

## NOVEL APPLICATIONS OF A SHAPE SENSITIVE DETECTOR 2: UV-MW RESONANCE

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We demonstrate the capability of using chirped pulsed Fourier transform microwave spectrometer (CP-FTMW) with UV double-resonance techniques. The application of this technique greatly simplifies the rotational spectrum, facilitating the simple assignment of the rotationally resolved electronic spectra of several compounds of interest. A Sirah dye laser pumped by a ND:YAG laser generated a variable laser beam which was then transferred to the UV region using a doubling crystal. Prior knowledge of  $\Delta J$  assignments from the rotational spectrum allowed for the straightforward monitoring of the intensity of specific rotational lines in the ground state spectrum as we scanned the UV laser beam. UV-MW double resonance was seen for many of the  $\Delta J 1 \rightarrow 2$ ,  $2 \rightarrow 3$ , and  $3 \rightarrow 4$  rotational transitions of Aniline and Phenylacetylene. The application of this technique to other molecular systems and processes will also be discussed.