATEL). A collaboration-wide review process prior to publication would slow the flow of information and thereby discourage the dissemination of time-critical alerts. As a consequence, review is the responsibility of the relevant working group(s). The Publication Board determines the process of publishing such alerts and settles related disputes but does not review time-critical alerts individually.

## **7) Theses**

Ph.D. theses are not reviewed by the Publication Board. On the other hand, associated journal papers are subject to the usual review. Theses containing DESC data products may not be posted to the arXiv (or similarly published by their author) before the associated publications have been approved by the DESC Publication Board. A list of active Ph.D. thesis projects can be obtained by searching the database of announced DESC projects (see Project Announcements).

## **8) Software tools**

Software tools developed by the DESC can be documented in an associated journal paper that should be cited in all publications that make use of the tools. They should follow DESC policies on software and/or reproducible research.

# Authorship

The authorship and citation policy for the LSST Dark Energy Science Collaboration follows common ethical practices as outlined by the American Astronomical Society (AAS) and the American Physical Society (APS); see the Appendix for the most relevant portions of each statement. The phrase “significant contribution” refers to one without which an analysis would be incomplete or inaccurate or one that greatly improved the quality of the resulting paper. This includes the development within DESC of methods that are later implemented by the Project and released in public catalogs that are used as inputs for a particular paper. The DESC Membership Policy defines the terms Member, Full Member, and Builder referred to below. The following points apply to journal papers, including data release papers; the authorship policy for other publications is discussed near the end of this section.

*DESC Builders* can join the list of authors of all Key Papers; they can also join the list of authors of any Standard Papers enabled by their contributions. *DESC Full Members* can join the list of authors of any Key or Standard Papers to which they made significant contributions. For Standard Papers, authorship requests are decided upon by the primary authors in consultation with the relevant working group conveners; for Key Papers, such requests are decided upon by the relevant working group conveners. Working group conveners should encourage scientists who make significant contributions to Key or Standard Papers to document their work in Research Notes as well as to request authorship.

DESC Members who are neither Builders nor Full Members and join specific projects announced to the collaboration will be listed as authors on the resulting publications if they make significant contributions to them. DESC publications may also be authored by scientists external to DESC (“external collaborators”) who bring unique expertise if formal permission for their involvement in the specific research has been granted in advance by the Collaboration (defined in a separate Policy on External Collaborators) and they have made a significant contribution to the paper. These may include individuals who contributed unique theoretical, computational, or simulation results; executed related analyses of non-LSST data; or developed or implemented statistical methods for use with LSST data. It is important to note that this external collaboration must not lead to unauthorized access to LSST data products.

The author list on DESC *Key Papers* will begin with “The LSST Dark Energy Science Collaboration”. After this, authors will be listed in alphabetical order. The “corresponding author” in a Key Paper will be an email address not associated with an individual scientist.

For *Standard Papers*, the author list will consist of two parts. The first group of authors comprises the individuals who were primarily responsible for doing the reported work and writing the paper - referred to as the “primary authors”. The list of primary authors will be determined in consultation with the conveners of the relevant working group(s). The primary authors will determine among themselves the order in which they are listed, and their individual contributions to the paper will be summarized in the Acknowledgments section. The remainder of the author list will be in alphabetical order. The author list will end with “The LSST Dark Energy Science Collaboration” to identify this as a paper that has been produced and reviewed by the DESC.

For *Key Papers*, any external collaborators are listed in the alphabetized block of the DESC collaboration authors, with a footnote indicating that they are external collaborators. For *Standard Papers*, external collaborators could appear in any location in the author list, as with any DESC contributor, depending on

the eventual level of contribution to the paper. The leads of the associated Project are the points of contact within DESC for external collaborators.

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. All authors share responsibility for the quality of a paper, and every author should be given the opportunity to provide feedback on a manuscript before its submission, as described in the publication review process below. No one will be listed as a coauthor without their explicit permission.

Research Notes should have a short list of authors who contributed directly to the analysis, method, or software being described. Author lists of conference abstracts, presentations, and proceedings are traditionally short, including only those who developed the presentation, followed by “for the LSST Dark Energy Science Collaboration”.

# Authorship rights for LSST Builders

LSST Builders who are DESC Full Members have the same rights as DESC Builders.

LSST Builders who are DESC Members (not Full Members) have the same rights as other DESC members.

Under this policy, LSST Builders who are not DESC members are welcome to apply for membership if they wish to accrue DESC authorship rights.

# Database of Author Contributions

Authors will self-report their contributions to each Key or Standard DESC Paper they join with a brief statement. These statements will be reviewed by the relevant working group conveners to avoid extreme cases of individuals claiming too much (or too little) credit. The DESC will maintain a public database of these self-reported author contribution statements, which is searchable by e.g., paper title, author name, or ORCID<sup>4</sup> number. This will enable DESC members to provide a URL on their CV or job applications that links directly to their list of author contribution statements.

