

STEREO/IMPACT LET Detector Naming

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Version 1.1

1. Introduction

This document is a LET Detector follow-on to the HET Detector Naming document. This has been modified from the previous version with the additional segmentation of the L1 outer rings into two parts, along with changes based on conversation between members of the STEREO HET and LET teams. There are now 54 separately digitized detector segments.

2. Configuration and Naming

The original proposed naming scheme follows the form:

L [detector type - 1, 2, or 3] [telescope location - A or B] [optional subdetector for L1 -- 0, 2, 3, 4, or 4; or segment name for L2, L3] [optional segment name for L1]

It has been suggested that the location-based naming scheme follow a most-significant-bit to least-significant-bit ordering, in which case, the A/B label will precede all others:

[telescope location - A or B] - [detector type - L1, L2, or L3] [optional subdetector for L1 -- 0, 2, 3, 4, or 4; or segment name for L2, L3] [optional segment name for L1]

The second scheme is likely to yield names like A-L10i, A-L10o, and so on. It is also possible that the L label (to distinguish from HET detectors) should come first: e.g. LA10i, LA10o, etc.

However, since detector fabrication discussions already use L1, L2, and L3, and since long discussion has already assumed a form following the original naming scheme, this document will preserve the original naming scheme and modify it for the new L1 detector configuration. This ordering follows detector type with a most-to-least-significant bit ordering based on rough left-to-right location in each half.

2.1 L1

L1 detectors have an inner and an outer region, with the outer rings now segmented into two parts. Since an i/o designation is no longer sufficient, an a/b/c designation is simplest. The following figure shows two options.

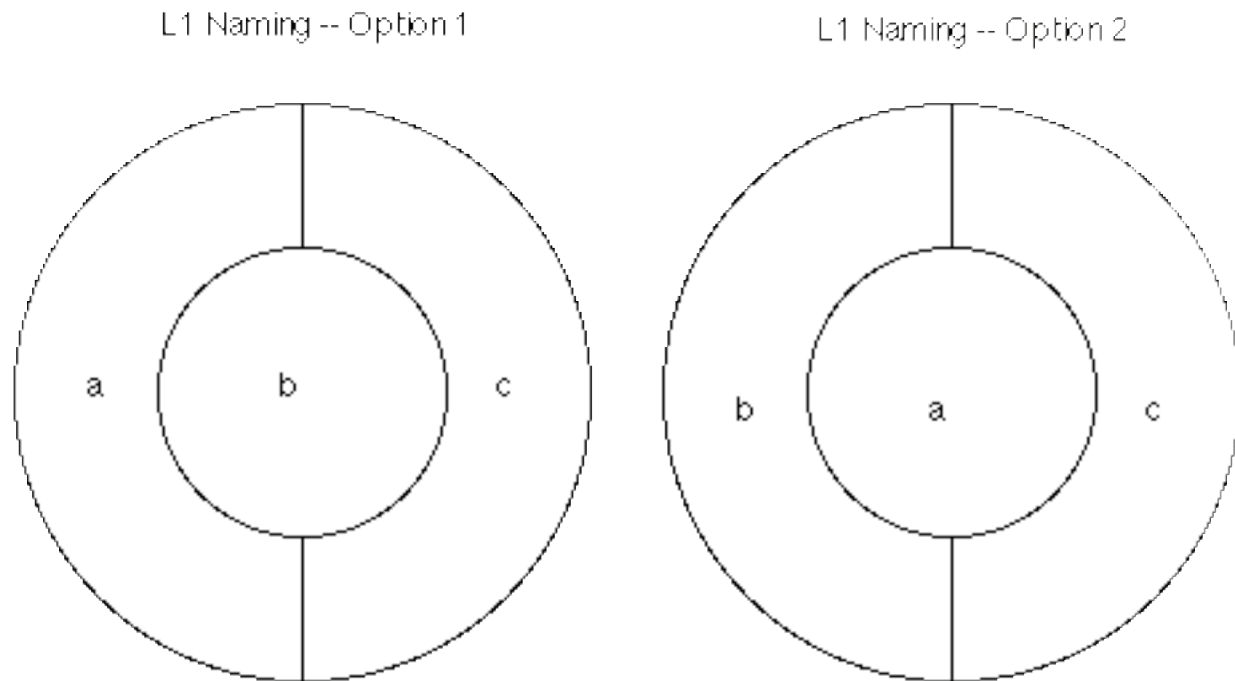


Figure 1: L1 segment naming options.

In the first option, the naming is left to right, while in the second, naming is with a in the center region. We will adopt the first option.

