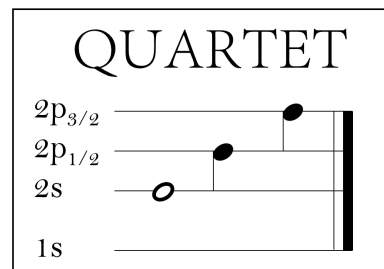


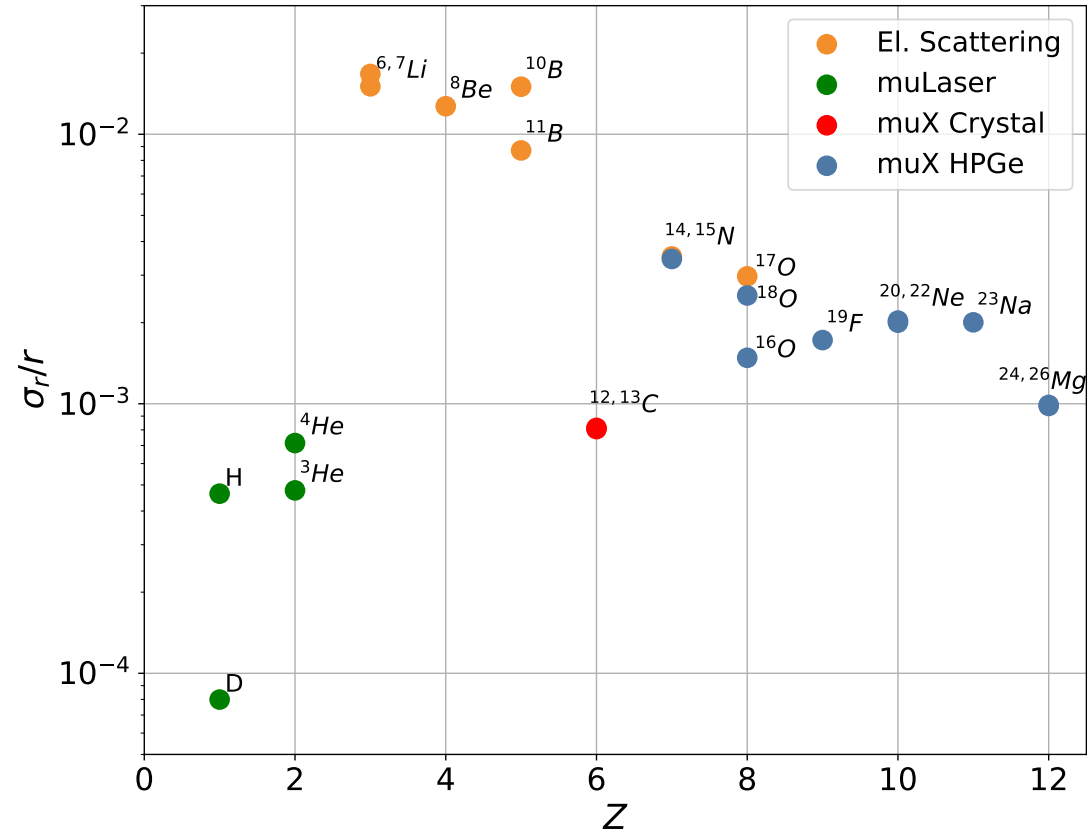
MMC based high-precision spectroscopy of muonic atoms

