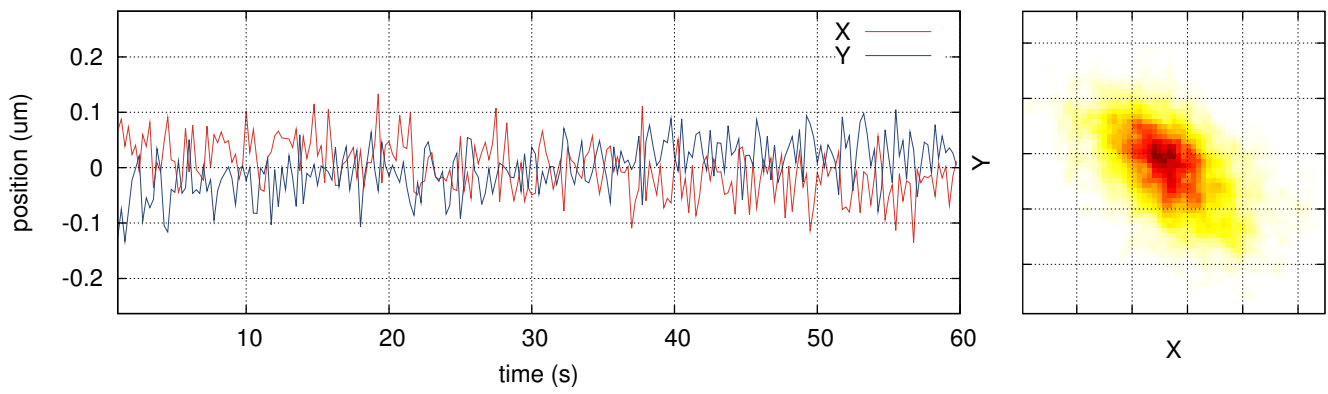
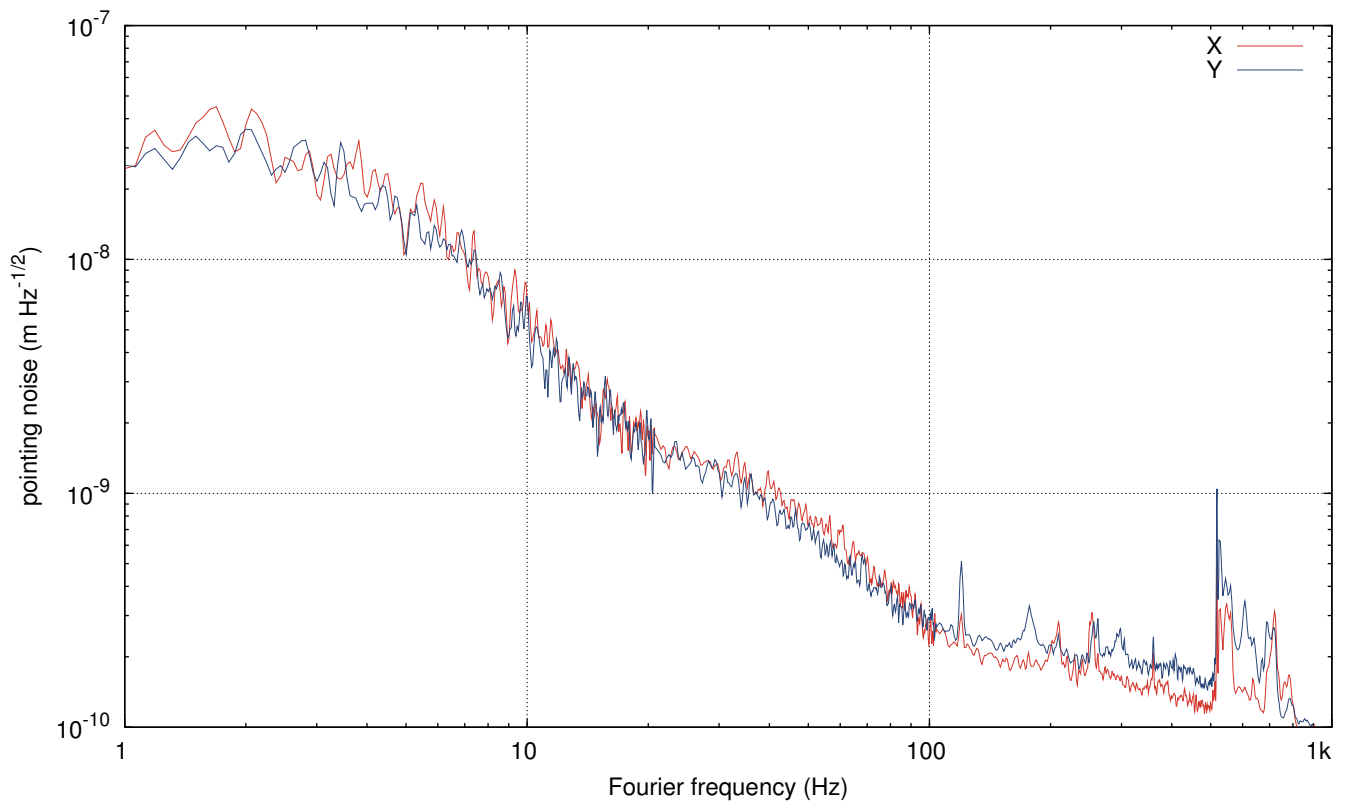


