



Detecting CO₂ isotopologues in the 4.4 μm region

The spectrum below represents a naturally occurring mixture of CO₂ isotopologues and shows that the entire *P*-branch of ¹³CO₂ can be resolved with no interferences from other species. A spectrum around 4.4 μm will therefore unambiguously identify ¹³CO₂, and also allow the relative ratios of the transitions in the *P*-branch to be measured. This in turn can be used to determine the temperature of the gas and remove the need for a temperature-controlled measurement cell.

