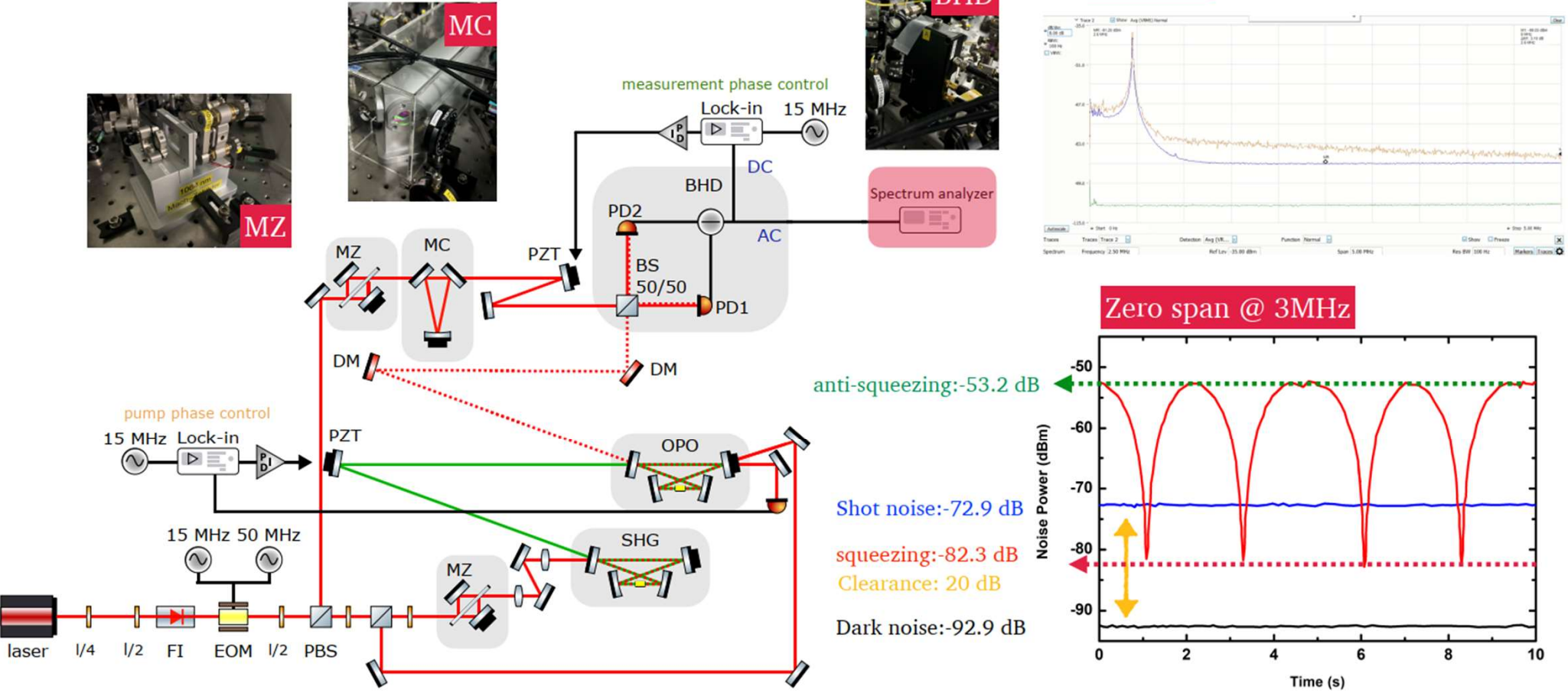
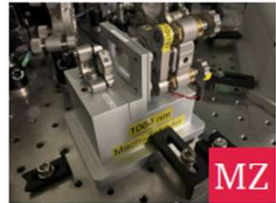
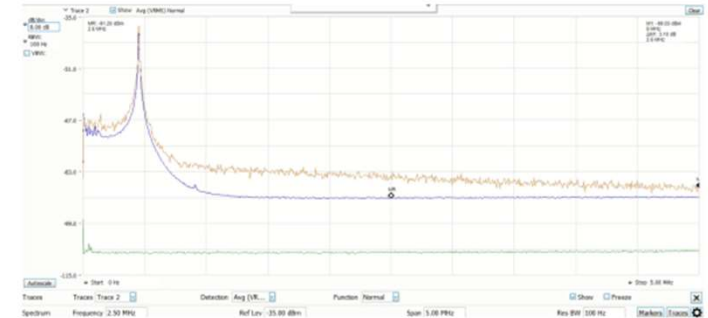