## POWER STABILIZATION

Measurement:	60 s = 1.0 min, 30. Oct 2012 13:11 PDT
Stabilization:	first loop closed, integrator on; second loop injection off
Reference signal:	-1.863 V
First-loop gain:	7.0 V
Last saturation event:	0d 0h 9m
Average AOM diffraction:	8.46%
Diffraction signal range:	4.57% . . . 11.47% (6.90% peak-to-peak, 32768 Hz samplingrate)

## POWER NOISE

	Photodiode A (PDA)	Photodiode B (PDB)
Average DC signal:	9.230 V	9.444 V
FILT signal range:	1.829 V . . . 1.863 V (0.003 $V_{\text{rms}}$ )	1.885 V . . . 1.892 V (0.001 $V_{\text{rms}}$ )
FILT samplingrate:	32768 Hz	32768 Hz
Photocurrent:	2.8 mA	2.8 mA
Relative shot noise level:	$1.07\text{e-}08 \text{ Hz}^{-1/2}$	$1.06\text{e-}08 \text{ Hz}^{-1/2}$



POSITION FLUCTUATIONS	
X position:	$24.066 \pm 0.073$ um, 23.802 um . . . 24.348 um
Y position:	$-5.726 \pm 0.067$ um, $-5.977$ um . . . $-5.496$ um
Samplingrate:	32768 Hz, 32768 Hz

D A Q	
Measurement duration:	60 s = 1.0 min
Measurement start:	30. Oct 2012 13:11 PDT (30. Oct 2012 20:11 UTC, 1035663128 GPS)
NDS:	h1nds1:8088 (v12r0)
User:	psl@operator2
Channels:	H1:PSL-ISS_PDA_OUT 32768 Hz, H1:PSL-ISS_PDB_OUT 32768 Hz, H1:PSL-ISS_DIFFRACTION_OUT 32768 Hz, H1:PSL-ISS_QPD_DX_OUT 32768 Hz, H1:PSL-ISS_QPD_DY_OUT 32768 Hz, H1:PSL-ISS_LOOP_STATE_OUTPUT 16 Hz, H1:PSL-ISS_REFSIGNAL_MON_OUTPUT 16 Hz, H1:PSL-ISS_GAIN 16 Hz, H1:PSL-ISS_SECONDDLOOP_CLOSED 16 Hz, H1:PSL-ISS_SAT_MIN 16 Hz, H1:PSL-ISS_SAT_HOUR 16 Hz, H1:PSL-ISS_SAT_DAY 16 Hz
Raw data:	<a href="#">rawdata.zip</a> (attached to this .pdf file, use Adobe Reader)
Calibration:	default.cali (embedded), 01. Jan 1970 00:00 UTC
Report source files:	<a href="#">report.zip</a> (attached to this .pdf file, use Adobe Reader)
Program:	iss_rpn.py v0.6, Patrick Kwee, patrick.kwee@aei.mpg.de

I N F O	
Measurement method: The power noise downstream of the PMC is measured with two low-noise 2 mm InGaAs photodetectors. One of the photodetectors is used as sensor in the ISS first feedback control loop. The signal to the AOM driver is used to estimate the free-running power noise of the laser system.	
<i>no comment</i>	