- Elevator Pitch -



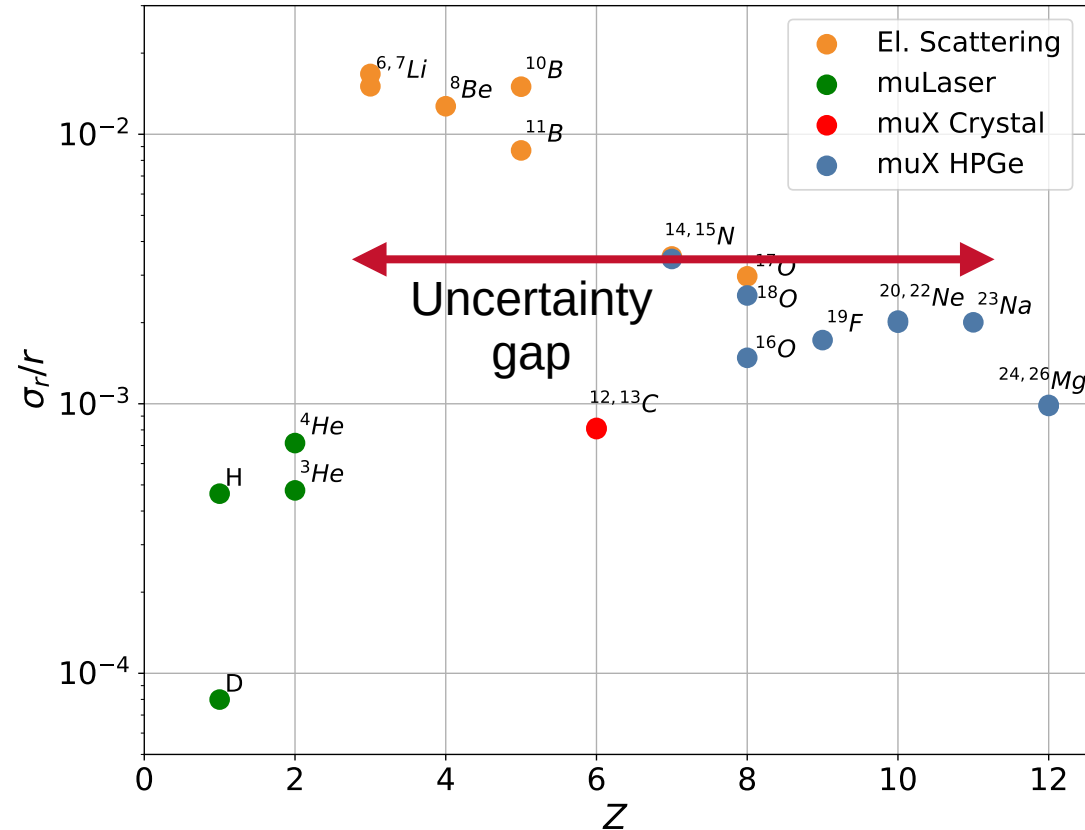
Motivation of QUARTET

- Accuracy gap in charge radii for $2 < Z < 11$
- Improvements to $\sigma_r/r < 1e-3$:
 - Benchmark theories of nuclear structure
 - Test QED from measuring transition energies
 - Recalibration of whole isotope chains
 - Study isospin effects from mirror nuclei



Motivation of QUARTET

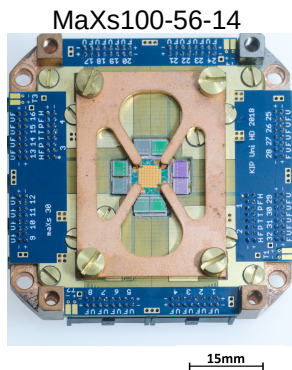
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Metallic Magnetic Calorimeters

