

Advanced LIGO Engineering Change Request (ECR)

ECR Title: Change Locating Dimensions of Oplev/Pcal Receiver Installations in all End VEAs

DCC No: E1300249-v2

Date: 25 APR 2013

**Requester: Craig Conley Impacted Subsystem(s):
AOS (Pcal & Oplev)**

Description of Proposed Change(s): Relocate the Oplev/Pcal Receiver Pylon to a position which is revised in the Beam Tube axial direction, and is according to document [G1300437-v1](#). This constitutes a shift 2.60" farther from the A-1 Adapter viewport flange face than the current position designated by approved documents ECR [E1200989-v1](#) & DCN [E1200996-x0](#). Upon approval of this Change Request, all relevant documents will be revised accordingly through a new DCN.

NOTE: Both LLO End Station VEA floors will need to be re-filled & re-drilled for this change. LHO End Station VEA floors have not been drilled to date.

Reason for Change(s): Due to inconsistencies between CAD models, available vendor (PSI) drawings, and actual installed V.E. hardware (all regarding A-1 Adapters), it was found necessary to measure the locations of vacuum/compression bellows and compression fittings on all End-Station installed A-1 Adapters on the side adjacent to planned Oplev/Pcal receiver pylon installations. These A-1 Adapter features will interfere with the receiver pylons at the currently documented receiver pylon positions. The measured locations of these A-1 Adapter features have been used to propose a viable new common location for all Oplev/Pcal receiver pylons. See [G1300437-v1](#).

Also, this change provides added distance requested by the Oplev group to better accommodate the Oplev Receiver rubber bellows interfacing to the A-1 Adapter viewport protector.

Estimated Cost: \$450 estimated work crew (2 person) total job cost to refill and re-drill three slab holes in each of two LLO VEAs.

Schedule Impact Estimate: None

Nature of Change (check all that apply):

- Safety
- Correct Hardware
- Correct Documentation

- Improve Hardware
- Improve/clarify Documentation
- Change Interface
- Change Requirement

Importance:

- Desirable for ease of use, maintenance, safety
- Desirable for improved performance, reliability
- Essential for performance, reliability
- Essential for fit
- Essential for function
- Essential for safety

Urgency:

- no urgency
- desirable by date/event:
- Essential by date/event: 01 JUNE 2013
- Immediately (ASAP)

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Impacted Hardware (select all that apply):

- Repair/modify. List part & SNs: _____
- Scrap & Replace. List part & SNs: _____
- Installed units? List IFO, part & SNs: _____
- Future units to be built

Impacted Documentation (list all dwgs, design reports, test reports, specifications, etc.): Approved drawings [G1000701](#), [G1000702](#), [G1000719](#), [G1000739](#) & approved RODA [M1200020](#) will be revised upon approval of this Change Request.

Disposition (to be completed by Systems Engineering):

- TRB
- CCB
- Approved
- Additional information required. Define:

[Requester re-submits with new information with the same DCC E-number for the ECR but the next version number.]

Concurrence by Project Management: (Acknowledged Electronically in DCC)

Project Systems Engineer: Dennis Coyne

Project Systems Scientist: Peter Fritschel