

INTERNATIONAL ACADEMY OF ASTRONAUTICS

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Rules & Guidelines for Producing an IAA Cosmic Study

1. Background

The IAA Cosmic Studies prepared by study groups, reviewed by a large group of Academicians and approved by the IAA Board of Trustees become the voice of the International Academy of Astronautics and contribute to its prestige. Consequently the names of the study group members are appearing in appendix and not in the initial pages. An IAA Cosmic Study is an expert interdisciplinary report on space related topic with significant international implications. As a result an IAA Cosmic Study cannot be a collection of individual technical papers.

A Position Paper is usually very short (3-5 pages). Because a Position Paper engages the Academy, there is no Peer review but the Board of Trustees do the Peer review and approval of the report. As a consequence the word "Position Paper" should not appear in an IAA Cosmic Study.

The following rules & guidelines define the process for producing Cosmic Studies. Implicit within these rules & guidelines is the Commission responsibility for providing technical leadership and support for development of high quality studies.

2. Criteria

An IAA Study should:

- express IAA views to external world
- be innovative
- be international
- be interdisciplinary in scope
- be a study between 50 and 400 pages
- possess a clear target user
- lead progress, and
- be completed within two years.

The Commission is responsible for assuring that these criteria are met.

3. Study Approval

Study Groups can originate internally from Commissions or individual IAA members or from an external request to the IAA. Any IAA Members or Corresponding Members wishing to organize a Study Group Report must complete the "Proposal for Forming an IAA Study Group" form.

Some clarifying comments relative to completing the form:

- The Study Group proposer(s) must be IAA full Member(s).
- Members of the study team should reflect the international and interdisciplinary criteria of the study. The study Chair must be an IAA full Member. Other membership should be selected with the interest and proper expertise to perform a high quality study.
- The overall goal should be defined so that meaningful results will be ready for peer review within two years. This time period may be extended in special cases with the permission of the Vice President for Scientific Activities.
- Methodology should describe the process by which the overall goals will be achieved. This includes information gathering using mechanisms such as IAA symposia and technical sessions, evaluation approach, possible interim reporting to focus the study, and format of the final report.

- Target community is intended to define who or what organizations could act on or react to the Report.

The commission secretary should be available to assist the study group proposer in developing a worthwhile and practical study proposal, and to expedite getting valuable studies underway. If needed, the section liaison members of the commission should identify candidate study group members with the required expertise. It is always possible to contact the Secretary General for asking that general information be sent to the members, to have IAA website announcement to solicit interested experts and to be included in the next package questionnaire to involve “Newly Elected”.

The commission chair should review the scope of the proposed study for overlap with other commissions and involve other chairs, as appropriate, to assure proper representation and evaluation. After approval by an Academy commission the proposal is forwarded to the Secretary General who will inform the Vice President for Scientific Activities and will add this item in the agenda of the next SAC meeting and the agenda of the next IAA Board of Trustees meeting. The decision will be properly documented in the various reports and notifications will be made shortly after the meetings.

4. Study Group work

It is vital that the study groups undertake thorough information gathering and evaluation as part of the study group report preparation. Since these reports involve international and interdisciplinary considerations, input and analysis should be obtained from a comprehensive set of sources. The study chairs should determine the best plan for carefully developing the study report. This is likely to require study group member meetings, workshops and standalone conferences or other forums to engage a wider audience.

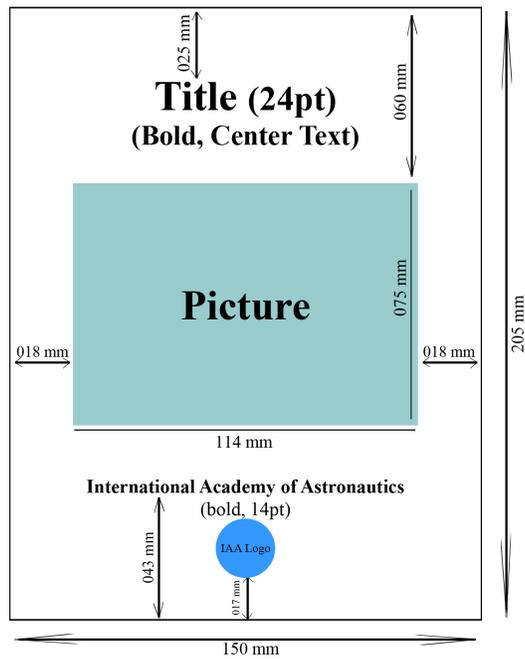
5. How to write a Study Report

The publication of a cosmic study can be made through two types of documents:

