

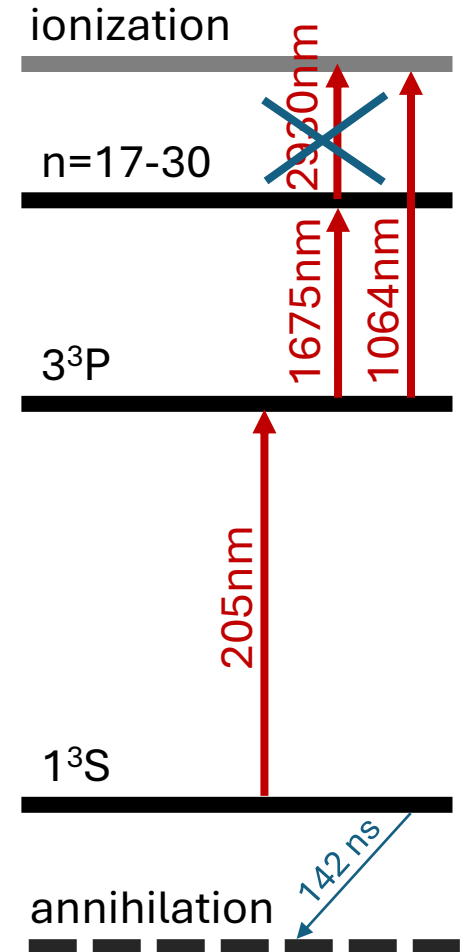
Laser status

Valts Krūmiņš

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Changes to EKSPILA

- Had to move all launching mirrors by 5cm due to the change in the position of experiment
- Added a bandpass filter (central wavelength 1750nm, FWHM 500nm) but only after the measurements
- Cooling water has been cleaned
- Free running has been eliminated



Other challenges

- Rydberg energy has been around 1mJ for most of the time which is lower than it should be, and the stability is not great
- Example – laser stability during Rydberg positronium program

Start of measurement	Next morning
1.4-1.9 mJ	0.5 - 1.0 mJ
0.8-1.3 mJ	1.2-1.6 mJ

Calibrations for the Rydberg line

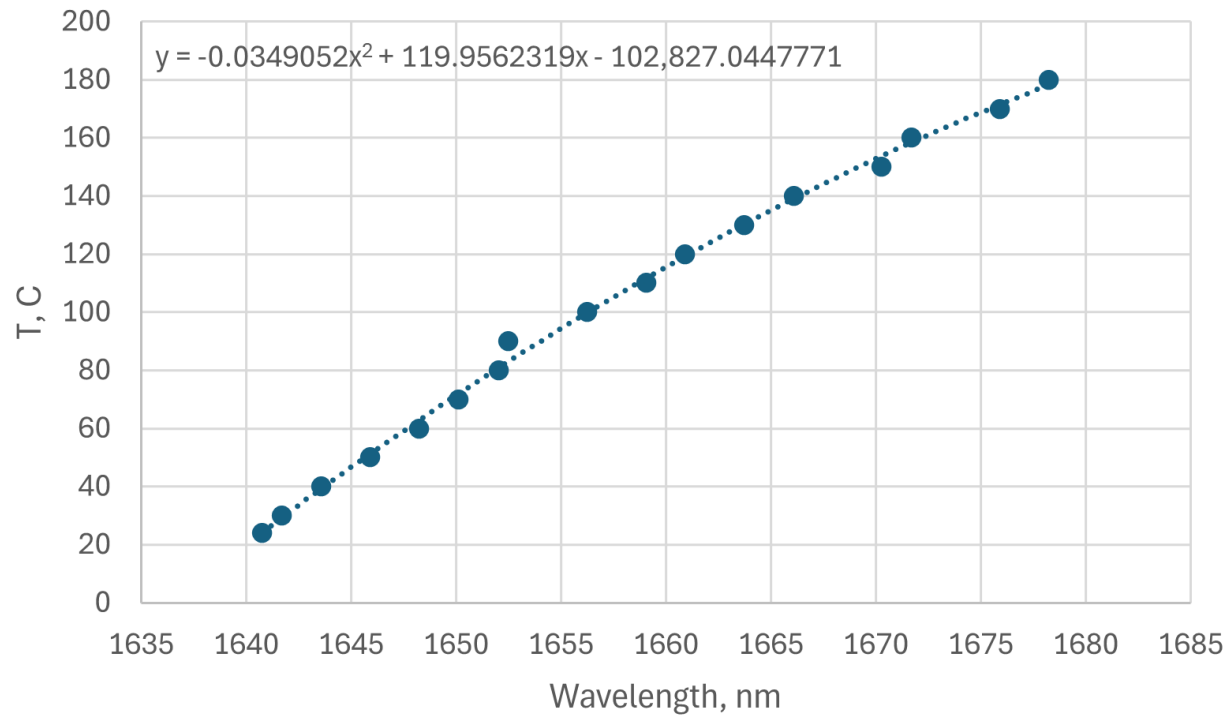
- 2 step process:

