

# NEWSLETTER

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NO. 24

NOVEMBER 1985

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### IUE ESA NEWSLETTER

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## OBSERVATORY CONTROLLER'S MESSAGE

As most of you will already know, the vacations of the IUE staff were rather brusquely interrupted by the failure of Gyro #3 on August 15. As a consequence of such anticipated failure the European Science program was formally suspended during 2 months for a "Recommissioning" phase of the 2-Gyro-FSS software. That this program suspension was only formal is illustrated by the fact that in this period 40% of the observations, which would have been severely affected by delaying, were still performed.

Although the experience with this "new" IUE is still limited, the S/C performance is essentially back to the level of the original 3-Gyro (old) IUE. Present operations still have a some excess overhead, but it is expected that this will be reduced with time, when the Observatory staff will have developed its usual familiarity with the 2-Gyro-FSS system (more details on page5).

It is worthwhile to point out that the IUE lifetime predictions (beyond 1989) have hardly been affected by the failure of the gyro #3. At the recent 3 Agency meeting it was decided that the Guidance and Control Branch at GSFC - who also developed the 2-Gyro-FSS system - will start the design and development of a backup control system anticipating a possible future gyro failure.

At this time we welcome Fernando Franco, who has taken up duty at VILSPA as SOE. Jürgen Fälker has left IUE to start working on the Ulysses project. We wish him a similarly successful project and all the best to him and his family at his new duty station JPL.

As a last note I would like to draw your special attention to the fact that one can now, for the first time, use the services of the IUE Observatory directly at your home institute: the VILSPA IUE Log on the PDP 11/35 at VILSPA, accessible under ADABAS, can now be remotely addressed (when the EDS #2 is not in use for the Real Time operations). This will allow up to date (2 months) information on all observations made with the IUE spectrographs. Details on this experimental set-up can be found on page 11.



Let me also use this space to reinforce strongly the plea for proper acknowledgement of the use of IUE Data and the identification of individual spectra used in your papers on page 38.

Willem Wamsteker

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NEW PERSONNEL



Fernando Franco has recently joined the Vilspa staff as IUE Spacecraft Operations Engineer. Although primarily a physicist, he has broad experience including computer studies and business administration. After obtaining his degree in Physics, he continued as Assistant Lecturer working on semiconductor surface states and interaction between magnetic transitions and plastic deformation in semiconductors at the universities of Seville and Madrid Autonoma. Since 1978 he has been working more directly with Space projects, first in the Space Division of CASA (Madrid, Spain) and later at ESTEC (Noordwijk, NL). Here he worked in the Spacecraft Technology Department, giving support to numerous projects (EXOSAT, SIRIO2, SPACE TELESCOPE, ULYSSES, ERS-1, ISO and GIOTTO) in the Thermal Control Subsystem. At the same time he was responsible for several research programs in the fields of Cryogenics (ISO oriented) and Thermal Protection Systems for Reentry Vehicles (Hermes oriented). He views his new job with IUE as a welcome opportunity to come back closer to Science.

Mike Barylak who has been at Vilspa as an ESA Fellow working with IGCS for 3 years has now become a fully-fledged member of the Observatory. As resident astronomer excused from real time duties, he will continue to work with image processing systems and data management systems. Users of ADABAS will already be familiar with his work. He is so devoted to the IUE data base that some time ago, he and Carmela Sastre, our indispensable IUE data bank specialist got married.



Departures:- Jürgen Fälker October 1985

## SPACECRAFT STATUS REPORT

### 1. INTRODUCTION

For the first time I am asked to report the IUE S/C status in the IUE Newsletter. I want to take this opportunity, to say "hello" to the readers and I want you to be aware of my commitment to try to maintain the high level of performance of the S/C operations at VILSPA which is largely due to my predecessor Jürgen Fälker to whom we wish all the best in Pasadena where he goes to take care of the ULYSSES operations.

### 2. GYRO #3 FAILURE

The spacecraft lost Gyro #3 on August 17th at 05:03 UT. This failure which makes impossible a 3-axis stabilization using gyroscopes only was previously anticipated and special software was created in order to assure 3-axis stabilization by means of the two remaining gyros (Gyro #4 and Gyro #5) and the digital Fine Sun Sensor (FSS). After Gyro #3 failed, the S/C was put in a safe mode, the scientific operations were suspended and two attempts were made to restart Gyro #6, which has been stuck since 1979, but they did not succeed. No further attempts were made in order not to damage the two remaining operational gyroscopes.

### 3. 2 GYRO + FSS CONTROL SYSTEM

The new 2-gyro + FSS software was loaded onto the OBC (8K processor) and 3-axis stabilization was obtained and attitude was recovered.

A large number of shifts both at GSFC and at VILSPA were allocated to test the new control system and to solve problems as they were arising. Gradually the time allocated to scientific observations was increased and now daily routine science observations are again being performed.

The control with the new system features in high maneuver accuracy and good stability.

The number of possible maneuvers from one target to another is now reduced to three. The sun vector is maintained in the roll axis-yaw axis plane during maneuvers. Therefore only PITCH and SUNLINE (around sun vector line) slews are possible now. These slews provide full capability to maneuver to the desired target and the maneuver themselves are even shorter and more accurate than ultimately with the 3-Gyro system.

#### 4. S/C STATUS

The overall status of the S/C is good. Temperatures have not registered a substantial increase during the last twelve months due to the flattening of the thermal coating absorptance degradation curve and naturally to the fact that a few non-essential units that were not in use have been switched off in order to increase the power margin.

The average power loss between May 1984 and May 1985 was found to be 4.38%.

The spacecraft emerged from the bi-annual eclipse season (nr. 16) in August /September with no difficulties having been noted. The maximum depth of discharge of the two on-board batteries was less than 62%.

Approximately 20.9 kg of hydrazine remain in the tanks at the end of September. Usage rate is less than 0.5 kg/year for the purpose of reaction wheel unloading and orbit correction ( $\Delta V$ ) maneuvers.

F. FRANCO

EUROPEAN QUESTIONNAIRE ON IUE DATA, ARCHIVE AND OPERATIONS

Some 400 questionnaires relating to the International Ultraviolet Explorer satellite were sent out after 7 years of orbital observatory operations. The mailing list consisted of all principal investigators and co-investigators involved in proposals for the 8th year of IUE observing. The questionnaire (10 pages) contained some 20 questions relating to the end product of the IUE project (archive), present science support at IUE observatory, and future operations.

The questionnaire has been presented in a previous IUE 3-Agency meeting report (VILSPA May 1985, page F11-1). The return frequency of slightly over 30% can be considered to represent a strong interest of the community in the questions posed. The return implies that more than 60% of those astronomers who are P.I. on IUE proposals have responded. The approximately 60 institutes from 15 countries represented in the questionnaire returns, represent 38% of all institutes and 52% of all countries with co-investigators on last years IUE proposals (USA is not included in any of these statistics). This indicates that one obtains from these returns a quite representative view of the desires of the European Astronomical Community involved in the use of IUE data for astrophysical research.

We will here give a summary which highlights the most significant results. The full results of the questionnaire, can be requested from the author, for further analysis.

I. REQUIREMENTS AND USE OF EVENTUAL REDUCTION FACILITY AT IUE OBSERVATORY IN VILSPA, ALLOWING EASY ACCESS TO ARCHIVE AND INDIVIDUALISED PROCESSING (INTERACTIVE IMAGE PROCESSING AVAILABLE) .

85% of the respondents consider such a facility useful. From these individuals 81% would make a special visit to VILSPA for archival research. These visits are for 50% expected to be combined with observing visits and will include direct analysis of observing results. The availability of such facility will probably extend an average G.O. visit by 80-100% in duration.

The desire for such a facility is stronger for continental Europeans than for British, however the difference does not appear to be as large as would be expected on the basis of the availability of STARLINK over the past 5 years.

The preferred software in such a facility is clearly related to familiarity of the respondents with a specific software package (39% STARLINK related vs 48% ESO related).

II. FACILITIES AT HOME INSTITUTES

72% of respondents have satisfactory reduction facilities at home institute (compare with 85% considering observatory facility useful; see under I).

79% have access to VAX	
21% have access to HP	not exclusive
20% use STARLINK related S/W	
33% use ESO related S/W	not exclusive
53% use other related S/W	

Main problems for analysis of IUE data are the availability of:

Software:	86%	
IUE Expertize:	59%	not exclusive
Facilities:	45%	

III. ANTICIPATION OF NEED FOR OBSERVATORY REDUCTION FACILITY AND USE OF THE ARCHIVE

65% of the respondents, anticipating the use of an observatory reduction facility, would like to see such a facility extended beyond the operational life of the satellite, (86% of those prefer an extend beyond 2 years after the end of operations).

Similar trends are seen in the use of the IUE archive. The use foreseen for this archive does not indicate a specific preference for what one considers "archival research":

Normal research	36%
Statistical research	16%
Catalogues	9%
Related to future projects	22%
Variability studies	16%

Over all these fields the expected duration of use of the IUE archive is up to 5 years for 32%; 5-10 years for 22%. The time span from 3-10 years is foreseen as the range of use for 74% of the respondents, independent of the specific purpose.

IV. REPROCESSING OF DATA

Of those who will carry out new research projects on archival data (80% of respondents, compare with remarks under I) 69% will do such, independent of reprocessing of the data. On the other hand 79% favors a homogenisation of the IUE data through reprocessing.

No specific preference was indicated for various choices of partial sets of the present full package of IUE data processing products. A very strong desire was expressed for a Merged Log inquiry facility on-line, which could be addressed remotely (90%).

The IUE archive appears to be best located in a small number of centers (69%), most likely since expertise is expected to be maintained this way; 47% would like to have a possibility to address the IUE data archive through remote computer links. These two responses were not mutually exclusive.

V. ARCHIVE TAPE FORMATS

IUE format	67%
Fits format	48%

VI. FUTURE OPERATIONS

With the eye on future possible constraints on S/C operations, 57% of the respondents preferred to retain the format of shift allocation i.e. observing period assigned to a program with G.O. interaction in the observations.

Of the 43% willing to give up the present observation mode, this is for 85% conditional on the coordination of scheduling between the two IUE observatories.



## VILSPA Database - Access and Future Plans

### Introduction

Nearly three years ago we introduced an "interactive facility for consulting the Merged Log of IUE observation at VILSPA" (Depablo, 1982). At that time birth was given to what today we call VILSPA Database, which is the result of a progressive development, where each step was aimed at meeting user requirements and solving problems, often unforeseen.

### Database Management System and Files available

The VILSPA database is currently installed on the PDP 11/35 and is governed by a database management system (DBMS) called ADABAS.

Two files have been available to visiting observers for consultation, the VILSPA IUE log ie. file DBV and an UV wavelength table (file UV). File DBV contains detailed description of IUE images taken both at Goddard and VILSPA and which is similar to the Merged Log except that it holds more information. File UV is an EUV wavelength table from 1100 till 3200A as given by Kurucz & Petreymann (1979).

Now a third file is accessible to the user community, ie. file PIUE, which contains references to publication on IUE observation. This file can be consulted in parallel with file DBV due to a set of common keys like camera & image number, coordinates, object class, etc. Hence one can find out if a spectrum has already been used in a publication or on the other hand can easily identify a spectrum used in an article. Currently this file holds ~6000 records.

