

The Dark Energy Survey Collaboration



The Dark Energy Survey Publication Policy

Version 10a

DES Publication Policy Committee

26 October 2008

I. Introduction

This document describes the policies and guidelines governing the publication and communication of scientific and technical results from the Dark Energy Survey (hereafter DES). The DES Publication Policy is designed to promote the scientific and technical accuracy and timeliness of DES publications and to ensure that fair credit is given to the authors and to other individuals who have contributed to the DES.

Unless explicitly stated otherwise, this document applies to publications and communications based either wholly or in part upon data taken with the Dark Energy camera as part of DES operations, and which were not in the public domain at the time that the scientific investigation was begun. This policy also covers publications on the technical aspects of DES, including simulations, hardware, and software.

This policy applies to all communications beyond the DES collaboration of DES scientific results and data, including oral, electronic, and print forms. This includes: papers submitted to electronic archives and refereed journals; scientific or technical books or book sections about the DES and its results; graphical or tabular materials or discussions of results, in electronic or hard-copy form; conference presentations (both talks and posters) and conference proceedings; seminars; circulars, telegrams, and other electronic announcements; press releases and press conferences; funding proposals; and verbal or other communications with colleagues who are not members or participants of the DES collaboration.

Responsibility for oversight of DES publications shall rest with the chair of the DES Publication Board. The Publication Board, which is appointed by the DES Management Committee (MC) and whose duties are described below, is tasked, along with the Science Committee, with ensuring that the policy is efficiently implemented to the benefit of the collaboration. The duration of Publication Board membership, duration of its chairpersonship, and the number of Publication Board members shall be determined by the MC.

The DES Director, with advice from the MC, has charged the DES Publication Policy committee with formulating this Publication policy. The Publication Policy committee members are: Josh Frieman (chair), Tom Diehl (vice-chair), Klaus Honscheid, Ramon Miquel, Bob Nichol, Paulo Pellegrini, Ravi Sheth, Greg Tarle, and Jon Thaler. As the DES progresses, the MC may approve revisions of this Policy.

II. Purview of this Policy and Resolution of Disputes

This policy applies to papers and communications based upon DES data that were not public at the time the investigation or analysis was begun, *even if those*

data become public before completion of the analysis and/or the resulting publication. An analysis is said to have begun when the project has been announced to the collaboration (see section VI).

It is expected that the majority of analyses of DES data by DES collaborators will be carried out under the purview of this policy. It will be considered a violation of the spirit of this policy if a DES collaborator waits until just after a DES data set becomes public in order to start and rapidly complete an analysis that falls outside the purview of this policy.

Abiding by the terms of this Policy is one of the responsibilities of all DES collaborators. Violations or perceived violations of this Policy should be brought to the attention of the Science Committee co-chairs (in the case of science papers or communications) or the relevant DES manager (in the case of technical papers), the Publication Board chair, and the MC chair. If they determine that a violation has occurred, they may recommend a course of action to the MC, depending on the egregiousness of the violation. Particularly egregious or repeat violations may result in loss or curtailment of co-authorship rights, data access, or collaboration membership.

Disputes about publication matters, including but not limited to authorship and author ordering, will be referred sequentially to the editorial committee (see Sec. VI), to the Working Group coordinators, and to the Science Committee co-chairs, in each case proceeding to the next level if consensus is not reached among the disputants. In the case of technical publications (see Sec III), such disputes shall be referred to the relevant DES manager. If the Science Committee or the relevant DES manager cannot broker a consensus, the matter will be referred to the Publication Board, which will attempt to reach its own consensus but which will take a majority vote if it cannot. In the latter case, the chair of the Publication Board will confer with the MC Chair. If they both agree that the majority decision is appropriate, the MC Chair will so inform the MC and the decision will stand. Otherwise, they can decide that the matter should be brought to the MC for consideration. In that case, the decision of the MC will be final.

III. Types of Papers

We distinguish several types of papers, which are governed by different guidelines, as discussed in later Sections of this policy:

1. Scientific publications with results based upon previously unpublished DES data for a journal, which are further subdivided into (1a) Key Project and (1b) non-Key Project papers. Key Project papers involve results associated with the core science goals of the DES. The WGs will be responsible for developing and updating lists of Key Projects, to be vetted by the Science Committee, and for organizing their execution.