5.1 Study Group booklet

A booklet with soft cover in A5 format (less than 100 pages) for short studies

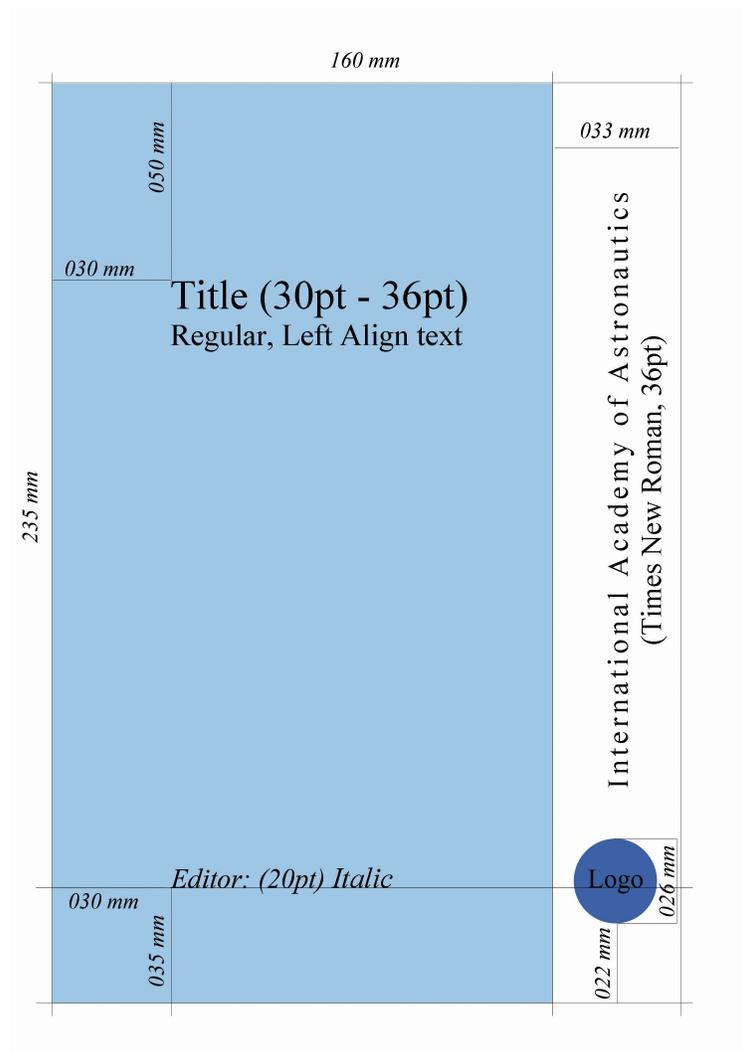
Study Group Booklet



- All Text "Times New Roman"
- Up to 100 pages
- Nothing in the back cover
- The color of the cover required White

5.2 Study Group book

A book with hard cover format (more than 100 pages).



Please note that a Word version and an acrobat pdf format are requested.

5.3 Cover

The IAA cosmic study cover page picture shall be provided by the study chairs. The art design of the cover is part of a series of coherent harmonized covers. The text of the cover includes the name International Academy of Astronautics, the title of the study, a picture and the Academy logo. Eventually the name of the printer may be included.

No mention of the name of the study group, the number of version, the name of the IAA commission or the name of the study members is authorized on the cover. The publication is no longer the publication of individuals but the publication of the Academy. As a consequence there is no name of Editor on the cover but in the interior pages the name of an editor might be included. In case of partnership for the publication the logo of both organizations are accepted.

