## ARTICULO ACEPTADO

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Paper: High Resolution Spectroscopy of Ammonia in a Hollow-Core Fiber

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## Abstracts:

We have demonstrated frequency modulation saturation spectroscopy of the ν1 +ν3 band of ammonia in hollow-core photonic bandgap fibers (HCâ€"PBFs). Previously blended lines have been resolved and the

corresponding molecular transitions assigned. Cross–over resonances are observed between transitions that do not share a common level. We have measured the pressure dependence of the line shape and determined the collisional self–broadening coefficients for ammonia. The many absorption

lines of ammonia in the 1.5 μm wavelength region are potential frequency references lines for optical communication as well as candidates for spectroscopic trace gas monitoring.

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