

Gated Spectrum vs. Energy

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03/25/19

K-H state paper

- In University of Geneva's paper, K-H state caused line shifts were observed.
- They used laser energy-spectrum plot to observe the shifts in the transition lines.

NATURE PHYSICS

LETTERS

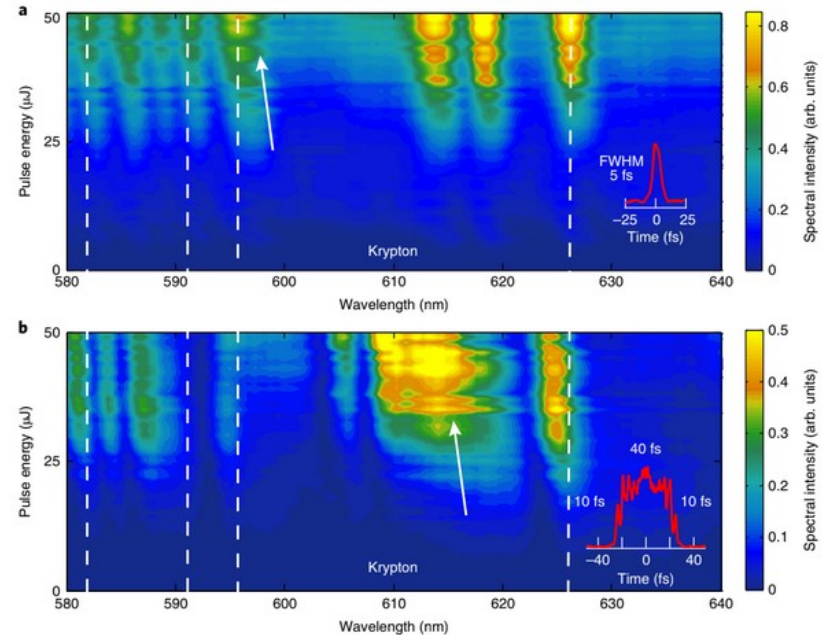
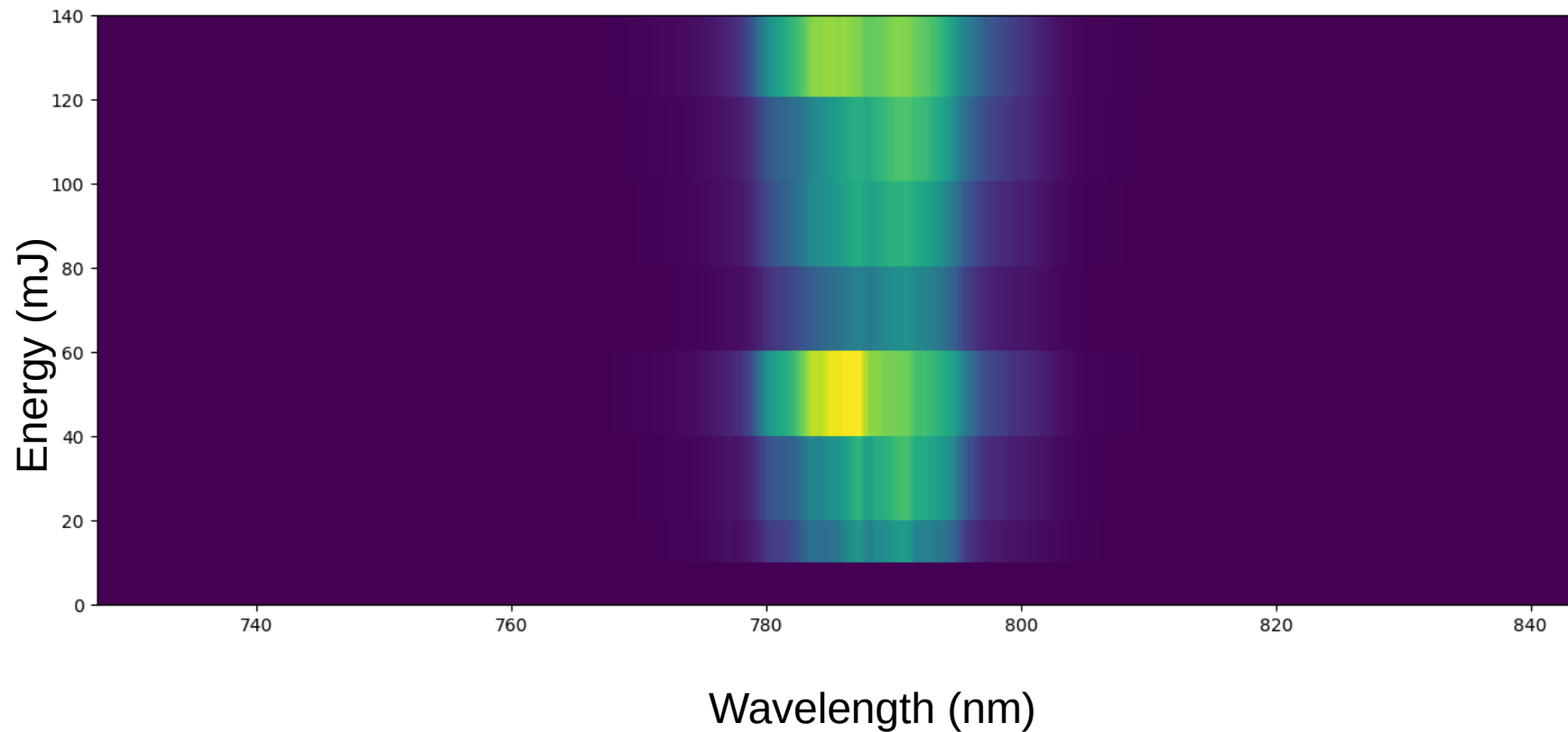


