Liquid Argon Calorimeter
Readout Electronics System ASSO

CERN – 17th June 2002

Review committee

M Nessi *(Chair)*

Ph Farthouat *(TC)*

M Dentan *(Radiation hardness)*

L Premisler *(US Atlas)*

A Gillman *(Level-1 Trigger)*

H Burckhart *(DCS)*

R Mclaren *(ROD/DAQ)*

Ex officio TC

M Hatch

D Lissauer

P Schmid

J Inigo-Golfin

Ph Farthouat

G Tappern

Ex officio Management

M Nessi

P Jenni

T Åkesson

M Nordberg

Purpose of the Status Overview

"The objective of such a status overview … is to go over all Activities with the Systems and find out the overall status of each of them."

"The first set of reviews will be used to give the Technical Coordinator and his team a way to identify problems in a speedy fashion. The review should benefit the systems and activity leaders as well as TC. It should allow the activity/system leader to give an accurate picture on the status and the performance of the activity/system. It will also allow setting the baseline for ATLAS."

Topics for Review

- Status of design and production of electronics systems and components
- Project schedule and reporting, manpower issues
- Documentation and configuration control
- Quality Assurance Plan and effective implementation, data base
- Interface issues
- Installation scenario and maintenance issues

Agenda

Introduction	*M Nessi*
LARG Electronics Organisation	*W Cleland*
Crates and Power Supplies	*H Takai*
HV Supplies and Cables	*H Braun*
Radiation Tolerance	*C De la Taille*
Trigger Sums and Transmission	*W Cleland*
Overview of Front End Crate	*J Parsons*
Grounding and Shielding	*V Radeka*
ROD Functionality and Interface	*L Poggioli*
Commissioning	*W Cleland*
Documentation	*M Citterio*
Integration/Installation	*M Citterio /TC*
Schedule	*W Cleland*
Resources	*H Oberlack*

Conclusions

"The electronics activity is very well driven and all management tools to follow the work progress and to check the validity of the different designs are in place. In particular the use of PPT and the organisation of internal design reviews at the right time help a lot."

- *47 recommendations grouped into seven categories:*
  - **QA procedures – Documentation – Reporting**
  - **Interfaces to Trigger/DAQ and RODs**
  - **Interface to DCS**
  - **Power supplies – Grounding & shielding – Safety**
  - **Radiation hardness**
  - **Commissioning – Installation**
  - **Maintenance – Running**

Action Items – some examples

Description	TC Contact	LAr Contact	Comments - Status
Electronics manufacturing drawings and documents should be stored in EDMS in due course	Ph Farthouat		Automatic interface with CADENCE CAE tools exists
The QC procedures for all components should be written. A coherent burn-in policy should be defined	?		QC procedures of the trigger sums can be taken as good example
The length of the trigger cables should be assessed	M Hatch	B Cleland	
The in-situ testing of the trigger cables should be defined	Ph Farthouat	B Cleland	
The summing weights to be applied for the forward calorimeter must be defined	Ph Farthouat	B Cleland	
The specification for the Receiver remapping boards must be made available	T Gillman	B Cleland	In sufficient time for the Slice Tests
Common noise, cross-talk, ... for the trigger sums must be measured	T Gillman	B Cleland	

Action Items – some examples

Description	TC Contact	LAr Contact	Comments - Status
The needs of the LAr for Level-1, DAQ, TTC, power, cooling for the installation and commissioning must be specified	Ph Farthouat	B Cleland	When does each component need to be available
There should be more intense interaction with the central DCS team	H Burckhart		More help will be obtained. This would avoid to have activities stopping (e.g temperature monitoring)
Interface to DCS needs to be formalised. Including the use and location of the ELMB	H Burckhart		
The UPS requirements (if any) must be given to TC	O Jonsson		There is a UPS included in the HV. May be a need elsewhere
Develop step-by-step installation instructions for all major components	D Lissauer	B Cleland	
Develop step-by-step commissioning instructions for all major components	D Lissauer	B Cleland	
A policy for spares and component obsolescence handling must be defined	Ph Farthouat	B Cleland	