



## ITM04 HR AR Absorption

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Approval(s)			
Specification Doc.	LIGO-E0900041	Specification	HR<0.5 ppm, AR<1.0 ppm
Procedure Doc.	LIGO-E1000863		
S1 HR (Mean $\pm$ RMS)	0.4 $\pm$ 0.1 ppm		
S2 AR (Mean $\pm$ RMS)	0.5 $\pm$ 0.1 ppm		
Conclusion	Qualified.		

**Discussions and Comments:**

**For each surface, S1 (HR) and S2 (AR), 4 linear scans of 20 mm are carried out along X+- and Y+- outside central 120 mm in diameter. The arrow on barrel is positioned at Y+ direction. The calibration is done by a contamination cavity HR mirror (1" in dia., No. 8128), of which the HR absorption was measured to be 0.6 ppm in the optical contamination test. The results are summarized in Fig.1 and 2 for HR (S1) and AR (S2) respectively.**



ITM04 HR AR Absorption

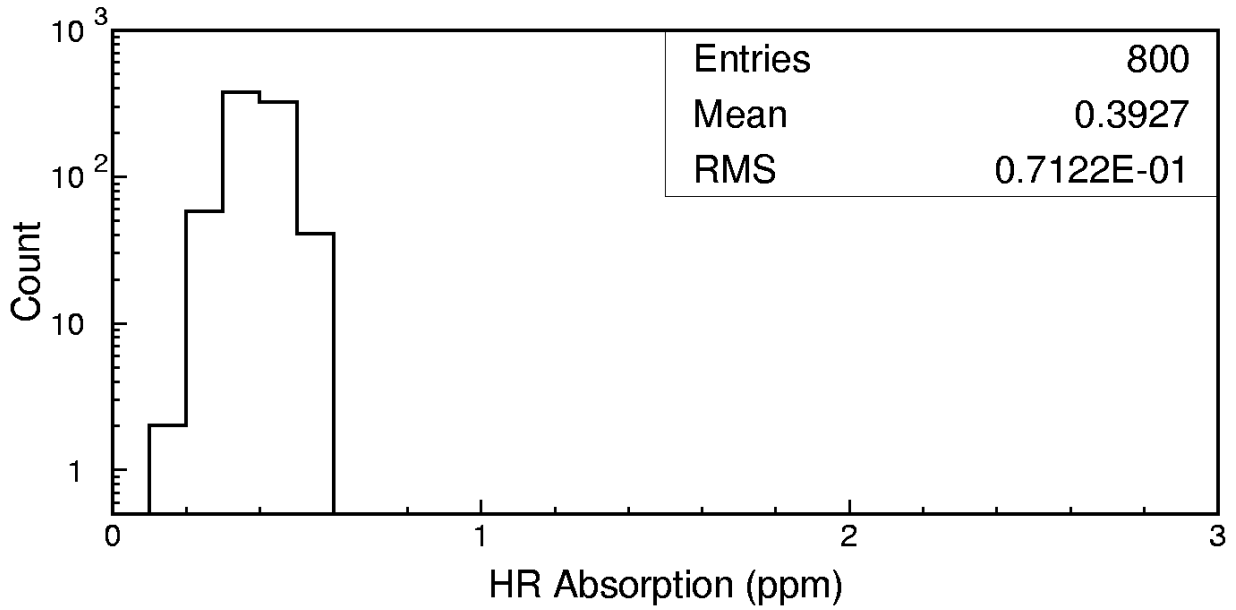
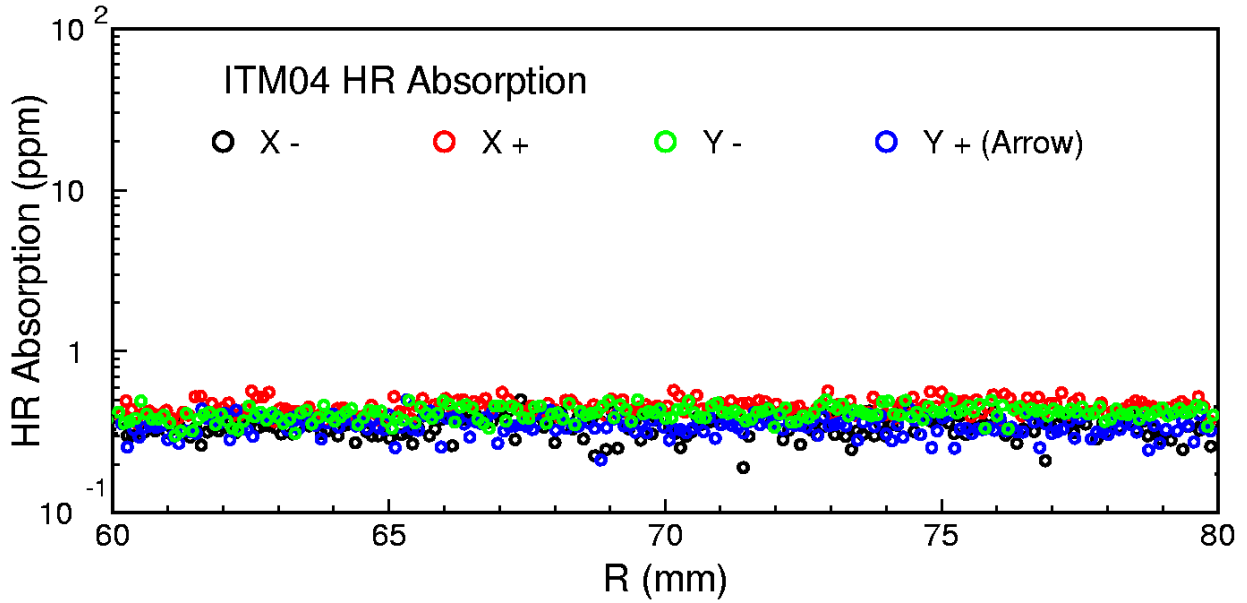


