

SPIRE-UCF-COM-001504

From: Matt Griffin [Matt.Griffin@astro.cf.ac.uk]
Sent: 15 January 2003 17:18
To: Astrid Heske
Cc: Ken King; Eric Sawyer; Bruce Swinyard; Judy Long
Subject: IBDR close-out



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Hello Astrid,

- * The attached WORD document gives the current status of the main actions/recommendations from the IBDR, based on the list you sent. Let us know if you have any comments or if you need any further elaboration at this stage.

- * We'll consider workable IHDR dates and get back to you on that in a couple of days. I propose that we have a discussion on the IHDR objectives and agenda at our next interface meeting in February.

Cheers,

Matt

SPIRE IBDR Close-Out Summary

Matt Griffin, Ken King, Eric Sawyer

14 January 2003

IBDR Board Recommendation (R) /Action (A) / Conclusion (C)		Status
R-01	Assess the impacts of the slow-down of the Project team activities, due to the funding situation, and propose priorities.	<p>Prioritisation has been implemented with full visibility and consultation with ESA and industry. Thermal modelling effort in particular has been maintained. Priority has also been given to definition of the grounding scheme, 300-mK thermal strap programme, spacecraft interface definition, and vibration levels.</p> <p>EMC modelling, PA, microphonics, and some subsystem liaison have received less attention than we would like.</p> <p>Project Team effort overall is to be increased now that additional funding is to be made available from ESA.</p>
R-02	Urgently consolidate the schedule; specifically clarify the planning of immature subsystems and clarify the AIV/AIT Plan accordingly.	<p>Subsystem schedules have been closely monitored by Project Team, especially critical path subsystems (detectors and DRCU). The JPL programme has been modified to deliver detector arrays on time by restricting testing.</p> <p>The AIT plan has been defined in detail for the CQM, with two options identified - restricted testing/on-time delivery and full testing /later delivery. A decision on which to follow will be made in consultation with industry and will depend on industry readiness.</p>
R-03	Make special efforts to advance the status of the DRCU and thermal bus bar to a level equivalent with the rest of the instrument.	<p>The grounding scheme has been defined allowing long-lead PSU procurement to go ahead.</p> <p>A warm electronics programme review is planned for March 2003 with the objective of establishing a model delivery schedule compatible with need dates, and preparing for the IHDR.</p> <p>The DCU EM has been manufactured and some tests already completed. It will be tested with representative bolometers in February 2003.</p> <p>The 300-mK thermal strap programme has been pursued as high priority. A design review was held in July and a Delta-review is planned for January. A substantial vibration and thermal test programme has continued and a viable design is now close to finalisation. The full system will be tested in the S TM in May.</p>
R-04	Urgently renew efforts to freeze outstanding interface with the spacecraft, both thermal and straylight.	<p>Thermal modelling has proceeded with industry with full availability and participation of the RAL thermal engineering group.</p> <p>Difficult problems and compromises remain necessary as a result of SPIRE being designed originally with respect to an invalid spacecraft thermal model. This issue continues to get high priority.</p> <p>The SPIRE stray light model has been provided to industry, and SPIRE has monitored and commented on the activities of the Herschel Optical Systems Working Group.</p>

R-05	Plan PA activities appropriately and allocate sufficient resources. In particular, finalise the system FMECA and derating WCA analysis. Detailed manufacturing flow charts featuring MIPS and KIPs must be made available.	<p>Reduced System FMECA has been submitted.</p> <p>WCA on DRCU spacecraft interfaces will be included in DRCU review in March</p> <p>The AIV plan is being further detailed to include system-level MIPS and KIPS, and subsystems are being asked to provide their subsystem-level AIV plans with their MIPS and KIPS.</p>
R-06	Improve configuration control, both at system and sub-system level.	<p>The ECR database has been set up and works effectively. Not enough of the documentation is yet under formal configuration control.</p> <p>Nearly all JPL documents are now under configuration control, and DRCU review will help - more project team effort will need to be devoted to this over the next six months.</p> <p>We regard our configuration control system as adequate (including the use of Livelink), but the actual work on documentation needs to be implemented.</p> <p>Project Team effort on this will be increased with the objective of establishing full configuration control on all relevant documents by the time of the IHDR.</p> <p>The CIDL maintenance is being reviewed and the system may be changed (but we do not regard this as a major issue).</p>
R-07	Give special care to early testing of high-risk items, such as SMEC, the BDAs and microphonics.	<p>BDA vibration qualification is taking place now.</p> <p>SMEC testing will await the STM.</p> <p>Meaningful system-level microphonics tests must await the CQM. In the meantime, unit level testing of the BDAs at JPL, and testing of the DCU with prototype arrays at Boulder and Saclay, will provide indicative data.</p> <p>In general, consortium resources and the schedule are not compatible with the level of prototyping and early testing that would be ideal.</p>
R-08	Make available a software development and verification plan.	The SW Validation and Verification Plan has been written and is available in draft form. It is now being reviewed prior to acceptance tests on the OBS which will take place in mid-February.
C-01	Address all recommendations and close out specific actions	Ongoing.
A-01	Evaluate the impact of the reduced resources of the system team and define priorities .	See R-01 above.
A-02	Agree with ESA Project and Industry on the thermal interfaces.	See R-04 above.