2. Scientific publications with results based upon DES simulations and methods for a journal
3. Technical publications describing specific hardware/software components for a journal
4. Data release publications and publications that provide an overview of the entire project for a journal
5. Conference proceedings that describe DES scientific results, simulations, or technical components or that provide an overview of the project (see Sec. VII)

IV. Authorship Eligibility and Builders

Authorship of DES publications shall generally be limited to DES members, associate members, provisional members, participants, and external collaborators. These categories of collaborators are defined by the DES Membership Policy. Briefly, members are faculty or staff scientists at Collaborating Institutions who have been approved to join the collaboration by the DES Management Committee. Associate members are faculty or staff scientists at non-DES institutions who have been approved to join the collaboration. A provisional member is a faculty or staff scientist at a Collaborating Institution who has been approved to work provisionally on the DES and who is likely to apply for regular membership after meeting conditions specified in the Membership Policy. Participants are current students or postdocs of members or of associate members who are involved in the DES. It is the responsibility of members and associate members to propose to the DES Membership Committee the names of their associated participants (the DES Membership Policy specifies the rules on participants). For the rest of this document, we will refer to both members and associate members as just members. External collaborators are individual investigators with special expertise or resources who are brought in to work collaboratively with DES members on a particular science project with the approval of the Management Committee. The list of collaboration members, participants, and external collaborators shall be maintained by the DES Project Director. Membership in the collaboration does not guarantee authorship on DES publications.

Authorship of DES science publications based on DES data (type 1 in Sec. III) and of data release papers (type 4 in Sec. III) will be drawn from two groups: (i) those members, participants, and external collaborators who contributed to the analysis and writing of the paper (referred to below as primary authors); and (ii) those designated DES Builders. Authorship of the other three classes of publications (2, 3, and 5) will generally be confined to those who contributed to the analysis, writing, or construction. External collaborators will only be authors on papers associated with the project for which their participation has been approved. Provisional members are only eligible for authorship on papers that they contribute directly to, at the discretion of the WG coordinators.

Builders

DES Builders are a subset of DES members and participants who have contributed at least 2 FTE-years of effort on DES project infrastructure or have otherwise made significant contributions to the project, in either case to be decided at the discretion of the Management Committee. Infrastructure work includes contributions to: DECam, DES Data Management, the CTIO Facilities Improvement Project, the Science Working groups (but see the next paragraph), project commissioning, project operations (including observing with DECam at CTIO), and project management. The list of DES Builders shall be maintained by the DES Project Director. Nominations for Buildership shall be brought forward from time to time by the MC. In addition, once each year the MC institutional representatives shall submit an updated list of Builders and proposed Builders to the MC. Vetting of Buildership candidates shall be carried out by the MC. Once given Builder status, that status shall be maintained as long as the person remains a member or participant in the collaboration.

Not all contributions to the Working Groups count as “infrastructure” work toward Builder status. In particular, writing science papers, reviewing presentations for conferences, supervising graduate students carrying out science analysis, participating in WG meetings, or performing science analyses for publications do *not* count as infrastructure work. WG infrastructure work includes but is not limited to: organization of the WG activity as a WG co-coordinator; development of DES science requirements; development, analysis, and optimization of survey strategy; development of pipeline code that will be incorporated into the DES Data Management system or into the Supernova Survey; development of simulations for the Data Management Data Challenges or for use by the WGs in developing analysis codes; contributions to the Data Management-Working Group interface; construction of value-added catalogs for science analysis; and serving on editorial review committees of science papers. The overarching idea here is that “infrastructure” work should benefit the collaboration in the broad sense.

Inclusion of Builders as authors on DES science and data release publications (types 1 and 4 of Sec. II) shall be granted upon request by the Builder, *i.e.*, no other justification shall be required. In most cases Builders will not be automatically added to the author list but must request authorship (“opt-in” policy). The mechanism for Builders or other collaborators to request co-authorship shall be straightforward, *e.g.*, via web access to the Publication Archive (see Sec. VI).

V. Authorship Ordering

For science papers that include results of Key Projects (type 1a, as designated by the WGs) and for data release papers (type 4), the author ordering shall be alphabetical.