### Future Plans

Efforts are being made to enter "homogeneous object identifications" and consistent coordinates in files DBV and PIUE considering the adoption of an IAU nomenclature hierachy. This nomenclature problem arises from the fact that various astronomical disciplines use different catalogues (eg. spectroscopists may preferentially use HD numbers while astrometrists prefer the SAO or AGK3 catalogues.). Since the IUE data are principally

spectroscopic in nature, our nomenclature is inclined to use the primary catalogues of spectroscopic data.

The connection of the PDP 11/35 to the local area network (LAN) of VILSPA enables remote consultations of the VILSPA IUE log. This remote access is offered on a trial basis and is connected via the ESOC LAN to the European packetswitching networks (DATEX-P, TRANSPAC, PSS, DNI, IBERPAC, etc...). Anybody interested in using this facility (eg. for proposal preparation) is invited to contact the RA in charge of the VILSPA database (ie. Dr. M. Barylak).

And as a database may be defined as "a collection of data on a defined range of subjects together with all the information needed to access that data" (I. Palmer, 1975), we will provide this access information in one of our next communications.

We would like to remind users who have neither access to computers nor networks that there still exists the possibility of a postal access to the VILSPA database, which is thoroughly described in the ESA IUE Newsletter No. 17, page 9.

#### References

- D. Depablo, 1982: ESA IUE Newsletter No. 15, p. 52.
- Kurucz, Petreyman, 1979: Smithon. Obs. Report 362
- I. Palmer, 1975: Database Systems: A Practical Reference, CACI Inc., London, England.

Michael Barylak  
10-Oct-1985

PRELIMINARY ANNOUNCEMENT

NEW INSIGHTS IN ASTROPHYSICS

(8 years of Ultraviolet Astronomy with IUE)

An international symposium sponsored by ESA, NASA & SERC

Dear Colleague,

Alive and well, IUE will soon celebrate its 8th birthday as a successful Ultraviolet Observatory. It is a good opportunity to review its tremendous achievements illustrated by the more than 750 articles published so far in the main scientific journals. ESA, NASA and SERC are therefore pleased to announce a joint IUE Conference to be held at the University College, London from 14 to 16 July 1986.

It is planned that a number of invited reviews will be presented on topical subjects where IUE has made an important impact: Comets, the Io Torus, Chromospheres and Winds, Mass Loss from Hot Stars, Novae, Evolution of Interacting Binaries, Galactic Haloes, Active Galactic Nuclei and the Next UV Mission. Other contributions will be through poster papers, although where they are particularly relevant to the subject of the reviews and the ensuing discussion, oral presentation may be requested.

In order that we can assess the logistical requirements, please complete the attached form and return it to Dr. D. Stickland (Secretary of the LOC) if you plan to attend no later than 11 January 1986. Feel free to copy this letter to colleagues who may not have received one. Please note that to cover some of the social and organizational expenses, a registration fee of about US\$40 will be levied.

The local organizing committee is composed of:

Dr. A.J. Willis  
Dr. I.D. Howarth  
Dr. D.J. Stickland (Secretary)  
Dr. J. Clavel

Name: .....

Institution: .....

Address: .....

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Telephone: .....Telex:.....

Yes, I do intend to come to the 1986 IUE Conference.

I do/do not plan to present a poster paper.

Signed:.....Date:.....

-----

This form to be returned by 11 January 1986 to:

Dr. D.J. Stickland  
Secretary of the LOC  
The 1986 ESA/NASA/SERC IUE Conference  
Rutherford Appleton Laboratory, R 25  
Chilton, Didcot, OX11 0QX  
United Kingdom

ANNOUNCEMENT OF AN INTERNATIONAL CONFERENCE

PHYSICS OF FORMATION OF LINES OUTSIDE LTE

Dear Colleague,

We wish to inform you that we are planning to hold an international meeting on the "Physics of Formation of Fe II Lines Outside LTE", to be held in Capri (Naples), Italy, 4-8 July 1986.

Absorption and emission lines of ionized iron are present in the spectra of a wide variety of different astrophysical objects, and their intensity can be used as a diagnostic of the physical conditions in different regions of the solar and stellar atmosphere, in stellar winds, circumstellar matter, as well as in active galactic nuclei.

Many investigations are currently in progress concerning Fe II line formation outside LTE, both theoretically and observationally, and many interesting results have been obtained in recent years, especially using IUE data. Therefore, it seems to us extremely opportune and timely to hold an international meeting with the aim of bringing together experts of different fields to discuss the problem of Fe II (and of other ionized metals) in Astrophysics. The subjects to be discussed include:

1. Observations of Fe II in the spectrum of different objects such as the Sun, stellar chromospheres, stellar winds, accretion regions (binaries and young stars), ejecta, active galactic nuclei, etc.
2. Basic atomic data.
3. Methods of empirical analysis.
4. Radiation transfer and synthetic spectra.

The Scientific Organizing Committee includes: B. Baschek, A.M. Boesgaard, M. Friedjung, S. Johansson, M. Joly, C. Jordan, H. Netzer, H. Nussbaumer, M. Rigutti and R. Viotti (Chairman). A. Vittone is the chairman of the Local Organizing Committee.

For more details please contact:

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Istituto Astrofisica Spaziale  
CP 67, I 00044 Frascati,  
ITALY  
Tel.: +39-6-9425655  
Tlx.: 610261

## Calibration of the LWR at Reduced UVC Voltage

### 1. Introduction

The LWR flare anomaly has now developed to the stage at which only images of very short exposure times (~ a few minutes) are completely free of the bright patch which on long exposures contaminates 30% or more of the image area (see ESA IUE Newsletter no. 22, p. 19). Fortunately the flare can be "turned off" by reducing the operating voltage of the LWR ultraviolet-to-visible converter (UVC) from the normal value of 5kV to 4.5 kV. In this way it should be possible to obtain flare-free images for a further 18 months or more, after which time it may be necessary to make a further reduction in the UVC voltage. Current project policy is to allow guest observers to use the LWR (at the lower UVC voltage) if they provide sufficient scientific justification. However, they must be prepared to lose the time required to switch the camera on and off during their shift (about 30 minutes).

Unfortunately, reducing the UVC voltage also reduces the camera sensitivity. It is therefore necessary to investigate the recalibration requirements at the lower operating voltage. An earlier study (ref. 1) had indicated that the 5/4.5 kV gain ratio was about 1.36. In this report a detailed analysis is presented in which an order-by-order comparison of the 5/4.5 kV gain ratio has been made using 11 high dispersion spectra (the 5/4.5 kV gain ratio is the factor by which the 5 kV exposure time must be increased to obtain the same DN level at 4.5 kV). The results of a similar comparison of low dispersion spectra are also given.

### 2. Procedure

Corresponding IUESIPS extracted orders in 2 high dispersion spectra of Zeta Cas, taken with the UVC voltage reduced to 4.5 kV and the standard exposure time increased by a factor of 1.36, were averaged and binned at 3 Å intervals. Mean, binned orders were also derived from 2 spectra of the same star taken with the normal 5 kV UVC setting and standard exposure time. Each resultant 4.5 kV order was then ratioed to the corresponding 5 kV order. Similar order ratios were also derived from averaged 4.5 and 5 kV spectra obtained with double the 100% exposure times in order to increase the signal/noise in the outer orders.

### 3. Results and Discussion

#### I. High Dispersion

Examples of the order ratios are given in Figures 1 and 2. In Figure 1 (100% exposure) every 5th order is plotted from 73 to 118 inclusive (wavelength decreases with increasing order number), while in Fig. 2 (200% exposure) every order is plotted in the range 72-81 inclusive. The faint lines superimposed on the order ratios show the unity levels. The separation between consecutive lines corresponds to a deviation of 30% from unity.

No significant non-uniformity in the gain ratio is evident in these plots, either along the orders or from one order to another. Deviations of the 3 A bins from unity are generally only a few % except for the extreme high and low orders, or at the ends of the orders, where signal/noise is reduced.

The mean of the 3 A bin ratios in each 4.5/5 kV order ratio was derived for 3 pairs of averaged 4.5 and 5 kV spectra. The procedure was repeated on a control set in which all 4 spectra were obtained at 4.5 kV. The results for the full range of high-dispersion orders are plotted against order number in Figs. 3, 4, 5, and 6. Apart from the high orders ( $> 115$ ), which have relatively low signal/noise, the deviation from unity is generally very small. However, there is a clear non-random component in the distribution of points in the sense that the 4.5/5 kV gain ratio is slightly lower in the outer orders. This is a reproducible result apparent in all cases except that of the control spectra (Fig. 6) and must be considered real. If the gain ratio is normalised to 100% over the order range 86-105 then it falls gradually to 96% at order 72, the longest wavelength order. At the high order end there is a similar, but possibly somewhat larger effect, although the magnitude of the trend is less clear due to the reduced signal/noise.

In order to check whether the gain ratio exhibits similar behaviour parallel to the orders, 14 order ratios (77-90) from the set of spectra used for Fig. 3 were averaged. The result (Fig. 7) shows that a similar variation in gain ratio may also occur along the orders, but the magnitude is less than 4% at maximum. However, a similar check made on the set of spectra used for Fig. 5 did not reproduce this result (Fig. 8).

The means of the order ratios plotted in Figs. 3 and 5 are 0.988 and 0.979 respectively. The exposure times used were 28.5 secs (4.5 kV) and 21 secs (5 kV). Correcting for OBC quantisation and camera dead-time the ratio of the actual exposure times is 1.355. Hence the mean 5/4.5 kV



gain ratio from these data is  $1.378 \pm 0.01$ . If this mean value were adopted as an invariant calibration factor, then ignoring the slight gain ratio variation across a spectrum would incur only a very small error (<2%) over most of the spectral range, with the exception of the high orders, 115-125, where the error might be ~ 5%.

## II. Low Dispersion

An order ratio for low dispersion, in 50 A bins, was derived in the same way as for high dispersion orders (Fig. 9). The two 5 kV spectra used for Fig. 9 were themselves ratioed to produce a comparison control plot (Fig. 10). The deviation of the 50 A bin ratios from unity in Fig. 9 is no greater than that seen in the control plot and there is no evidence of any wavelength dependence of the gain ratio. After correction for OBC quantisation and camera dead-time the ratio of the 4.5/5 kV exposure times is 1.371. In the good signal/noise range 1860 - 3200 A the mean of the 50 A bins in Fig. 9 is 1.004. Therefore the gain ratio from the low dispersion data is 1.366, which agrees to within 1% with that derived from high dispersion data.

## 4. Conclusions

1. In high dispersion the 4.5/5 kV gain ratio appears to vary slightly from order to order in the sense that it decreases from the middle orders towards the edge of the image. The maximum deviation is around 5%. There is some evidence that a similar variation occurs along the orders.
2. The mean gain ratio derived from the optimally exposed high dispersion spectra used in this study is  $1.378 \pm 0.01$ . Use of this value as an invariant calibration factor would introduce a small error (<2% over most of the spectral range) due to the slight non-uniformity in the gain ratio. The error for the highest orders (115-125) would be somewhat larger (~ 5%).
3. The gain ratio derived from low dispersion data agrees to within 1% with that derived for high resolution. There is no evidence of any variation of the gain ratio along the low dispersion order.

