

THE EXTENDED SPECTROSCOPIC DATABASE ON FORMAMIDE: PARENT, ^{13}C AND DEUTERATED SPECIES UP TO 1 THz

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Formamide (NH_2CHO) is the simplest interstellar molecule containing a peptide bond that provides polymerization of amino acids. It is also considered as a precursor of acetamide another molecule containing a peptide bond that has been recently discovered in interstellar medium^a. While the rotational spectra of the parent isotopic species of formamide were extensively studied up to 500 GHz^b only few data are available on its deuterated species. We present the new study of the rotational spectra of all singly deuterated isotopologues of formamide as well as new analysis of the rotational spectra of the parent and ^{13}C isotopic species of formamide in the frequency range up to 1 THz. All the measurements have been performed using the Lille spectrometer based on the solid state sources. In total, about 2500 newly measured transition frequencies have been added to existing dataset on the rotational spectra of formamide and its isotopologues.

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^aHollis, J.M. et al. *Astrophys. J. Letters* **643** (2006) L25.

^bKryvda, A.V. et al. *J. Mol. Spec.* **254** (2009) 28.