NH_3 INFRARED EMISSION IN COMETS. K. Magee-Sauer[1], M. J. Mumma[2], B. P. Bonev[3], Y. L. Radeva[4], M. A. DiSanti[2], G. L. Villanueva[5], N. Dello Russo[6], E. L. Gibb[7], W. M. Anderson[3], [1]Dept of Physics & Astronomy, Rowan University, Glassboro, NJ 08028, [2]NASA's GSFC, [3]CUA/NASA's GSFC, [4]UMd/NASA's GSFC, [5]APP/NASA's GSFC, [6]JHU APL, [7]UMSL

NH_3 is the dominant (observable) nitrogen-containing volatile in comets, present at ~ 1% relative to water. At infrared wavelengths (ν_1 band), NH_3 is difficult to detect since it requires a significant geocentric velocity to shift the strongest NH_3 emissions out of the terrestrial atmospheric water absorption. Only a few comets have offered a Doppler shift sufficient to observe the strongest Q-branch lines. Other comets offer only the fainter P- and R-branch lines for possible NH_3 detection, however these lines are possibly blended with other cometary emission from daughter molecules (NH_2 or OH, for example).

We revisit our highest quality data sets (obtained with CSHELL (NASA IRTF) and NIRSPEC (Keck 2)) and present a summary and discussion of ammonia detections in past comets to date using updated fluorescence models and data analysis algorithms.

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