

## News Notes

SWPFIX Dr. Sidney Parsons points out a potential source of error in the use of the subroutine SWPFIX (Cassatella et al. 1980, IUE Newsletter, No. 8, p.1). If the user allows his main program to loop through all 55 lines of the essr file, SWPFIX will sum the correct lines into the gross and background and will automatically normalize the background to have the same area as the gross. This occurs as soon as the subroutine is called with a line number one larger than the largest line number used in the background. The user should not then recall SWPFIX with ILINE=k4+1 or the background will be normalized twice.

Scattered Light Elsewhere in this issue is a welcome report on modeling scattered light in the shortwave length spectrograph by Dr. John Clarke. It might be noted that in most cases where scattered light is a problem it can be easily recognized by the presence of an apparent continuum shortward of 1150 Å where the transmission of the MgF<sub>2</sub> faceplates is very low.

The table below contains relative quantum efficiencies for the four IUE cameras from a memo by Dr. C.I. Coleman dated 1977 August 11. These values will be helpful to those of you who want to do your own scattered light modeling.

### Relative Quantum Efficiency

<u>λ</u>	<u>LWP</u>	<u>LWR</u>	<u>SWP</u>	<u>SWR</u>
5500	3.0E-4	8.1E-4	9.0E-4	7.7E-4
4000	2.8E-3	4.4E-3	3.8E-3	3.1E-3
3130	0.33	0.30	0.37	0.29
3000	0.58	0.47	0.57	0.46
2800	0.68	0.68	0.72	0.71
2540	1.00	1.00	1.00	1.00
2400	1.10	1.08	1.09	1.08
2200	1.16	1.21	1.17	1.15
1940	1.22	1.25	1.20	1.21
1800	1.01	0.98	0.98	0.97
1700	0.79	0.79	0.81	0.74
1600	0.70	0.69	0.68	0.69
1500	0.76	0.74	0.73	0.56
1400	0.92	0.88	0.84	0.74
1220	0.82	0.93	0.97	0.75

Regional Data Analysis Facilities NASA has approved the creation of two IUE Regional Data Analysis Facilities (RDAF), one at Goddard and one at the University of Colorado. Since the beginning of this year, the Goddard RDAF has been developing, testing, and debugging software, under the direction of Dr. Sara Heap. The hardware also has been updated. Two large disks and several new terminals were installed and, during April, the PDP 11/40 was replaced by a PDP 11/44. At the present, the 11/44 is operational most of the time. The Goddard RDAF has been accepting IUE Users at the rate of one per week to aid in

debugging the system and in training the support personnel.

At the time of the March IUE Users' Committee meeting, Dr. Edward Brugel, Scientific Director of the Colorado RDAF, reported that Colorado did not yet have its computer.

When you are observing with the IUE be sure to ask your RA about the latest status of the RDAF.

Update on the Residual Geometrical Errors In IUE Newsletter No. 12, page 30 (or page 260, if you count all the IUE Log pages) there was a report on residual geometrical errors that allow the center of the spectrum to wander slightly relative to the dispersion line. As a result of Skip Schiffer's developing software to extract triple exposures from the gpi (or GPHOT) image, he is able to report quantitatively on this error. In the two images he has processed so far, he finds that the center of the spectrum moves systematically by about  $\pm \frac{1}{4}$  pixel relative to its mean distance from the dispersion line. (It was noted previously that the mean distance of the spectrum relative to the dispersion line may be non-zero.) These geometrical errors and their effects will be documented more fully in a future Newsletter article.

IUE Extraction Routines Elsewhere in this Newsletter is a report by de Boer and Snijders comparing several software systems for extracting IUE spectra. This report is valuable input from two users who have thought carefully about the quality of the spectra. It is regretful that they were unable to provide figures to illustrate quantitatively the improvements to be gained by using these custom extraction systems. In discussing the November 1980 IUESIPS, de Boer and Snijders neglected to mention that the new method applies a median filter to eliminate reseaux, blemishes, and particle spikes from the background (Turnrose, Harvel, and Bohlin 1979, NASA IUE Newsletter, No. 7, p. 9). Since the November 1980 version of IUESIPS was intended to improve the resolution and background characteristics of IUE spectra to be comparable with the best of the custom extraction systems, it will be interesting to see what results de Boer and Snijders obtain when they include the new system in their comparisons.

Some of the custom extraction packages apply an instrumental sensitivity curve which has been specifically derived for that extraction program. Bohlin et al. (1980, Astron. Astroph., 85, 1) point out that there are systematic differences between the available flux standards. If the user-derived sensitivity curve has been based on a different standard than the IUE standard (for example, on OAO-2 or TD-1 fluxes), there is a possibility of systematic flux differences between a spectrum extracted by a custom program and one processed entirely conventionally.

Ray tracing experiments for the telescope and spectrograph reported in the System Design Report show that the point spread function will be asymmetric and will vary with location on the camera face. Thus the deviations from Gaussian point spread functions discussed by de Boer and Snijders are understandable. Because of the possibility of extended wings on the point spread function, care should be used in where the background is chosen when using profile fitting extraction methods.

Finally, users who have written their own extraction programs might consider testing them with some of the Observatory's calibration spectra. A large data base of spectra to test reproducibility, photometric linearity, resolution, etc., exists. I would be happy to advise users on what spectra might best be

used to test their program and on how to obtain them. Special observations may be obtained to aid users with unusual calibration needs.

Staff News First, here is a clarification about the news of Ruth Ehlers which appeared in the last NASA Newsletter. Ruth has been promoted to a position that does not involve shift work. Part of her time is spent helping the Resident Astronomers with their research projects. Part of her time is spent guiding new users of the RDAF. While her new position is a step up from the telescope operator position and we have able new TOs to replace her, we will miss her talents and experience in IUE operations. Sorry, ladies and gentlemen!!

If GOs have noticed RAs Skip Schiffer and Bob Panek looking more tired or bewildered than usual, it could be because both became first time fathers this winter. Skip and Linda have a daughter, Eva. Bob and Pat have a daughter, Karen. Everyone is doing well.

As advertised in the March edition of the AAS job register (item No. 1156), we are looking for applicants for a RA position.

Al Holm  
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