

**Minutes of SPIRE Project Team Meeting, RAL, 19 July 2002**  
**Matt Griffin, 21 July 2002**

**Present:** Matt Griffin  
Eric Sawyer  
Bruce Swinyard  
John Delderfield (various parts of meeting)  
Dave Smith (for item 6)

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### 1. Grounding status and review plan

- The telecon on July 18 decided that a dedicated review is needed to reach a conclusion on this very complex and important issue
- After the telecon, Matt sent out a draft plan for comments
- This review plan updated slightly
- In the period between now and the review, the DRCU EM and QM1 programmes should proceed as normal
- [Action 1: Matt to distribute revised review plan by Monday](#)
- [Action 2: Eric to request SAp \(Jean-Louis\) to continue with the EM and QM1 programme and other normal work that can be carried out in the interim.](#)

### 2. DRCU DDR

- Documentation has been received from Jean-Louis and the Project Team has started to review it
- All comments (including those of IFSI and JPL) are to be collated centrally by Eric and distributed to Jean-Louis
- Deadline for consolidated comments to Jean Louis = 1 Sept.
- [Action 3: Eric to issue the documents to subsystems asking/inviting comments appropriately, and organise PT activity in connection with the DDR](#)
- [Action 4: Eric to arrange a date with Jean-Louis for a review close-out meeting at SAp \(if possible\) in the week following the Grounding Review. This meeting to take the form of a review of any outstanding issues and definition of appropriate actions](#)
- Document status:
  - DRCU Spec
    - New version
    - PT hasn't commented yet
    - John and Bruce will be main reviewers
  - SCU Des. Desc.
    - New document
    - John and Bruce will be main reviewers

- Comments also needed from other subsystems (Eric to issue instruction)
- DRCU Des. Desc.
  - Bruce to review. Will be discussed at next JPL detector meeting also.
- DRCU ICD
  - Ken has already sent some comments to Christophe
  - Ken to provide consolidated comments to Eric for the master list
- DCU and FCU ICD Drawings
  - John has sent some comments
  - John to provide consolidated comments to Eric for master list
- DRCU-DPU ICD
  - IFSI to comment and incorporate into DPU ICD
  - Ken to remind IFSI

### 3. Vibration levels note

- The draft note outlining the case for lower vibration levels prepared by MJG was revised (still draft but can be sent to Gerry Crone today for information prior to discussion at next week's meeting).

### 4. Preparation for next week's meeting with Industry

- Current status of SPIRE:
  - SPIRE now has a logo (that's real progress . . .)
  - General: to be based on Matt's presentation to HST
  - Update on grounding status and review plan
  - Recent Thermal Strap DDR - draft report is available
  - Payload funding meeting - SPIRE's response to June 19 mtg. AI3 has been issued
  - Minutes of June 19 meeting confirm that ESA will pay for cold vibration costs.
- Mechanical interfaces
  - JFET interface: clarification needed
  - PACS-SPIRE clash: discussion needed
  - Alignment cube: SPIRE has provided details of the position and expects industry to note and accept this..
  - Level-0 strap interface: Astrium to update/explain
  - Dowels and shims: Dowels yes, shims no
  - SPIRE Moment of Inertia: MSSSL to respond
- Electrical interfaces
  - Astrium HEPLM electrical ICD: For our information only - we work to the IID-A
  - Harness discrepancies: we cannot and will not change the test harness.
  - Clarification needed on routing between SPIRE hot and cold ends
  - JFET connectors: Clarification needed
- Thermal interfaces
  - Delivery of reduced model: may happen in next couple of days. A thermal meeting needs to be arranged following review and analysis. RAL has a plan for resuming thermal modelling/meeting support, and resources are authorised by the Project.
  - Level-3 JFET interface: Astrium to inform us how it might be done (doc. to be tabled)
  - ECR29 and ECR30:
    - 29 = harness and launch latch verification (shutter, SMEC, BSM)
    - 30 = temp monitors
 Both updated and sent out

- Shutter deletion: Matt has sent Göran Pilbratt update on SPIRE's requirements on the CTA. Göran has incorporated this and similar requirements from PACS into an updated document (distributed today).
- SPIRE ASAP stray light model: To be clarified during meeting or standard references provided - RAL not currently resourced for anything except minimal activity on this.
- Mean dissipations etc: Matt has e-mailed Gerry Crone pointing out that this information is in the Thermal Config. Doc. If more information required, it should be by update to this doc.
- Vibration levels
  - Meeting should discuss based on our note sent out today
- IID-B status
  - Moving from 2.2 to 2.3. Routine discussion as appropriate.
- ECR status
  - Did ECR31 (IID-B Issue 2.2 changes) get adopted?  
If yes then IID-B 2.2 is agreed baseline
  - ECR to be raised on shutter deletion
  - Routine ECR to be raised covering proposed routine IID-B updates
- Straylight
  - What's Alcatel's status wrt overall system emissivity?
  - PDR states up to 18% rather than 10% (marginally compliant = non-compliant?)
- AOB
  - Clarify to ESA/Industry that communication will be more formalised to avoid confusion
  - Latest status of cold vibration facility schedule?
  - Progress on replacement for Jean Bruston?