## REFERENCE

1. Harris, A. W., 1984, Report to the IUE 3-Agency Meeting, ESOC, May 1984.

LWR (17477+17479)/(17473+17475). 4.5/5 kv ORDER RATIOS, 3 Å BINS.

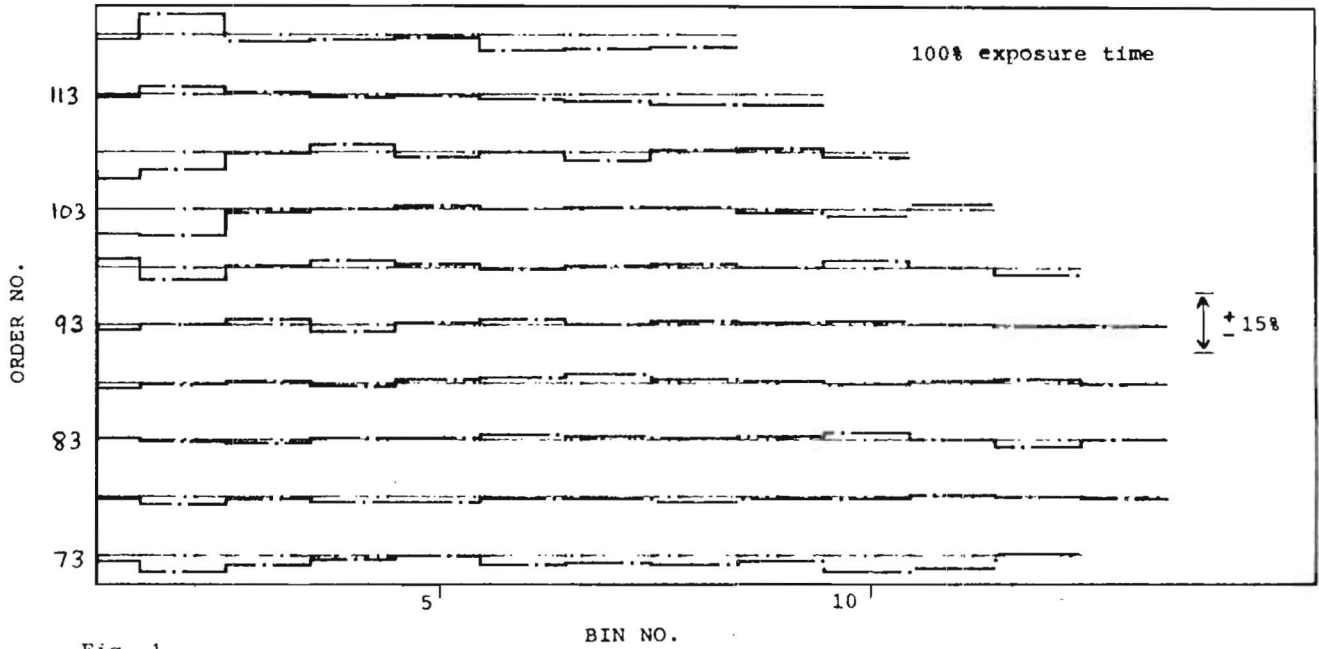


Fig. 1

LWR (17478+17480)/(17474+17476). 4.5/5 kv ORDER RATIOS, 3 Å BINS.

