

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 $\lambda = 370 \text{ nm}$, $P_{max} = 2.5 \text{ mW}$, $f_0 = 40 \text{ MHz}$, 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 50Ω
- FELH700 Thorlabs $\times 2$ - longpass filter at 700 nm
- LB-1494-AB Thorlabs $\times 2$ - bi-convex lens, $f=12.0 \text{ mm}$
- LA-4380-AB Thorlabs - lense, $f=100.3 \text{ mm}$, $(400 \div 1100) \text{ nm}$
- 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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