

# P5615: Investigation of the $b^3\Sigma^+$ , $v=0$ State in Aluminium Monofluoride

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- AlF: candidate for laser cooling and trapping
- $b^3\Sigma^+$  state:
  - Interaction of the singlet and triplet manifolds
  - Triplet MOT?
  - Efficient detection of triplet molecules with hyperfine resolution
  - Study detailed energy level structure of the  $b^3\Sigma^+$  state
- Rotational spectra, radiative lifetime
- Hyperfine-resolved spectra
- Interaction of the  $b^3\Sigma^+$  and  $A^1\Pi$  states mediated by spin-orbit coupling

