

Monthly Progress Report
SPIRE Test Facility and Scientific Support

Contract Number: 9F007-020251/001/SR
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Part 1

1. Is the project on schedule? **Yes.**
2. Is the project within budget? **Yes.**
3. Is the project free of any areas of concern in which the assistance or guidance of Canada may be required? **Yes.**

Part 2

Task 3.1: Provide SPIRE Test Facility FTS

- The SPIRE test team at the Rutherford Appleton Laboratory (RAL) has started the pre-vibration test campaign with the SPIRE Qualification Model. Performance tests will rely on the Test Facility FTS that has been provided by Canada and are scheduled for mid January 2004.
- Asier Abreu, the Canadian member of the SPIRE Instrument Control Centre (ICC) at RAL, has prepared an acceptance test plan for the Test Facility FTS. He will perform the acceptance early in the next year. Locke Spencer, a graduate student from the University of Lethbridge will assist him. Results from the data analysis already performed at the University of Lethbridge will be included
- Samuel Ronayette has designed and is in the process of assembling an anti-static encasing to provide a low water-vapor volume for the far infra-red beam to travel through during tests.
- Tanya Lim, a SPIRE test scientist, has prepared a document to spell out the details of the pre-vibration testing. David Naylor has provided feedback on the sections that involve the Test Facility FTS. A revised version will be published accordingly.

Task 3.2: Provide SPIRE Data Analysis Software

- Two of the core modules of the data processing toolkit have been considerably revised: apodization and phase correction. Margaret Tahic and Locke Spencer, both grad students at the University of Lethbridge, have developed greatly improved ways of providing the respective functionality under the supervision of David Naylor. The improved modules will be integrated into the data processing toolkit and, together with other improvements, an updated version of the data processing toolkit will be released accordingly.
- Kris Dyke, the computer science coop student, who was involved in writing and delivering the FTS data processing toolkit in IDL® will leave the University of Lethbridge with the new year. His knowledge was transferred to the SPIRE software engineer Trevor Fulton and other staff.

Task 3.3: Canadian SPIRE Team Support

- Six applications for the two currently vacant positions in the Canadian Herschel/SPIRE Science Steering Committee arrived and the Canadian Herschel/SPIRE Science Steering Committee reviewed them carefully. Each member of the steering committee ranked the applications, except in situations of

potential conflict of interest. The ranked list of applicants was again reviewed by the Joint Committee on Space Astronomy and the names of four candidates were forwarded to Gretchen Harris, the president of CASCA, to make the final decision as soon as possible.

- All Canadian Associate Scientists have now signed up for the SPIRE Specialist Astronomy Groups (SAGs). The following table details the Canadian involvement in the Herschel/SPIRE SAGs:

	Specialist Astronomy Group	Canadian Scientist involved
1	High-redshift galaxies	Douglas Scott (University of British Columbia) Mark Halpern (University of British Columbia)
2	Galaxies in the local universe	Christine Wilson (McMaster University)
3	Star formation in the galaxy	Christine Wilson (McMaster University)
4	The galactic inter-stellar medium	David Naylor (University of Lethbridge) Mark Halpern (University of British Columbia)
5	Solar system	David Naylor (University of Lethbridge)
6	Stellar and circumstellar	

- The first meetings of SAGs are scheduled for January 20 & 21, 2004 at the Institut d'Astrophysique de Paris. Christine Wilson will travel to France in January to attend the kick-off meetings for both SAGs she has signed up for (2 & 3).
- Matt Griffin, the SPIRE Principal Investigator, has announced the next SPIRE Science Team Meeting for April 14 – 16, 2004 at the Imperial College, London. Canadian representation at this meeting will be crucial to actively involve Canadian researchers in Herschel/SPIRE science. The draft agenda is currently:

Wed. 14th: Start at 14:00

- Plenary session
- Update on "rules of the game" etc.
- Proposal guidelines, update on performance of instruments
- GT preparation activities in the other Herschel consortia
- Short summaries by SAG leaders of status of their SAGs' activities and proposed programmes

Tues. 15th:

- Morning: SAG working sessions
- Afternoon: Plenary session
- Reports on prioritised outline GT programmes from each SAG and what OT proposals are being considered
- Late afternoon: SAG coordinators' meeting
 - SAG membership and activity reporting
 - Discussion on policy issues (to be decided at Co-I level)
 - Balance between GT Key programmes and regular GT programmes
 - What can/should be done in OT, not GT?
 - Collaborations with other Herschel consortia
 - Herschel/Planck synergy
 - Etc.

Wed. 16th: End at lunchtime

- Plenary session
- Summary of SAG's proposed/possible programmes
- Attempt at formulation of a straw-man GT programme (We can expect lots of uncertainties and differences of opinion, so that at least the discussion will highlight these for future attention)
- Conclusions (to be formulated for consideration by the Co-Is) and future plan

Task 3.4: SPIRE ITT and ICC Support

- Samuel Ronayette, the SPIRE ITT member for Canada at RAL, and Asier Abreu, the SPIRE ICC member for Canada at RAL, are both actively involved in the pre-vibration test campaign at RAL (see above).
- John Lindner and Locke Spencer, two graduate students at the University of Lethbridge, will support the instrument test and control teams at RAL from January 2003 through June 2003. Travel details have been finalized. Their respective contributions to the SPIRE project have been defined at a more detailed level and work plans have been prepared to guide them through the six month period.