First - finding out what wavelength is generated by OPG crystal at different temperatures

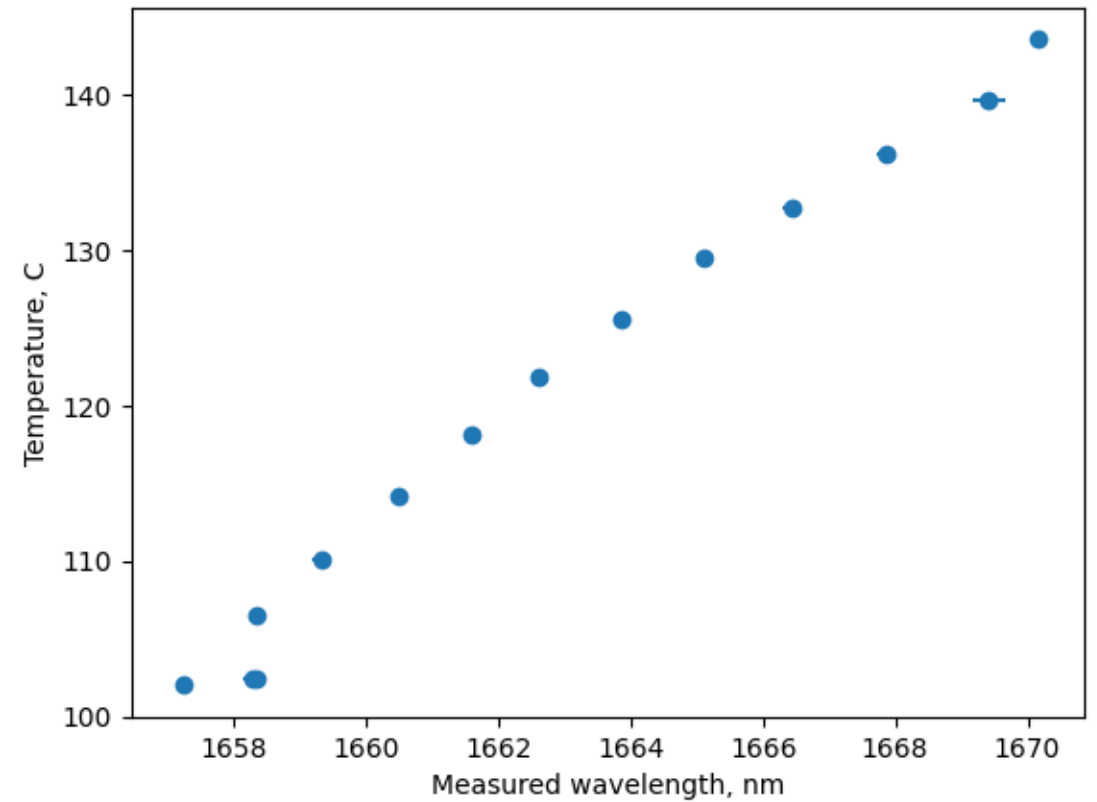
Second – optimisation of OPA angles to get the maximum energy

