

## 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.<sup>a</sup> 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  $\text{NH} \cdots \text{O}=\text{C}$  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 ( $\text{O}_w\text{-H} \cdots \text{O}=\text{C}$ ) and between the hydroxyl group and the electron lone pair at the oxygen atom of water ( $\text{O}_w \cdots \text{H-O-C}$ ).

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<sup>a</sup>A. Lesarri, S. Mata, J. C. López, and J. L. Alonso; *Rev. Sci. Instrum.*, **74**, 4799 (2003)