

IUE NEWS NOTES

Maneuvering Problems - Solved! In the last newsletter we reported a degradation in maneuvering accuracy. Analysis by Bob Panek showed that maneuver errors during the summer were 0.1 - 0.2 % of the length of the maneuver while during the previous winter they were rarely 0.05 %. The large errors caused some problems with identifying and acquiring targets.

Much of the problem was traced to a drift in the gyro calibration, especially #1 gyro, in the attitude control system. The previous calibration was performed before launch, over 4 years ago. We were thus faced with the problem of recalibrating the gyros in flight! A cooperative, three-pronged attack on the problem was initiated by Skip Schiffer from IUE Science Operations, Mike Myslinski from IUE Operations Control, and Mike Femiano from NASA Goddard. After considerable effort, a new set of gyro scale factors were agreed upon and uplinked to the spacecraft on November 21, 1981. The subsequent maneuvers have been noticeably improved. Analysis by Bob Panek shows that maneuver errors are now generally 0.03 % of the maneuver length. This means that typically the target is within 2 arcmin of the center of the FES field and almost never as much as 4 arcmin off. Observers may find their targets with greater ease and reliability - with thanks to all concerned!

Using the New Regional Data Analysis Facilities IUE Users may be interested in taking advantage of the facilities provided by the two new RDAF's (see the related article in this newsletter). In particular, you may wish to use the Goddard facility in conjunction with an observing run. Visitors have found using the facility between shifts or just after an observing run worthwhile for obtaining a quick look at their data or planning the remainder of their runs. If you are interested, please call Skip Schiffer (301-344-8800) to reserve time at the Goddard RDAF. Normal hours are Monday through Friday, 11 am to 7 pm.

The LWP Camera The LWP camera serves as a backup in case of failure in the LWR camera. Ninety two images have been acquired in the last 3 months, allowing further operational experience in using the camera, testing of software designed to cope with the camera's scan anomalies and some calibration work. Use of the camera is still limited due to its scan problems and relatively small degree of calibration. The camera is described in detail in Newsletter No. 15.

IUE Symposium The IUE Symposium "Advances in Ultraviolet Astronomy: Four Years of IUE Research" will be held at Goddard Space Flight Center on March 30 through April 1. Abstracts for contributed papers are due by February 12, 1982. Persons interested in attending the symposium should contact Yoji Kondo (301-344-6247).

Fifth Episode Proposal Review The peer review of the fifth episode proposals was held at Goddard during January 20 through 22. The committee recommendations have been presented to Project Scientist Albert Boggess, who is allocating the available shifts. His recommendations and a budget will then be presented to NASA Headquarters for approval. Notifications of proposal acceptance/rejection will be mailed out by March 1.

A Recent Wavelength Scale Shift A change has been detected in the time dependence of the long wavelength redundant (LWR) spectral format shifts. The change is noticeable primarily in the direction along the dispersion (for high dispersion images) and indicates that LWR spectral format shifts do not follow the present linear predictions. Since current images are processed using the previously determined time dependence, high dispersion LWR images may have systematic errors in wavelength assignments such that spectral features are assigned too short a wavelength. The magnitude of the error appears to have become progressively worse with time ranging from 2-3 km/s in February 1981 to 6-7 km/s at the end of the year. Low dispersion LWR images will show similiar variations in the direction perpendicular to the dispersion which, therefore, should not affect wavelength assignments. No significant changes have been detected in the correlations used for the short wavelength prime (SWP) camera. Work is now in progress on updating the correlations and the mean dispersion constants.

Staff Changes George Sonneborn has joined the Telescope Operations staff as a Resident Astronomer. Dr. Sonneborn comes to us from Ohio State University, where he has worked on model atmospheres of rotating early-type stars. Richard Wasatonic has joined the staff as a Telescope Operator.

A protostar has recently emerged - Al and Gail Holm are the proud parents of a baby girl, Carolyn Jean.

Cathy Imhoff