OPG calibrations

From April

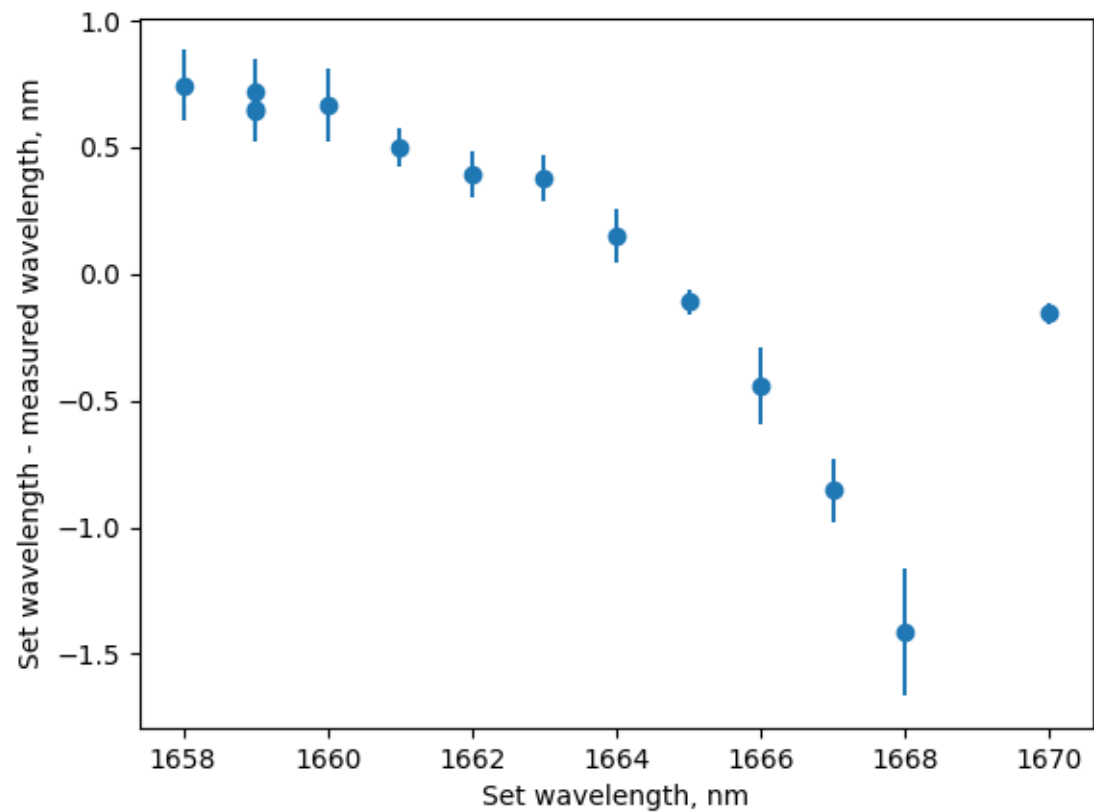


From December

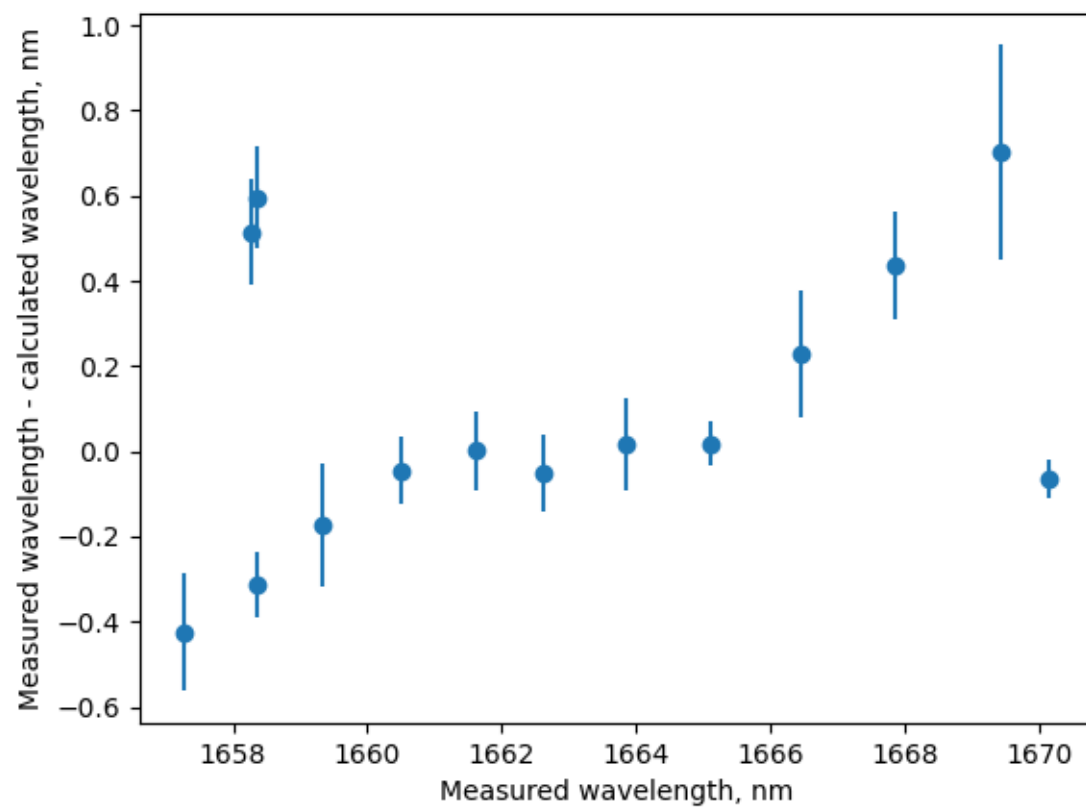


OPG calibrations

From April

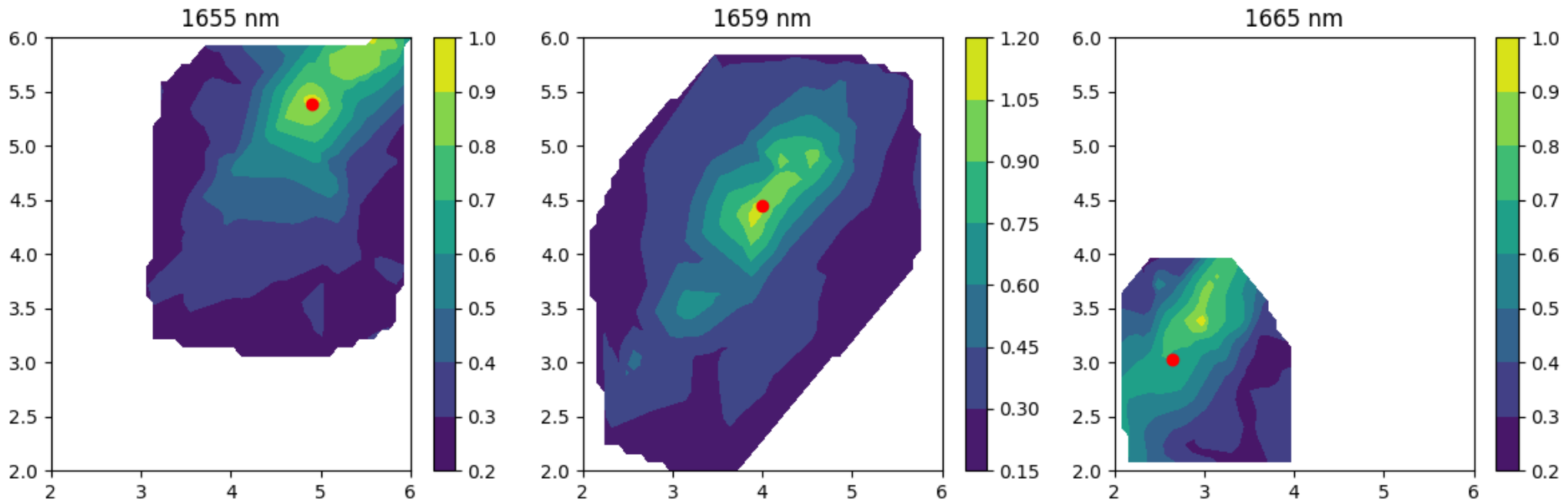


From December



OPA calibration

- Changing the angle of OPA crystals changes phase matching
- 2 parameter optimisation as there are 2 OPA crystals
- Motors limited to the range 2-6mm



OPA calibration

