



LIGO HANFORD OBSERVATORY
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MEMORANDUM

DATE: October 19, 2012

TO: Advanced LIGO
FROM: Daniel Sigg
SUBJECT: Electronics and Optics Change Request from the One Arm Test
Refer to: LIGO-[E1200908-v1](#)

The One Arm Test (OAT) concluded with a set of recommendations. They included eliminating the green wavefront sensors and making improvements to the automation. The later include polarization adjustment for the fiber reference beam, adding a frequency counter to measure the laser beat node and adding DC photodetector to measure the fiber output. Additionally, during the test changes were made to the transfer functions of the common mode servo boards, which need to be propagated to the other ALS servo boards. This is covered by the following ECRs:

| ECR | Description | Estimate |
|-----------------------------|--|----------|
| E1200934-v1 | CM Board Modifications (ALS) | 5,000 |
| E1200935-v1 | Eliminating the ALS Wavefront Sensors | 0 |
| E1200936-v1 | Frequency Counter for PLL error signal | 12,000 |
| E1200937-v1 | Fiber Polarization Correction | 39,300 |
| E1200938-v1 | DC Photodiodes for laser power measurement | 19,500 |
| | Total | 75,800 |

We ask for \$76k from the Advanced LIGO project.