NQR View of Solid Phases of NOCl***

J. Pirnat, Z. Trontelj, and H. Borrmann^a

Institute of Mathematics, Physics, and Mechanics, Ljubljana, Slovenia ^a Max-Planck Institut für Festkörperforschung, Stuttgart, Germany

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Reprint requests to Dr. J. Pirnat: Fax: +3 86 61 21 72 81.

Chlorine NQR studies of solid nitrosyl chloride NOCl between 110 and 212 K are reported. In the temperature dependence an order-disorder phase transition near 145 K, found by X-ray diffraction, is confirmed. Unusual hysteretic NQR signal behaviour indirectly proves also the low temperature phase transition below 100 K. In the measured temperature region fast relaxing mechanisms are present. The upper limit of the expected ¹⁴N NQR frequency is estimated using the Townes-Dailey approach.