## 5. SPIRE Management

- As noted at IBDR and in various meetings and discussions since, the management team must prioritise its activities
- Following a period in which much attention has been devoted to system-level issues and interaction with industry and ESA - to the neglect of SPIRE subsystems - the pendulum has to swing the other way
- Project Team's policy is therefore to give priority to liaison with subsystems for the next ~ six months - especially important as we move into the STM/CQM phase
- Although we will cover the essentials, interaction with ESA/Industry will suffer - this is regrettable but inevitable
- Project Team practices:
  - Regular telecons will be held with
    - JPL - to be run by Matt (already established and working well)
    - CEA - to be run by Eric
    - LAM - to be run by Eric
    - Thermal strap team (MSSL + Cardiff) - to be run by Doug
  - Telecons will be minuted and will define priorities and track actions and progress
  - Weekly PM telecons may be discontinued (TBD by Eric)
  - Communications with industry/ESA to be more formal to make sure that a clear distinction between e-mail/telephone discussions and official statements by either side is maintained
  - Internal consortium e-mail discussions will not be copied to ESA/Industry until an "official" position has been established
- Main PT responsibilities over the next several months will be as follows (this is indicative as there will be overlap and PT members will often cover for each other when someone is absent at meetings or on vacation)
- Eric S:
  - Overall instrument schedule
  - Monitoring of LAM, SAp (DRCU review), MSSL structure
  - Monthly reporting to ESA (what's current status?)

- Day-to-day direction and prioritisation of PT activity
- Doug:
  - Thermal strap programme (monitoring/action-tracking through fortnightly telecons)
  - EMC working group and modelling
  - Harness control
  - ATC programme
- Bruce:
  - JPL programme (with Matt)
  - Thermal and stray light issues
  - STM AIV programme and subsystem model philosophy (with Eric)
  - EQM test programme (liaison with ESA/Industry)
  - Subsystem technical/performance support etc.
- John:
  - IIDs; CEA electronics and grounding
- Matt:
  - JPL programme telecons
  - Co-I and institute-level programmatic
  - Charing Project Team meetings
  - Supporting the ICCDT more than of late
- Ken:
  - UK financial reporting
  - DPU OBS
  - EGSE
  - AVM and simulators
  - ICC
  - RAL financial programme (with input from Eric)
- Berend:
  - Reviewing and advising PT and subsystems on mechanical/vibration levels etc.
  - MSSL STM programme, integration, testing
  - Liaison with ESA/industry as appropriate on vibration, structural issues
- Eric C.:
  - PA (limited effort available)

## 6. AIV facility Cryogenic Black Body specification

- Canada is being asked to provide this
- Draft requirements document reviewed and updated - contains actions on Pete, Bruce, Dave to be carried out before end July. Bruce to send procurement spec. to David Naylor ASAP
- [Action 5: Bruce to circulate revised document and liase with David Naylor over then next two weeks on CBB specification and Canadian provision](#)

## 7. Black compound qualification (telecon with Pete Hargrave at Cardiff)

- Est. need date for application of black coating to STM parts is early Dec. (Eric to confirm)
- Qualification testing at Cardiff to commence next week
- Outgassing tests: we need ESA to do this - this is the area of the programme with greatest uncertainty in terms of schedule and outcome - should therefore be addressed as high priority
- [Action 6: Eric S to liase with Eric Clark to seek out ESA guy who can do outgassing, and report status to Pete](#)
- [Action 7: Pete to circulate black compound qualification test plan to Eric Clark for comment](#)

## 8. LAM programme status: SMEC and mirrors

- Report from Eric following telecon with Dominique
  - Pivots
    - Problem still there. Further clarification needed. Dominique still has action to write briefing note to PT
  - Mirrors
    - Spec. thought not to be quite good enough for alignment
    - Samples being made to assess optical quality
    - Some mirrors may be more important than others
    - Need to assess implications for STM/CQM - aim should be avoid delay to STM by whatever workarounds are needed
- Bruce and Eric will be visiting LAM on July 25 to assess status, and agree programme/monitoring/review

## 9. MSSL programme

- Report from Eric following visit by Chris yesterday
- Some machining/design problems on recent parts - recovery in progress
- Optics bench dwg. to go out Aug 2. Finish manufacture end Aug.
- Some schedule slip - Dave Smith is working on replanting of STM AIV programme

## 10. AIV programme status

- Cryostat: Outer vacuum vessel has problems with door sealing. AS are fixing it. There will be some delay due to this.
- Worries about cold vacuum leak test coming up - problems in commissioning a cryostat of this size would not be surprising.
- STM AIV programme may need to be reworked to accommodate delay in cryostat availability.
- Contingency plan to accommodate a significant delay should be outlined (most aspects of the STM programme should be OK - except for thermal performance tests)

## 11. Summary of actions

No.	Action	Responsible	Due date	Status
1	Circulate updated grounding review plan	Matt	21 July	Open
2	Request SAp (Jean-Louis) to continue with the EM and QM1 programme and other normal work that can be carried out in the interim prior to the grounding review	Eric	21 July	Open
3	Issue the DRCU DDR documents to subsystems asking/inviting comments appropriately, and organise PT activity in connection with the DDR	Eric	21 July	Open
4	Arrange a date with Jean-Louis for a DRCU DDR close-out meeting at SAp	Eric	27 July	Open
5	Circulate revised CBB document and liaise with David Naylor over the next two weeks on CBB specification and Canadian provision	Bruce	22 July	Open
6	Eric S to ask with Eric Clark to seek out ESA person who can arrange outgassing tests	Eric S and then Eric C	22 July	Open
7	Send black compound qualification test plan to Eric Clark for comment	Pete	21 July	Open