

PCAL Calibration Factors for LHOX

PCAL Team

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Description	Variable(Units)	D20150827	D20151013
Mass of ETM	$M(Kg)$	$39.6470 \pm 0.01\%$	$39.6470 \pm 0.01\%$
Cosine of Incident Angle	$Cos\theta$	$0.9884 \pm 0.07\%$	$0.9884 \pm 0.07\%$
WS/GS(T15000035)	(V/V)	$0.9262 \pm 0.03\%$	$0.9262 \pm 0.03\%$
GS/NIST(T15000035)	(V/W)	$-1.6935 \pm 0.44\%$	$-1.6935 \pm 0.44\%$
WS/TX (inner beam)	(V/V)	$-0.1588 \pm 2.8 \times 10^{-03} \%$	$-0.1588 \pm 3.2 \times 10^{-03} \%$
WS/TX (outer beam)	(V/V)	$-0.1583 \pm 2.8 \times 10^{-03} \%$	$-0.1586 \pm 3.0 \times 10^{-03} \%$
WS/TX (inner beam)	(V/V)	$-0.1561 \pm 3.2 \times 10^{-03} \%$	$-0.1545 \pm 3.4 \times 10^{-03} \%$
WS/TX (outer beam)	(V/V)	$-0.1532 \pm 3.1 \times 10^{-03} \%$	$-0.1407 \pm 6.8 \times 10^{-03} \%$
RX/TX (inner beam)	(V/V)	$0.6270 \pm 5.1 \times 10^{-04} \%$	$0.6207 \pm 1.1 \times 10^{-03} \%$
RX/TX (outer beam)	(V/V)	$0.6128 \pm 2.4 \times 10^{-03} \%$	$0.5633 \pm 5.9 \times 10^{-03} \%$
Optical efficiency (inner)	e_i	$0.9828 \pm 0.50\%$	$0.9724 \pm 0.81\%$
Optical efficiency (outer)	e_o	$0.9679 \pm 0.94\%$	$0.8871 \pm 3.45\%$
Optical efficiency	e	$0.9753 \pm 0.72\%$	$0.9298 \pm 2.10\%$
TX/WS (combined)	(V/V)	$-3.1533 \pm 2.0 \times 10^{-04} \%$	$-3.1503 \pm 2.2 \times 10^{-04} \%$
RX/WS (combined)	(V/V)	$-4.0082 \pm 5.1 \times 10^{-03} \%$	$-4.0114 \pm 9.7 \times 10^{-03} \%$
Calibration factor (TxPD)	(V/W)	$5.0079 \pm 0.84669\%$	$5.1212 \pm 2.14943\%$
Calibration factor (RxPD)	(V/W)	$6.2085 \pm 0.84670\%$	$6.0631 \pm 2.14945\%$
Displacement factor (TxPD)/ f^2	(m/V)	$8.412 \times 10^{-13} \pm 0.85091\%$	$8.226 \times 10^{-13} \pm 2.15110\%$
Displacement factor (RxPD)/ f^2	(m/V)	$6.785 \times 10^{-13} \pm 0.85092\%$	$6.948 \times 10^{-13} \pm 2.15112\%$
Force Coefficient (TxPD)	(N/V)	$1.317 \times 10^{-09} \pm 0.85082\%$	$1.288 \times 10^{-09} \pm 2.15106\%$
Force Coefficient (RxPD)	(N/V)	$1.062 \times 10^{-09} \pm 0.85083\%$	$1.088 \times 10^{-09} \pm 2.15108\%$