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TO: IUE Users
 FROM: Daniel A. Klinglesmith & Richard P. Fahey
 SUBJECT: An IUE Spectral Analysis System

We have developed an interactive spectral analysis system for use with reduced IUE spectra. This system runs on code 680's PDP 11/40 computer using the language FORTH. IUE users may use the system on a time available basis after normal working hours. A users guide is available as a NASA x-document (X-685-79-29) from Daniel A. Klinglesmith.

The system currently has the features shown in the attached Table 1. It is evolving and more features will be available as time goes on.

TABLE 1

IUE GO System Features as of 11/1/79

Spectral Display and Plotting

- single order plot
- expanded plot of part of one order
- multiple plots of the same order from different spectra
- combined plots of low dispersion (long and short wavelength)
- comparison with model data (D.A. Klinglesmith, IUE Newsletter #7)
- normalized plots

Quantitative Measurements

- wavelength determined
- equivalent width
- absolute flux calibration
- total flux in an emission line
- full width measure
- ratio of two spectra
- central depth
- asymmetry

Smoothing

- running average
- median filter
- averaging of several spectra

Utilities

- tape copy and merging of IUE spectra
- absolutely calibrated spectra back to tape

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