

# Advanced LIGO Engineering Change Request (ECR)

**ECR Title: Modification of Oplev/Pcal Receiver Pylon Weldments**

**DCC No: E1300594-v1**

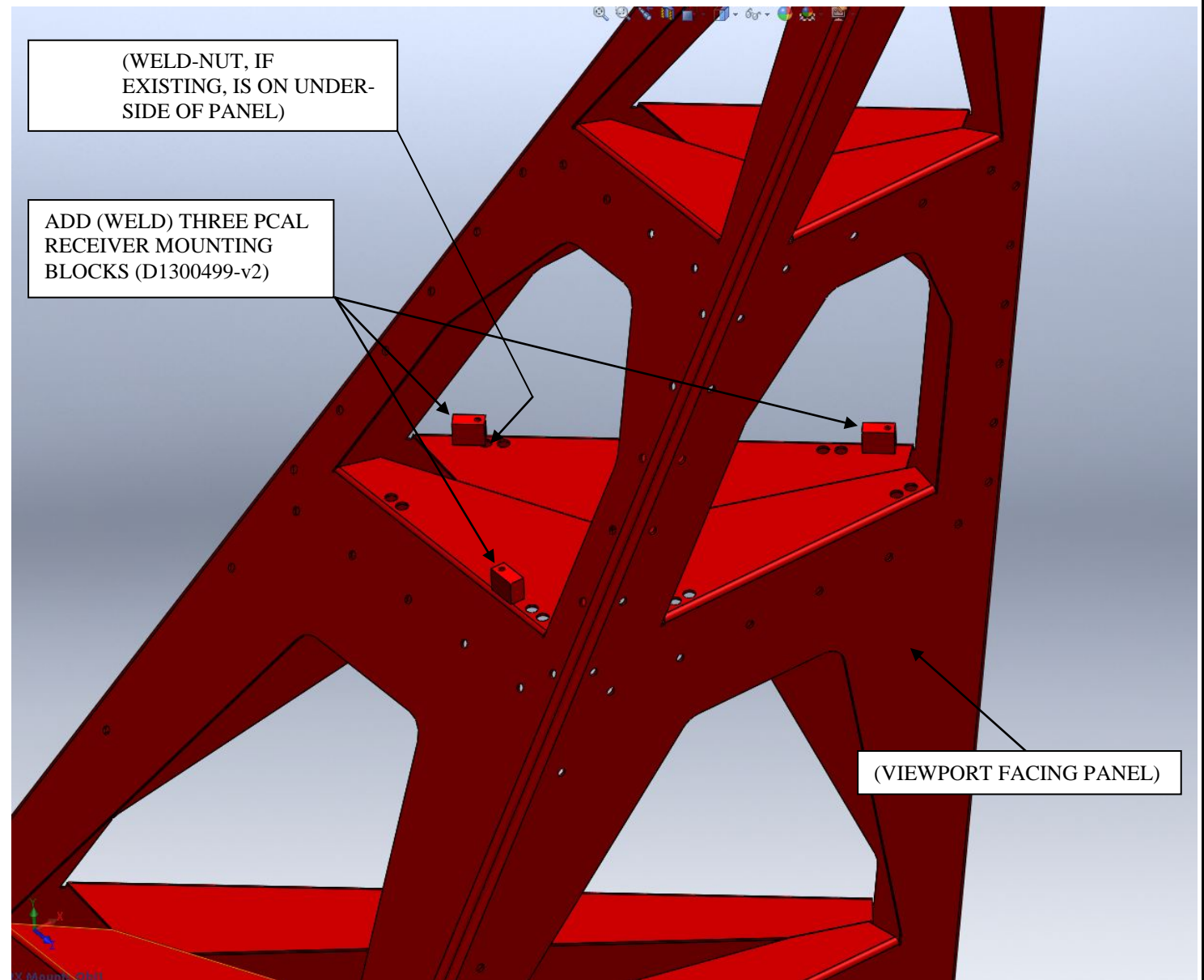
**Date: 11 JUL 2013**

**Requester: Craig Conley**

**Impacted Subsystem(s):**

**AOS (Pcal)**

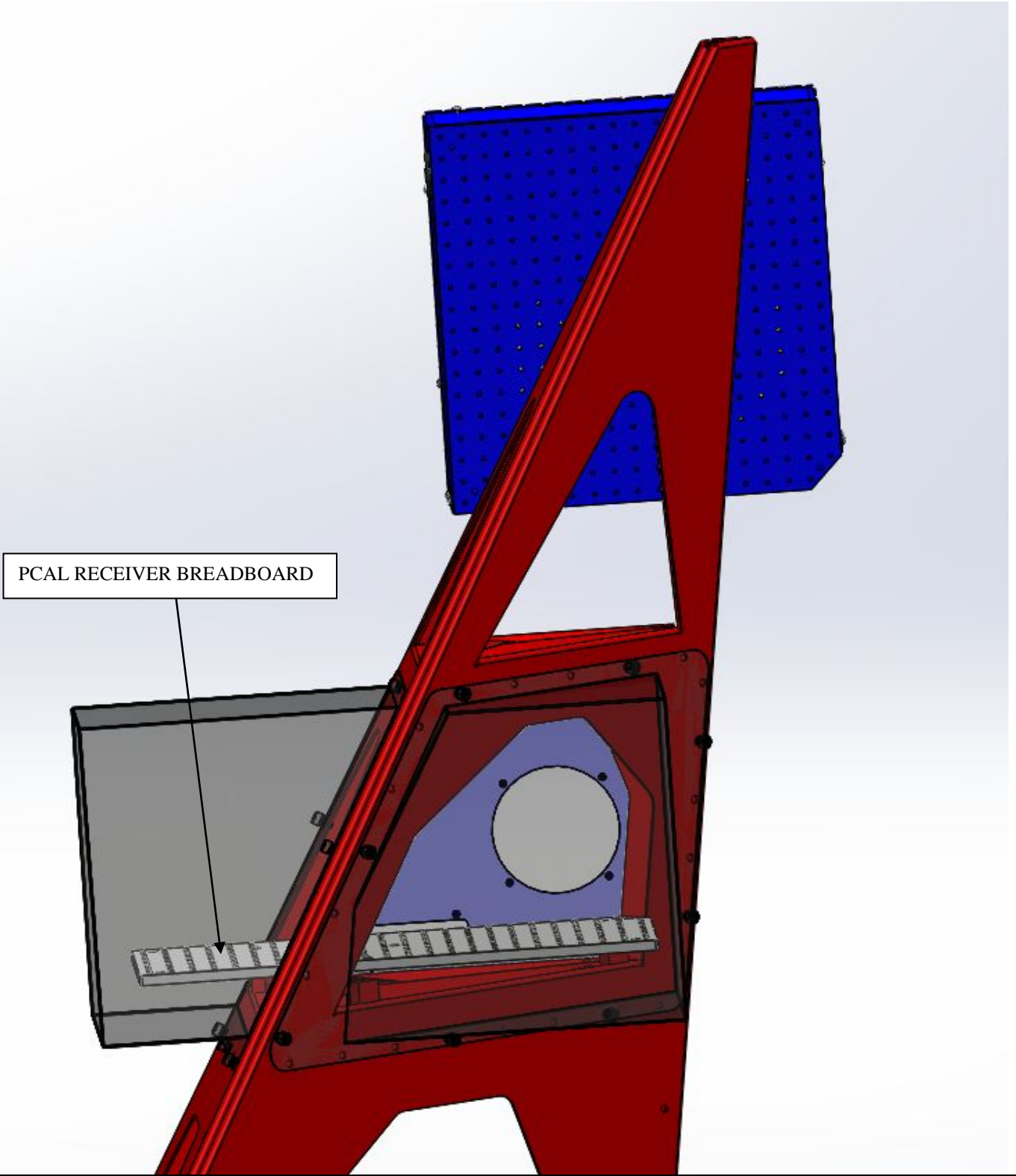
**Description of Proposed Change(s):** Addition of welded Pcal Receiver Mounting Blocks to Oplev/Pcal Receiver Pylon Weldments as follows.



ABOVE: D1300499-v2 Pcal Receiver Mounting Blocks shown in place (to be welded) on an X-Arm pylon weldment D1001297. On Y-Arm pylon weldments D1001292, the arrangement is similar by symmetry.

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BELOW: The facilitated Pcal receiver module installation on a Y-Arm pylon weldment is shown. (Only the breadboard of the module is shown here. The module mounting is via the breadboard.)



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**Reason for Change(s):** Due to absence on the Oplev/Pcal receiver pylons of any attachment means for the Pcal receiver module, the mounting blocks D1300499-v2 were designed to be welded at three specific locations (as shown above) to facilitate a three point push-pull type mounting arrangement, adjustable for leveling and elevation, for the receiver modules.

**Estimated Cost:** For 6 End station pylons, total cost \$1,950. Includes work crew \$1000, mounts (20 pieces) \$500, fixture \$450.

**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 function
- Essential for safety

**Urgency:**

- No urgency
- Desirable by date/event: Start mod work week of July 22
- Essential by date/event: \_\_\_\_\_
- Immediately (ASAP)

**Impacted Hardware (select all that apply):**

- Repair/Modify. List part & SNs: D1001292 (3) D1001297 (3). SNs not known.
- 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.):**

