

**Monthly Progress Report**  
**SPIRE Test Facility and Scientific Support**

**Contract Number:** 9F007-020251/001/SR  
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**Period:** February 2003

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## Part 1

1. Is the project on schedule? **Yes.**
2. Is the project within budget? **No.**

**The project is currently not within budget since the original budget was intended to last for 4 months. It now has to cover expenses for a period of at least 6 months which it was never designed to do. Also, the necessity to do more detailed metrology tests with the Aerotech stage has caused additional costs.**

3. Is the project free of any areas of concern in which the assistance or guidance of Canada may be required? **No.**

**We expect to receive a new bid for proposals from Public Works Canada to amend the current contract for the Canadian contribution to SPIRE.**

## Part 2

### Task 3.1: Provide SPIRE Test Facility FTS

- Ian Schofield has revised the Test Facility Data ICD document and version 1.1 has been published on February 17, 2003. He is currently working on the implementation of the TFTS Communication Server.
- Based on feedback from RAL, Greg Tompkins from the electronics workshop at the University of Lethbridge has redesigned the break-out box to tap into the slow interface and pick up the clock signal from the Data Processing Unit (DPU). Electronic components have been purchased for the final design of the counter solution.
- Metrology tests of the Aerotech stage have been designed, data analysis software has been developed, and the first tests have been performed. Conclusions from those tests are pending. A copy of the Unidex 500 manual has been posted on ESA's Livelink with permission of Aerotech.
- Frank Klassen from the machine shop at the University of Lethbridge manufactured a complete mount for the beamsplitter.
- The breadboard has arrived and the relevant optical components have been assembled in the SPIRE lab. Frank Klassen has provided threaded support beams.
- Ian Chapman has prepared test data that simulates the spectrum we can expect to see during the Instrument Level Tests at RAL later this summer.

- The delivery of the mirrors for the TFTS by suppliers has been delayed. The overall delivery date is still feasible to assemble the TFTS in time.

### **Task 3.2: Provide SPIRE Data Analysis Software**

- The IDL seminar series has been finished. Sessions will be made available electronically.
- Trevor Fulton has prepared a first version of a Technical Note that spells out all software components relevant to the Canadian contribution to SPIRE. The note has been sent to RAL. Based on the feedback revisions are under way, including revised responsibilities for delivery, a testing strategy, an overview, as well as more detailed specifications. After finishing the revision the first steps towards implementation will be made.
- An integrated software environment is in the process of being established at the University of Lethbridge to simulate the operational conditions at RAL during the Instrument Level Test phase. Data from the Engineering Simulator passes through the Router and can be displayed by the Quick Look Analysis.
- An overview of the requirements by the SPIRE project for the Interactive Analysis has been provided. It will serve as a basis to finalize the user requirements and system specifications of the Lethbridge Interactive Analysis to be provided alongside the TFTS later this summer.

### **Task 3.3: Canadian SPIRE Team Support**

- Nothing to report.

### **Task 3.4: SPIRE ITT and ICC Support**

- Samuel Ronayette has joined the Instrument Test Team on February 17, 2003. He started work on the alignment of the telescope simulator and is reading up on details of the SPIRE project.
- All candidates identified for the ICC position have turned down the offer. We currently discuss with CSA and the SPIRE project how to fill the position.