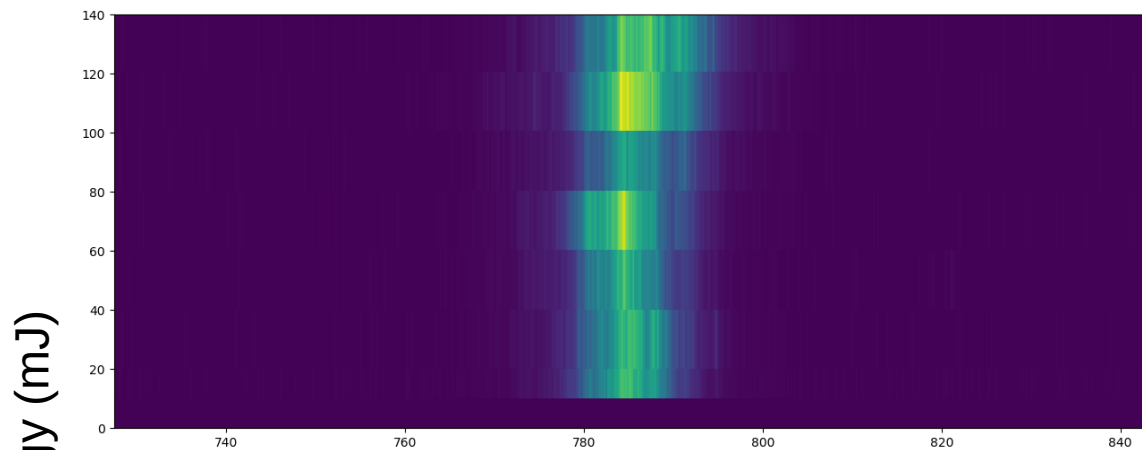
Fig. 4 | The forward emission spectra of trapezoid pulse shapes in krypton at 9 bar, with increasing pulse energy. a, A Fourier-limited pulse, 7 fs duration. A shift in the transition lines is observed with increasing pulse energy of 3–5 nm over $50\mu\text{J}$, and at $20\mu\text{J}$ the weak emission/absorption lines are strongly enhanced and the linewidths broadened (from 3 nm to 7 nm). **b**, Trapezoid pulses with 10 fs rise time, 40 fs plateau and 10 fs decay time. Narrow and broad gain features are visible, experiencing a spectral shift of about 3–5 nm over an energy increase of $50\mu\text{J}$, but with less broadening. A distinct Fano lineshape emerges at 627 nm. Dashed lines and white arrows are to guide the eye, between the figures, to show the shift in emission wavelengths between different pulse durations and also to highlight the field dependence of the states involved. The temporal pulse shape is shown in red for each graph.