For non-Key Project science papers (type 1b), the default ordering will include two tiers, with primary authors and analyzers followed by alphabetical listing of those Builders who have requested authorship. The author ordering within the first tier is at the discretion of the lead author(s) of the paper. If they wish, the lead authors can opt for alphabetical ordering within the first tier or for alphabetical ordering of the entire list.

For simulation/methods papers (type 2) and technical papers (type 3), with authorship confined to those who made direct contributions to the paper, the lead author(s) shall decide on the author ordering, with guidance from the system managers (for technical papers) and the WG coordinators (for simulation papers). Again, they can choose to make the ordering alphabetical if they wish.

VI. The Publication Process

A. Paper initiation and organization:

At the *initiation* of work leading to a DES *scientific* publication or other communication of a scientific result, an electronic announcement must be sent to the relevant Working Group mail archive, announcing the project, summarizing the project and its scope in brief, listing those who are initially involved, and inviting other DES collaborators to join. At the initiation of work leading to a DES *technical* publication, the announcement should be sent to the relevant technical group mail archive. For *all* publications, a copy of the electronic announcement must also be made at this initial stage to the entire DES collaboration, and such project announcements shall be permanently archived. *Early and timely announcement of projects is vital to the health of the collaboration and to maintaining a collegial environment.* Project leaders must provide the relevant Working or technical groups with periodic updates on progress. The intent to write conference proceedings must also be announced well in advance of submission of the proceedings. Failure to announce science projects in the earliest stages of the analysis will be considered a violation of this Policy.

Although early project announcement is important, it is not intended as a method of “fencing off” scientific territory. DES members are encouraged to collaborate and communicate with other interested members on analysis projects, and the participation of those wishing to join an analysis project should be welcomed. At the same time, there may be cases in which multiple, independent analysis work on the same or similar topics is appropriate or even desirable. In these cases, the WG coordinators will be responsible for ensuring

sufficient coordination of the analyses and resulting publication(s).

Simulation/methods and science papers will be organized by the WGs, which are responsible for posting lists of active analysis projects and maintaining open lines of communication about progress. Technical papers will be organized by those who did the technical work, under the guidance of the relevant DES system managers. Publications that cross WG boundaries will be jointly coordinated by the WGs involved. Science analyses that do not naturally fall under the purview of one or more WGs shall be coordinated by the Publication Board (see below).

B. Editorial review:

All DES science results and publications shall be internally reviewed prior to public dissemination. Internal reviewing aims to produce better publications and therefore more rapid acceptance of publications by journals. The review process will depend upon the type of paper.

The WG coordinators will set up an editorial review committee for each science paper (types 1 and 2) that falls under the purview of that group. The technical papers will be vetted by the appropriate DES system manager. For the case of science papers that do not fall under the purview of one or more of the WGs, and for data release publications, the Publication Board will set up the review committee. The review committee will monitor progress of scientific papers through the internal review process.

For DES science papers, the sequence is:

1. The project is organized by the analysis team, in coordination with the relevant WG coordinators, and electronically announced to the WG and to the collaboration via the DES project announcement archive.
2. The WG coordinators assign a review committee at some point during the course of the project, at their discretion. If the review committee is constituted early in the analysis project, which will be the expected norm for Key Project papers, it can serve to actively monitor analysis progress. In other cases, the review committee may only be needed when the associated paper is nearing completion. Names of the reviewers shall be announced and posted to the WG.
3. The analysis team makes periodic progress reports to the WG. If the review committee has been constituted, it may receive more detailed reports during this stage. Once the analysis reaches a reasonable level of maturity, the technical notes and presentations associated with these reports should be posted to the WG website.
4. When the analysis team reaches what they consider to be final scientific result(s), then in consultation with the review committee (if it already exists) they ask the WG coordinators to arrange for the result(s) to be approved for dissemination beyond the collaboration. The approval process is at the discretion

of the WG coordinators but will usually involve presentation and discussion of the result in a WG meeting. If consensus is reached that the result(s) should be approved, the WG coordinators will notify the analysis team, the review committee, the WG, and the rest of the Science Committee in writing. For particularly sensitive or important results, the Science Committee co-chairs may choose or be asked to make a final decision on approval. Material associated with the approved result(s), e.g., figures, tables, numbers, shall be posted to the WG website with the clear designation "Preliminary". From this point onward, such material may normally be used in public presentations unless the analysis team and the WG coordinators have decided it should be embargoed. In any case, those wishing to use such material in public presentations should first confirm with the analysis team and the WG coordinators (see Sec. VII).

