ROTATIONAL SPECTRA OF PHENYLALANINE, TIROSINE AND TRYPTOPHAN

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The rotational spectra of the aromatic natural amino acids phenylalanine, tyrosine and tryptophan have been investigated by Laser Ablation Molecular Beam Fourier transform Microwave Spectroscopy LA-MB-FTMW. The spectra of two rotamers of phenylalanine have been detected in the supersonic expansion. Both forms are stabilized by a chain of intramolecular hydrogen bonds O-H$\cdots$N-H$\cdots\pi$, being the carboxylic group in*cis* configuration. One conformer of tyrosine, which only differs from phenylalanine in a -OH group in*para* position, has been also characterized. Preliminary results on the rotational spectrum of tryptophan are presented.