Fig. 1 ITM04 HR absorption measurements along X+- and Y+- outside central 120 mm in diameter.



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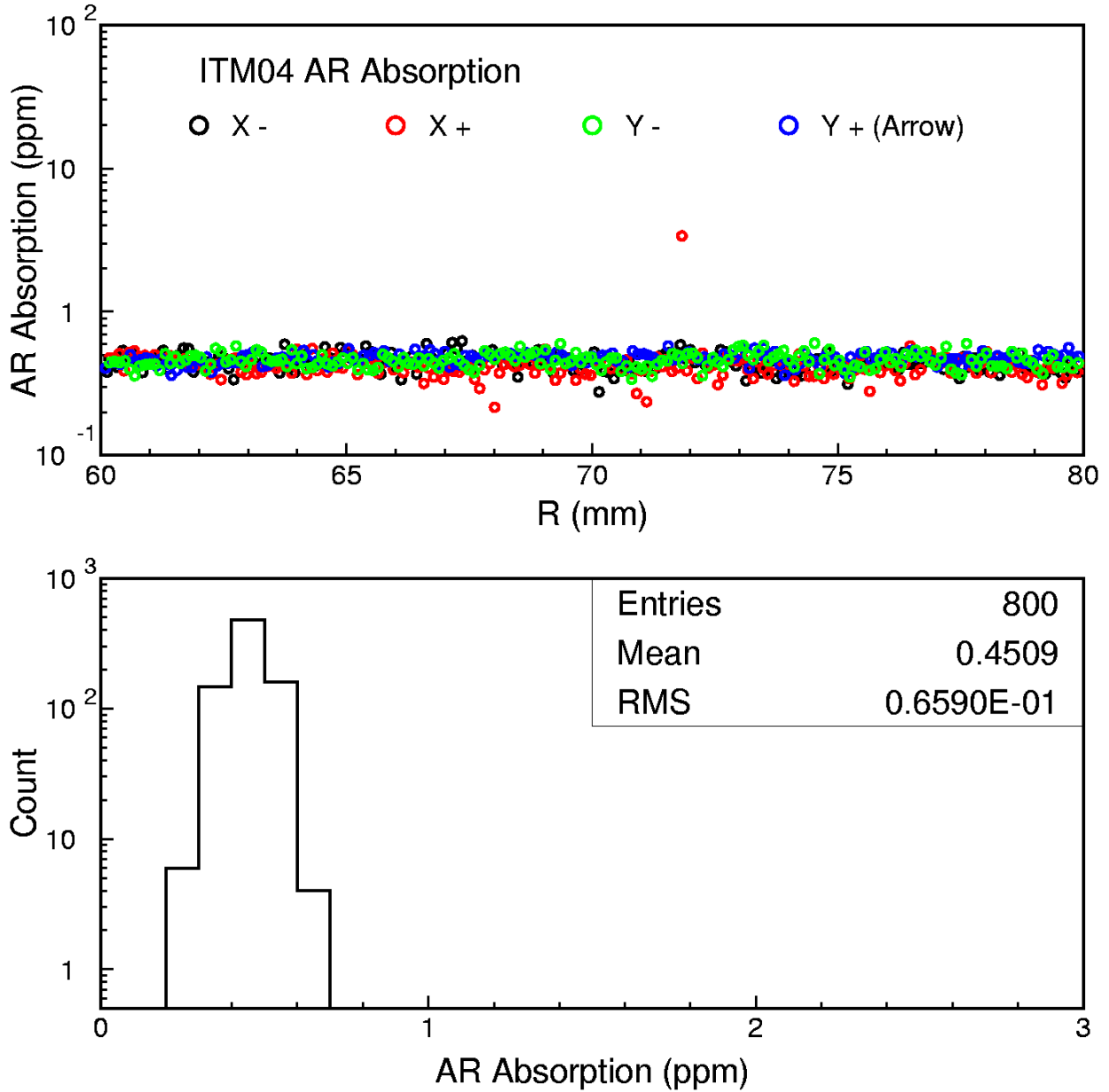


Fig. 2 ITM04 AR absorption measurements along X+- and Y+- outside central 120 mm in diameter.