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## **DAQ for PMT HV Base Test (1)**



# **DAQ for PMT HV Base Test (2)**

Test objectives (just some possibilities...)

DOMMB-PMT HV Base communication
Board ID database integrity
PMT HV Base under repetition of ON/OFF & ramp up/down
PMT response (under what stimuli?)

**Board Identity** 

Test results

Test conditions (environmental, etc.)

## **DAQ for Flasher Board Test (1)**



(The interface is not defined yet)

## **DAQ for Flasher Board Test (2)**

#### Flasher Operation

DOMMB selects Flasher DOMMB issues a "Get Ready" signal DOMMB sets up Amplitude Flasher writes "Ready" to the status register DOMMB issues a trigger Flasher fires Flasher sends a time-stamp pulse to DOMMB

#### Note:

Present ERD calls for only "Narrow pulse mode"
Amplitude is up to 256 levels (possibly as few as 32 levels)
The Flasher Board side interface is likely a CPLD
No "User Devices" are defined so far
Two types of Flasher Board will be implemented differing only in LED orientation
Passive PMT HV Base support devices (physically present on Flasher Board PCB) are transparent to DOMMB

## **DAQ for Flasher Board Test (3)**

### What to test

Communication with DOMMB

Pulse shape (15nsec FWHM)

Pulse repetition rate (1kHz)

Pulse intensity (Calibration):

3.1.4.4 Intensity accuracy Output v.s. programmed preset (15%) Output for a given preset (3% per week)
3.1.4.4.5 Calibration Output for the maximum preset to shall be known to within 20% Linearity (Output v.s. preset) shall be calibrated to within 10%

The calibration data are necessary for the DOMMB to operate the Flasher Board