

Advanced LIGO Engineering Change Request (ECR)

ECR Title: ECR:

DCC No: E1400320-v1

CM Board Modifications (green finesse)

Date: 7/8/2014

Requester:

Impacted Subsystem(s):

Daniel Sigg

ISC

Description of Proposed Change(s):

Solution 1 - Change the second boost filter in the ALS PDH boards. See LHO alogs [9357](#) and [11503](#).

- C119: from 100n to 1u
- R78: from 82 to 165

Solution 2 – Change the common compensation filter to increase the zero from 200Hz to 4kHz. Modify first boost to give more gain at DC, pole lowered from 100Hz to 10Hz. See LLO alog [13484](#).

- R68: from 3.6k to 1.2k (Comm Comp)
- R69: from 18k to 120k (Comm Comp)
- R70: from 4.53k to 1.2k (Comm Comp)
- C121: from 220n to 33n (Comm Comp)
- R72: from 1.5k to 15k (Boost 1)

Reason for Change(s):

The issue of the green ETM coatings requires a filter change in the ALS PDH board in the end station to account for the reduced finesse.

Estimated Cost: small (parts and labor)

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: Feb 2013

Essential by date/event: _____

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.):

D040180-F

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