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| **Test Date** | Jan. 10-13, 2014 |
| **Author(S)** | Liyuan Zhang, Margot Phelps, GariLynn Billingsley |
| **Approval(s)** |  |
| **Specification Doc.** | LIGO-E0900041 | Specification | < 50 ppm |
| **Procedure Doc.** | LIGO-E1000863 | Mean ± Error\* | 294 ± 5 ppm |
| **Conclusion** | Accepted |

\* Error is the calibration error, which is ~2%.

**Discussions and Comments:**

 **The scan was done over a 160 mm diameter aperture with the beam and step sizes of 1 mm and positioning arrow on barrel at Y+ direction. The calibration is done by normalizing the AR reflection signal to the signal from a 1” HR mirror (T=70 ppm) and the variation of laser power during scan is monitored and corrected, the result is summarized in Fig.1.**

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**Fig. 1 ITM11 S2 AR reflection over a 160 mm diameter aperture.**