For Standard Papers, a summary of each primary author's contribution will appear in the Acknowledgments. See <http://www.nature.com/authors/policies/authorship.html#close> for Nature's author contribution statements policy, and [http://blogs.nature.com/nautilus/2007/11/post\\_12.html](http://blogs.nature.com/nautilus/2007/11/post_12.html) for some examples.

It may also be possible to publish the full list of author contribution statements for a given Key or Standard Paper as a machine readable table within the paper.

---

<sup>4</sup>Persistent digital identifier: <http://orcid.org/>

# Publication Review Process

The publication review process for DESC journal papers is structured with the goals of the publication policy in mind -- in particular, to take full advantage of the scientific and technical expertise across the DESC to maximize the quality and ensure the validity of DESC publications, and to provide an effective and efficient review process to reduce the overall time for a paper to be accepted for publication. The process allows all interested DESC members to participate in a constructive internal review of a given paper. Authors benefit from the engagement of DESC members with relevant expertise and the increased confidence in the results generated by the collaboration review process.

To allow timely input and to maximize efficiency, the review process is built on three overlapping periods when the authors receive input from members of the relevant working group(s), an appointed three-person review committee, and the broader DESC membership, as illustrated in the figure below.

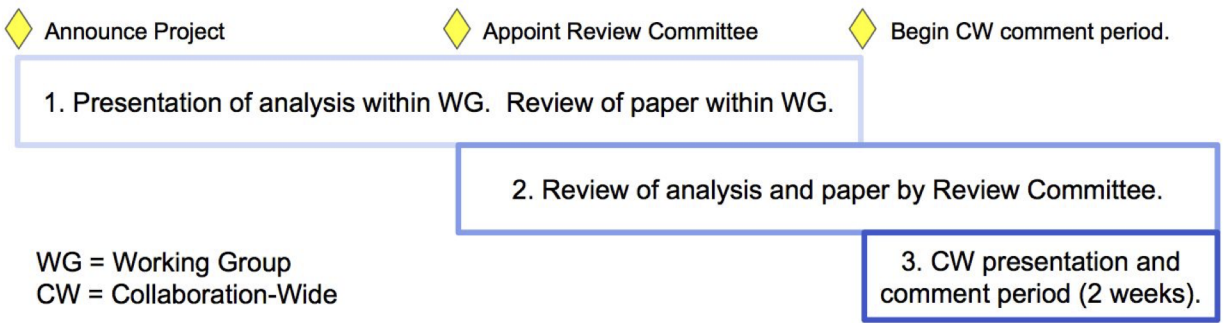


Figure 1: The DESC publication review process.

The overlapping stages of the review process are described below, with the first three stages corresponding to the three rows of the above figure. The “primary contacts” referred to below are the relevant working group conveners (or their designates) for the case of a Key Paper, and the primary authors for the case of a Standard Paper.

1. The analysis and supporting documentation are reviewed within the relevant working group(s), typically as part of the ongoing working group presentations and discussions. This review should be conducted openly, so that DESC members outside the working group with relevant expertise can contribute. Presentations and documentation will be tracked via a common infrastructure maintained by the collaboration for all working groups.
2. Once the primary authors and working group convener(s) agree that the analysis and supporting documentation are ready for Publication Board review, the working group convener requests the formation of a review committee. As long as the analysis is mature enough for a meaningful review, this request may be made while the paper is still being drafted, both to allow timely input by the review committee on potential analysis issues and to avoid unnecessary delays. At the latest, this request should be made when the working group convener(s) expect that a paper will be ready for the collaboration-wide comment period to begin after a single iteration with the review committee --i.e., within two weeks. For Key Papers, a review committee



must be appointed in time to review any preliminary results to be presented at conferences. In consultation with the primary authors and the working group convener(s), the Publication Board appoints a review committee consisting of three members of the DESC. The review committee selects a chair, who organizes the committee to ensure an efficient review. Once appointed, the review committee members will submit their feedback on the analysis (based on supporting documentation and the draft paper once it is available) to the authors and the Publication Manager within two weeks. The authors should explicitly consider and respond to the feedback from the review committee and post an updated draft of the supporting documentation (and/or paper). The reviewers will respond within two weeks to each iteration, and it is expected that the pace of responses from both authors and reviewers will accelerate as convergence is neared. This review will be conducted openly, so that any interested members of the DESC can follow the comments and responses. Working group review of the paper can be completed in parallel with the initial stages of Publication Board review of the analysis.

3. Once the review committee has completed its initial review of the analysis and the working group considers the paper to be in nearly final form (i.e., ready for publication in the view of the authors and the working group conveners), the Publication Manager will announce the paper to the entire collaboration for a two-week comment period and schedule a collaboration-wide presentation within the two-week period. The review committee will continue to review the paper during this period. The primary contacts are responsible for considering and responding to comments and feedback on the paper from the review committee and DESC members.

