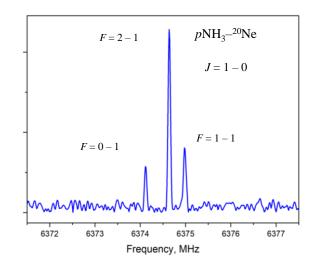
## P4987: BOUND STATE CALCULATIONS OF THE VAN DER WAALS NH<sub>3</sub>-Ne COMPLEX AND FIRST MICROWAVE DETECTION OF THE MISSING (para)-NH<sub>3</sub>-Ne NUCLEAR SPIN ISOMER

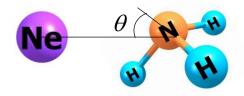
L. Surin<sup>1</sup>, I. Tarabukin<sup>1</sup>, C. Pérez<sup>2</sup>, M. Schnell<sup>2</sup>, J. Loreau<sup>3</sup>, and A. van der Avoird<sup>4</sup>

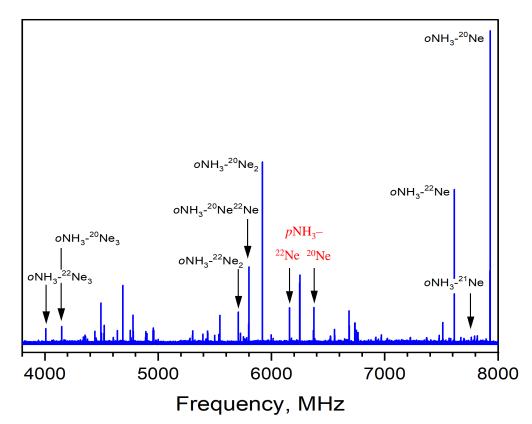
The bound rovibrational energy levels were calculated for total angular momentum J = 0 - 10 for both (*ortho* and *para*) nuclear spin modifications of the complex.

Pure rotational J = 1 - 0 transition of the missing  $paraNH_3$ –Ne ( $^{20}Ne$ ) has been measured using CP-FTMW spectroscopy.

Nuclear quadrupole structure (from <sup>14</sup>N nucleus) was resolved and analyzed, providing information about angular orientation of NH<sub>3</sub> within complex.







<sup>&</sup>lt;sup>1</sup> Institute of Spectroscopy of RAS, <sup>2</sup> FS-SMP, Deutsches Elektronen-Synchrotron (DESY), <sup>3</sup> Chemistry, KU Leuven, <sup>4</sup> Institute for Molecules and Materials (IMM), Radboud University Nijmegen