

Gravitational and Space Research

Instructions for Authors

Brief Overview:

The journal of the American Society for Gravitational and Space Research (ASGSR), *Gravitational and Space Research*, publishes quality, peer reviewed manuscripts in several categories. Manuscripts should be self-contained, and all conclusions substantiated and supported by results in the form of figures and/or tables. Authors are held to standards of writing (American English) for clarity and material appropriate for the *Gravitational and Space Research (GSR)* journal. Subject matter can include any topic within the following broad categories: the impact of gravity and changes in the gravity vector on biology, astrobiology, spaceflight and planetary analog environment research, advanced life support (ALS), biophysics, radiation biology, human-tended spaceflight, satellite payloads, suborbital research, parabolic flight, sounding rockets, high altitude balloons, hardware engineering and development, acceleration in altered gravity environments, combustion science, complex fluids, fluid physics, fundamental physics, and materials science. In addition, research wholly dedicated to terrestrial explorations of the impact of gravity and to changes in the gravity vector is welcome. The categories of papers include Short Communication, Methods, Research, Hypothesis, and Review. We are also open to publishing Educational Outreach papers, and can embed links to additional materials, including videos and large databases.

I. Short Communications

Short communications are submissions typically 2 - 3 pages in length (1000 – 2500 words, excluding references). These manuscripts are generally comprised of preliminary data supporting work in progress, or a brief report to showcase a stand-alone facet of a larger project.

II. Methods Papers

Methods papers are manuscripts typically 3 - 6 pages in length and, although there is no strict limitation to size, a reviewer may address extremes of brevity or length as appropriate to conveying the information presented. These manuscripts are primarily comprised of data and protocols that support the design and execution of experiments in any of the categories defined in the overview. The manuscripts should contain sufficient detail to enable a reader to replicate the protocol. Figures should include illustrations of procedures and set-up, and should include data that verify the efficacy of the procedures.

III. Research Papers

Research papers are manuscripts of typically 8 - 15 pages in length. These manuscripts present original research of interest to the gravitational and space research community.

IV. Review Articles

Review articles are typically 10 - 15 pages in length. These manuscripts are often solicited from symposium speakers at the annual ASGSR meeting, but they are not limited to those solicitations. Any author may approach the editorial board with a suggestion or request to submit a review article, which will be peer-reviewed as any other paper.

Detailed Instructions

Format

The same basic format is used for each type of article. Consult a current issue of *Gravitational and Space Research*, as well as the instructions below, for guidance on formatting, organizing, and preparing references, figures, tables, and legends. An article must have a brief abstract (less than 250 words) that summarizes the principal conclusions of the paper. A Template in Microsoft Word can be downloaded from the Journal website (<http://GravitationalAndSpaceResearch.org>) that conforms to the general Journal requirements. Alternatively, the manuscript can be formatted for submission along the following guidelines (see also **Arrangement** section below):

Text: Single spaced, Times New Roman 11, paragraphs indent 0.25 inch. Do not insert line space after paragraph. Do not use page breaks.

Citations: In text by (Author, year) mode; details below.

Headings: **HEADING LEVEL ONE;** Bold, all capital.

Subheadings: **Heading Level Two;** Bold, Title case.

Subheadings: *Heading level three;* Italics, non-bold, sentence case.

Reference section: Must comply with format below, each citation separated by line space.

Length

Length is dependent on the type of manuscript being submitted; see overviews above for specifics. One page of a GSR article is typically comprised of 750 – 950 words (depending on the number of figures) and articles range from 2-3 pages for Short Communications, to 15 pages for full Research Papers and Review Articles.

Abbreviations

- Do not use abbreviations other than those that are standard for international usage.
- Use SI units as far as possible.
- Use *g* (italicized) for unit gravity, to distinguish it from the standard abbreviation g (not italicized) for gram.
- Any acronyms that are used in the manuscript must be defined at first mention.

Arrangement

Arrange the manuscript in the following order, with all pages numbered consecutively in the footer of the lower right corner. The last name of the first author should precede each page number. A Template in Microsoft Word can be downloaded from the Journal website (<http://GravitationalAndSpaceResearch.org>) that conforms to the general Journal requirements.

Running Title: Title case. To be used as a header; it is not to exceed 60 characters, including spaces.

Full Title: Title case. Use a descriptive title, but do not exceed 200 characters, including spaces.

All Authors: Provide full names and affiliations (institution, city, state) in the order in which they are to be listed. Use numerical superscripts to identify affiliations.

