

March 1st, 2014

Rules & Guidelines for Producing an IAA Cosmic Study

1. Background

The International Academy of Astronautics (IAA) Cosmic Studies, developed and approved through the IAA Scientific Activities Committee (SAC), are intended to be expert interdisciplinary reports on space related topics with significant international implications. Because they are Academy reports, and not individual technical papers, they must satisfy the following Criteria, Study Approval, Content Development and Peer Review requirements. 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 IAA Cosmic Studies.

2. Criteria

The criteria for establishing a Study Group that will develop an IAA Report are that the Study should:

- express IAA views to external world
- be international
- be interdisciplinary in scope
- possess a clear target user
- lead progress, and
- be completed within three 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.

IAA Members or Corresponding Members wishing to organize a Study Group Report must complete the "Proposal for Forming an IAA Study Group" form which is located on the IAA website at <http://iaaweb.org/content/view/313/458/>

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 three years. This time period may be extended in special cases with the permission of the Vice President for Scientific Activities to be properly documented in the SAC report.
- 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 (cosmic study, position paper, etc.).
- Target community is intended to define who or what organizations could act on or react to the Report.
- Support needed will not be applicable in most cases, but if certain organizational or resource needs are believed necessary to support the Study Methodology, they should be defined.

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.

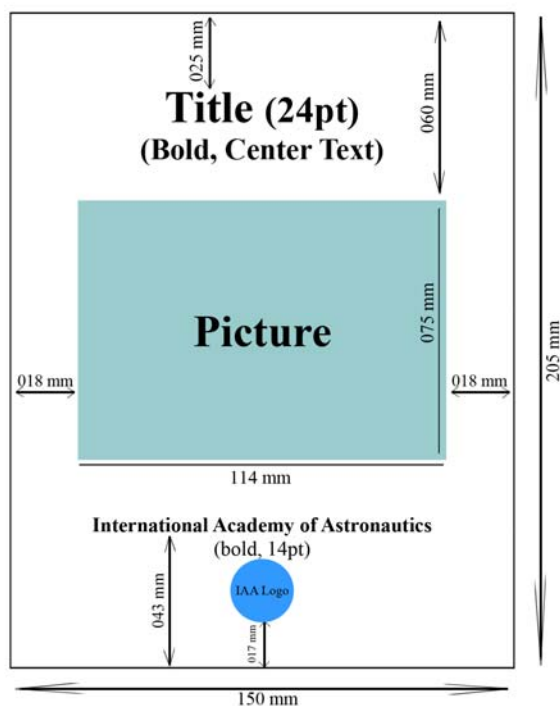
The IAA study group homepage website <http://iaaweb.org/content/view/273/412/> should be utilized for posting the draft as it takes form.

5. How to write a Study Report

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

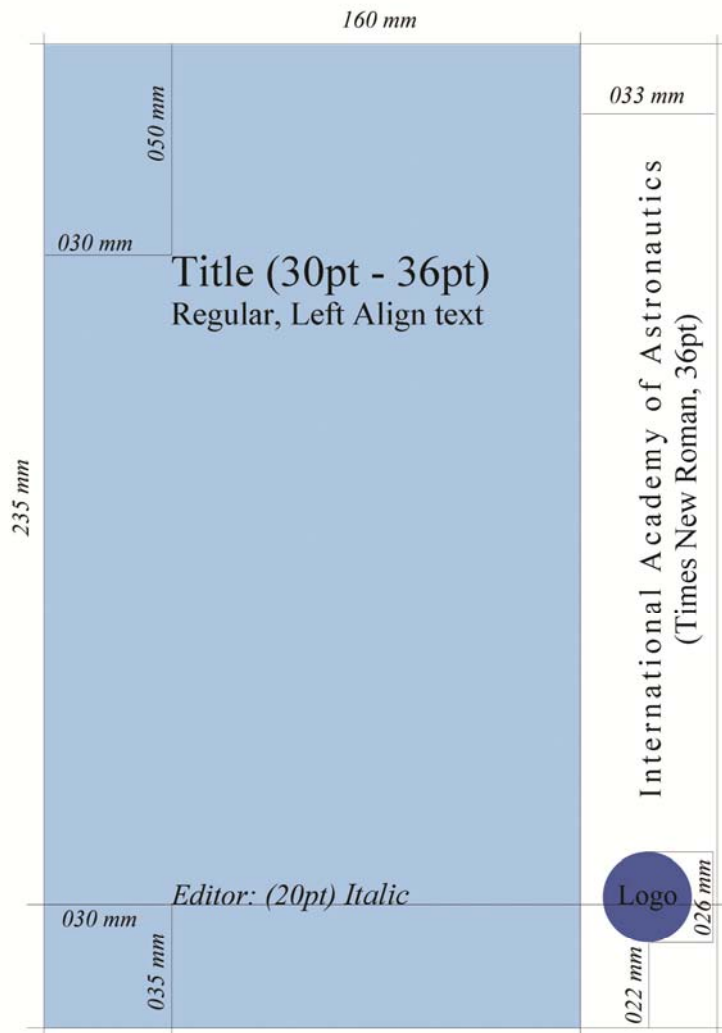
- a booklet with soft cover in A5 format (less than 100 pages) for position papers or reduced version of study

Study Group Booklet



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

- a book with hard cover format (more than 100 pages). For cosmic studies, both formats are recommended when external support is available for publication of the full text.



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

5.1 Cover.

The IAA cosmic study cover page picture shall be provided by the Secretary General upon request (sgeneral@iaaemail.org). 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 when it is published in China. It also may include the name of the Editor when it is a hard cover publication.

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.

In case of partnership for the publication the logo of both organizations are accepted.

