

P5536: ENTANGLED PHOTON SPECTROSCOPY OF MOLECULES

Scott K. Cushing, California Institute of Technology

- Two entangled photons are linearly absorbed by one molecule at an increased TPA cross section.
- The enhanced TPA cross sections do not follow any known structure-function ratio.
- Measure entangled fluorescence vs. scattering for R6G. Cross section is 1,000x larger than classical TPA but 10^{-6-7} that of classical 1PA.
- The entangled photon / molecule interaction Hamiltonian leaves a lot to explore!

