**Notes on HEPI Assembly Validation Procedure**

Reference: [E1300824](file:///C:\Users\nroberts\Documents\aLIGO%20HEPI%20Assembly%20Validation%20Procedure), and comments to this document by HughR, filed under “Other Files”.

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**Introduction**

As Fabrice has advised us, the Assembly Validation Procedure was a draft put together by the MIT team based on what they considered at the time of writing (Oct/Nov 2013) to be the useful steps to carry out. Since that time the SEI team has gained experience from carrying out testing on site. In particular Hugh Radkins has provided comments to the tests including recommendations for bypassing several of them. The SEI fabrication acceptance team in conjunction with the SEI team has reviewed these. We note here which tests we have concluded are redundant and for which the absence of results is acceptable.

The numbering follows E1300824.

**Tests which are Redundant**

1) Step 3 Boot Location

Reasoning: After installation the platforms are moved in response to initial alignment. So initial readings are redundant, and also they do not really check any clearances.

2) Step 4 Check Stops Gaps

Reasoning: Locks are opened and closed many times during commissioning so only the last time has any validity.

3) Step 5 Gaps Check

Reasoning: All subsequent actuation tests confirm these close points are not touching. They are checked visually and by hand.

4) Step 6 IPS centering

Reasoning: IPS values are taken in Step 14 Alignment offsets. The latter are more important.

5) Step 8 SUS-watchdogs interaction test

Reasoning: This test is obsolete as the requisite WD connection is planned to be (may already have been) removed.

6) Step 9 Static Test Local Drive – goal to look at cross coupling but not very useful due to variable.

Reasoning: Not relevant test as difficult to interpret.

7) Step 11 Actuator Plates to Shield Gap

Reasoning: The Range of Motion and Linearity tests will confirm these gaps are obstruction free.