5.2 Back of cover.

The Academy ISBN serial number will be provided by the Secretary General 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 2013 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 below:

¶
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. ¶

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¶
Title: Protecting the Environment of Celestial Bodies: The Need for Policy and Guidelines ¶

Editors: Mahulena Hofmann, Petra Rettberg and Mark Williamson ¶

Rapporteur: Marc Haese ¶

¶

Printing of this Study was supported by IAA Studies
Center in China and co-sponsored by: ¶

China Aerospace Science and Technology Corporation ¶
No. 16 Fucheng Road, Beijing, China 100048 ¶
www.spacechina.com ¶

China International Exchange Center for Astronautical
Science and Technology ¶

No. 8 Fucheng Road, Beijing, China 100048 ¶

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www.iaaweb.org ¶

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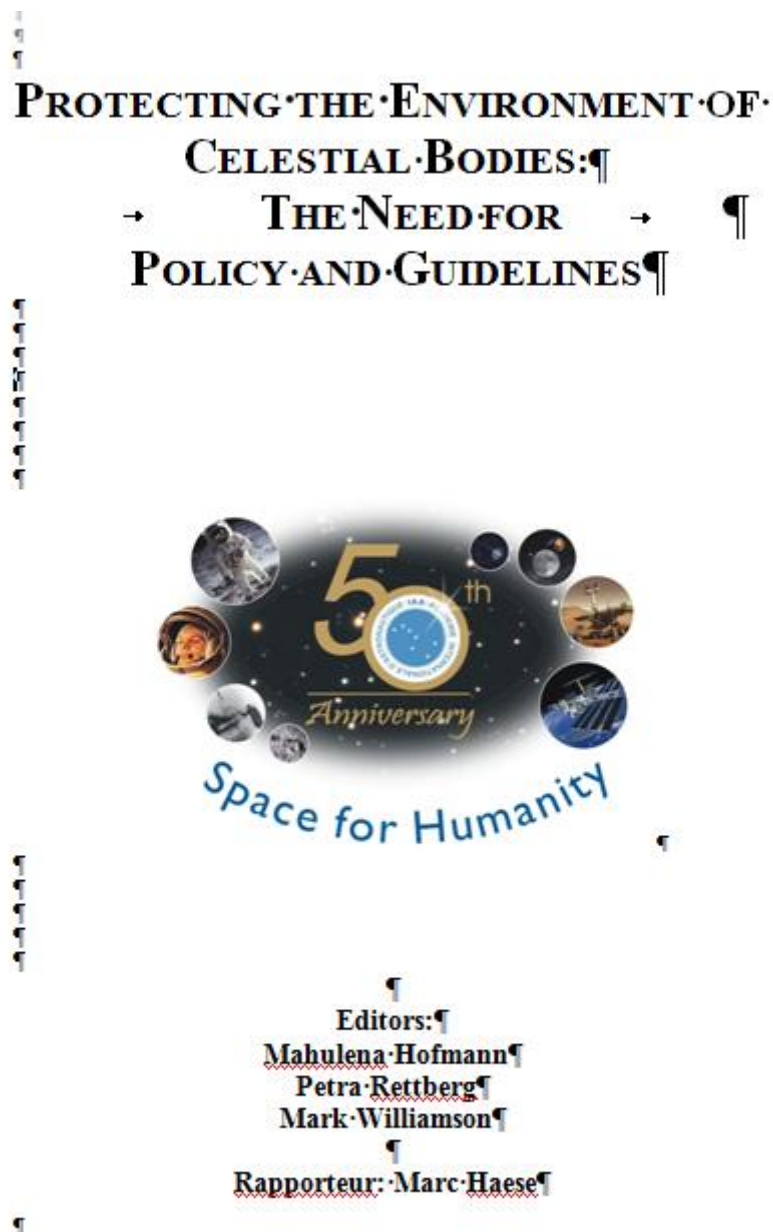


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¶
Cover Illustration: Aspects of environmental protection considered by the study (clockwise from top left): the possibility of alien biology [Ranjith Krishnan/FreeDigitalPhotos.net]; the human exploration of Mars [NASA/Mark Williamson]; Saturn's rings and Mimas imaged by Cassini [NASA/JPL/Space Science Institute]; Jupiter imaged by Voyager [NASA]. Cover illustration design by Jacqueline Myrha & Mark Williamson. ¶



Second cover (soft) should be as shown below:



Back cover (soft) should be blank or not blank if published in China:

5.3 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.

5.4 Cosmic study structure

5.4.1 Every cosmic study should contain the following sections:

- **Cover** (hard or semi hard)
- **Cover** (soft)
- **Table of content**
- **Acknowledgements** (optional)
- **Foreword** (optional)
- **Preface**
- **Executive summary**
- **1. Introduction** (no more than one introduction must be listed in the study 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 study report)
- **8. Recommendations** (optional or included in the conclusion chapter)
- **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**
- **10.3 Appendix C/D/E/F... – technical appendices** (optional)
- **Appendix X** (last one) – IAA in brief (provided by the Secretary General)

5.4.2 References

Single document:

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 section:

References (by Section and Chapter)

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...

5.4.3 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.

5.4.4 Appendix B

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

5.4.6 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.

6. Peer Review Study

These are the elements of the peer review process:

1. Commission pre-review
2. Academy Peer review

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 peer 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.

2. After the study group has successfully responded to the initial pre-review of the commission, the commission chair 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. Reviewers may choose to remain anonymous. List of Peer review for a given study have to be communicated to the IAA Secretariat for proper registration as such. 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.

7. Peer Review Process:

A pre-review is organized by the Commission and the Peer review is organized by the SAC (details are available in the "Process for IAA Studies")

8. 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 three 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.