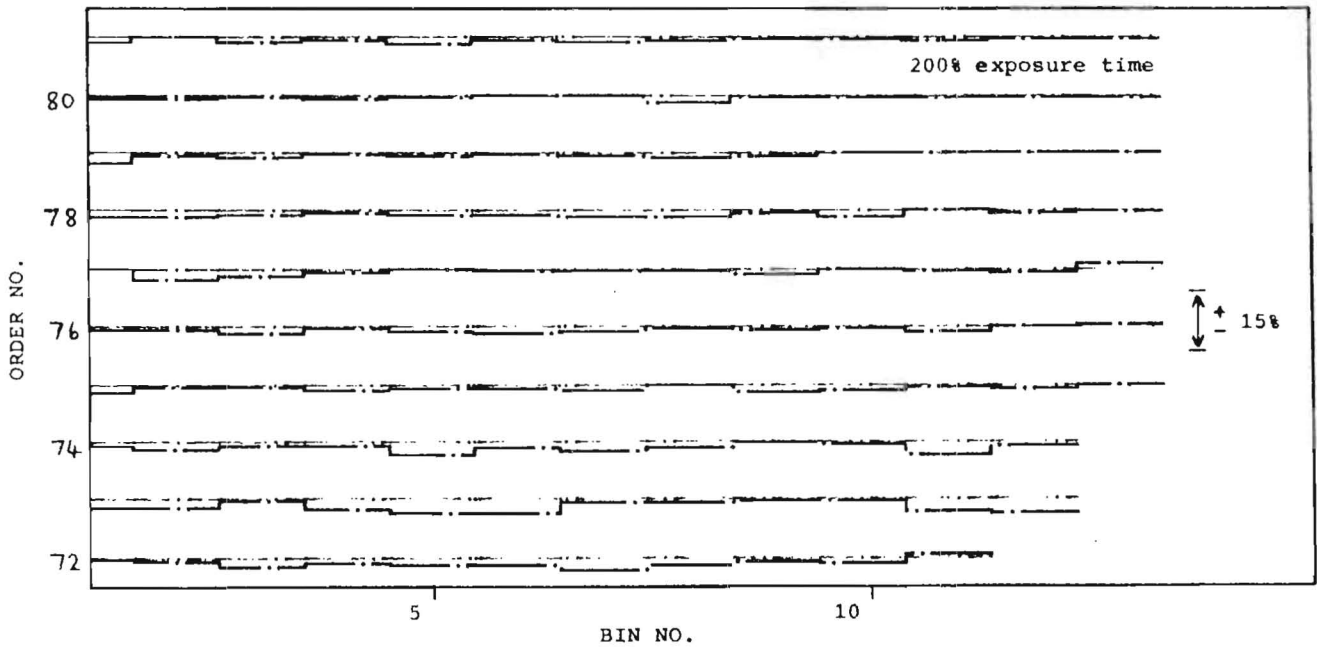


Fig. 2

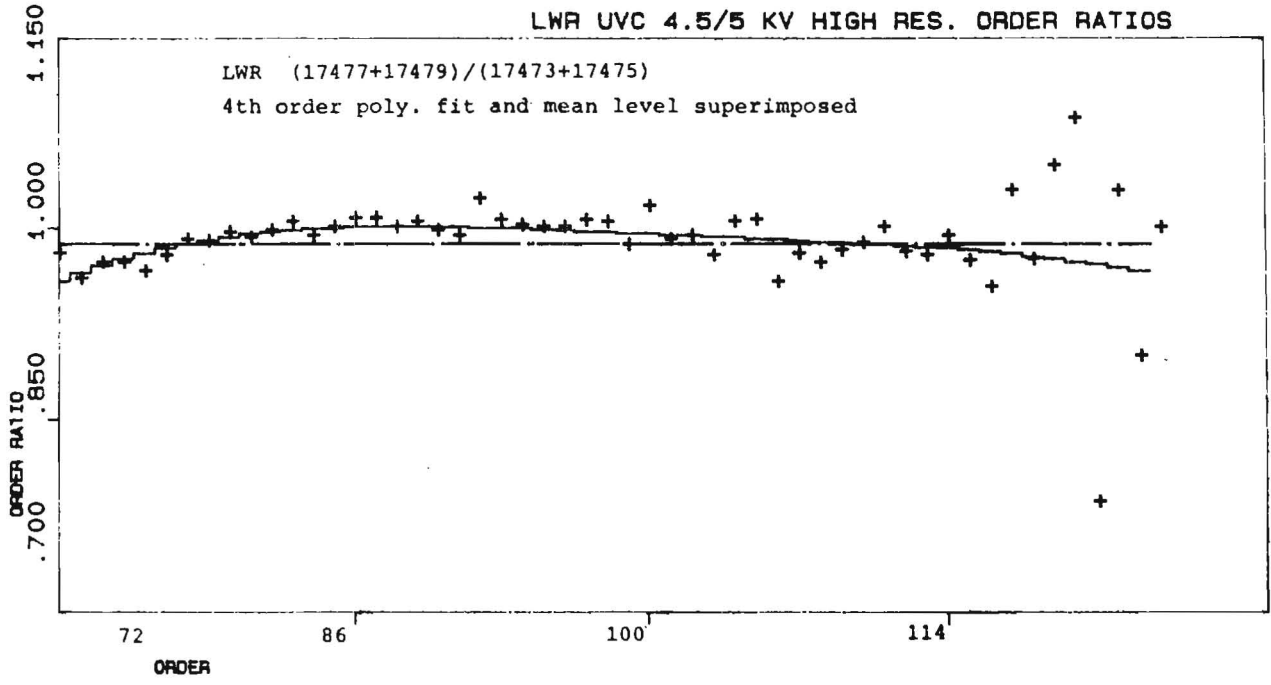


Fig. 3

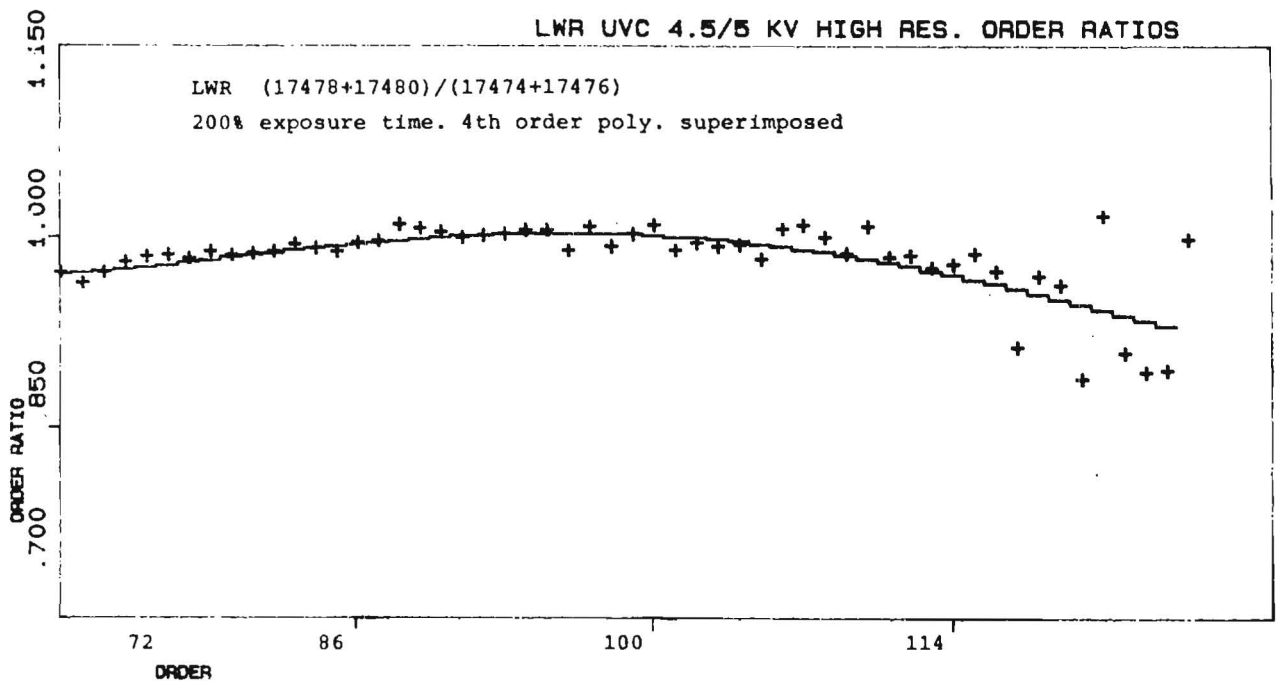


Fig. 4

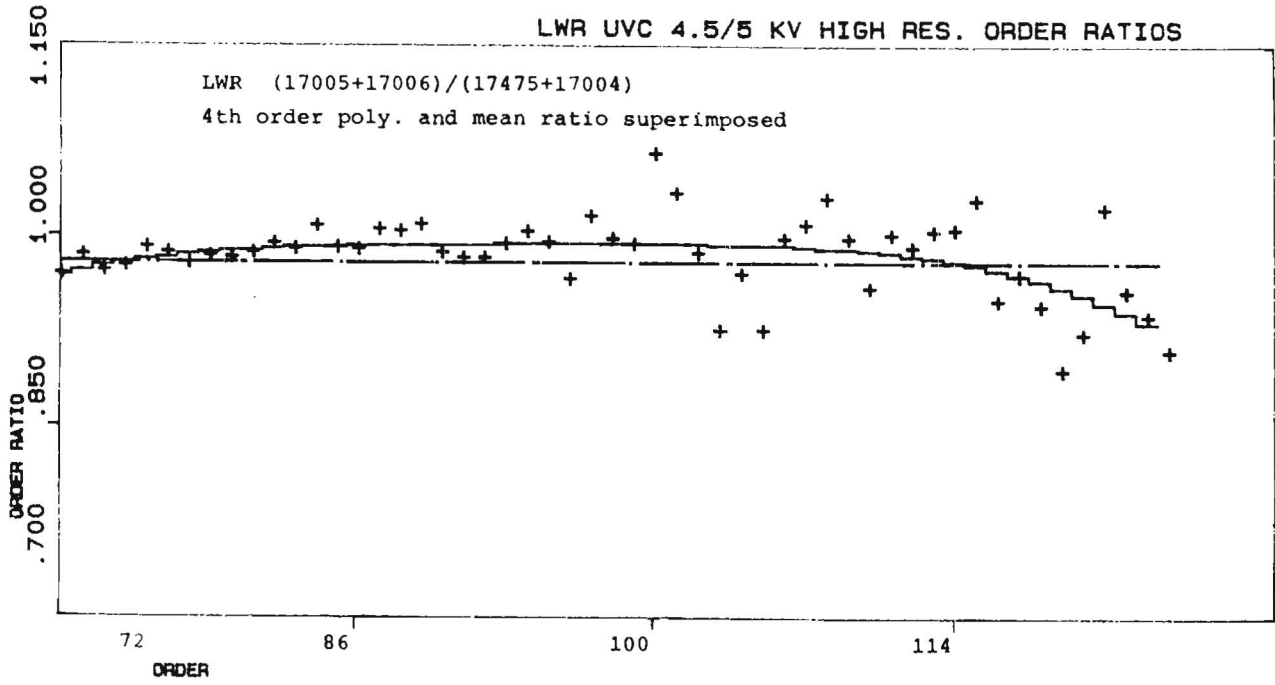


Fig. 5

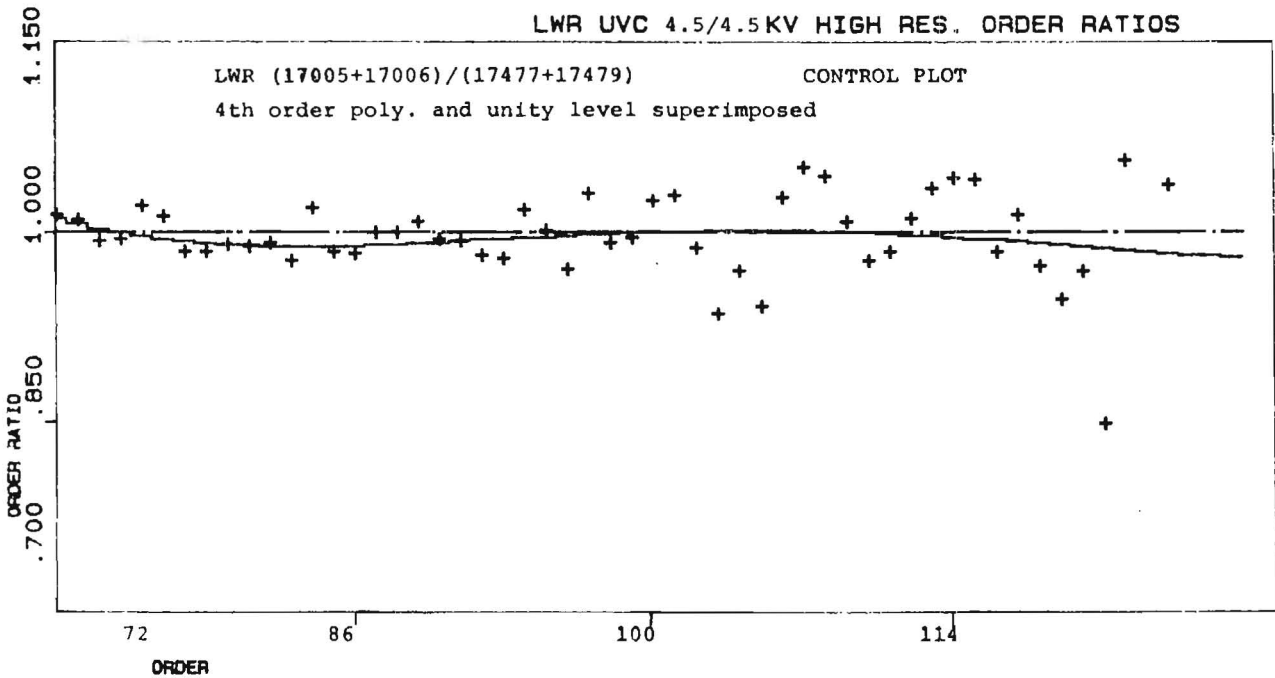


Fig. 6

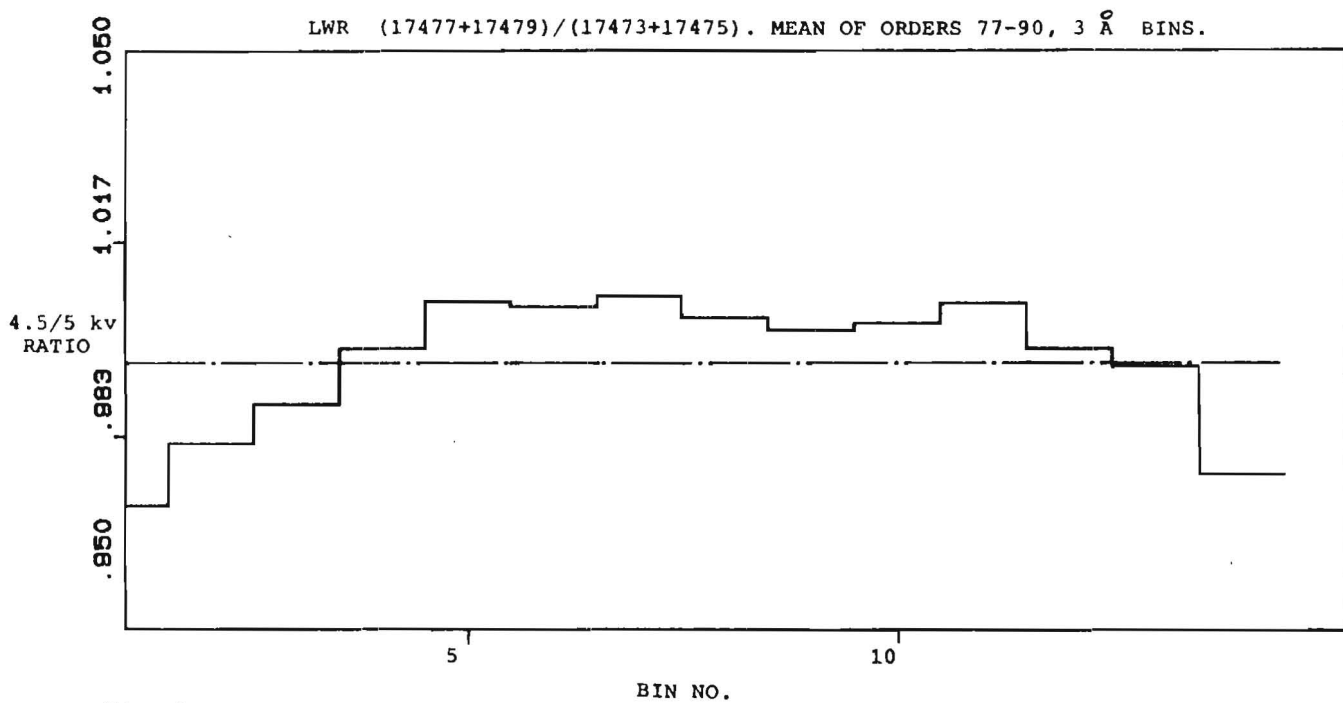


Fig. 7

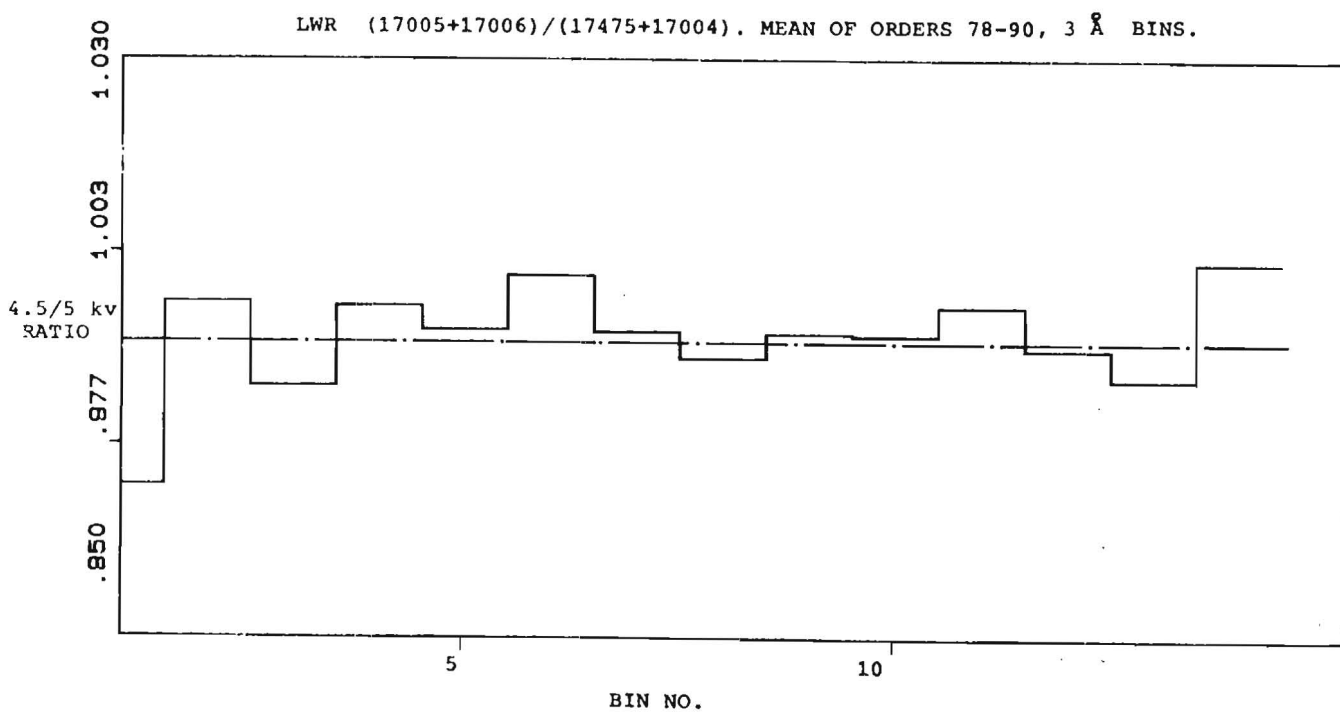


Fig. 8



## Flux Adjustment by Self-Modeling of IUE Images:

An accurate method to extract IUE high resolution spectras

### Introduction

It is well known that the fluxes given in the 3rd file of IUE high resolution standard software (IUESIPS) are affected by overlapping of orders that tends to overestimate the background. Ramella et al. (1983) proposed a solution. They used a bi-dimensional deconvolution with filtering and gained that way both a better effective resolution in  $\lambda$ , and, with the narrowing of the orders, a better determination of the background. The choice of the filter used in such a method is very important and the precise knowledge of the Point Spread Function (PSF) is required to derive unambiguous results. Another way is chosen here since the PSF may vary from one image to another, upon parameters such as the exposure time. The method described here yields, as a by-product, a good estimate of the flux in not too heavily saturated spectral regions.

In the following, the reader is assumed to be familiar with IUE high resolution images and the principles of the method employed by standard IUESIPS software (Bohlin et al. 1982), discussed in a preliminary paper by Borsenberger (1983).

Figure 1 illustrates an idealised overlapping situation. Hereafter (figure 2) the x-direction is inclined at  $\pi/4$  from the scanning direction (this is for LWR Images, whereas LWP and SWP are inverted left to right to follow the same pattern).

Some other drawbacks may arise with the use of IUESIPS:

- The predicted position of the orders may differ from the actual one, thus increasing the effect of overlap on net fluxes.
- The PSF may vary from the center of an order to the ends, and the fixed-length pseudo-slit used in IUESIPS ignores more flux as it approaches the target edges.

The software proposed here starts from the 2nd file (photometrically corrected image), and does not perform any software rotation so as not to degrade the original information. It uses non linear fitting with precise modeling for pixel illumination.

1/ Some Mathematics

Let  $I$ , a monochromatic signal at wavelength  $\lambda$  be spread along  $x$ , following a gaussian law :

$$S_{\lambda}(x) = \frac{I(\lambda)}{\sqrt{2\pi}\sigma} \exp\left(-\frac{(x-x_0)^2}{2\sigma^2}\right) \quad (1)$$

where  $x_0$  is the position of the center of the order,  $\sigma$  the order width. The unit used is the pixel-diagonal. The contribution of  $I(\lambda)$  to the illumination of a pixel lying between  $j$  and  $j+1$  will be, taking into account the shape of the pixel:

$$C_j = I(\lambda) F_j(\sigma, x_0) = E I(\lambda) \left\{ \frac{\sigma}{2\pi} \left[ \exp\left(-\frac{(j-x_0)^2}{2\sigma^2}\right) + \exp\left(-\frac{(j+1-x_0)^2}{2\sigma^2}\right) - 2 \exp\left(-\frac{(j+1/2-x_0)^2}{2\sigma^2}\right) \right] + \frac{1}{2} \left[ (j-x_0) \left\{ \operatorname{erf}\left(\frac{j-x_0}{\sqrt{2}\sigma}\right) - \operatorname{erf}\left(\frac{j+1/2-x_0}{\sqrt{2}\sigma}\right) \right\} + (j+1-x_0) \left\{ \operatorname{erf}\left(\frac{j+1-x_0}{\sqrt{2}\sigma}\right) - \operatorname{erf}\left(\frac{j+1/2-x_0}{\sqrt{2}\sigma}\right) \right\} \right] \right\} \quad (2)$$

where the constant  $E$  stands for pixel efficiency. One could see Borsenberger (1983) for more details here.

Considering now all orders, superscripted  $(n)$  affecting the pixel  $j$ , its level of illumination  $L_j$  should be, if the noise is not taken into account:

$$L_j = \sum_n I_{\lambda}^{(n)} F_j(\sigma^{(n)}, x_0^{(n)}) + C B_k \quad (3)$$

where  $b_k$  is the background level, supposed locally constant, and  $C$  a constant equal to  $E/4$ .

On the image we measure the actual illuminations  $M_j$ , let  $G$  be the sum of squares of the differences.

$$G(I_{\lambda}(n=1\dots n_2), \sigma(n=1\dots n_2), x_0(n=1\dots n_2), b_k(n=1\dots n_2)) = \sum_j (L_j - M_j)^2 \quad (4)$$

We will search for the set of parameters  $(I, b_k, \sigma, x_0)$  minimizing  $G$ . We will take advantage of the fact that, in practice only 3 orders may be considered at a time, and that  $\sigma$ ,  $b_k$ , and  $x_0$  vary smoothly. Moreover, I have checked that one can proceed by iteration, treating one order at a time, subtracting from  $M_j$  the estimated contributions of adjacent orders.

As the problem is non-linear, we have to search by iteration in a 4-



dimensional space, but two of the variables act linearly ( $b_k$  and  $I$ ). This implies that, once the two non-linear variables are fixed, the two others are completely determined by the least-square condition. That way, we can make a search in a 2-dimensional space, which is done using a gradient algorithm, with parabolic approximation and analytic calculation of partial derivatives.

## 2/ Strategy

The software proceeds in 2, 3 or 4 phases explained below. The flow-chart is shown in figure 3.

### 2.1 Find position

As  $x_0$  is a nonlinear parameter, it is necessary to have an estimate of it. A first guess of positions is made visually on a cross-cut located in the center of the image, is smoothed, and used to start minimization. Then the result is used, knowing the mean inclination of orders on the  $y$ -direction, to determine the starting positions for the next cross-cut.