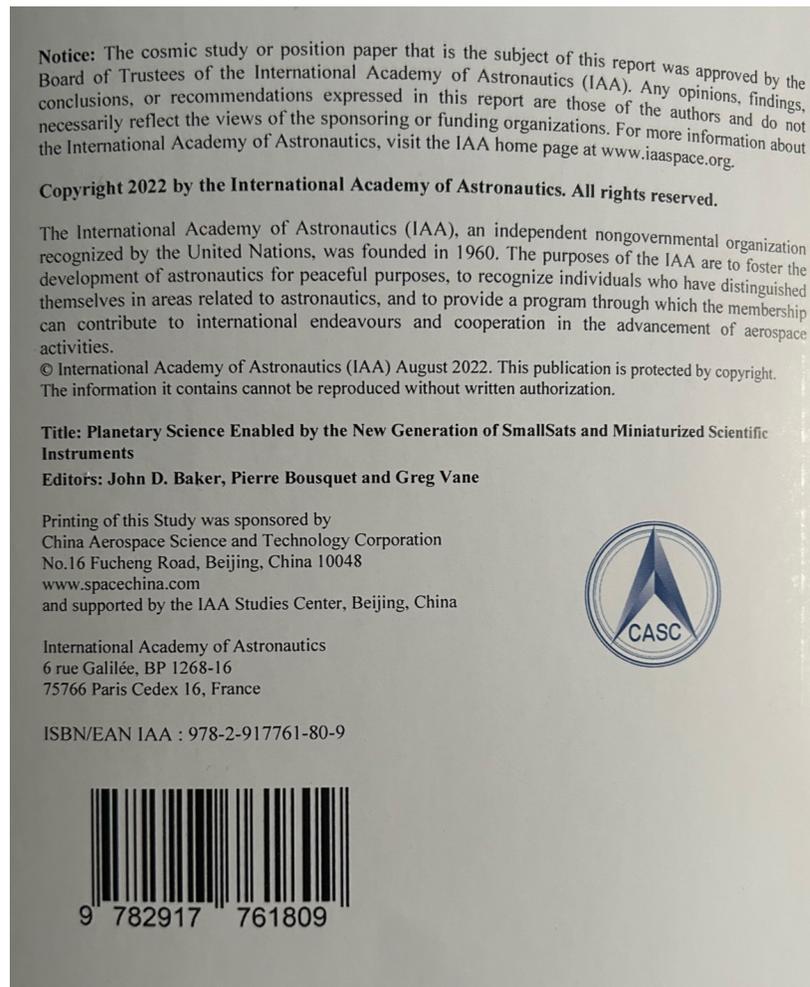
5.4 Back of cover

The Academy ISBN serial number will be provided by the IAA Secretariat or might be issued by the publication partner after written acceptance sent by the IAA Secretary General. The ISBN page shall include the following proprietary information:

