

# Guidelines for Herschel Key Project Proposals

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## 1. Introduction

This note proposes a standard format for Herschel Key Project proposals. It assumes that the main case will be submitted as a document, while parallel technical information may be produced through working with HSpot. This is a preliminary version, and these guidelines have not yet been finally defined by the Herschel Science Team. However, it has been agreed by the Project Scientist that they may be used in developing proposals which will not need substantial reformatting once the final guidelines are released as part of the AO for observing proposals.

## 2. Document format

- Document type: PDF
- Page size: A4
- Typeface: Minimum 11 pt.
- Margins:  $\geq 2$  cm all round
- Max file size: 10 MB
- Figures: Should be interpretable in black and white

## 3. Proposal structure and headings

Proposals shall include the following sections and headings.

### 0. Abstract (max 250 words)

### 1. List of proposers and institutes

### 2. Science case (max. 6 pages including figures and tables)

- a. Scientific case for the observations proposed
- b. Why Herschel is essential
- c. Relation to past or future observations with other facilities
- d. Outline description of proposed observations

### 3. Technical implementation (max. 3 pages)

- a. Proposed observing modes and justification
- b. Summary of observing time estimates (based on HSpot output)
- c. Special requirements or constraints
- d. Data processing and analysis plan

### 4. Impact of different instrument sensitivities (max. 1 page)

### 5. Science exploitation (max. 2 pages)

- a. Consortium science exploitation plan
- b. Foreseen use and value of the archive in the longer term

### 6. Description of archival data products and tools that will be produced (max. 2 pages)

### 7. Outreach plan (max. 1 page)

### 8. References

### Appendices:

- A List of sources/fields to be observed
- B The consortium (max. 5 pages)
- C Short CVs of proposers (max. 200 words each)
- D Letters of support from institutes and/or agencies confirming the availability of resources
- E Special content for US-based proposers (TBC)

#### 4. Guidelines for the proposal sections

##### 0. Abstract (max. 250 words)

- *A concise description of the proposal, which will be useful to the HOTAC for compilation and categorisation of proposals.*

##### 1. List of proposers and institutes

##### 2. Science case (max. 6 pages)

###### a. Scientific case for the observations proposed

- *This section should show clearly and emphatically how the proposed observations match the essential requirements for a Key Project (as outlined in the Herschel Science Management Plan) that such programmes should:*
  - exploit unique Herschel capabilities to address (an) important scientific issue(s) in a comprehensive manner;*
  - require a large amount of observing time to be used in a uniform and coherent fashion;*
  - produce a resulting well characterised dataset of high archival value.*

###### b. Why Herschel is essential

- *An explanation of why the science objectives cannot be met by using other facilities or methods.*

###### c. Relation to past or future observations with other facilities

- *How the Herschel observations will be complemented by other data (past, present or future – Herschel or other); whether such other data are essential for the analysis and interpretation; how the Herschel observations may be followed up.*
- *Details of any linked proposals with other observatories*

###### d. Outline description of proposed observations

- *Brief summary of what is proposed (full details to be given in Appendix A)*

##### 3. Technical implementation (max. 3 pages)

###### a. Proposed observing modes and justification

###### b. Observing time estimates

- *Brief summary or tables of observing times, based on HSpot output.*

###### c. Special requirements or constraints

###### d. Data processing and analysis plan

- *The plan for data product generation, validation and delivery.*

##### 4. Impact of different instrument sensitivities on the programme (max. 1 page)

- *This section should explain the impact on the programme of sensitivity levels a factor of two better or worse than the nominal values should be outlined (corresponding to a factor of four in observing speed). This could involve de-scoping of the integration time or the number of sources/fields, or both. The arguments presented should be scientifically based. A programme which is not scientifically robust in the context of uncertain sensitivities will be regarded as a weak one.*

##### 5. Science exploitation (max. 2 pages)

###### a. Consortium science exploitation plan

- *As emphasised in the Key Project guidelines, the observational data are expected to have a long-lasting archival value. This means that the consortium will be expected to focus on certain aspects of the data and science case during the proprietary period, leaving other aspects for future exploitation open to the community. The baseline plans for data exploitation by the consortium should be outlined in this section. It is understood that once the data are available, departures from this plan may be made. The important point is that it should be clear that the data will be of lasting value.*

###### b. Foreseen use and value of the archive in the longer term

- *Here the envisaged archival value and benefits of the data set should be described. This should be based not only on the immediate data products which the consortium will provide at the end of the proprietary period, but on the final “mature” products that are foreseen to*

*be available eventually via subsequent more sophisticated data-processing and calibration.*

6. Description of archival data products and tools that will be produced (max. 2 pages)
  - *This should be based on the guidelines to be provided. But proposers should not feel limited by these guidelines, and are free to propose provision of any data products which they believe will be of benefit to the community.*
7. Outreach plan (max. 1 page)
  - *This section should outline the team's plans for its outreach activities throughout the project (from the time of successful award of the observing time to at least the end of the proprietary period.*

#### **Appendices:**

- A List of sources/fields to be observed
  - *Perhaps this can be generated using Hspot.*
- B The consortium (max. 5 pages)
  - a. Strengths of the team that make it appropriate for the project
  - b. Summary of staff and other resources that will be committed to the programme
    - *This should include science exploitation by the consortium and the provision of data products.*
  - c. Consortium management/organisational structure
  - d. Project schedule and management plan
    - *This section should summarize the schedule and management plan of the project, including preparatory and/or supplemental observations, work load distribution, data-product releases, publication plan, team meetings, workshops, etc.*
- C Short CVs of proposers (max. 200 words each)
- D Letters of support from institutes and/or agencies confirming the availability of resources.
- E Special content for US-based proposers (TBC)
  - *US-based proposers may be asked to provide some particular information required by the NHSC (details TBC)*