Corresponding Author: Full name, affiliation and address, e-mail, telephone number.

Abstract: Summarize the principal approach and conclusions of the paper (not to exceed 250 words).

Body of paper: For Research Papers, the body of the paper should be arranged into subsections for Introduction, Materials and Methods, Results, and Discussion. Review Papers should be organized in a manner appropriate to the subject. Methods papers should include a short Introduction and also a Discussion of the application addressing the significance of the method being described.

References and Citations: Cite each reference in the text by author(s) name(s) and the publication date: Examples: Smith, 1989 (one author); Smith and Jones, 2001 (two authors); Smith et al., 2010 (more than two authors). An EndNote® Style file can be downloaded at the GSR website (<http://GravitationalAndSpaceResearch.org>).

- Alphabetize the reference list by authors' last names.
- List only published or in-press articles. Unpublished results, including personal communications and submitted manuscripts, should be cited as such in the text.
- References formatted as follows: last name(s) of author(s), followed by initials with no space; year of publication in parentheses; article title in sentence case, followed by a period; journal title (unabbreviated and italicized), followed by volume number in bold, issue number in parenthesis (if applicable), a colon, a space, and page numbers.

Four examples below:

Journal Article:

Salmi ML, Bushart TJ, Roux SJ (2011) Autonomous gravity perception and responses of single plant cells. *Gravitational and Space Biology* **25**: 6-13

Book:

Baker D (1981) *The History of Spaceflight*, New York: Crown Publishers, Inc.

Edited Book:

Horz F, Grieve R, Heiken G, Spudis P, Binder A (1991) Lunar surface processes. In *Lunar Sourcebook: A User's Guide to the Moon*, G.H. Heiken DTV, and B.M. French (ed), pp 61-120. Cambridge: Cambridge University Press

Conference Proceedings:

Peldszus R (2011) Surprise Payload Rack: A user scenario of a conceptual novelty intervention system for isolated crews on extended space exploration missions. In *Workshop Proceedings of the 7th International Conference on Intelligent Environments*, Vol. 10, p 290.

Figure legends: Provide full, descriptive figure legends for each figure; each figure legend should be composed of a short descriptive title, followed by a description of the material illustrated in the figure. Figure legends should provide any information key to understanding the material presented in the figure.

Figures: Submit Figures as individual graphics files (TIF, BMP, or high resolution JPG). Resolution must be at least 300dpi for photographs and 600dpi for line graphics. Include Figure number in the file name when uploaded. For publication, Figures will be formatted to either one column width (3 inches / 7.6cm) or across two columns (6.3 inches / 16cm). Note that all lettering and numbers within Figures must be at least font size 8 when reduced to publication width. This restriction includes numbers and axis information in graphs as well. Authors are encouraged to test size their Figures in these two dimensions to ensure compliance, as Figures which contain illegible annotations will be returned for

reconfiguration.

- Number Figures consecutively as they are used in the text. Use Figure 1, i.e., capitalize and the full word “Figure” (do not use Fig. 1).
- The first time a Figure is discussed, refer to it actively rather than parenthetically.
- Provide enough information in the Figure Legend such that the reader can understand the Figure without significant input from the text.
- Designate Figure sections with letters and explain all symbols and abbreviations that are used in the Figure.

Tables: Provide at the end of the manuscript.

- Number Tables consecutively as they are used in the text.
- The first time a Table is discussed refer to it actively, rather than parenthetically.
- Give each Table a concise title, followed by a legend that makes the general meaning of the Table comprehensible without reference to the text.
- Tables should be constructed in Word or Excel with the general format below. Font size 10 should be used for the primary Table text, but font size 8 may be used for footnotes or annotations.

Table 1. Atmospheric pressure relative to altitude

Pressure (kPa)	Altitude (m)	Comments
101 – 70	0 – 3000	tropical / temperate / taiga biome - many examples of human habitation
70 – 50	3000 – 5500	tundra / alpine biome - few examples of human habitation
50 – 30	5500 – 9000	extreme terrestrial elevations - humans require supplemental oxygen
30 – 5	9000 – 27000	plants can survive as long as temperature is mediated and water is available

Footnotes as necessary

Manuscript Peer Review and Preparation of Final Version

Prior to publication, manuscripts are reviewed by the managing editor who is assigned to an author’s article, and by two to three external scientific reviewers. Manuscripts submitted without complying with submission requirements may be returned for format changes before being accepted for review.

