ANALYSIS AND ASSIGNMENT OF ROTATIONAL SPECTRA USING WINDOWS SOFTWARE

BRIAN J. DROUIN, *California Institute Of Technology, Jet Propulsion Laboratory, 4800 Oak Grove Dr, Pasadena, CA 91109-8099.*

As spectral data collection and analysis become increasingly computer-oriented, software limitations often greatly extend the time required for reduction and manipulation of the measured spectra. This problem is particularly pronounced when processing large data sets. In an effort to minimize the time required for data analysis a LabWindows program has been developed at JPL for rapid processing (background subtraction, smoothing, peak-picking, *etc.*) of large and small data sets. The data can be plotted simultaneously with SPCAT output, for quick comparison to known spectra, and assignment of the measured spectra. The program creates output in SPFIT line format for assignments, thus vastly reducing the data entry time generally required for line assignments of large data sets. Catalog files in the data-merged format will not re-assign previously assigned spectral features. Data can be entered as (X_i, Y_i), or as a peak list (ν_i, S_i). Other features of the program include a spectral simulation algorithm, WYSIWYG printing and a spectrum calculator.