As the presence of spikes, microphonics, or other undesirable things (such as broad deep lines, for this particular aim) may lead to misleading position, a weighted polynomial fit of the relation between the order number and its location is made so that rejection of unreliable positions is performed.

Then positions are collected order by order and a weighted polynomial fit with rejection is performed along  $y$  for  $x_0$ ,  $\sigma$ , and  $b_k$ . The presence of "wiggles" on order position imposes the use of high order polynomials (usually 16 terms), while  $\sigma$  is conveniently fitted with 4 terms, and  $b_k$  with 6 terms.

In order to reduce the effects of noise this phase uses cross-cuts averaged 4 by 4, projected along  $y$ . This affects the position only by second order terms (i.e. local curvature of the order, as first order terms cancel each other, leading to completely negligible error. But as dispersion does not follow exactly the  $y$  direction this manipulation tends to slightly overestimate  $\sigma$ . This is usually still negligible, but in the case of very narrow order width, it has to be corrected with the often by-passed second phase described below.

### 2.2 Determining the precise width

We will now consider the position of orders as fixed, and determine just the width  $\sigma$ . The method is almost the same, except the search is made

in a one-dimensional space and cross-cuts are no longer averaged. As above the results are fitted order by order with a polynomial.

### 2.3 Determining background

At this time we have a linear problem, as only  $I$  and  $b_k$  remain unfixed, consequently a direct method is used, and then results are smoothed as above.

### 2.4 Adjusting fluxes

Up to now, we have implicitly supposed that light of a particular  $\lambda$  spreads perpendicularly to the order, a convenient over-simplification. The two-dimensional pattern involved (PSF) cannot be derived from the data. As the order width varies from an image to another, we may infer that this PSF, determined for some particular observations, is not strictly constant. The less dramatic hypothesis one can make on this point is to assume the PSF to be circularly symmetric. Let us call  $y_0$  the abscissae in the dispersion direction associated with  $\lambda_0$ , we have for the PSF:

$$S_{\lambda}^{(n)} = \frac{I_{\lambda_0}^{(n)}}{2\pi\sigma} \exp [-(x-x_0^{(n)})^2 + (y-y_0^{(n)})^2] / 2\sigma^2 \quad (5)$$

If we suppose, for the sake of simplicity, that  $\sigma$  is locally constant, and that the orders are perpendicular to cross-cuts, the global influence of an order may be evaluated as follows:

$$B^n(x, y_0) = \frac{1}{\sqrt{2\pi}} \exp [-(x-x_0)^2 / 2\sigma^2] \sum_j \frac{I_j^{(n)}}{\sqrt{2\pi}} \exp [-(y_0 - y_j^{(n)})^2 / 2\sigma^2] \quad (6)$$

Which is very similar to (1),  $I(\lambda)$  being replaced by a sum along the order. We can then proceed the same way as in the preceding phases, apart from the fact we have to wholly compute an order before subtracting its influence on nearby pixels.

Theoretically, this may be applied to the spread of the signal along dispersion, but here the distances are much shorter, the numerical behaviour is completely different, the results are vulnerable to noise (in fact this would be like a de-convolution).

### 2.5 Wavelength

The software presented here does not re-calibrate  $\lambda$ , it uses the fact that its final step is strictly the same as that of the 3rd file of IUESIPS. It performs correlations with the "Net Not Ripple Corrected" data

of IUESIPS, determines the best fit and subjects it to an eye check and interactive correction (only necessary in particular cases). The corresponding wavelength of IUESIPS are then adopted.

### 3/ Results

The software has been applied to a lot of IUE images which have permitted us to define more clearly its possibilities.

Figure 4 is an example of a display plotted by SEEFIT, showing the results of phase 1 (MINIUE), with the corresponding polynomial fit (dashed lines). To clarify the figure the position is corrected from the linear term, so that the complexity of the position of an order can be appreciated. This particular case here is far from being extreme, as fluctuations in position increase as one get closer to face plate edges, that is for low order number.

Figures 5 (IUESIPS) and 6 (This software) illustrate the improvement for an intermediate order, on the background determination. The effect would be more important on higher orders, but we do not have up to now sufficiently exposed images at our disposal.

Figures 7, 8, and 9 illustrate the possibility of restoring the fluxes in presence of saturation. Figure 7 is a spectra of HD60178 over-exposed (3 min), the saturated regions are hatched on the top of the picture, the use of extrapolated ITF is marked by a square. Figure 8 is the spectrum obtained by the present software with the same image, which coincide with the preceding one in heavy line cores. Figure 9 is a well exposed spectrum (30 s) of the same star, which shows excellent agreement with Figure 8.

This software does not work on too faint orders; these are lost during order tracking if nearby orders are also faint. As a consequence it cannot work on emission line objects, because if peaks are well exposed, orders are too weak. It is moreover necessary, for the order tracking to work well to use a sufficient quantity of orders (minimum 15) and this leads to a significant CPU time (30 min of VAX 11-780). These drawbacks may be dropped in a further version of MINIUE... if I get the time.