Vacuum Data

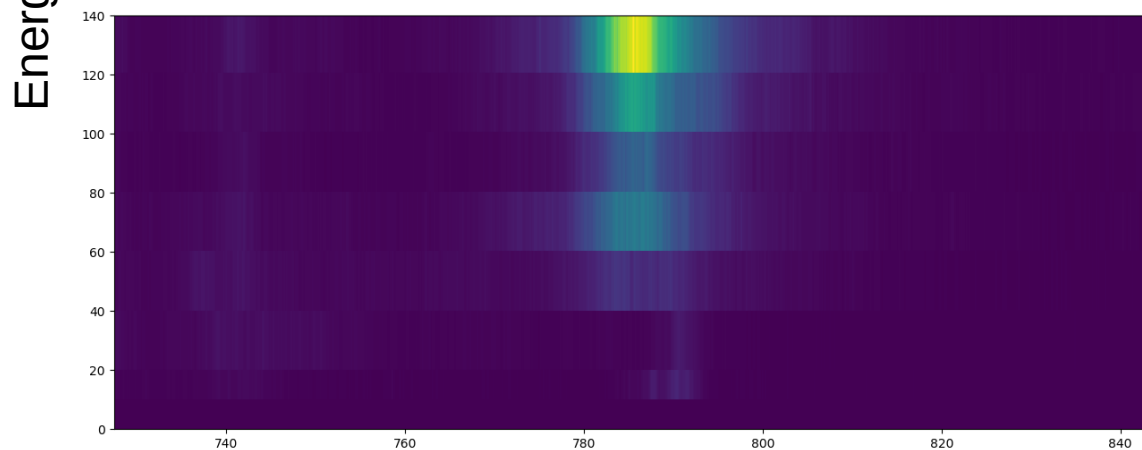


Vacuum Data

polMin



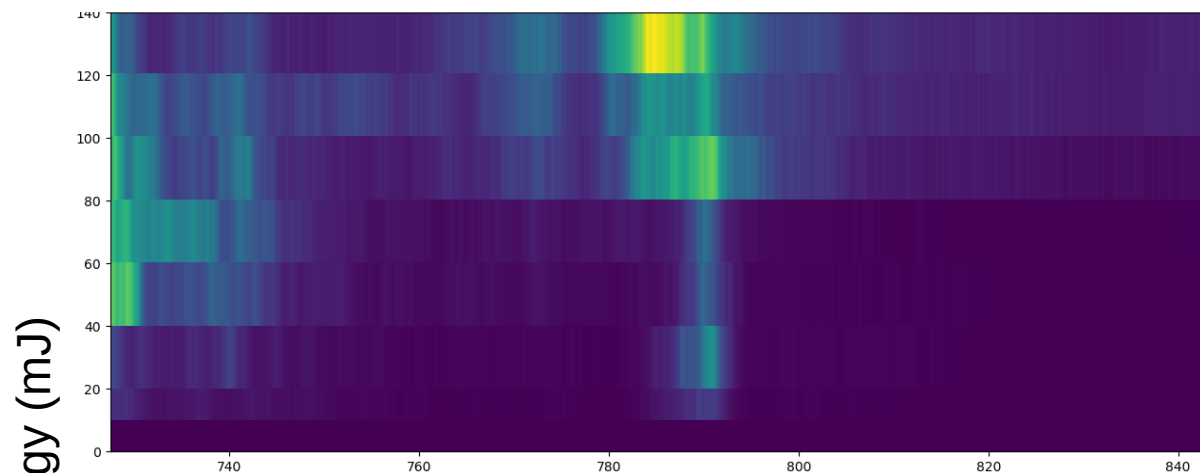
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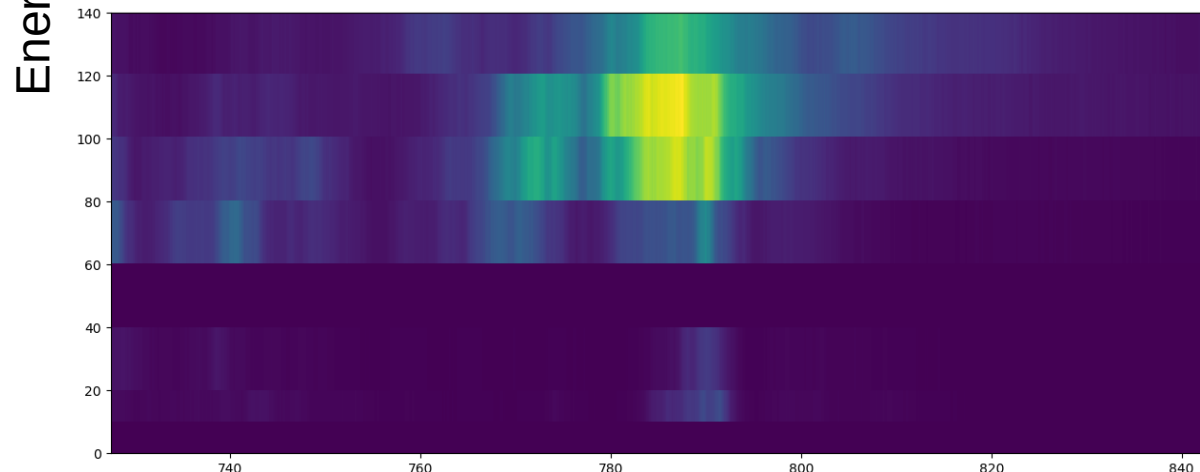
Wavelength (nm)