5. The authors submit an advanced draft of the paper to the review committee for comment and also post the draft to the WG website.

6. The review committee shall send written comments on the paper to the analysis team within 2 weeks. WG members and other collaborators are also welcome to send comments during this period to the analysis team and to the review committee.

7. The analysis team responds to comments received, iterating with the review committee to reach a consensus final version.

8. The final paper version is posted to the WG, to the collaboration Publication Archive and, after a two-week final comment period and subject to final approval by the Science Committee co-chairs and by the Publication Board, may be submitted for publication. Authorship requests may be made at any time prior to submission, using web-based access to the Publication Archive. Once a paper is approved for submission, the designation "Preliminary" shall be removed from the associated material.

9. The authors may decide to defer posting the paper to the ArXiv until the paper is accepted for publication. The Science Committee or the Publication Board may request this action in certain cases.

10. The final accepted-for-publication version of the paper shall be posted to the Publication Archive.

11. All DES science papers shall include in the acknowledgements section the sentence "This paper has gone through internal review by the DES collaboration."

In the case of science publications that do not fall under the purview of one or more of the WGs, the role of the WG coordinators in the sequence above shall be played by the Publication Board. In those cases, instead of posting the paper first to a WG, the paper shall instead be posted for comments for three weeks to the collaboration via the Publication Archive. Again, the Science Committee co-chairs and the Publication Board will have final approval before submission. For

technical papers, as noted above, the publication process will be under the direction of the relevant DES manager. However, technical papers shall also be posted to the collaboration for one week prior to submission, with final approval by the Publication Board.

DES collaborators starting an analysis of *already-public* DES data are not required to have their paper go through the formal review process. They *may* choose to undergo that process if they wish, in which case they could include in the acknowledgement section of the paper the statement that it was reviewed by the DES collaboration. If they do not so choose, the authors are strongly encouraged but not formally required to submit their papers to the collaboration Publication Archive for comment 3 weeks before submission to a journal. Experience shows that informal comment by colleagues who have in-depth understanding of the data can be of significant benefit.

Role of the Publication Board

In addition to setting up review committees for non-Working Group science papers and data release publications, the Publication Board shall make final editorial comments and ensure that *all* DES papers and press releases (see Sec. VIII) include the proper references to DES technical publications, to funding agencies and institutions via a standard acknowledgement agreed to by the MC, etc. The Publication Board shall also maintain the collaboration Publication Archive as well as the collaboration archive of project announcements. The Publication Board also serves as the penultimate resort in resolving publication-related disputes.

VII. Talks, Posters, and other communications

In addition to publications submitted to journals, DES results will also be communicated through presentations, *e.g.*, conference talks, conference posters, and seminars. We distinguish several types of such communications:

- A. Talks or poster presentations at conferences that include the first public presentation of a result from DES
- B. Talks or posters at conferences that overview the DES project
- C. Broader review talks or posters at conferences that may include some discussion of DES among other projects
- D. Academic seminars or colloquia at universities, laboratories, or institutes and popular talks to the general public, that touch upon DES in whole or in part
- E. Presentations to internal or external review committees

Speakers' Bureau

The MC shall appoint a Speakers' Bureau to help coordinate presentations in categories A and B. It will have the following tasks:

- (i) To keep track of upcoming conferences and to encourage or ask people in the collaboration to sign up to give talks/posters, to help promote the project and its results
- (ii) To maintain balance of exposure among different people in the collaboration, especially to help increase exposure for junior people in the collaboration and to ensure that those doing work get public recognition for that work
- (iii) To maintain a list and web archive of talks/speakers and their presentations

Those planning to make a communication, either voluntarily or in response to an invitation, in category A or B are required to notify the Speakers' Bureau of such plans and to obtain approval from the Bureau before proceeding. This notification shall include the title of the presentation and a description of which non-public results will be included and must be done well in advance of the presentation date. In most cases, approval is the expected norm, but the Bureau is empowered to assign another speaker or presenter if it feels justified on the basis of (ii). In addition, if a DES member or participant receives an invitation to speak or present at a conference but is unable or unwilling to do so, he or she should notify the Bureau and get a suggested replacement name that they can pass on to the conference organizers.

