

Appendix I: GODDESS Collaboration Management Committee (as of December 15, 2019)

Director

Steven D. Pain Physics Division
Oak Ridge National Laboratory, Oak Ridge, TN

Members:

Jolie A. Cizewski Department of Physics and Astronomy
Rutgers University, New Brunswick, NJ

Kate L. Jones Department of Physics and Astronomy
University of Tennessee-Knoxville, Knoxville, TN

Andrew Ratkiewicz Division of Nuclear and Chemical Sciences
Lawrence Livermore National Laboratory, Livermore, CA

Other members of the GODDESS Management Committee will be identified as necessary and upon agreement by the then current members of the Management Committee.

A list of current GODDESS collaboration members can be obtained from Steven Pain:
stevenpain AT nuclearemail.org

Appendix II: Guidelines for GODDESS Collaborators

“Principal Investigator (PI)” refers to the GODDESS collaborator most intimately involved with a particular experiment/design/result/test/campaign/proposal and who is thus most appropriate to present said information. The individual could be a Spokesperson on a specific experiment or their designee (for example, the faculty mentor of a graduate student Spokesperson could be considered a Principal Investigator for the following requirements). “Director” refers to the Director of the Management Committee.

A. Proposals

1. The Principal Investigator will circulate proposals to the GODDESS Management Committee and proposed collaborators a minimum of two weeks before the PAC deadline for submission. GODDESS is a complicated device; this requirement ensures that a technical review can be conducted and allows all collaborators ample time to provide feedback on other proposals while working on their own.
2. PIs will contact the Management Committee Director at least four weeks in advance of the PAC deadline with a short description of their experiment and technical expectations, to provide time to ensure technical feasibility.

B. Experiments

1. Staging a GODDESS experiment requires a substantial investment of time and resources from multiple institutions. For this reason, single experiments will not be mounted, except in special cases and with the concurrence of the Management Committee. Therefore, PIs should not expect to run an experiment outside of a campaign of other GODDESS experiments with broadly similar configurations.
 - a. Due to the necessity of running GODDESS in campaign mode, the PI must contact the GODDESS Director as soon as they are contacted by the facility about scheduling and liaise with the Director in the scheduling process.
 - b. The PI must make the Director aware of any unique technical or hardware components required by their experiments well in advance of the setup time.
2. PIs are expected to play a leadership role in the setup and execution of their experiment.
 - a. The PI or their designee is expected to be present to make critical experiment decisions. The PI can delegate this authority to any competent person, but it must be clear who is responsible for these decisions throughout setup, execution and calibration of the experiment.
 - b. The PI or their designee is expected to be available (on call) before their experiment, during their experiment, and during calibrations for their experiment.
 - c. The PI is expected to provide and manage a workforce to run their experiment, in collaboration with the GODDESS Management Committee. If another experiment is scheduled proximate to theirs, it would be appreciated if they contributed to the staffing of that experiment, to prevent the same individuals from spending several months on shift. In particular, for new collaborators, it is recommended that they

collaborate on experiments prior to their experiment, as this is an excellent opportunity to become familiar with the GODDESS data-taking protocols and other safety and technical requirements.

3. The PI is responsible for training their team. The PI or their designee will be trained on a GODDESS subsystem (DAQ, detector operation/biasing, target drive, elog, etc) by a person proficient on that system. The PI or their designee is then expected to pass that knowledge on to the rest of their team. The PI is responsible for sharing these Appendices (I: The GODDESS Collaboration Management Committee list, and II: Guidelines for GODDESS Collaborators) with collaborators on their experiment.
4. GODDESS campaigns involve many people and are conducted at facilities with access restrictions. The PI is expected to take responsibility for the administrative work for their own experiments. Specifically, but not limited to:
 - a. Coordinating with the facility regarding badging the people coming for their experiment. For foreign nationals this process generally needs to begin at least 30 days before access is requested; three months for sensitive-country foreign nationals. For specific facility requirements, the PI should contact the local person in charge of badging.
 - b. Training of their team as required by the facility (access and safety).
 - c. Coordinating with the facility and the GODDESS Management Committee regarding safety requirements for their experiment.
 - d. Beam development for their experiment.
 - e. Maintaining good relations and communications with the staff of the hosting accelerator facility. (For example, the PI is responsible for bringing donuts to the operations staff on first day of their experiment).
 - f. The PI is responsible for timely communications to all collaborators on the facility requirements.
5. The PI is expected to bring storage media to take their data away from the facility. The PI should contact the Director regarding storage media requirements.
6. In running an experiment, the PI is making a commitment to analyze, interpret and disseminate the results from the principal dataset from the experiment and in a timely manner.
 - a. The PI must communicate a succession plan for the analysis, interpretation and dissemination of results of their experiment to the GODDESS Management Committee and update this plan as appropriate.
 - b. The PI has first refusal on secondary datasets resulting from their experiment. However, if a PI does not want to analyze a secondary dataset, it should be offered to the GODDESS Management Committee, who may extend the analysis opportunity to other Members of the collaboration.

