



DBB	
Diagnostic breadboard:	DBID 0208, lock mode (4)
Selected laser beam:	35W laser (DBB shutter open)
Power in DBB (RPD.DC):	9.9 V
PMC resonant:	100%
Beam alignment:	auto-alignment on
Modematching lens positions:	lens 1 (ML ₁) = -0.6 mm, lens 2 (ML ₂) = -1.8 mm, lenses latched

FREQUENCY NOISE	
Measurement:	300 s = 5.0 min, 12. Jul 2011 16:50 CDT
Error signal:	1745.42 Hz _{rms} , -8202.25 ... 7757.79 Hz
Error signal slope :	20.20 Hz/cts
Error signal calibration age:	3.2 min
HV monitor:	1596.860 ± 30.730 MHz, 1542.295 ... 1651.183 MHz
	2.233 ± 0.043 FSR, 2.157 ... 2.309 FSR

D A Q

Measurement duration:	300 s = 5.0 min
Measurement start:	12. Jul 2011 16:50 CDT (12. Jul 2011 21:50 UTC, 994542636 GPS)
NDS:	10.110.140.106:8088 (v12r0)
User:	controls@l1pslctrl4.local
Channels:	L1:PSL-DBB_MON_PZT_OUT 65536 Hz, L1:PSL-DBB_MON_HV_FSR_OUT 65536 Hz, L1:PSL-DBB_QPD_DS_CAL_OUT 65536 Hz, L1:PSL-DBB_SHUTTER 16 Hz, L1:PSL-DBB_DBID 16 Hz, L1:PSL-DBB_MON_SHUTTER_CLOSED 16 Hz, L1:PSL-DBB_MODE_NUM 16 Hz, L1:PSL-DBB_RPD_DC_OUTPUT 16 Hz, L1:PSL-DBB_CTRL_DSWITCH_ON 16 Hz, L1:PSL-DBB_LENS1 16 Hz, L1:PSL-DBB_LENS2 16 Hz, L1:PSL-DBB_LENS_LATCH 16 Hz, L1:PSL-DBB_QPD_CALI_AGE 16 Hz, L1:PSL-DBB_QPD_CALI_FACTOR 16 Hz, L1:PSL-DBB_CTRL_RESONANT 16 Hz
Raw data:	rawdata.zip (attached to this .pdf file, use Adobe Reader)
Calibration:	default.cali (embedded), 01. Jan 1970 00:00 UTC
Report source files:	report.zip (attached to this .pdf file, use Adobe Reader)
Program:	dbb_freq.py v0.3-12-g5bf8f1d, Patrick Kwee, patrick.kwee@aei.mpg.de

I N F O

<p>Measurement method: The frequency noise of the beam was measured by stabilizing one fundamental mode frequency of the DBB PMC to the laser frequency. The DBB PMC length was the frequency reference in this measurement. The noise of the error signal and a monitor signal of the high voltage going to the PZT of the PMC was measured. Detailed information about the measurement method and instructions for performing this measurement are available in Kwee et al., Appl. Opt., 47(32):6022–6032, 2008; LIGO-T0900133; LIGO-T0900579.</p> <p>characterization measurement for OBS1 report</p>
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