The Speakers' Bureau will not decide on speakers/presenters for categories C, D, or E. However, such communications are subject to the usual rules regarding dissemination of new science results, *i.e.*, *all communications may only include DES science results that have been approved for dissemination* (see Sec. VI.B, item 4). Presenters in any of the categories above should check with the relevant WG coordinators and with the primary authors before showing approved, nonpublic science results, *i.e.*, results that have not been previously shown outside the collaboration. Disputes about what can and cannot be shown shall be handled by the same sequence as for other publication disputes (see Sec. II). Presentations of technical (as opposed to science) results and presentations on DES cost, schedule, and technical performance in reviews (category E) are *not* subject to this Policy.

Some conferences require abstracts to be submitted in advance of the conference and often publish such abstracts in electronic or booklet form. Abstracts must not disseminate unpublished science results, *i.e.*, results that have not appeared in a paper on the ArXiv or in print. All abstracts should be posted to the collaboration before submission. Conference abstract authorship should follow the same rule as for Proceedings below.

Conference Proceedings

Conference proceedings contributions are write-ups based upon a conference presentation that are submitted to a proceedings editor and are usually published in electronic or print form. We envision two categories of conference proceedings: (a) those that do not include previously unpublished results, and (b) those that do. Note that “unpublished” is distinguished from “nonpublic”: a result is *public* once it has been disseminated in any form, e.g., in a conference presentation, but it is not *published* until it has appeared in a paper on the ArXiv or in a refereed journal.

Conference proceedings describing science results that are part of a Key Project (as determined by the WG coordinators) are restricted to category (a): in these cases, the speaker or poster may show approved Preliminary results, but the corresponding proceedings may not present those results unless the Preliminary designation has since been removed, i.e., the result has since appeared in a paper submitted to a refereed journal. For category (a) proceedings, the author(s) shall post the write-up to the collaboration Publication Archive at least one week prior to submitting to the proceedings editor. The author list will include the conference presenter and may include others who contributed to the presentation or to the results included therein but in any case shall include the appellation “for the DES collaboration” after the list of named authors.

A non-Key Project conference proceedings contribution falling under category (b), *i.e.*, that includes previously unpublished results, shall be treated as a DES science publication and must follow the publication process described in Sec. VI. In particular, the author list must include the full list of authors of the refereed journal article that will include the results, in the same order as the refereed journal article. The rationale for this requirement is that those who contributed to the result should receive fair credit.

Presentation of technical results in conference proceedings is at the discretion of the relevant DES project manager.

Funding Proposals

Proposals to government agencies, private foundations, or other sources for support of DES science analysis are also subject to the rule that *all communications may only include DES science results that have been approved for dissemination* (see Sec. VI.B, item 4). Funding proposals are not, however, subject to the editorial review process for publications.

VIII. Press Conferences and Press Releases

For science results of particular importance or broad significance, the analysis team and/or the WG coordinators may propose to have a press release and

possibly an associated press conference. They should confer with the Science Committee co-chairs and the DES Project Director to determine that pursuing a press release is appropriate. If they concur, the Project Director will inform the DES funding agencies and major institutions (Fermilab, NOAO, NCSA) that DES is considering a press release and/or press conference. The lead authors of the paper will draft a release, with the assistance of the Public Information Officers of their institutions as needed. The draft release must be circulated for comment to all authors on the paper as well as to the Science Committee, the Publication Board, and the MC. The Publication Board will ensure inclusion of the standard acknowledgement of sponsoring institutions and funding agencies. In a timely manner, the WG coordinators and Science Committee co-chairs will review the draft for balance in credit for discovery and scientific accuracy, including specific mention of scientists and institutions. The revised release will be posted by the lead author to the DES collaboration mail archive at least one week before the release goes to the press, and the DES Project Director, after consultation with the MC, the funding agencies, and the major institutions, shall give final approval.

In some cases, an institution may wish to formulate a version of the DES release for local distribution. In that case, the lead author at that institution must circulate a draft of that release and incorporate revisions as above. The local release must not precede the main release, and the local release should refer to the main release.