Rb 1e15

polMin



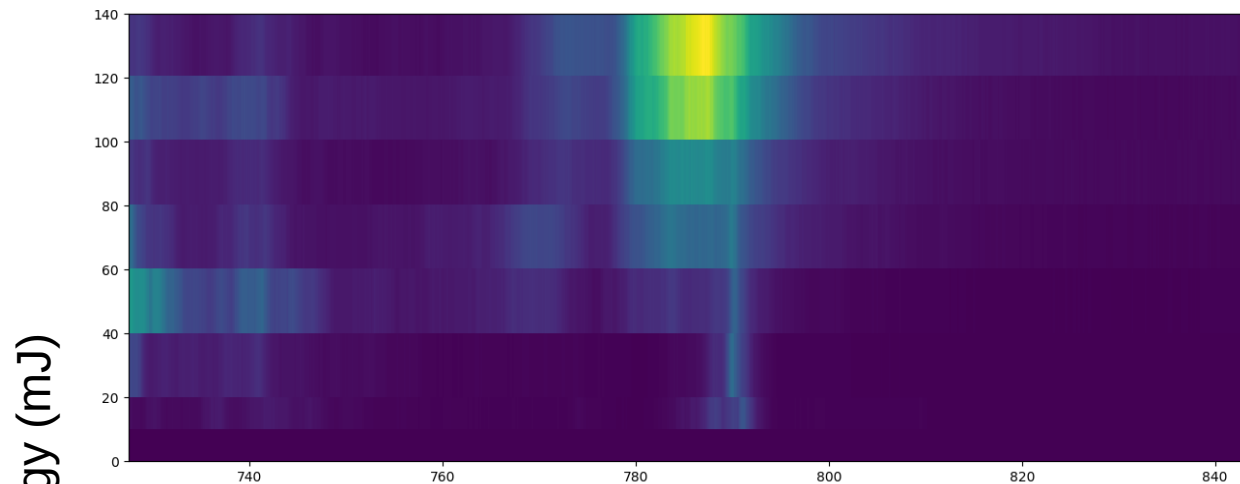
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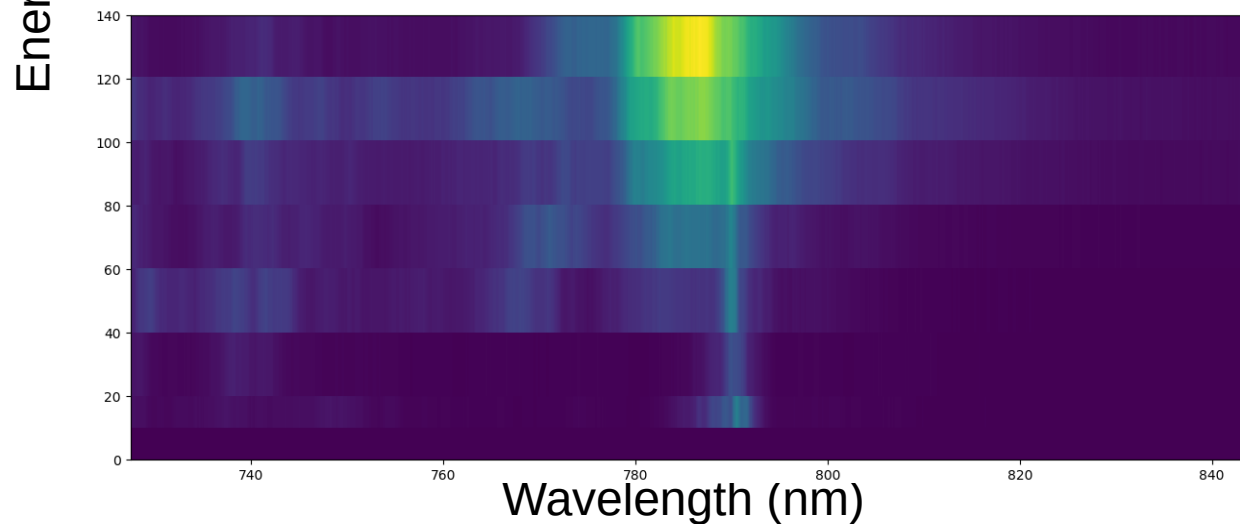
Wavelength (nm)

