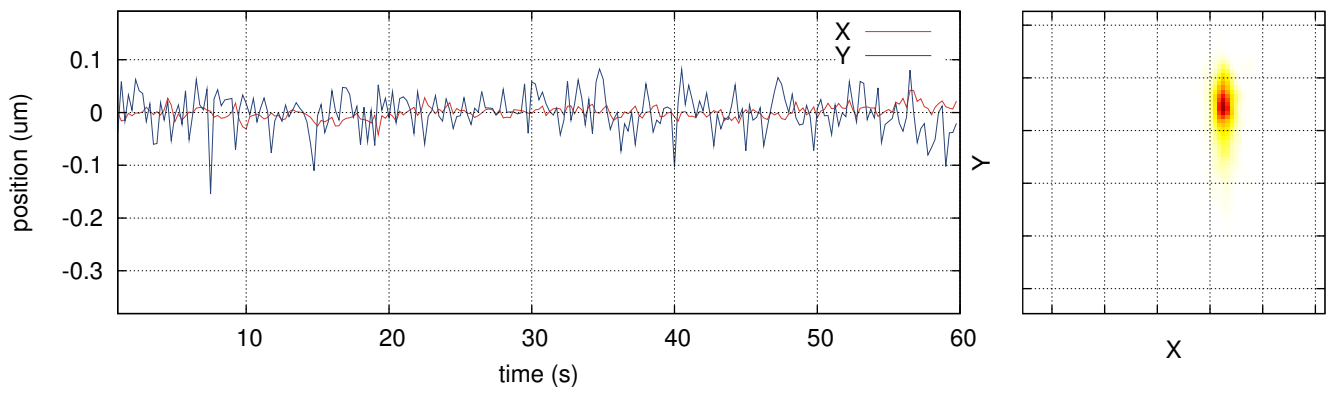
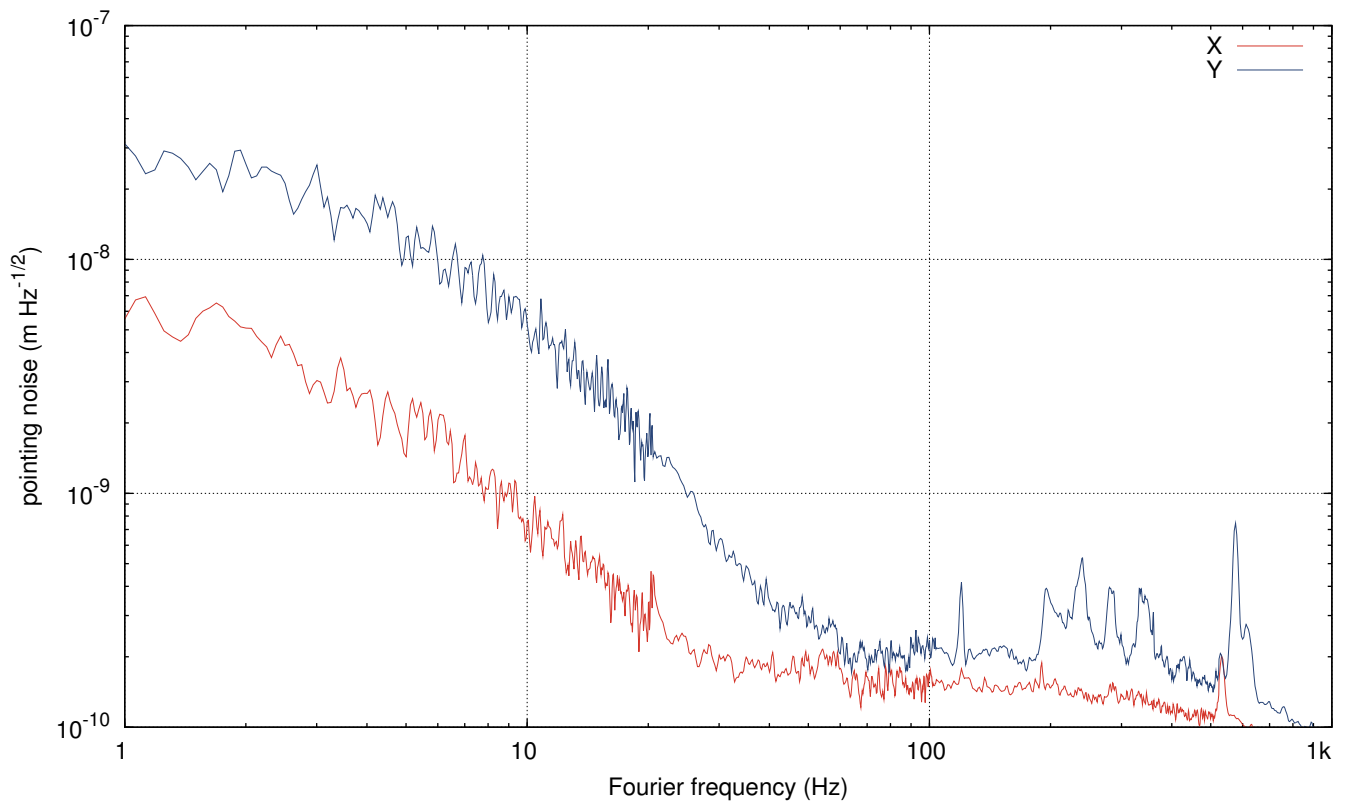


## POWER STABILIZATION

Measurement:	60 s = 1.0 min, 19. Nov 2012 09:15 PST
Stabilization:	first loop closed, integrator on; second loop injection off
Reference signal:	-1.982 V
First-loop gain:	7.0 V
Last saturation event:	1d 1h 16m
Average AOM diffraction:	6.06%
Diffraction signal range:	4.82% . . . 7.50% (2.68% peak-to-peak, 32768 Hz samplingrate)

## POWER NOISE

	Photodiode A (PDA)	Photodiode B (PDB)
Average DC signal:	9.779 V	10.046 V
FILT signal range:	1.938 V . . . 1.975 V (0.002 V <sub>rms</sub> )	2.004 V . . . 2.014 V (0.001 V <sub>rms</sub> )
FILT samplingrate:	32768 Hz	32768 Hz
Photocurrent:	2.9 mA	3.0 mA
Relative shot noise level:	1.04e-08 Hz <sup>-1/2</sup>	1.03e-08 Hz <sup>-1/2</sup>



POSITION FLUCTUATIONS	
X position:	$253.526 \pm 0.014 \mu\text{m}, 253.437 \mu\text{m} \dots 253.596 \mu\text{m}$
Y position:	$-7.466 \pm 0.056 \mu\text{m}, -7.847 \mu\text{m} \dots -7.274 \mu\text{m}$
Samplingrate:	32768 Hz, 32768 Hz

D A Q	
Measurement duration:	60 s = 1.0 min
Measurement start:	19. Nov 2012 09:15 PST (19. Nov 2012 17:15 UTC, 1037380558 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>	