**HIGH ENERGY PHYSICS GROUP**
Department of Physics
University of Notre Dame
Notre Dame • Indiana • 46556
USA

(219) 631-6044

To: E852 Collaboration
From: T. Adams, J. LoSecco
Date: April 18, 1994
Subject: Numbering of the Cesium Iodide Target Veto

This note is to clarify the preferred numbering scheme for the CsI veto. The CSI comes in two parts. The primary section consists of 10 rings of 18 blocks each. This portion is known as "cib" or "CSI". In addition there is a single ring of 18 blocks located upstream of the target and the tcyl amplifiers. This single ring is known as "cia" or "UEA". In addition the CsI will use 6 scintillation counters, 3 upstream and 3 downstream, as beam halo monitors. We can monitor the device with cosmic rays and beam halo.

Each segment of the cesium iodide will be adc'ed. This gives us 198 channels for them. My personal preference is to adc the halo counters so we have a rough idea of the multiplicity but at the very least we will need bits assigned to them. The halo counters can not share an adc with the csi since the timing and gate requirements are different.

We need two types of triggers for the cesium iodide. We will produce a cosmic ray trigger by discriminating on the blocks themselves. We will have a halo trigger based on upstream-downstream pairs of the halo counters. A bit should be reserved for each of these.

# Numbering

The least confusion will arise with a numbering scheme that corresponds closely to the geometry. We propose to use a 4 digit decimal number to describe the CSI (cib) and UEA (cia). The high order 2 digits will be the ring number. The CSI (cib) rings will be numbered from 1 to 10. 1 is the upstream ring. 10 is the downstream ring. The UEA (cia) is numbered ring 0. The low order 2 digits will be the block number within a ring. The blocks

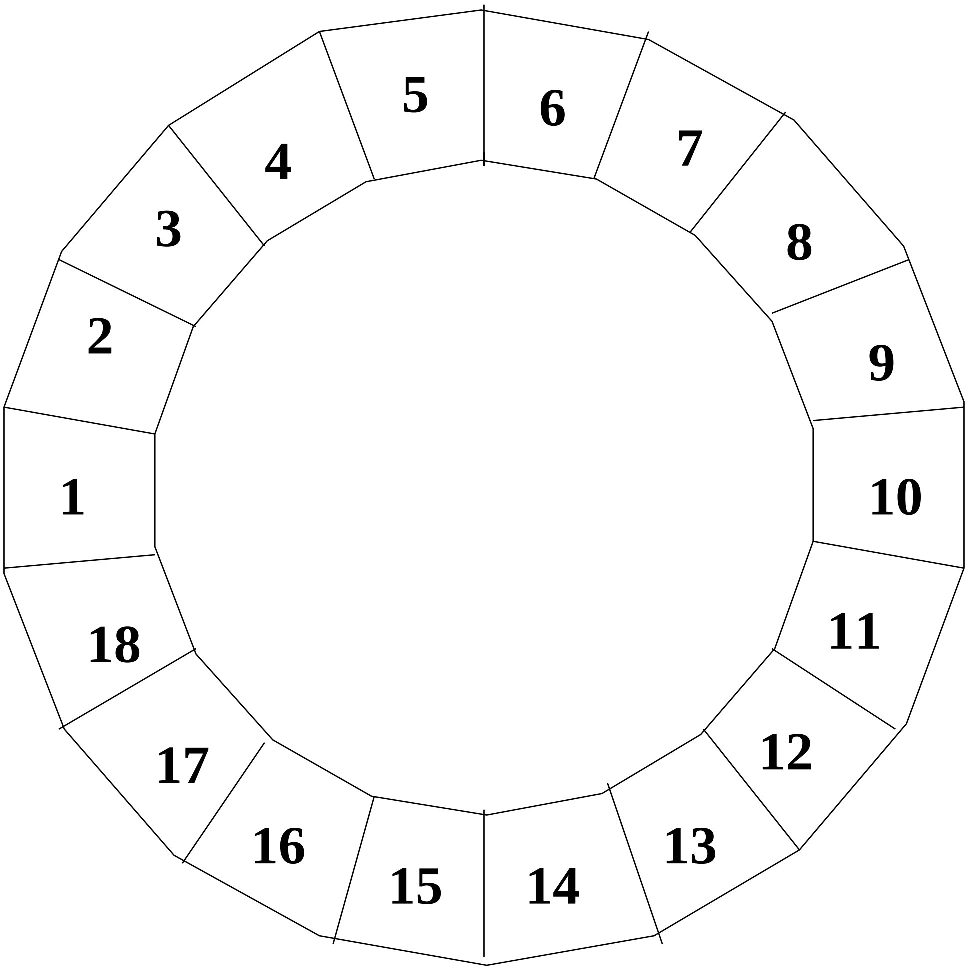


Figure 0.1: Barrel Numbering for a Ring (*looking downstream*)

will be numbered 1 to 18 clockwise when *viewed from upstream.* 1 will be on the west side on the positive x axis.

The UEA should be numbered the same as the rest of the CSI. We think that a ring number of zero (0) is preferable to other possible schemes since this ring will be upstream of ring 1 of CSI.

The scintillators can be numbered from 1 to 6. 1 to 3 on the upstream end, numbered clockwise and 4 to 6 on the downstream end numbered clockwise.