### 4/Machine dependency

The commented FORTRAN code, written for VAX is available on tape, and should work on any computer with virtual memory (there is no special call to VMS). A complete description in English will be available soon.

Since this software has been built up first on a 16-bit mini-computer (read-only virtual memory is then simulated in FORTRAN to store the image) it is possible to adapt it back to such a machine.

#### 5/Acknowledgements

I am indebted for many fruitful discussions on the project philosophy to C. Catala who presented with patience and cleverness the User point of view. I have to thank Dr F. Praderie and P. Couturier who have made this work possible. It is a pleasure here to thank Dr C. Harvey for help in the correction of the original pidgin English and Dr A. Talavera for the final revision.

J. Borsenberger

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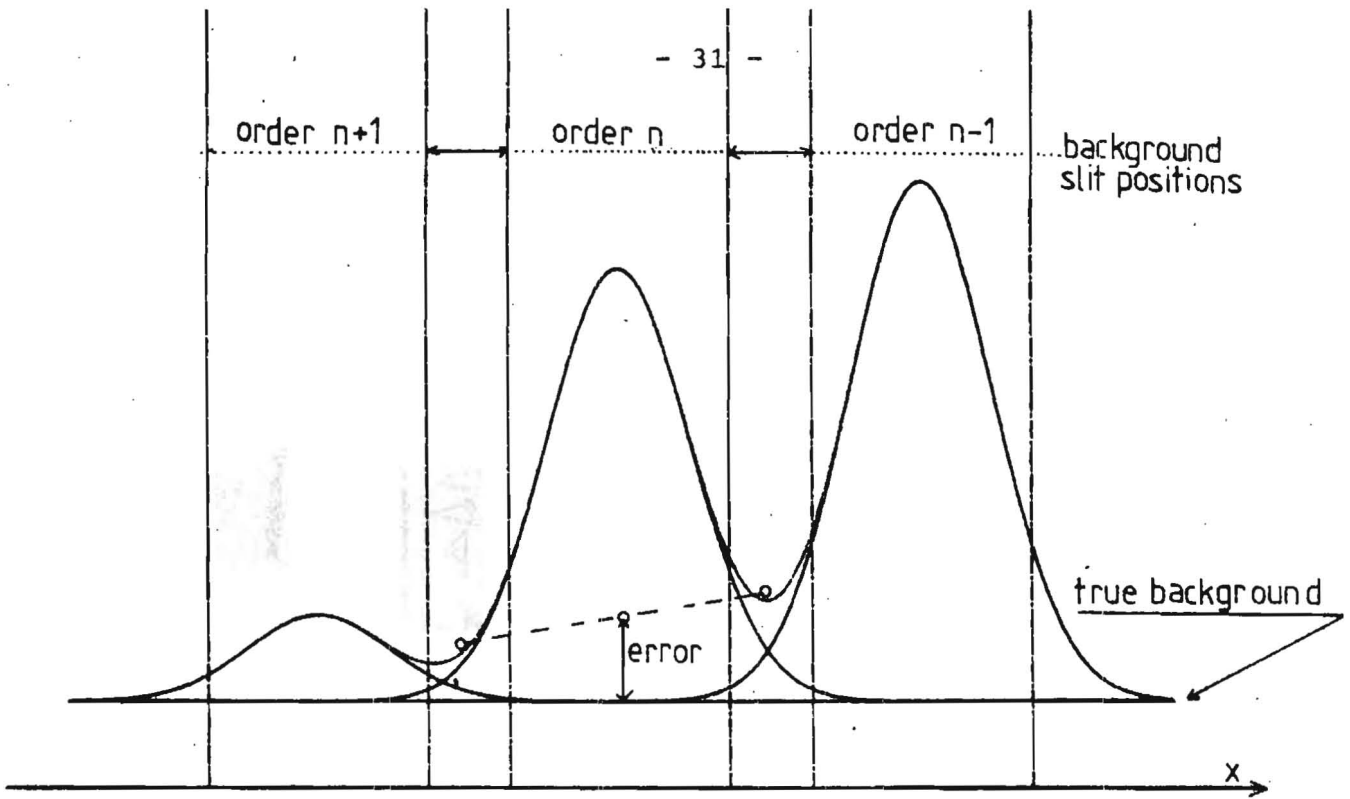


figure 1

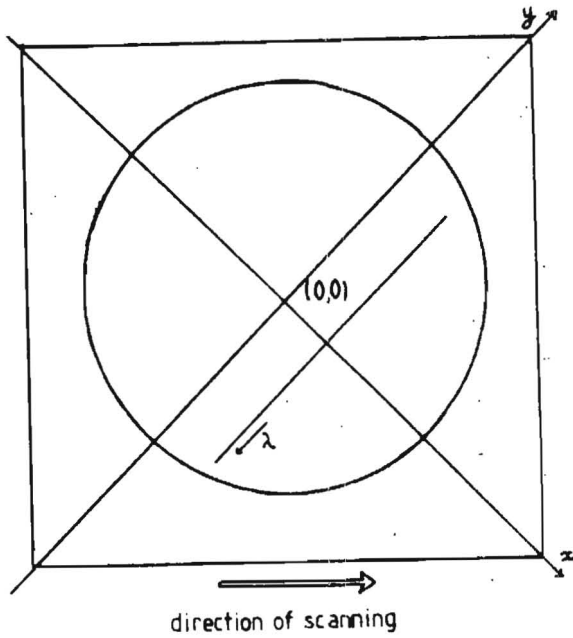


figure 2

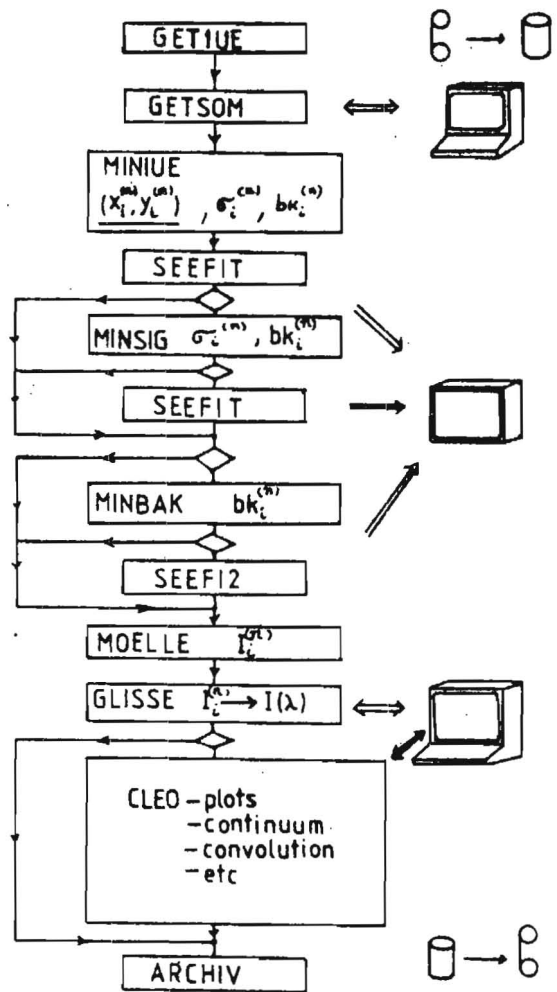


figure 3

33

FN  
 20000.  
 10000.  
 0.

INTENSITY

0.  
 2000.  
 4000.  
 6000.

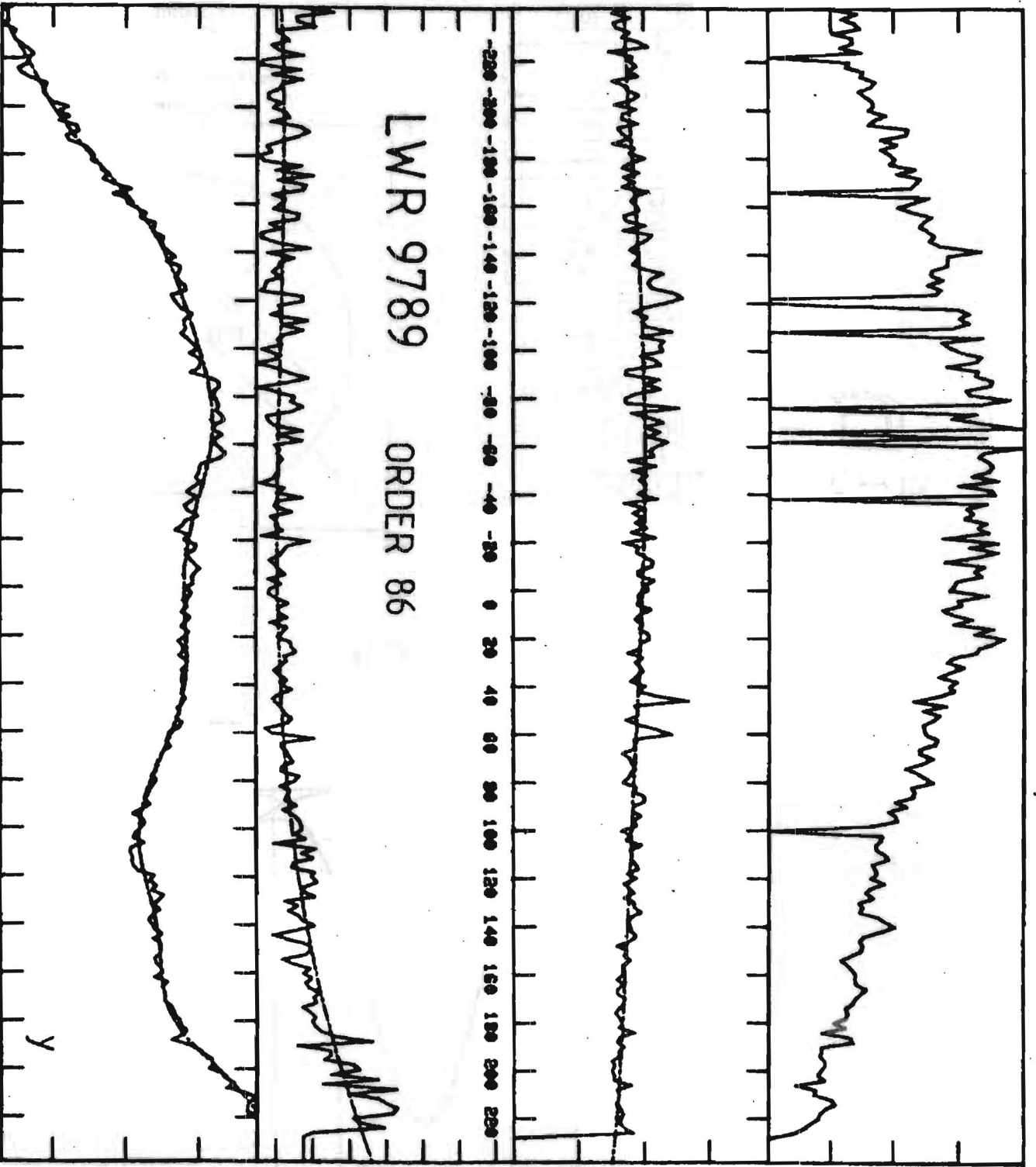
BACKGROUND

0.  
 1.500  
 1.500  
 1.400  
 1.300  
 1.000  
 0.800  
 0.600

SIGMA

X  
 441.0  
 440.0  
 439.0

POSITION  
 SLOPE 0.231



DIXON D.

