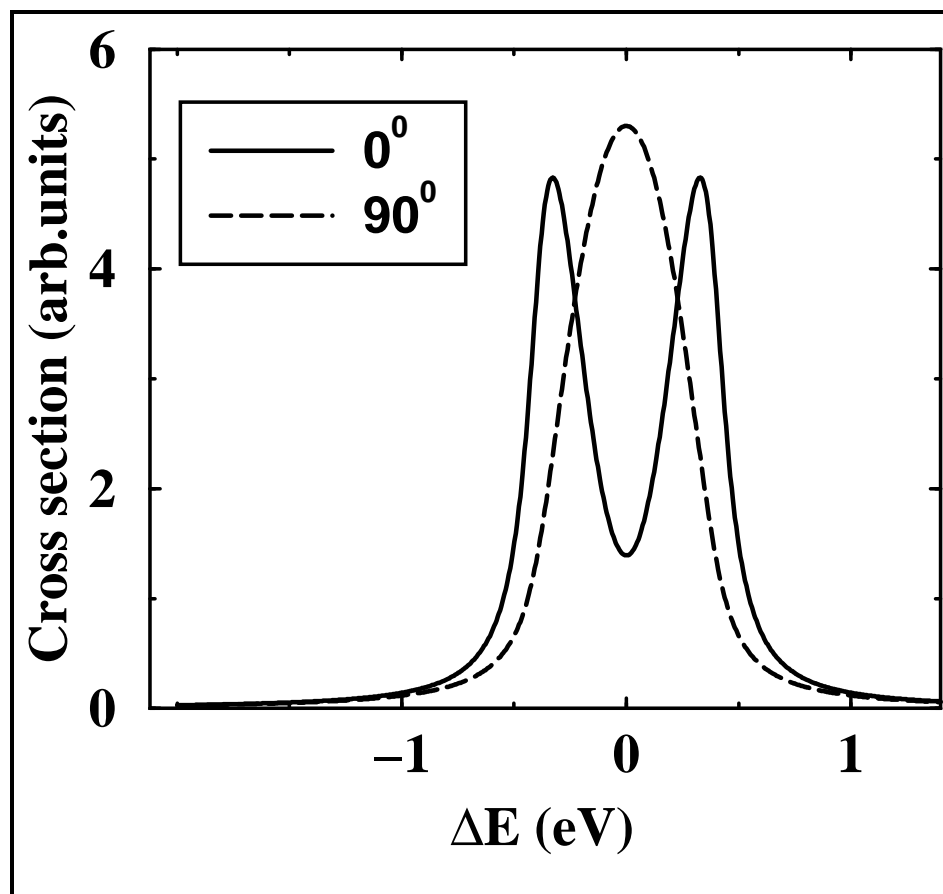
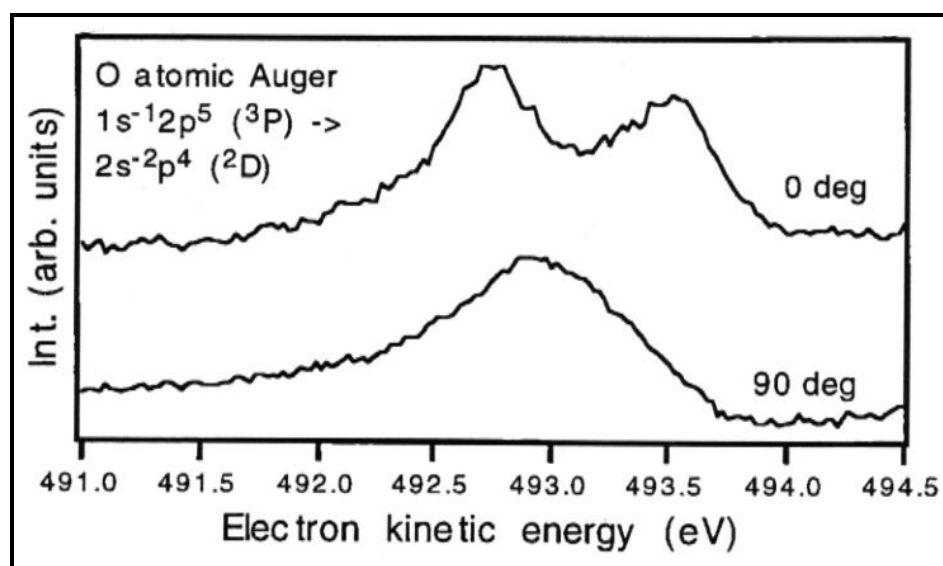


Spectrum of  ${}^2\Sigma^+$  state of  $1\pi^{-1}\sigma^*$  core-excited HCl.

... predicted...



... and observed...



Doppler splitting of the atomic peak for  $O_2$ .