

# HOM notes

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## 1 Introduction

First done in: [1], but the goal is [2]

## 2 Experimental setup

Has been used, as in [3, 4]:

- PicoQuant PDL 800-B  $\lambda = 370$  nm,  $P_{max} = 2.5$  mW,  $f_0 = 40$  MHz, its sync signal has been dumped by 6 dB
- PicoQuant HydraHarp 400 4-channel picosecond event timer, library version: 3.0 [5], CFD level = 610 mV, CFD zero cross = 10 mV with maximal time resolution of 1 ps
- Agilent 53132A Universal Counter 225 MHz  $\times 2$  at 2.7 V threshold and inner resistance  $50 \Omega$
- FELH700 Thorlabs  $\times 2$  - longpass filter at 700 nm
- LB-1494-AB Thorlabs  $\times 2$  - bi-convex lens,  $f=12.0$  mm
- LA-4380-AB Thorlabs - lense,  $f=100.3$  mm,  $(400 \div 1100)$  nm
- FBH370-40 Thorlabs - bandpass filter at 370 nm FWHM=40 nm
- F260SMA-B Thorlabs - fiber collimator
- BBO crystal  $6 \times 6 \times 1$   $\theta = 29.2^\circ$   $\varphi = 90^\circ$  Eksma Optics
- Beam splitter 50:50 as HOM BS
- Beam splitter 30:70 for alignment at position of BBO

### 3 Experiment

### 4 Discussion and conclusion

### 5 Acknowledgments

### References

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