FIGURE 5

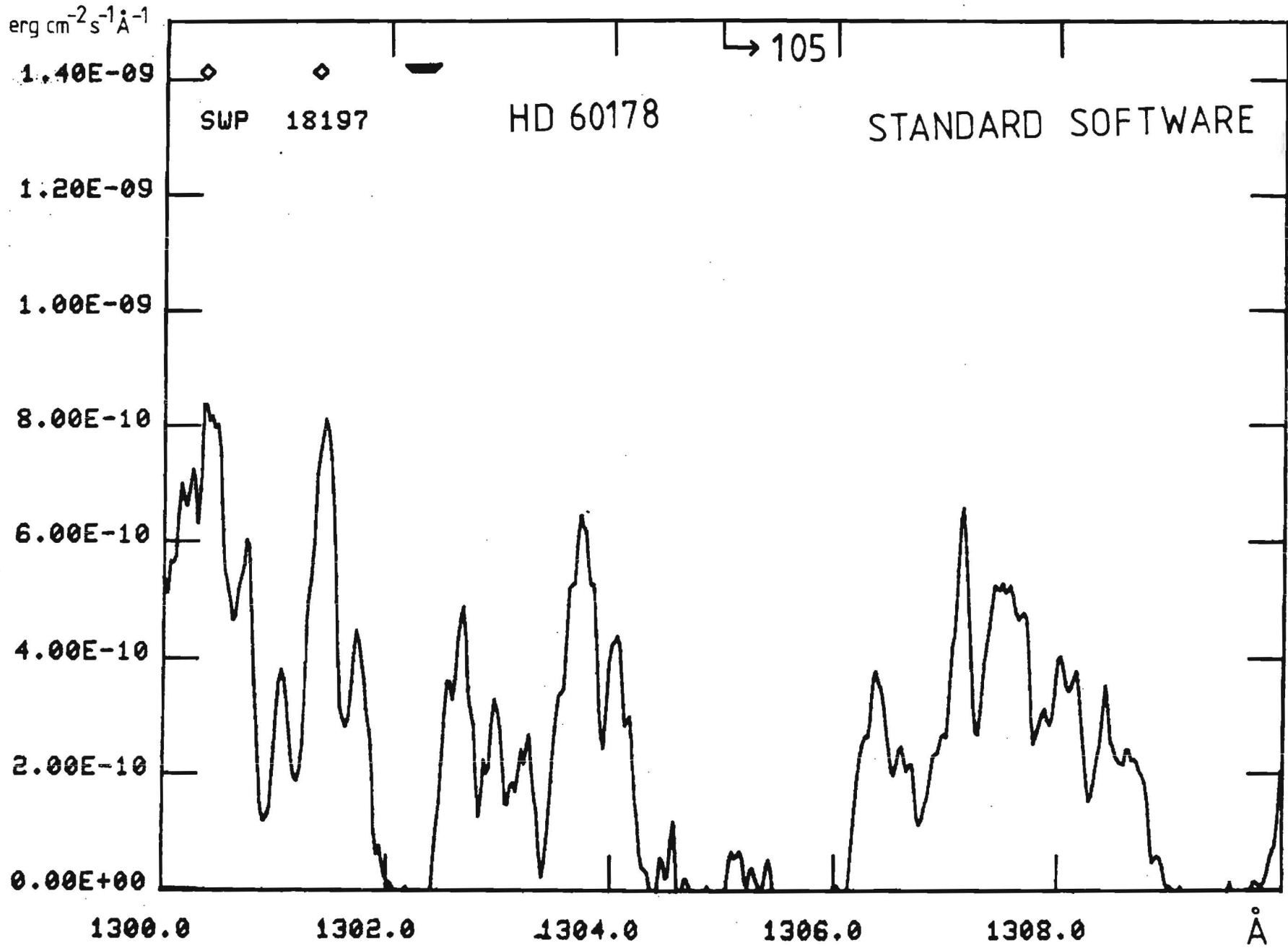
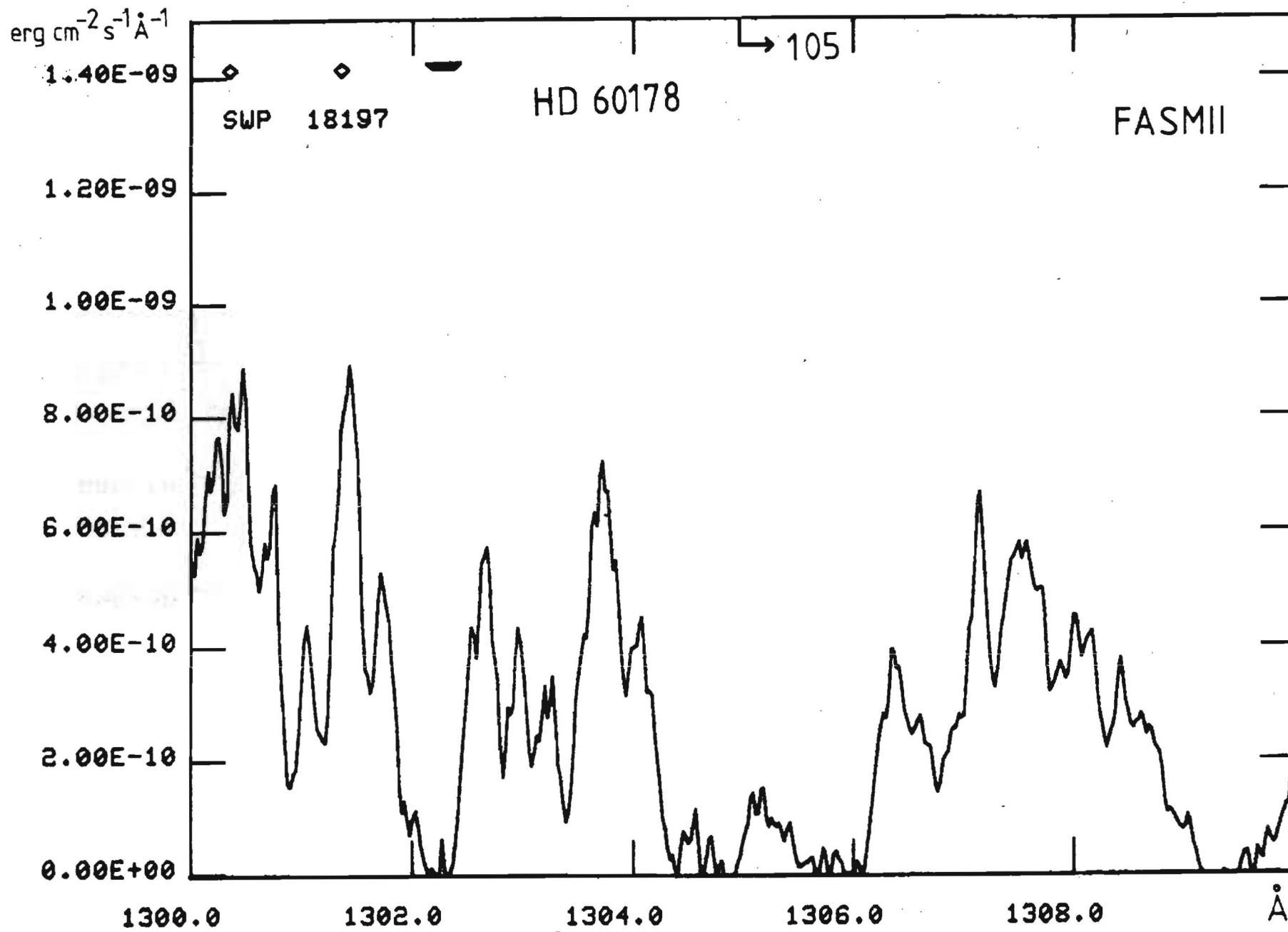