IX. Theses

Student participants in DES (i.e., students of DES members or associate members) are encouraged to author theses based in part on DES data. Theses typically contain more detailed discussions of scientific results that have been presented in scientific publication(s) for a journal. The presentation of new (previously unpublished) DES results, whether or not carried out as part of thesis research, is under the purview of all the Publication Policy rules above, including co-authorship rules. In particular, a thesis must not contain results based on non-public DES data that have not been vetted according to the process described in Section VI. If an analysis is to be carried out as part of a student's thesis research, the project announcement (Sec. VI.A) should state that, and the student's supervisor should communicate that to the relevant WG coordinators. As noted in VI.A, the WG coordinators will be responsible for ensuring coordination of potentially overlapping analyses, and they should be especially vigilant when one or more of those analyses involve thesis research.

X. Dissemination of Time-critical Data

The DES will occasionally detect time-variable events and/or objects for which timely dissemination to the broader astronomical community can pay big scientific dividends. DES collaborators who detect time-critical events are encouraged to report these to the broader community through IAU Circulars,

electronic telegrams, public websites, and the like. If they do so, they must also report these in advance to the DES collaboration as a whole. Since this procedure involves release of DES data, it must be approved by the DES Project Director or his/her designate, who is encouraged to respond with alacrity. Given the space constraints and expense of IAU Circulars, the attribution for the report should include "for the Dark Energy Survey (see <http://www.darkenergysurvey.org/>)...". Relevant finding charts, positions, and photometry drawn from the DES data set for these objects may be released.

DES collaborators who expect to release substantial amounts of time-critical data, for example, SN candidates from the DES Supernova Survey or positions and photometry of asteroids or comets, must request general approval in advance from the MC. Upon approval, the project must be posted to the DES collaboration archive of project announcements.

The rules for "normal" (as opposed to time-critical) public releases of DES data are governed by agreements with the funding agencies and are not under the purview of this Policy.

XI. Glossary

In this section we provide short definitions of key concepts, along with references to the sections of the Policy where they are discussed:

Publication Archive: an electronic archive of publications (maintained by the Publication Board) that are soon to be or have been submitted for publication, including journal papers, conference proceedings, and conference abstracts. (Sec. VI)

Project Announcement Archive: an electronic archive of all announcements of analysis projects, maintained by the Publication Board. (Sec. VI)

Working Groups: Groups responsible for carrying out DES science. The Working Group coordinators play important managerial roles in the scientific publication process (Sec. VI). The Working Groups also define the Key Projects (Sec. III).

Science Committee: committee comprising the WG coordinators plus two co-chairs. The Science Committee has overall responsibility for ensuring delivery of DES science and high-level management of science publications.

Publication Board: a small group appointed by the DES Management Committee with overall responsibility for the publication process. The Board sets up review committees for non-Working Group science papers and data release publications; makes final editorial comments and ensures that *all* DES papers and press releases include the proper references to DES technical publications, to funding agencies and institutions, etc; maintains the Publication and Project

Announcement Archives; and serves as the last resort in resolving publication-related disputes. (Sec. VI)

Editorial Review Committee: small group of DES collaborators assigned by the WG coordinators or by the Publication Board to carry out internal review of publications to check and improve on scientific accuracy and clarity. (Sec. VI)

DES collaborators: see Sec. IV for brief definitions of the categories of DES collaborators (members, associate members, provisional members, participants, and external collaborators). These categories are defined in the DES Membership Policy.

Builders: DES collaborators who have made important or long-term contributions to the project and have thereby gained automatic authorship rights on DES science publications. (Sec. IV)

Unpublished, Nonpublic, and Preliminary results: A result is *unpublished* if it has not yet appeared in a publication submitted to a journal or to the ArXiv. A result is *nonpublic* if it has not yet been communicated beyond the collaboration in any form, be it print, electronic, oral communication, or poster. A *preliminary* result is one that has been approved for non-print communication beyond the collaboration but not yet for inclusion in a journal publication.

Key Projects: projects involving results associated with the core science goals of the DES, as defined by the Working Groups and the Science Committee. (Sec. III)

Speakers' Bureau: a small group appointed by the DES Management Committee to coordinate DES presentations at conferences, ensuring DES representation at meetings as well as balance and fairness in exposure for DES collaborators. The Bureau also maintains a web archive of DES talks. (Sec. VII)