Once a manuscript is accepted, the manuscript is reviewed internally for copyediting, and then sent to the publishing editor. Page proofs are provided to the authors for review prior to publication.

Journal Policies

Authorship Statement

Authorship of articles implies that an individual has made a substantial contribution to the article, both in terms of the design of the study or collection/evaluation of data and with regard to the intellectual content of the manuscript.

Conflict-of-Interest Statement

Reviewers recruited for the evaluation of manuscripts being considered for publication in *Gravitational and Space Research* will be held to Conflict of Interest standards comparable to those required of NSF panelists. You may be considered in conflict if:

You have an association with the submitting institution:

- Employment as faculty at the submitting institution or as a consultant or advisor to the institution.
- Previous employment with the institution within the last 12 months.
- Being considered for employment at the institution.
- Hold any office, governing board membership, or relevant committee chair in the institution.
- Received and retained an honorarium or award from the institution within the last 12 months.
- Ownership of investments in the research technology.

You have a relationship with an author on the manuscript:

- A family relationship such as spouse, child, sibling, or parent.
- Any affiliation or relationship of your spouse, of your minor child, of a relative living in your immediate household, or of anyone who is legally your partner.
- A relationship, such as close personal friendship, that you think might tend to affect your judgment or be seen as doing so by a reasonable person familiar with the relationship.
- Business or professional partnership.
- Past or present association as thesis advisor or thesis student.
- Past or present association as post-doctoral advisor or postdoctoral student within the past 5 years.
- Collaboration on a project or on a book, article, report, or paper within the last 2 years.
- Co-editing of a journal, compendium, or conference proceedings within the last 1 year.

Published Statement of Human and Animal Rights:

Research involving Human and Animal Subjects must have been approved by the author's institutional review board. Authors must include in the Methods section a brief statement identifying the institutional and/or licensing committee approving the experiments. For experiments involving human subjects, authors must also include a statement confirming that informed consent was obtained from all subjects. All experiments involving human subjects must have been conducted according to the principles expressed in the Declaration of Helsinki. If doubt exists whether the research was conducted in accordance with the Helsinki Declaration, the authors must explain the rationale for their approach, and demonstrate that the institutional review body explicitly approved the doubtful aspects of the study. When reporting experiments on animals, authors should be asked to indicate whether the institutional and national guide for the care and use of laboratory animals was followed. For research using Recombinant DNA, physical and biological containment must conform to National Institutes of Health guidelines or those of a corresponding agency.

Published Statement of Informed Consent:

The general requirements for informed consent conform to guidelines and requirements outlined by the National Science Foundation (<http://www.nsf.gov/bfa/dias/policy/docs/45cfr690.pdf>) and Health and Human services (<http://www.hhs.gov/ohrp/policy/consent/>). No investigator may involve a human being as a subject in research covered by this policy unless the investigator has obtained the legally effective informed consent of the subject or the subject's legally authorized representative. An investigator shall seek such consent only under circumstances that provide the prospective subject or the

representative sufficient opportunity to consider whether or not to participate and that minimize the possibility of coercion or undue influence. The information that is given to the subject or the representative shall be in language understandable to the subject or the representative. No informed consent, whether oral or written, may include any exculpatory language through which the subject or the representative is made to waive or appear to waive any of the subject's legal rights, or releases or appears to release the investigator, the sponsor, the institution or its agents from liability for negligence.

Basic elements of informed consent:

In seeking informed consent the following information shall be provided to each subject:

- A statement that the study involves research, an explanation of the purposes of the research, and the expected duration of the subject's participation, a description of the procedures to be followed, and identification of any procedures which are experimental;
- A description of any reasonably foreseeable risks or discomforts to the subject;
- A description of any benefits to the subject or to others which may reasonably be expected from the research;
- A disclosure of appropriate alternative procedures or courses of treatment, if any, that might be advantageous to the subject;
- A statement describing the extent, if any, to which confidentiality of records identifying the subject will be maintained;
- For research involving more than minimal risk, an explanation as to whether any compensation and an explanation as to whether any medical treatments are available if injury occurs and, if so, what they consist of, or where further information may be obtained;
- An explanation of whom to contact for answers to pertinent questions about the research and research subjects' rights, and whom to contact in the event of a research-related injury to the subject; and
- A statement that participation is voluntary, refusal to participate will involve no penalty or loss of benefits to which the subject is otherwise entitled, and the subject may discontinue participation at any time without penalty or loss of benefits to which the subject is otherwise entitled.