Rb 7e14

polMin

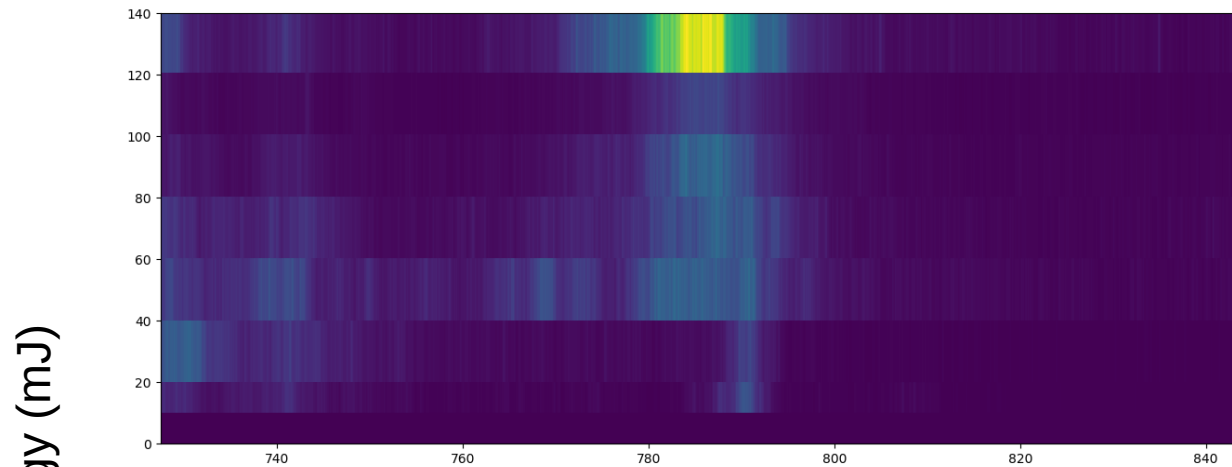


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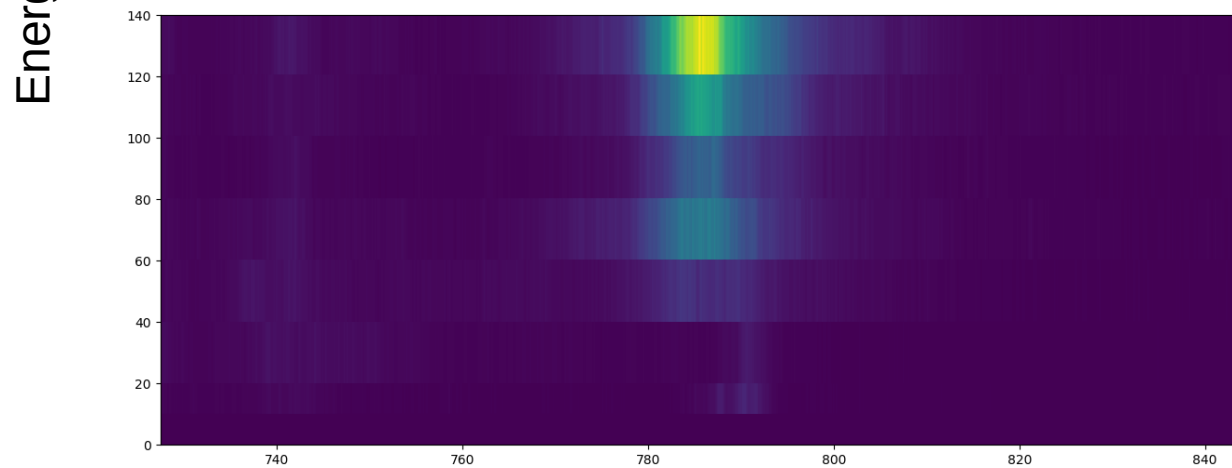


