A CHIRPED-PULSE FOURIER TRANSFORM MICROWAVE SPECTROMETER COMBINED WITH A LASER AB-LATION SOURCE

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The design of a chirped-pulse Fourier transform microwave spectrometer CP-FTMW combined with a laser ablation LA source is presented. The spectrometer is capable of measuring the 6.5-18 GHz region. Rotational spectra of solid samples of proline (m.p. 228 $^{\circ}$ C) and alanine (m.p. 290 $^{\circ}$ C) vaporized by laser ablation has been recorded. Four low-energy conformers of proline and two in alanine have been detected. ¹³C species of alanine in their natural abundance have been also observed. The performance of this spectrometer is compared to a LA-MB-FTMW spectrometer.