CH/Doc/92/10

Minutes

MEGHA Project Meeting IV

Meeting held on: 10 September 1992

Meeting held at: Daresbury

Minutes

This is a text copy of the minutes distributed by Stuart Metcalf.

SCIENCE AND ENGINEERING RESEARCH COUNCIL

DARESBURY LABORATORY

M.E.G.H.A. PROJECT MEETING

Notes on the meeting to discuss the Multi Element Gas Hybrid Array project, held at Daresbury Laboratory on 10th September 1992.

Present:-

Dr. J. Lilley (Chair)
Mr. J. Kay
Mr. S. Metcalfe (Secretary)
Mr. R. Cunningham
Dr. D. Watson (York)
Mr. M. Peters (York)
Mr. S. Lawson (York)
Mr. R. Hide (York)
Mr. C. Ovenden (York)
Dr. N. Clarke (Birmingham)

cc. Dr. W. Catford (Surrey)
Mr. S.V. Davies
Dr. W. Rae (Oxford)
Mr. E.C.G. Owen
Dr. V. Pucknell
Mr. R. Hunt (Oxford)
Dr. B. Fulton (Birmingham)

1.0 Minutes of previous meeting.
These where agreed.

2.0 Detectors and telescope modules.
SM described the procedure for the replacement of detectors.

2.1 Module Wiring - still to be agreed. ACTION: RC/BF/SM/NC

An electrical focal point is to be nominated and a whole system schematic produced. ACTION: BF/VP

2.2 Preamps.

WR sent a sketch showing his proposed method of mounting the preamps. The number of preamps has increased from 5 to 6.

SM supplied an alternative preamp layout for discussion.

SM and RC will visit Barney Brookes at Oxford to finalise the details.

Verelec SA have confirmed that they will be able to manufacture a ribbon cable vacuum feedthrough to the design shown on drg. no. 32/8038. The IBM product did not appear to be suitable. A quote is to be obtained from Verelec when the design has been finalised.

ACTION: SM

The preamp cans will only be used outside the vacuum. If the module is to be used within a chamber, then the ribbon cables are to be extended to the outside.

2.3 Detectors.

2.3.1 Scintillator.

The dummy scintillator and prototype mounting hardware is currently being manufactured at York.

NC reported that 50 scintillators have been ordered. A further 4 will be required when funds are available.

2.3.2 Silicon.

The proposed detector will be tested next week.

SM proposed that the corners of the PCB be chamfered to allow a M2,5 stud to pass through to support the rear electrode and anode.

Wiring details have still to be decided.

The current module design will not accommodate strip detectors. A sub group will meet on 7/10/92 to discuss the requirements for strip detectors.

ACTION: JL/DW

2.3.3 Rear electrode.
Further design work required.

2.3.4 Anode.
Further design work required.

2.3.5 Gas Chamber.
The depth of the module is to be fixed at 134. (see drg. no. NSE/SC/138)

A number of tapped holes are to be provided around the chamber for mounting. The O-ring grooves are to be trapezoidal.

ACTION: SM

3.0 The 5 Module Chamber

A scheme of the proposed chamber was presented by SM for comments.

The target position is to be outside the chamber. There are to be 6 targets on a ladder, probably using a copy of the Eurogam mechanism. Also a collimator and quartz viewer is required with a Faraday cup inside the chamber. The chamber is to be made from stainless steel. DW is to confirm the minimum distance from detector to chamber wall.

ACTION: SM/DW

4.0 Gas Handling

Estimated cost this year is 20K pounds. 12K pounds spent so far.

Sub group consists of CO/RC/SVD/SL/RH/MP

4.1 System.

SM to produce a schematic diagram, based on RC's drawings.

ACTION: SM

2 x 4 racks are to be used to facilitate transport. The gas bottles may need to be removed prior to departure.

4.2 Controls.

SL explained the proposed system, based on a Mitsubishi controller.

SL requires the spec. of the Eurogam target ladder controller for duplication

ACTION: JK

5.0 Data Acquisition.

Nothing to report at this meeting.

6.0 Date of next meeting.

15th October 1992 at 14:00

S.J. Metcalfe