P5010: CAVITY RING-DOWN SPECTROSCOPY MEASUREMENTS OF RESONANCE-ENHANCED TWO-PHOTON ABSORPTION BY Nitrous Oxide (N_2O)

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- Detection of trace NNO using 2-photon CRDS
- Observe the resonantly enhanced Q(18) transition in air with 24 ppmv of N2O
- Used optical locking to efficiently couple light from DFB-QCL into cavity
- Decay of light intensity from cavity shows clear evidence of two photon loss
- Transition is Doppler Free and display Lorentzian homogeneous lineshape
- Strength is slightly stronger than predicted by theory.