New Documents (completed)- D1300499, D1300522, D1300523, D1300524, D1300525

New Documents (to be completed)- E1300593

Documents to be revised- D1001292, D1001297, D1001325, D1001330

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## Disposition of the proposed change(s):

The disposition of this proposed engineering change request is to be completed by Systems Engineering and indicated in the “Notes and Changes” metadata field in the DCC entry for this ECR. The typical dispositions are as follows:

- **Additional Information Required**: in which case the additional information requested is defined. The ECR requester then re-submits the ECR with the new information using the same DCC number for the ECR but with the next version number.
- **Rejected**: in which case the reason(s) for the rejection are to be given
- **Approved**
- **Approved with Caveat(s)**: in which case the caveat(s) are listed
- **TRB**: the ECR is referred to an ad-hoc Technical Review Board for further evaluation and recommendation. It is the System Engineer’s (or designee’s) responsibility to organize the TRB. The System Engineer (or designee) then makes a technical decision based on the TRB’s recommendation. Links to the TRB’s documentation (charge, memos, final report, etc.) are to be added to the “Related Documents” field for this ECR.
- **CCB**: a change request for approval of additional funds or schedule impact is to be submitted to the Configuration Control Board. Links to the CCB’s documentation (CR, etc.) are to be added to the “Related Documents” field for this ECR.

## Concurrence by Project Management:

Acknowledgement/acceptance/approval of the disposition is to be indicated by the electronic “signature” feature in the DCC entry for this ECR, by one the following personnel:

- Systems Scientist
- Systems Engineer
- Deputy Systems Engineer