2.2 L2

L2 detectors are segmented into 10 identical segments, each of which are read separately. These segments are labeled from 0 to 9: L2A0, L2A1, L2A2, ... L2A9 and L2B0, L2B1, L2B2, ... L2B9.

2.3 L3

L3 detectors are segmented into 3 identical segments, but the outer two segments of each are joined, so these are designated i (inner) and o (outer): L3Ai, L3Ao, L3Bi, and L3Bo.

Figure 2, reproduced in part from the Phase A report, shows the LET telescope with the detectors named accordingly. As has been discussed previously, detector naming goes in a clockwise direction, allowing rotational symmetry between the two LET halves.

LET Detector Naming

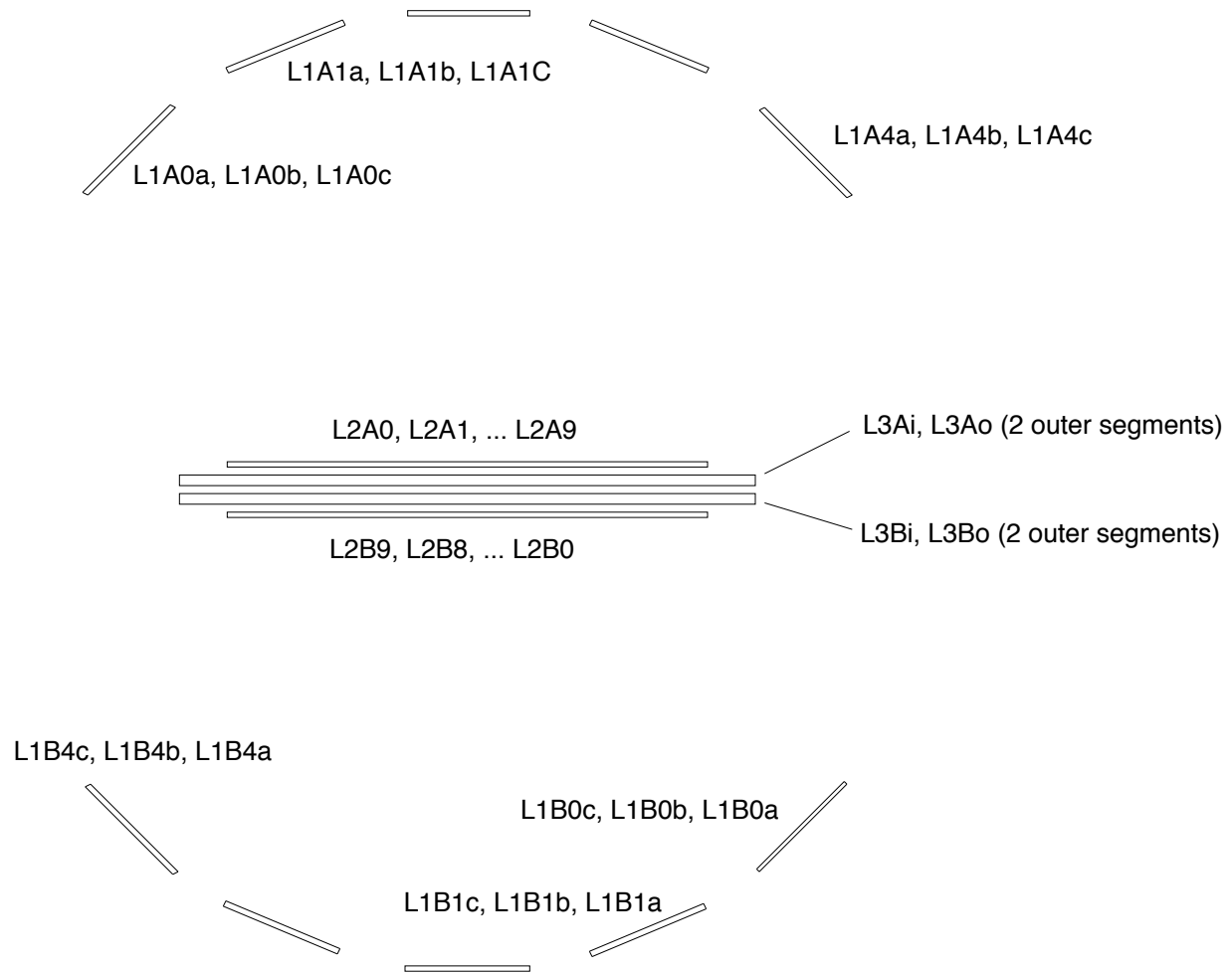


Figure 2: LET Telescope, with detectors named according to the proposed naming scheme. Note the clockwise naming order.