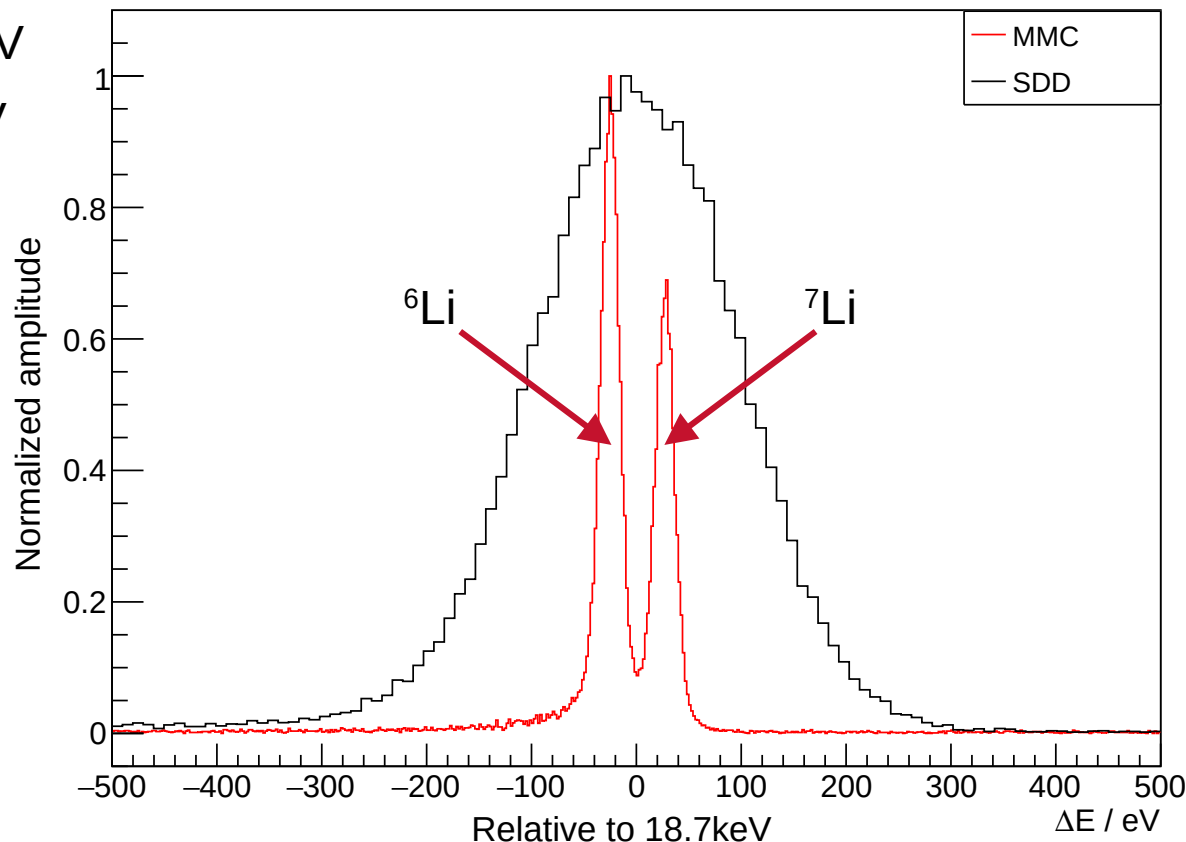
- Detection range from 1keV to 400keV
- Energy resolution in the order $\sim 10\text{eV}$
- Not commercially available

