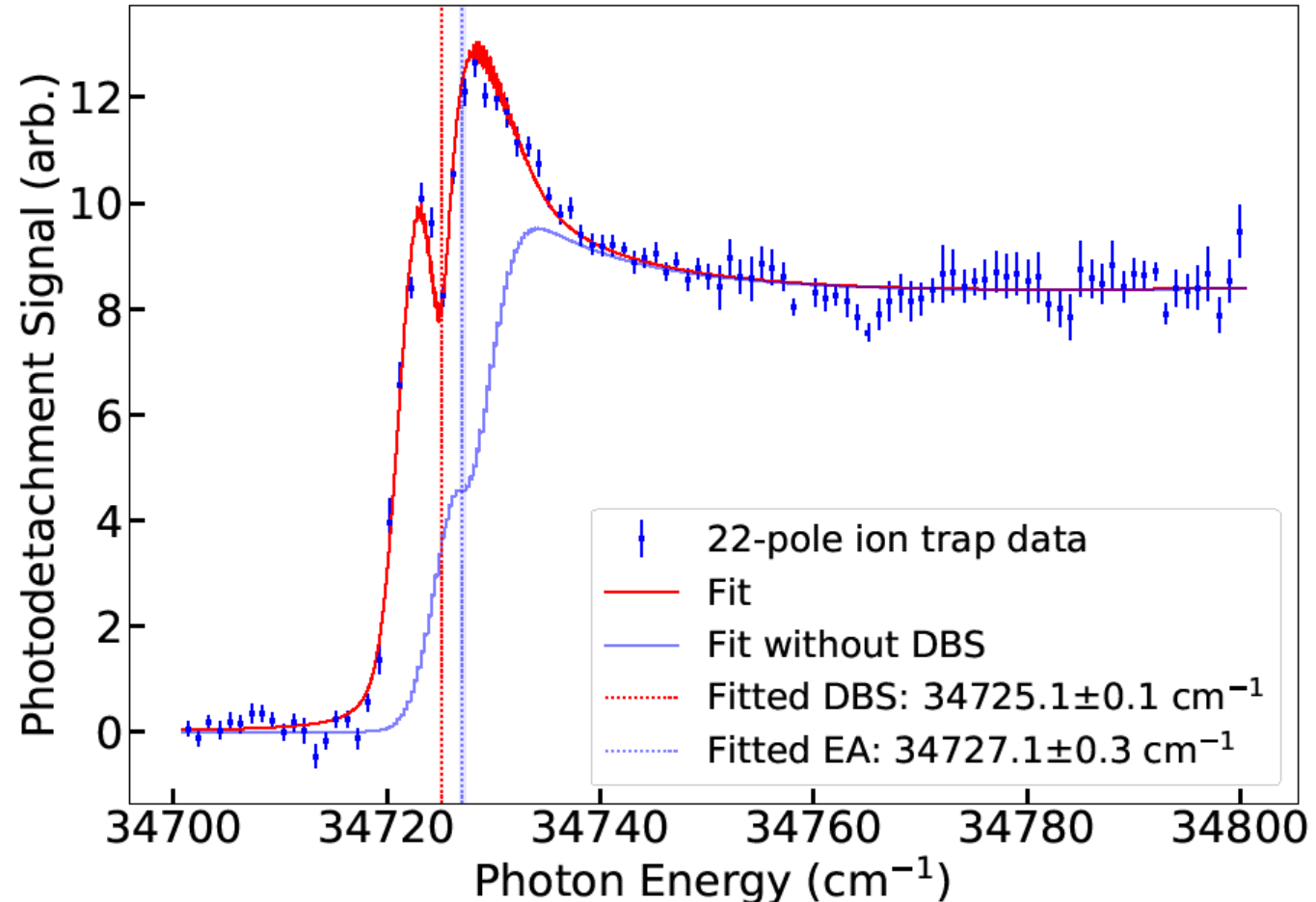


P5459: OBSERVATION OF A DIPOLE-BOUND STATE IN THRESHOLD PHOTODETACHMENT SPECTROSCOPY OF THE INTERSTELLAR ANION C_3N^-

Malcolm James Simpson, Markus Nötzold, Tim Michaelsen, Robert Wild, Franco A. Gianturco, Roland Wester, Institute for Ion Physics and Applied Physics, University of Innsbruck, Austria.

- C_3N^- observed in space
 - Primary formation mechanism undetermined
 - Radiative attachment through dipole-bound state may augment rates
- Photodetachment spectroscopy in cryogenic 22-pole ion trap
- Novel cross section behaviour above threshold
- DBS observed 2 cm^{-1} below threshold



Simpson, M. et al, Influence of a supercritical electric dipole moment on the photodetachment of C_3N^- , *Phys. Rev. Lett.*, (in press)