THE GLYCINE-WATER DIMER

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We report the first observation of the 1:1 complex of glycine-water. A solid rod of glycine was impinged by the green line of a Nd:YAG laser and the vaporized molecules were seeded into a gas pulse of Ne saturated with water, forming a supersonic jet which was probed by FT-microwave spectroscopy.[a] The water molecule has been reliably located in the complex from the analysis of several isotopomers. Glycine is in its most stable form, with a cis-carboxylic group and a NH$\cdots$O=C bifurcated intramolecular hydrogen bond. The complex is stabilized by two intermolecular hydrogen bonds formed between the carbonyl group and one of the hydrogen atoms of water (O_w-H$\cdots$O=C) and between the hydroxyl group and the electron lone pair at the oxygen atom of water ($O_w \cdots$H-O-C)).

[a] A. Lesarri, S. Mata, J. C. López, and J. L. Alonso; *Rev. Sci. Instrum.*, **74**, 4799 (2003)