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Date: November 20, 2007 12:31:53 PM GMT-06:00
To: halld-cal@jlab.org
Subject: Rough outline for Calorimetry Doc
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Hi,

At last week's calorimetry meeting we decided to put together a rough outline for the calorimetry documentation that we would review at this weeks calorimetry meeting. There has already been some info exchanged between the UR guys and Alex on a few parts. I've tried to rough out the outline for the FCAL and also "performance" parts. We should review all of this at this weeks calorimetry meeting and try to finalize some writing assignments. The goal is to write a self contained document at the level of a design report.

-Matt

Introduction

(Alex's content here.)

BCAL Design

(George/Zisis content here.)

FCAL Design

- Introduction/Background
 - * lead glass calorimetry
 - * RadPhi and E852 experience
 - * motivate design parameters/specs

- Detector Design
 - * light coupling optimization / magnetic field
 - * CW bases
 - * FADC Readout
 - * mechanical

- Performance/Operation
 - * resolution
 - * low energy threshold / dynamic range
 - * radiation hardness
 - * calibration

- * noise suppression (timing)

Full Calorimetry Performance

- Simulation / Reconstruction Description

- * what is modeled and parametrized
- * material description
- * clustering algorithms
- * four-vector resolution

- Physics Simulations

- * efficiency as a function of polar angle
- * π^0 and η reconstruction
- * identifying hadronic final states with neutrals (signal purity)
- * amplitude analysis of neutral states (acceptance)