Rb 4e14

polMin



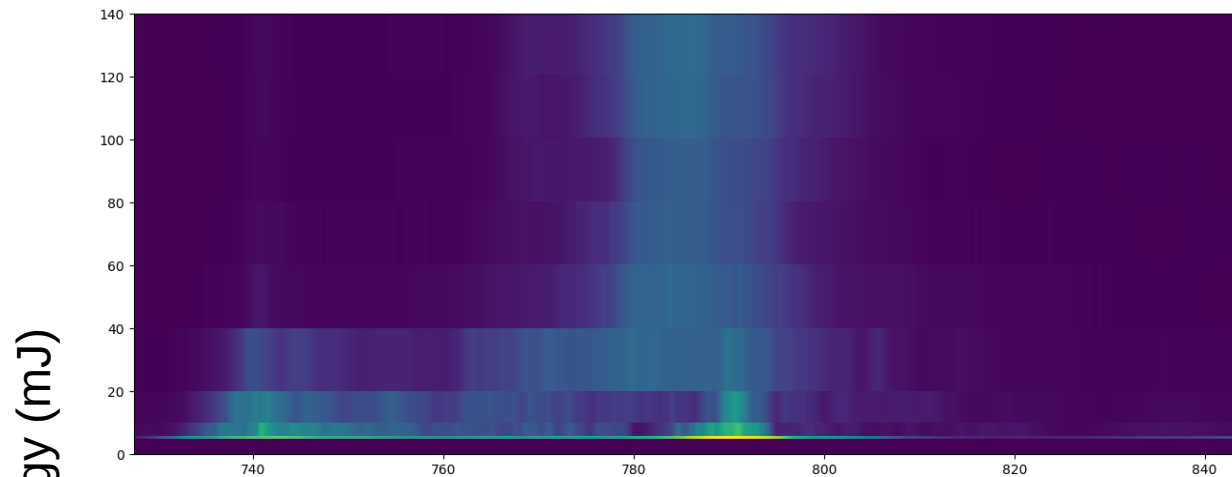
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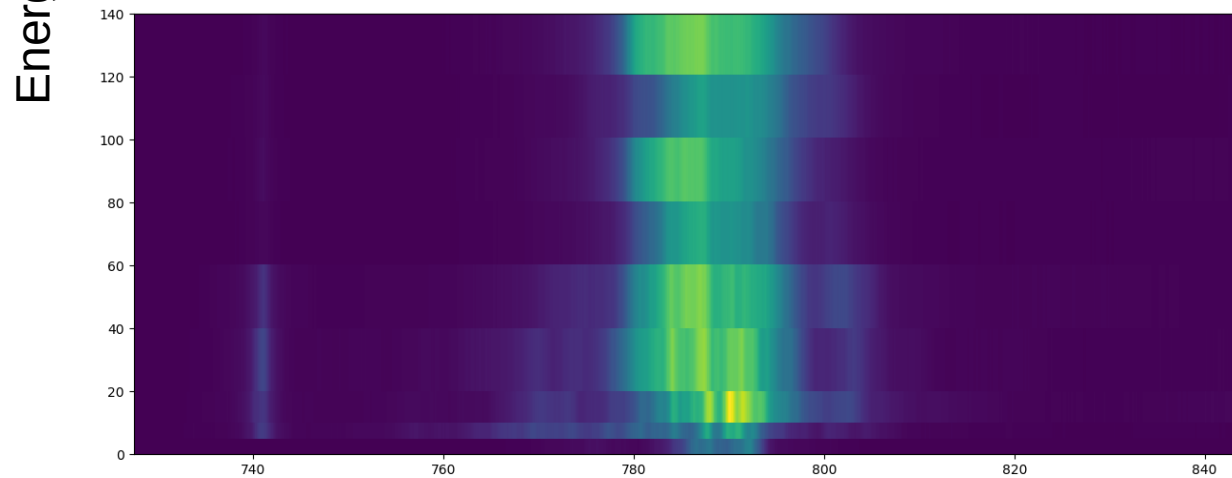
Wavelength (nm)

Rb 2e14/ Rb 4e13

Rb 2e14



Rb 4e13



Wavelength (nm)