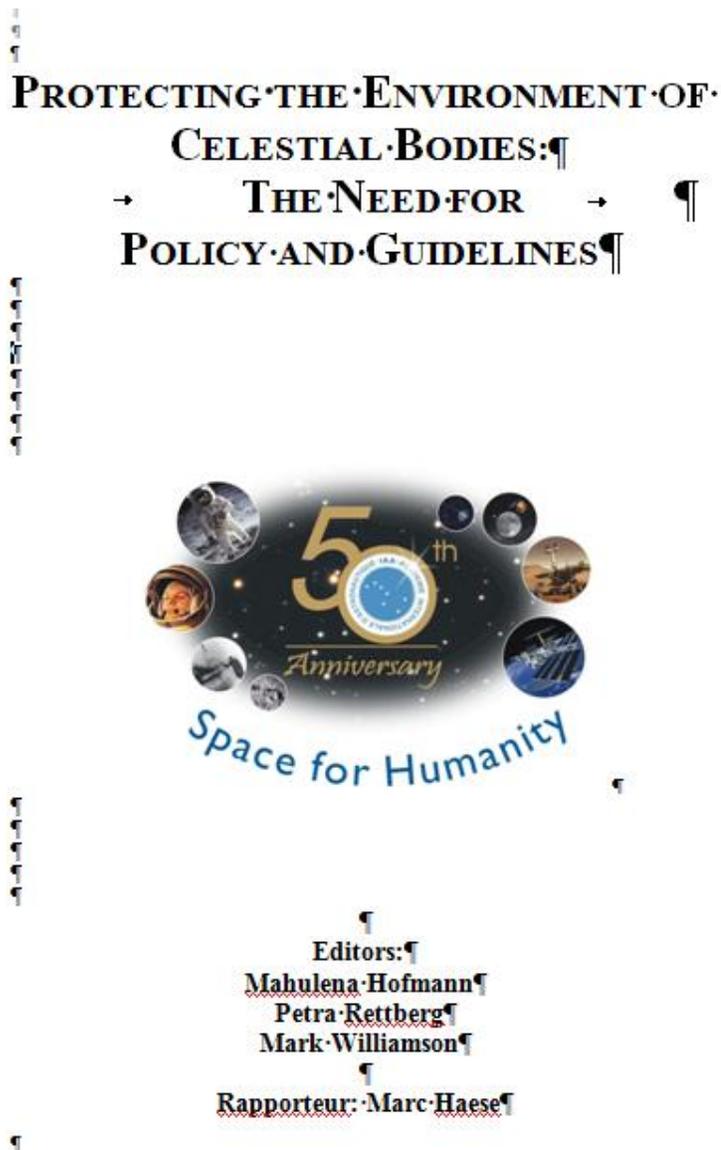
Notice: The cosmic study or position paper that is the subject of this report was approved by the Board of Trustees of the International Academy of Astronautics (IAA). Any opinions, findings, conclusions, or recommendations expressed in this report are those of the authors and do not necessarily reflect the views of the sponsoring or funding organizations. For more information about the International Academy of Astronautics, visit the IAA home page at www.iaaweb.org. Copyright 2023 by the International Academy of Astronautics. All rights reserved.

The International Academy of Astronautics (IAA), an independent nongovernmental organization recognized by the United Nations, was founded in 1960. The purposes of the IAA are to foster the development of astronautics for peaceful purposes, to recognize individuals who have distinguished themselves in areas related to astronautics, and to provide a program through which the membership can contribute to international endeavors and cooperation in the advancement of aerospace activities.

The back cover should be as shown hereafter:



Second cover (soft) should be as shown hereafter:



Back cover (soft) should be blank.

6. Typing Instructions

Language: English is the only language accepted for IAA publication. Translations in any other languages are possible.

Typing: Times New Roman size 12. Header including the title of the study (short title) and art graphics. Footer section includes art graphics and page numbering centered font Times New Roman size 11.

Manuscripts should be typed single-spaced throughout, one on side of the page only, with wide margins, in the following order: title, abstract, main text, acknowledgements, references, appendices. While non maximum length is prescribed, authors are encouraged to write concisely. Papers should be divided into sections, subsections and sub-sections with clearly marked subtitles and noted numerically (e.g. 2.1.3.), the Introduction being Section 1. Figures, Tables, Equations and References should be numbered sequentially through-out the paper.

7 Cosmic study structure

7.1 Every cosmic study should contain in the following order:

- **Cover** (hard or semi hard, soft)
- **Foreword** (optional but highly recommended, should contain acknowledgements)
- **Table of Content** (and not “content” or another title)
- **Preface**
- **Executive summary**

- **1. Introduction** (no more than one introduction must be listed in the entire report)
- **2. Technical report**
- **2.1 chapter 1**
- **2.2**
- **2.3**
- **3. Chapter 2**
- **etc.**
- **7. Conclusion** (the number depends on the preceding sections/chapters, no more than one conclusion must be listed in the entire report)
- **8. Recommendations** (optional or included in the conclusion chapter if short; should include all findings)
- **9. References** (references can be a single document for the entire study or by section and chapter)
- **10. Appendices**
- **10.1 Appendix A – Contributors**
- **10.2 Appendix B – Abbreviations and Acronyms** (optional)
- **10.3 Appendix C – Index** (optional)
- **10.4 Appendix D/E/F... – technical appendices** (optional)
- **10.X Appendix X** (last one) – **IAA in brief** (provided by the Secretary General)

7.2 References

Should be a single section, eventually organized by chapter. Each reference should be identified by a number. In the case of reference by chapter, identified by two number (chapter – reference).