4. The Publication Manager gives the final approval for the paper to be posted to the arXiv and submitted for publication. Once the paper has been approved for submission, the submitting author is in charge of the logistics of the publication and will submit the paper. For Standard Papers, the submitting author will be the corresponding author; for Key Papers, it will be someone designated by the Publication Board.

5. All referee reports, responses to the referee(s), and paper revisions will be made available to the collaboration on an internal web site. The review committee will be consulted on revisions, and the Publication Manager gives the final approval to re-submit and/or re-post to arXiv.

The Publication Manager is responsible for verifying that each paper and corresponding project has been properly announced, that the above review process is followed, that the process is efficient and feedback is given in a timely manner, and that all appropriate DESC and LSST Project documents are cited (see section on Recognition of LSST Project Contributions). The process for dealing with conflicts or disputes related to the scientific or technical content of the paper is described in the earlier section on the duties of the Publication Board and Manager.

The Publication Board will define and refine (as communication tools evolve) the technical details of the review process to ensure that all communications between the analysis team and members of the review committee or the broader collaboration are open to all DESC members and are archived. The Publication Board will also define and refine the details of the collaboration comment process to ensure that all papers receive thorough review in a manner that is efficient for both the collaboration and the analysis team.

Adjustments to the review process may be necessary due to practical considerations. For example, if a contribution is severely limited in page length, then a large number of authors, an extensive reference list, or a full acknowledgment may not be feasible. In extraordinary circumstances of urgency due to a major discovery or outside competition, the review timeline could be compressed. Such policy exceptions and modifications to the review process will be at the discretion of the Publication Board.

# Open Access and Public Repositories

The review process is designed to ensure, with a high degree of confidence, that science results included in DESC papers are valid. Therefore, the DESC will strive to make its science results public, for the benefit of the broader scientific community, once a paper has been approved for submission to a journal.

Once a paper has been deemed acceptable for submission by the DESC Publication Manager, it may be posted to the arXiv or similar public repository. DESC science papers will be posted to the arXiv within 2 weeks of their submission to the journal (before or after). The Publication Board can make individual exceptions to the arXiv submission timeline if justified (e.g., if a journal or press release requires an embargo).

The version of the arXiv paper will be updated to the final version after acceptance to the journal, and a journal reference will be added to the arXiv listing when the paper is published.

# Science Papers Based on Unpublished LSST Products

Before LSST operations begin, we can expect to see scientific papers from the LSST Dark Energy 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 DESC 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 product was used appropriately. Authors should consider acknowledging the contribution of any reviewer who has had a significant impact on the content and quality of the paper.

# Recognition of LSST Project Contributions

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 DESC 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 the LSST web site at <http://www.lsst.org/scientists/publications/citable/>.

Conversely, some methods used by the Project for public data releases may be based on methods originally implemented by DESC. DESC papers that use such Project data products should cite the corresponding DESC paper establishing the methods used. The collaboration will maintain a list of relevant citations.

# Acknowledgments

As noted in the Authorship section, all scientists who make significant contributions to a paper should be offered the opportunity to be listed as authors; other individuals who have contributed to the study should be appropriately noted in the acknowledgment section of the paper. An example of an individual deserving acknowledgment is someone whose comments improved the paper.

Publications based directly on products of the LSST Project, including data products, simulations, and software, should acknowledge the Project for these contributions. See LSST Doc-3607<sup>5</sup> for detailed guidance on acknowledgment text.

The acknowledgements should also include the following items when applicable:

- A note that the paper has undergone DESC review.
- For Standard Papers, a list of contributions of the primary authors (as described in the Author Contributions section).
- A list of research contributions by people other than the authors.
- Funding agencies
- Telescopes used in the acquisition of the data and/or a facilities section with facility keywords.<sup>6</sup>
- External tools such as the NASA/IPAC Extragalactic Database (NED) or the SAO/NASA Astrophysics Data System (ADS).
- Authors of software products used in the analysis.

---

<sup>5</sup>LSST acknowledgement text: <https://docushare.lsstcorp.org/docushare/dsweb/Get/Document-3607>

<sup>6</sup>AAS facility keywords: <https://aas.org/aastex/facility-keywords>

# Appendix 1: Publication and Authorship Guidelines of the AAS and APS

## AAS Publication and Authorship Practices:

[http://aas.org/about/ethics\\_statement](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](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.

# Appendix 2: Version History

- v5, July 6, 2016: Circulated to the collaboration for feedback.
- v6, August 15, 2016: Voted on by collaboration, and then ratified by the DESC Council.
- v7, April 10, 2018: Incorporates publication rights for LSST builders, ratified by the DESC Council.
- v8, April 16, 2018: Added paragraph about external collaborators in the Authorship section, for ratification by the DESC Council.
- v9, August 2018: Redefined DESC publication

## Footnotes