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Minutes of SPIRE ICC Definition Team Meeting (Data Processing Workshop) RAL 10 April 2000

Attendance:

Matt Griffin (part) **QMW Bruce Swinyard RAL** Jean-Paul Baluteau LAS Pierre Cox IAS Alain Abergel IAM Francois Moriset LAM Sunil Sidher RAL Gillian Wright **ATC** Walter Gear Cardiff Trevor Dimbylow **RAL** Ken King **RAL** Tanya Lim (part) **RAL** Neal Todd **ICSTM**

1. Presentations

Overview Ken King

See appended viewgraphs

ISO Data Processing Sunil Sidher

See appended viewgraphs

ORAC DR Gillian Wright

See appended viewgraphs

SPIRE Observing modes Matt Griffin

See appended viewgraphs

2. Discussion

Important points raised were

 Many of the SPIRE photometer data processing needs have already been implemented for SCUBA. Given the involvement of the ATC in the consortium, it is sensible to base SPIRE photometer data processing on existing SCUBA routines and algorithms

Action AI-IDT-000388-01: Walter Gear to obtain the relevant top-level SCUBA documents from Colin Cunningham and circulate them (through Bruce). Deadline: TBD

• In view of the above, it would be logical to increase the funded participation of the ATC in the SPIRE ICC to take advantage of the expertise that resides there (e.g., in the persons of Denis Kelly and John Lightfoot).

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- ORAC DR has many attractive features that can be incorporated into the SPIRE ICC, perhaps
 even to the extent of basing the data processing system on it. This issue needs to be studied in
 more detail to decide on the optimum use of ORAC. In particular, the specific requirements of
 SPIRE should be defined to see what adaptations would be necessary.
- It would be appropriate to set up a demonstration of ORAC DR for SPIRE and the other FIRST instruments

Action AI-IDT-000388-02: Ken King to discuss this with Otto Bauer and Pjotr Roelfsema and arrange demonstration if possible. Deadline: TBD

• The data processing techniques used for the imaging FTS on the CFHT should be studied to see what we can usefully learn for SPIRE

3. Study groups

The following study groups were set up with the membership as indicated. Others interested in joining the groups should contact the relevant group leader:

1. Software Implementation (RAL Software Engineer (Andrew Harwood?); Gillian; Sunil; Neal)

This group will investigate

- the feasibility of incorporating an IDL socket into ORAC DR (Gillian)
- the interface with FINDAS (Neil)
- SPIRE-specific requirements (Sunil)

e.g.: what instrument and spacecraft data are needed;

what fixed and variable calibration files and tables are needed;

• Definition of "use cases" and then FINDAS object model (needed by late June) (Neal/Sunil)

2. Photometer data processing study group (Walter, Matt, Neal, Gillian, Seb)

This group will

- examine what existing SCUBA routines/algorithms can be employed by SPIRE, and what adaptations would be necessary
- generate detailed descriptions of photometer observing modes and parameters to Gillian for Group 1

3. FTS data processing study group (Jean-Paul, Pierre, Bruce, Pete Ade, Peter Hamilton)

This group will

- investigate what can be learned/borrowed from the CFHT imaging FTS
- generate detailed descriptions of FTS observing modes and parameters to Gillian for Group 1

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4. ICC Systems Group (Sunil; Ken; Bruce + systems person)

Looking at system from a holistic systems point of view to ensure that the data required for the processing are correctly generated by the instrument and define the detail of how observations will be made. They will take inputs from the other study groups and provide feedback on the proposed processing schemes.

5. Other issues raised

The organisation and leadership of the ICC development effort is in need of attention. It now requires the dedicated effort of at least one individual with a good deal of time to devote to its coordination of a fragmented and distributed team. The current organisation is too vague and the tasks and goals are also too ill-defined.

Action AI-IDT-000388-03: Matt to consider the organisation of the ICC Definition Team and discuss solutions with the team members and appropriate Co-Is. Deadline: mid-May

The design stage of the data processing architecture requires the expertise of a software systems engineer. At present, this is lacking. Denis Kelly of the ATC could fulfil this role, but might not be available.

Some aspects of the warm electronics hardware design may be incompatible with the observing modes as currently defined. This should be addressed by the Warm Electronics Group.

6. Next meeting:

The next meeting of the ICC Definition Team will be at RAL (TBC) on Friday June 9th.