References to published literature should be quoted in the text in square brackets and grouped at the end of the paper in numerical order and presented as follows:

1. Knowles, J. K. And Reissner, Note on the stress-strain relations for thin, elastic shells, *Journal of Mathematical Physics*, 1958, **37**, 269-282.
 2. Carslaw, H. S. And Jaeger, J. C., *Operational Methods in Applied Mathematics*, 2nd edn. Oxford University Press, London 1953, p. 121.
- Etc...

By chapter:

References (by chapter and number)

1.1 Definitions and Concepts

[1.1-1] E. Mallove and G. Matloff, *The Starflight Handbook*, Wiley, New York, 1989.

[1.1-2] G. Vulpetti, *On the Viability of Interstellar Flight*, 49th International Astronautical Congress, Melbourne, September-October 1998;

[1.1-3]

Etc...

7.3 Appendix A

Two options are possible for the list of contributors. One short and one long:

Contributors' names should be typed in appendix A with full names followed by authors' affiliations.

Short option:

Ivan Almar, Hungarian Academy of Sciences, Budapest, Hungary.

Charles Cockell, University of Edinburgh, Edinburgh, Scotland.

Long option:

Iván Almár (Chapter 4.2) is professor of astronomy at the Konkoly Observatory of the Hungarian Academy of Sciences. He has worked in space research (specifically, upper-atmospheric research and satellite geodesy) for more than 50 years. Prof. Almár has been a Member of the IAA since 1984, and was chairman of its Space and Society Commission from 2003 to 2005. He began presenting and publishing papers on planetary protection in 1989. Hungarian Academy of Sciences, Budapest, Hungary.

Charles Cockell (Chapter 4.5) is professor of geomicrobiology at the Open University, UK. He obtained his PhD from the University of Oxford and held an NRC Associateship at the NASA Ames Research Centre. His interests are in microbe-mineral interactions and life in extreme environments. He is author of several books, including 'Space on Earth' (Macmillan), which explores the links between environmentalism and space exploration. His publications on ethics have focused on the place of microorganisms in environmental ethics and the protection of the space environment. He is Chair of the Earth and Space Foundation.

7.4 Appendix B

ASI	Agenzia Spaziale Italiana
CNES	Centre National d'Études Spatiales (French Space Agency)
CNSA	China National Space Administration
Etc...	

7.5 Other typing recommendations

Footnotes: if absolutely necessary, should be indicated by special symbols : ψζξ{

Illustrations: They should be restricted to the minimum necessary. Line drawings should be complete, including labels, letters and numbers and should be drawn in black. Line thickness and letter size should be appropriate for the necessary reduction. Authors are responsible for obtaining from the copyright holder permission reproduce any figures for which copyright exists.

Mathematics: All mathematical symbols shall be typewritten. The numbers identifying equations should be placed in parentheses on the right. Nomenclature (if any) should be treated as an Appendix, following any other Appendices. It should be presented in alphabetical order of symbols. If included, a footnote should be inserted in the first section where symbols are used, reading "See Nomenclature at end of paper".

Important notice:

No more than one **introduction** and one **conclusion** may be listed in the study report. A report with several introductions and conclusions by chapters will not be accepted.

8. General Rules for the Pre-Review Process

1. The commission will provide the pre-review of the draft final report eventually based on a presentation with supporting graphics. The commission will assure that the study topic and approach meet the criteria for the study and that the report conclusions and recommendations have solid supporting rationale. The commission will determine whether the report is ready for pre-review. If it is not, the commission chair will provide guidance to the study group leaders on changes required to bring the study to a point where it is ready for peer review. All Commission members are invited to review the study. The review might be detailed or light depending on the field of expertise of each member. If the subject is not in the field of expertise, we still need a review in order to ensure that the Cosmic Study is acceptable and not in conflict with other published IAA studies, or having unexpected non technical considerations.

