

LASER INTERFEROMETER GRAVITATIONAL WAVE OBSERVATORY

COC QA TEST REPORT

E1300313 -v1-

Document No Rev.

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ETM08 Transmission

Test Date	April 25-26, 2013		
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Approval(s)			
Specification Doc.	LIGO-E0900068	Specification	5 ± 1 ppm
Procedure Doc.	LIGO-E1000863	Mean ± Error*	$3.6 \pm 0.2 \text{ ppm}$
Conclusion	Qualified.		

^{*}Error is the calibration error.

Discussions and Comments:

The scan was done over a 160 mm diameter aperture with the beam and step sizes of 1 mm and an orientation that the arrow at barrel is at Y+ direction as shown in Fig.1. The calibration is done by normalizing the transmitted signal to the signal without mirror and the variation of power during the scan is monitored and corrected. Two defects with peaks of about 220 and 55 ppm were found at (36, 2) and (16, 43) respectively.

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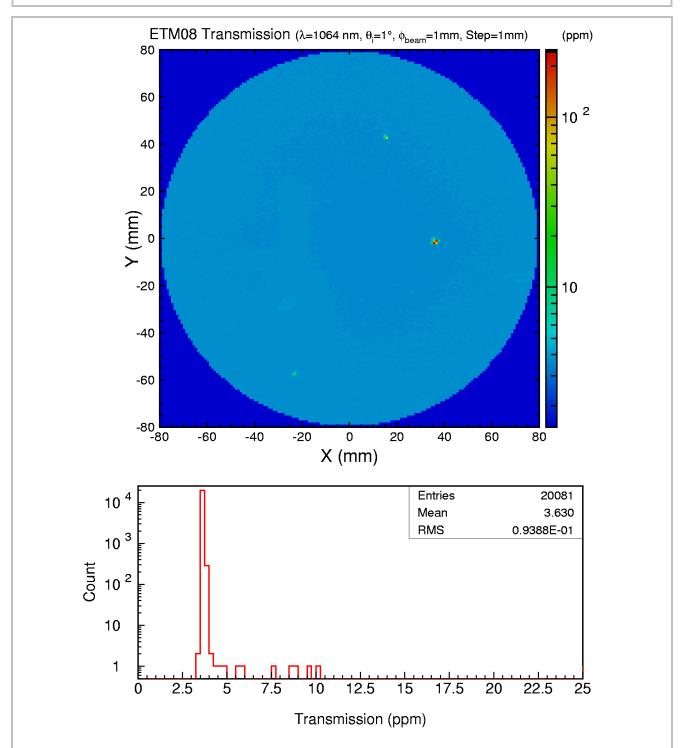


Fig. 1 ETM08 transmission over a 160 mm diameter aperture.