➔ detector development for experiment specific purposes needed

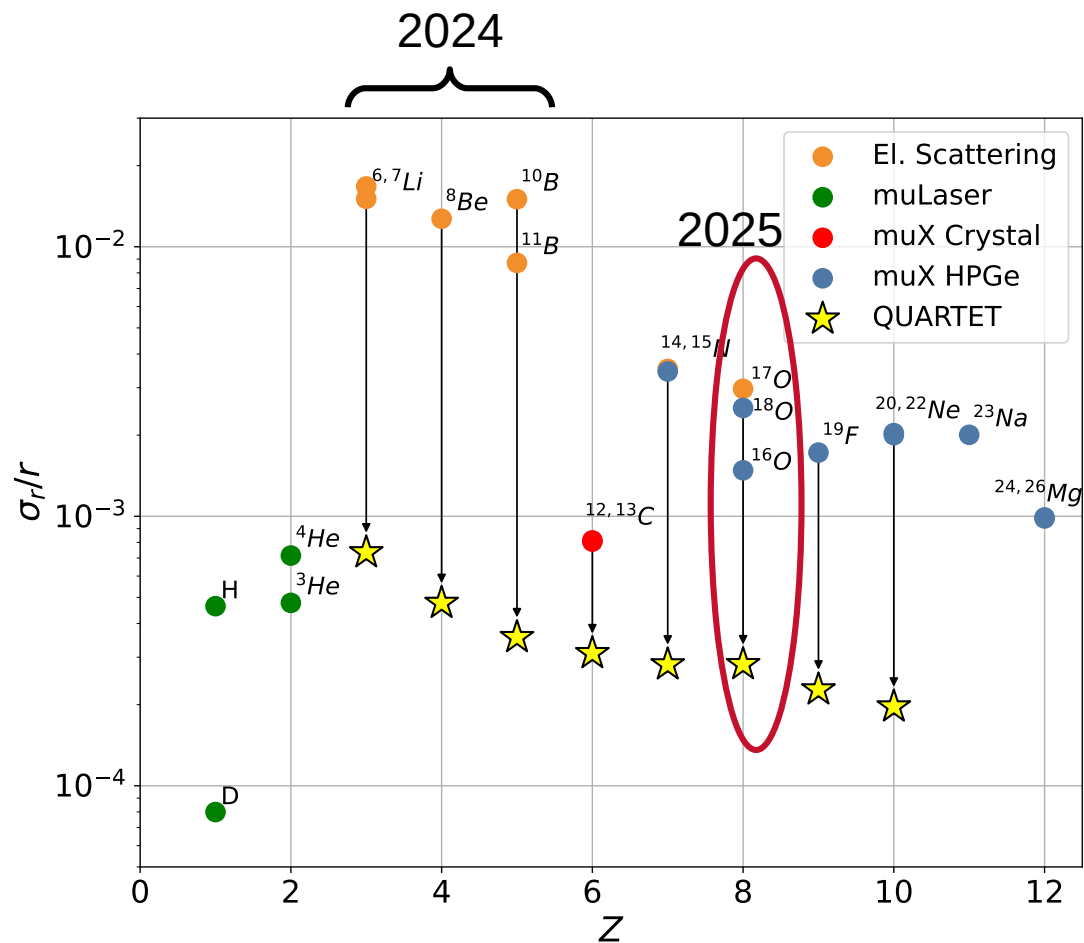


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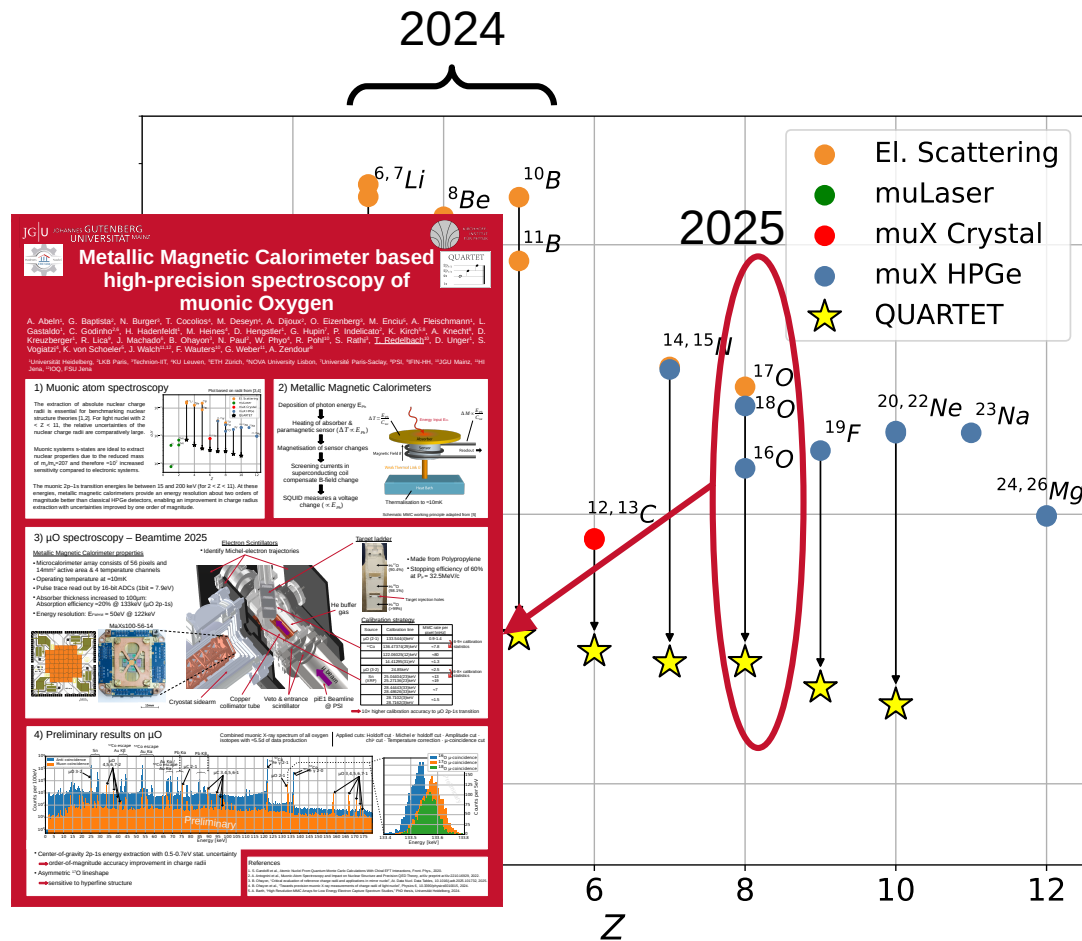
Li (2p-1s) isotope shift (Beamtime 2023&24)



Motivation of QUARTET



Motivation of QUARTET



Thanks for your attention



JOHANNES GUTENBERG
UNIVERSITÄT MAINZ



PAUL SCHERRER INSTITUT

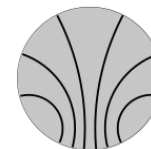


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