2. After the study group has successfully responded to the initial pre-review of the commission, the SAC Vice-Chair Studies will appoint peer reviewers who will all be external to the study group. The reviewers should include at least one member from each section, and should include representatives of at least five countries. They may include other commission members and subject matter experts as needed (particularly, at least an expert in space law). Subject matter experts need not be IAA Members or Corresponding Members. Newly Elected Corresponding Members will be invited to become reviewers.
Reviewers may choose to remain anonymous. List of Peer review for a given study have to be communicated to the Commission. Results of the peer review will be communicated to the IAA Secretariat and to the study group leaders on an expeditious basis.
3. The study group will incorporate the results of the peer review into the final draft of its study, or provide an explanation of why it has not done so for particular comments. The final draft will then be submitted to the commission chair.
4. When the Commission is satisfied with the study group's written disposition of issues identified by the peer review, the final report and report of peer review comment disposition will be forwarded to the Secretary General who will inform the Vice-President Scientific Programs and will add this information in the agenda of the next IAA Board of Trustees meeting for final IAA endorsement.
5. The Secretary General will initiate the publication process in close coordination with the Study Group leaders. In particular, the photographs high definitions to be used in the publication will have to be sent to the Academy through a dedicated website if too heavy for email transfer. The IAA secretariat will be responsible for the quality of the documents to ensure proper reproduction standards.
6. The Secretary General will undertake contacts towards potential sponsors to publish the study, such as space agencies. If the Study Group leaders have potential access to in-kind support or preferred sponsor they are invited to inform the Secretary General as soon as possible and well before the end of the process. In any case the standards for an IAA publication have to be strictly followed. Publications through another organization using its own standards and copyright are not possible.

9. General Rules for the Peer Review Process:

1. The peer review process is organized and managed by the SAC Vice-Chair Studies, with the support of the IAA Office. Templates of letters to reviewers and standardized questionnaires for reviewers are available online.
2. The peer review will be conducted in a timely manner with a clearly defined schedule. Generally, peer reviews should be complete within 30/45 days.
3. The group report will be posted online with password access given to reviewers.

10. Guidelines for Review Criteria

IAA Cosmic Studies cover a broad range of topics. Although no rigid set of criteria is likely to be applicable to all reports, reviewers may find the following questions useful in formatting their comments.

1. Does the study group report meet the original IAA study group criteria:
 - a. Express IAA views to external world
 - b. Be international
 - c. Be interdisciplinary in scope
 - d. Possess a clear target user
 - e. Lead progress, and.
 - f. Be completed within two years
2. Is the objective clearly described in the report? Are all objectives met?
3. Is the report organized in a clear, concise manner? Is the report readable and understandable to non-experts?
4. Is the report fair? Is its tone impartial and non-judgmental?
5. Does the report reflect international and interdisciplinary considerations?
6. Does it contain input and analysis from a comprehensive set of sources?
7. Are the data and analyses handled competently? Are references given where appropriate?
8. Are the findings, conclusions and recommendations adequately supported by evidence, analysis and rationale?

9. Does the executive summary concisely and accurately describe the key findings and recommendations? Is it consistent with other sections of the report?
10. Are any sensitive policy issues treated with proper care? For example, if a recommendation requires involvement or approval from a particular organization or agency, are any challenges appropriately addressed?
11. Are appendices, if any, relevant to the report content?
12. Is the expected role of IAA, if any, clearly identified?
13. What other significant improvements, if any, might be made in the report?

In providing comments, reviewers are encouraged to distinguish issues they consider to be of general or major concern from other, less significant points. Comments must be submitted to the commission secretary (or designated contact) in written format. It is preferred; however, that the comments be submitted either as email text or, if practicable, highlighted and inserted directly into the text of the report, and returned electronically.