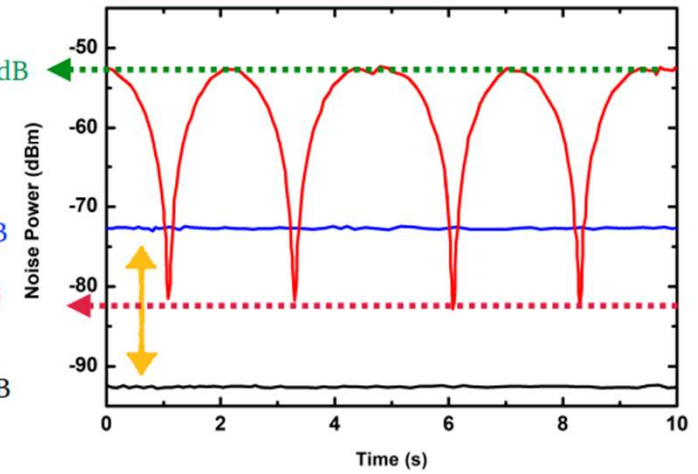
Squeezing level



Full span



Zero span @ 3MHz



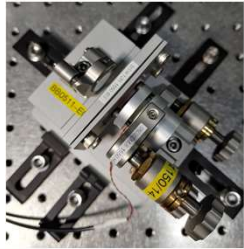
anti-squeezing: -53.2 dB

Shot noise: -72.9 dB

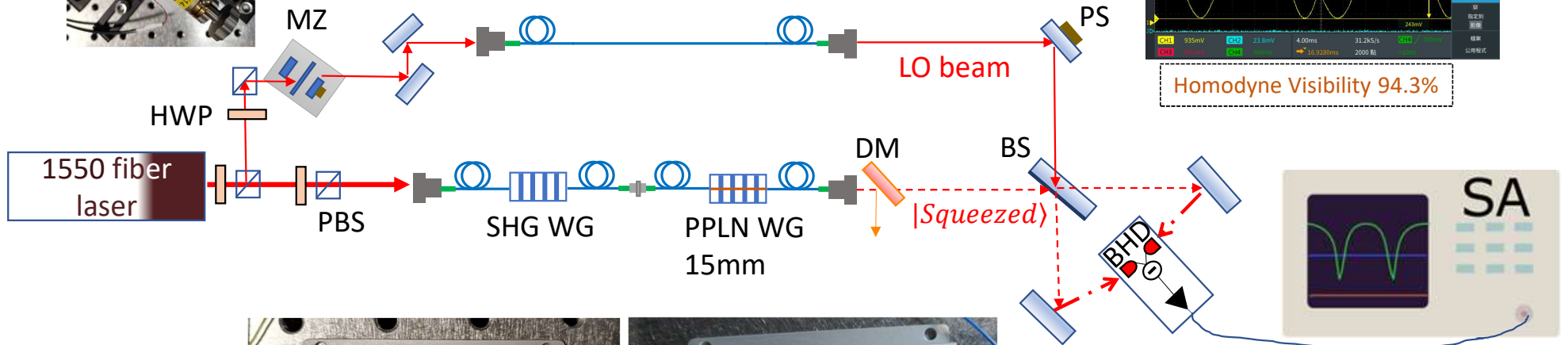
squeezing: -82.3 dB

Clearance: 20 dB

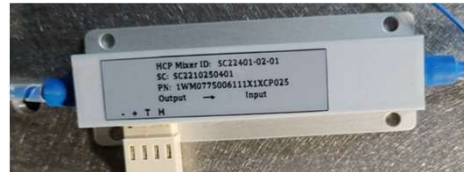
Dark noise: -92.9 dB



Schematic diagram of the 1550 nm PPLN waveguide Squeezer experimental setup

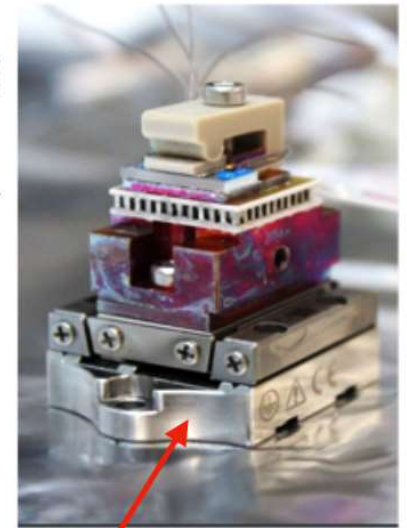
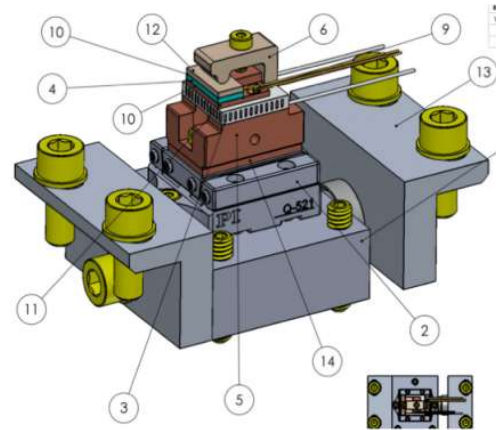
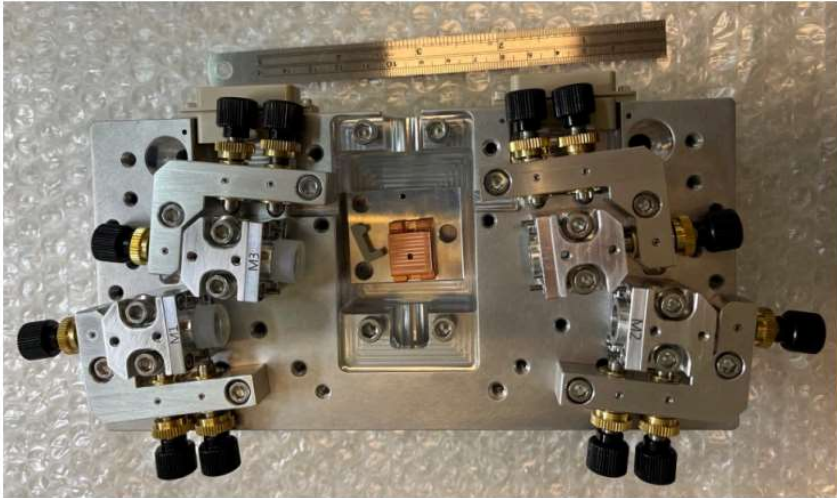


Homodyne Visibility 94.3%



- HWP: Half waveplate
- PBS: polarization beam splitter
- MZ: Mach-Zehnder interferometer
- SHG: second-harmonic generation
- DM: Dichroic Mirror
- WG: waveguide
- PS: phase shifter
- LO: Local Oscillator
- BS: 50/50 beam splitter
- BHD: Balanced homodyne detector





PI

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Q-521

- Only 21 mm in width and 10 mm in height
- Direct position measurement with integrated incremental encoder
- Encoder resolution up to 1 nm
- Minimum incremental motion down to 30 nm
- Multi-axis system setups with adapter plate or bracket (available as an option)



Component	Manufacturer	Product	Material	LIGO Vac approved
Mirrors	Laseroptik	-	-	Yes
PZT	Noliac	NAC2124	NCE51F	Yes
Epoxy	Masterbond	EP30-2	-	Yes
Peltier	Laird Tech	HOT20.31. F2A.0909	alumina ceramic, bismuth telluride	No
Thermistor	EPCOS	10kOhm	-	No
Indium foil	Goodfellow	IN00230	99.999% Indium	Yes
Oven screws	Skiffy	PEEK	PEEK	Yes
Oven connector, cable	Accuglass	110000, 123502	glass-filled dyiathilate	Yes