

SPIRE Harness Progress Meeting Notes

SPIRE-RAL-NOT-001509

Date: 21 January 2003

Purpose: Progress meeting on SPIRE Ground Test and FPU Harnesses

Attendees: Roy Blake, Terry McManus, Doug Griffin, Dave Smith, John Delderfield

1. Cold Test Harness

- As it was found to be impossible to transfer the impedance measurements from the ATE to PC via the ATE serial port, this task was conducted manually.
- The data will be passed onto RAL by Friday 24th January
- The original paper will be sent to RAL for archiving
- The harnesses will be sent to RAL on Monday 27th January

2. Warm Test Harness

- The orders have been placed for the procurement of the materials to carry out the rework of the harnesses. (chain mail EMI screen, adhesive tape)
- The materials are on back order and will be delivered 3rd Feb
- Work will start after the delivery and is expected around the end of March.
- This work will include Banana Plug in the connection between the FPU Faraday Shield wires on the 128-Way and the existing SS Overbraid.
- The length of the tails leading to the DPU and the FCU was discussed. This included a visit to the SPIRE Cryolab. It was agreed that these tails would be 500mm.
- It was agreed that strain relief was required on both the 128-Way connectors and the D-Sub Connectors (Saddle clamps over the groups of tails on the individual harnesses)
- It was agreed in principle that some sort of conduit would be used to mechanically protect and electrically isolate the harness overshield from other objects in the lab. The chain mail overshield will not be wrapped with insulation.
- It was agreed that the harnesses should approach the DCU and FCU from the side and at the same height as the top of the boxes.

3. Subsystem and STM Thermometry Harnesses

- All connectors for these harnesses have been received at Tekdata
- The harnesses are currently waiting to be woven. (Need length information from RAL)
- RAL had suggested that some of the thermometry harnesses that run across two temperature stages could be made entirely from SS. Previously; it was thought that these harnesses would be made partially from SS and partially from Cu conductors. An answer is required before 3 Feb 2003.

- Tekdata requires specification of the termination of the thermistor harnesses¹.
- It was noted that a 38AWG SS drain wire will be used to aid in the termination of the shields in the Subsystem harnesses and the JPL harnesses at the JFET
- Tekdata asked if I could remind Jean-Louis Augeres from CEA that a second order for the Flight Spare Harnesses has not been received.
- It was noted that the provision of the STEP models of the subsystems from MSSL is now on the critical path for the delivery of the harnesses. Expected delivery around the middle of March.
- MSSL need to be informed that different size harness saddles need to be made
- The harnesses need to have supports for where they pass over the webs of the SOB
- Tekdata is awaiting confirmation of the lengths outside and inside the FPU.

4. JPL BDA-JFET Harnesses

- A review of the RAL proposed FPU feedthru design was made. Tekdata to produce production drawings.
- RAL to provide the tolerances for the hole and shaft
- The materials (12-ax and connectors) have been received from JPL. There is a limited supply of the 12-ax
- Tekdata need estimates of the lengths of the harnesses.
- Tekdata is awaiting confirmation of the lengths outside and inside the FPU.
- There is a hiatus in the production of the JPL harnesses imposed by Len Husted due to details of the JPL ICD being incorrect

AOB

A weekly progress telecon between Roy, Terry and Doug will be started week of 26 Jan '03

Number	What	Who	When
1	Tekdata send harness impedance measurements to RAL	Terry	24 Jan
2	Tekdata send cold harnesses to RAL	Terry	27 Jan
3	RAL supply information about the termination of the thermometry harnesses	Doug	End Feb
4	RAL to specify the use of all stainless conductors for the thermistor harnesses	Doug	27 Jan
5	RAL to supply estimates of the lengths of the JPL harnesses and the sub-system harnesses	Doug	ASAP
6	RAL to supply solid model of	Doug	ASAP (critical path)

¹ It occurred to me after the meeting that Tekdata should be made aware that the thermistors are to be soldered to the harness **after** bakeout.

	subsystems to Tekdata		
7	Remind CEA of 2 nd harness PO	Doug	27 Jan
8	Remind MSSL that different types of harness saddles are required	Doug	Done
9	Send Tekdata and MSSL the tolerances on the hole and spigot for the feedthrus	Doug	ASAP