C. Dissemination of results: abstracts, invited talks and publications

Because staging GODDESS experiments represents a large investment from many people, funding agencies, and institutions, it is critical that the PI takes responsibility for ensuring that appropriate stakeholders are acknowledged in all formats of dissemination of results.

1. The PI is responsible for requesting from all co-authors and incorporating proper acknowledgement of funding agencies and institutions. If only junior scientists (e.g., students and/or postdocs) participated in a project, the PI must also circulate the manuscript to the advisor(s) of the junior scientists to ensure that funding agencies and home organizations are properly acknowledged.
2. All abstracts for submission to conferences and scientific meetings should be circulated to the GODDESS Management Committee, as well as all co-authors.
 - a. We recognize that the GODDESS collaboration is large, and that in some cases (for example, in the case of a character-limited abstract) it may be appropriate to credit it as “The GODDESS Collaboration”. However, the PI/lead author on the document must make every effort to recognize the contribution by GODDESS collaborators, including individual authorship credits in a conference paper or in the acknowledgements slide of a talk.
3. Draft manuscripts for publication (for refereed and non-refereed dissemination) should be circulated to every co-author with sufficient opportunity to comment and reply. If only junior scientists (e.g., students and/or postdocs) participated in an experiment, the PI must also circulate the manuscript to the advisor(s) of the junior scientists to inform the PI of this work and ensure that funding agencies and home organizations are properly acknowledged.
4. In general, the PI is responsible for timely communications to the Management Committee and all collaborators during the life cycle of an experiment: drafts and final text of proposals, plans for mounting the experiment, determining workforce (for setup, shift taking, calibrations, and post-data taking), drafts and final texts of abstracts, conference proceedings and publications, and announcing publication(s).

D. Authorship

The American Physical Society Ethics Guidelines concerning publication apply.

1. Guidelines for authorship order and precedence are as follows:
 - a. Driver(s) of the science result.
 - i. If (a) is a junior scientist, it may be appropriate for the mentor to be the second author, as determined by the mentor and junior scientist.
 - b. People who were critical in realizing the experiment (e.g., leads on setup, critical experiment-specific technical developments) and/or interpreting the results (e.g., substantial theoretical input).
 - c. Other contributors, in alphabetical order.
2. To qualify for authorship on a scientific (as opposed to a technical) paper, people should have provided scientific input to the result, having contributed by at least one of the following:
 - a. Specific technical development critical to the experiment:
 - i. Software
 - ii. Experimental design
 - iii. Staging the experiment
 - iv. New detector developments/detector upgrades specific to the experiment.

- v. Data acquisition modifications/upgrades
- b. Experimental set up, including:
 - i. Data acquisition setup, including computational systems required to record, broadcast and analyze data
 - ii. The set-up of detectors, including:
 - The GODDESS silicon array
 - Auxiliary detectors/systems
 - Gamma-ray detectors
 - Recoil detectors
 - iii. Beam characterization/development specific to the current experiment
 - iv. Fabricating an experiment-specific target
 - v. Calibrations of detectors and detector systems
- c. Experiment operation and on-line analysis:
 - i. Leadership in data taking for at least 2 shifts (or 20%, whichever is least) on an experiment. Since travel schedules and unscheduled downtime can overlap destructively, people who were committed to sitting shifts, or who were on call, are considered as having contributed for these purposes.
 - ii. Contributing to on-line analysis and/or development/implementation of on-line analysis tools.
- d. Substantial contributions to the analysis of experimental data.
- e. Substantial contributions to the interpretation of physics results.
- f. Substantial contributions to the preparation of the manuscript.