FIGURE 6





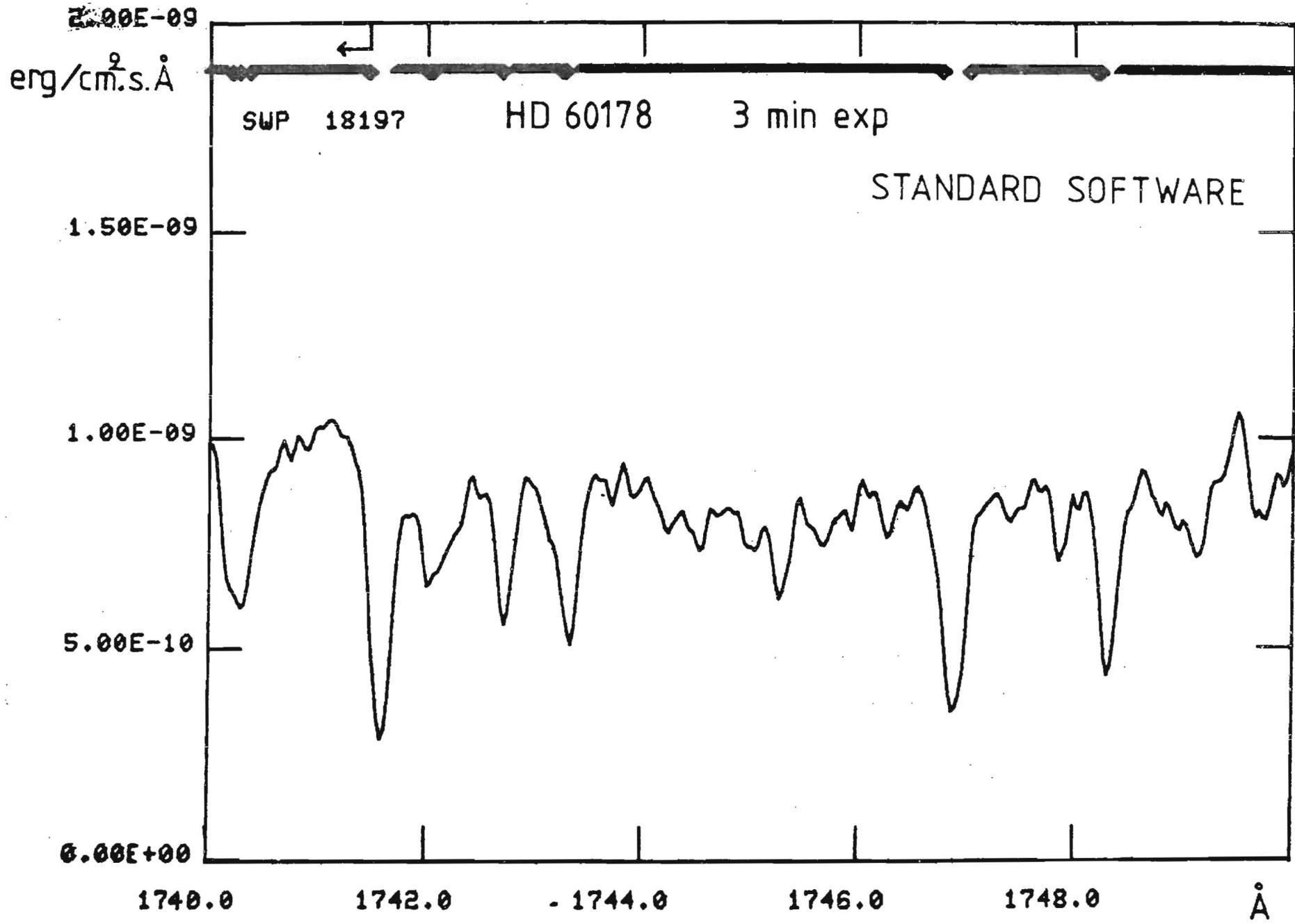


FIGURE 7

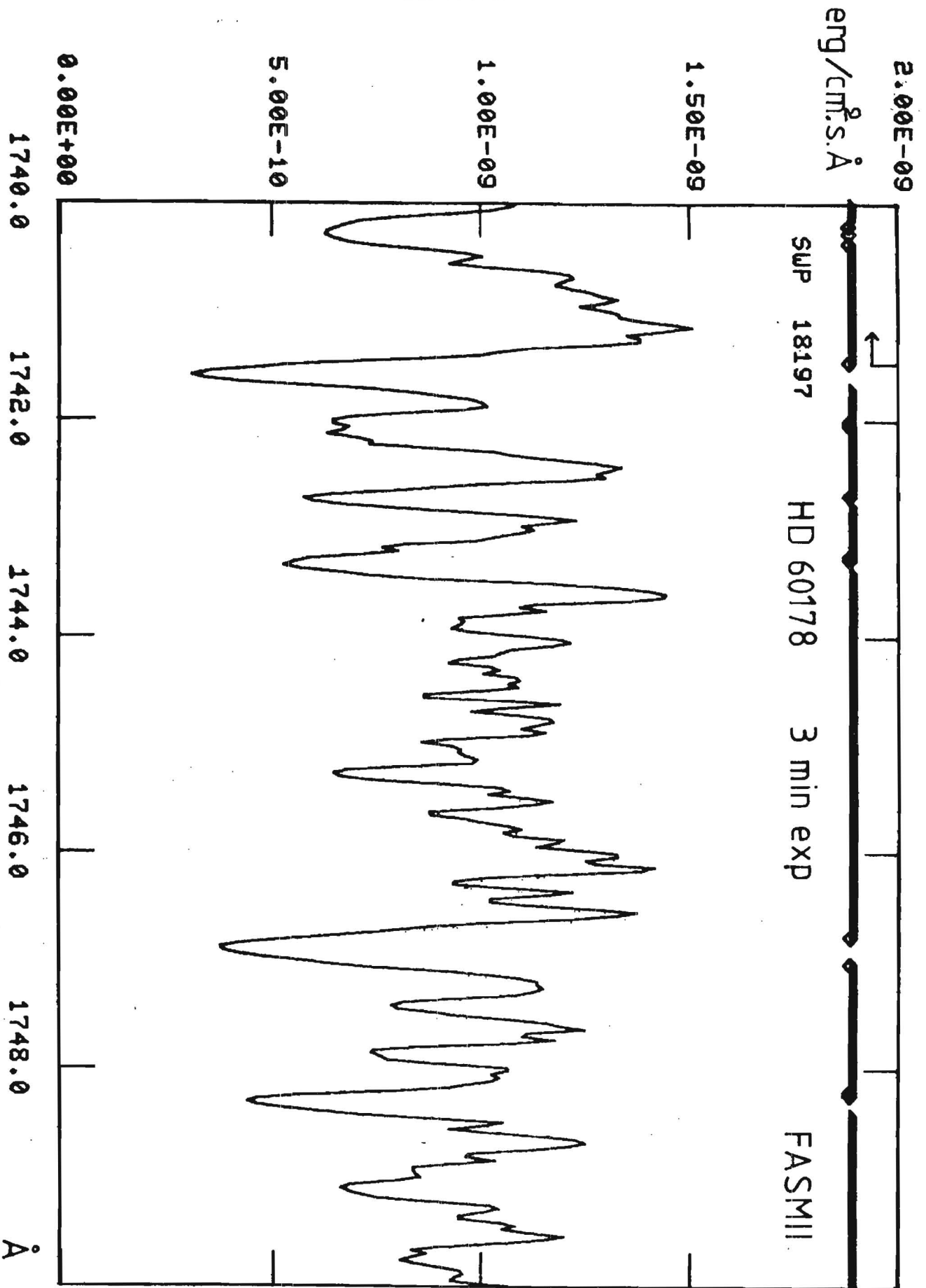


FIGURE 8

2.00E-09  
erg/cm<sup>2</sup>.s.Å

SWP 18198

HD 60178

30 s exp

STANDARD SOFTWARE

1.50E-09

1.00E-09

5.00E-10

0.00E+00

1740.0

1742.0

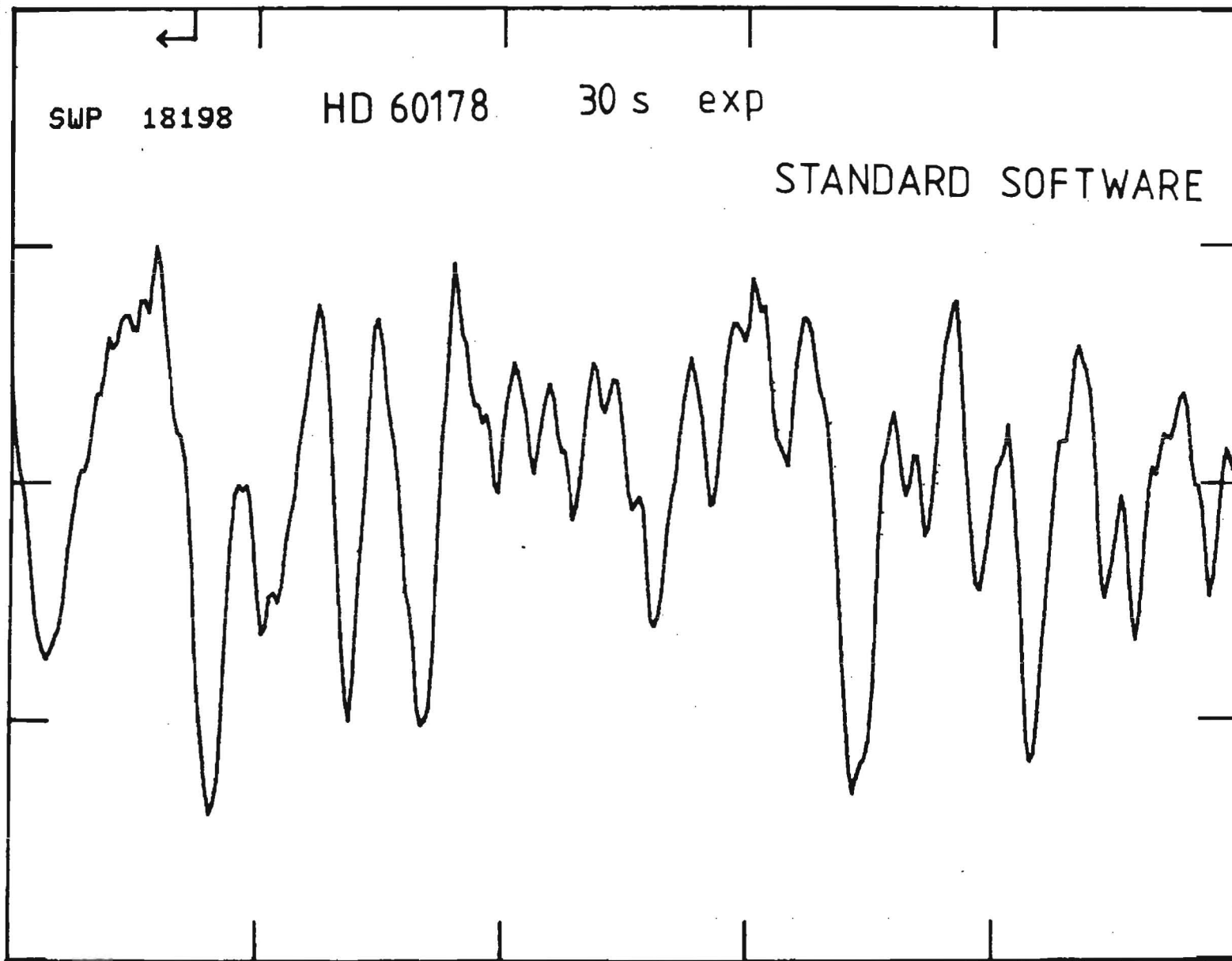
1744.0

1746.0

1748.0

Å

FIGURE 9



## IUE PAPERS AND THE VILSPA DATA BASE

I regret to say that many astronomers still do not append the "based on IUE data ..." footnote to the title of their papers. Since the footnote, among other things, helps me in the literature survey, I would be grateful if everybody could stick to the rule.

We have a new feature in our database at VILSPA: it is now possible to get information on publications resulting from IUE images. This is now complete up to the end of 1984 (see page 11). However, many authors have not identified the image number of their spectra in their papers. I will be sending a letter asking them to send this information to me, so that we can update the database. It would be extremely useful, and in the interest of the whole community, therefore, if from now on all IUE papers contained a table indicating which images have been used.

Thanks for your cooperation.

Roberto GILMOZZI

```
#####  
#  
#           VILSPA PUBLICATIONS LIST           #  
#  
#           IN MAIN JOURNALS                   #  
#  
#  
#           Published 1 Jan - 30 Apr 1985      #  
#  
#####
```

This list contains all Vilspa papers that have appeared between the above dates in major refereed journals (Mon. Not. R. astr. Soc., Astron. Astrophys., Astrophys. J.) and which originate from Europe. While the origin of the data is the main criterion for inclusion in this list, the affiliation of the authors is also taken into consideration. Underlining of an author's name indicates membership of the Vilspa Observatory staff, and papers by Observatory staff on topics not involving IUE data are marked by '(Obs)' after the entry.

We remind users that, in any publications resulting from IUE data, whether it be from their own allocated shifts or data released from the Archive, they should acknowledge the use of the IUE Satellite and the Agency - ESA, NASA or SERC as appropriate, in a footnote on the title page. The following are examples of some of the possibilities.

# Based on observations by the International Ultraviolet Explorer, collected at Villafranca Satellite Tracking Station of the European Space Agency. (In the case of one's own observations).

# Based on data from the International Ultraviolet Explorer, de-archived from the Villafranca Data Archive of the European Space Agency. (In the case of archive data).

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Ultraviolet spectroscopic observations of HD 77581 (VELA X-1=4U  
0900-40)  
Astrophys. J., 288, 284-291, 1985
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The near-ultraviolet spectrum of the high-redshift BL Lacertae  
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Astrophys. J., 288, 580-594, 1985
- Giampapa, M.S., Golub, L., Peres, G., Serio, S., Vaiana, G.S.  
Closed coronal structures. VI. Far-ultraviolet and X-ray  
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coronal loop models  
Astrophys. J., 289, 203-212, 1985
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Astrophys. J., 289, 709-720, 1985
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High-velocity winds in close binaries with accretion disks. II.  
The view along the plane of the disk  
Astrophys. J., 290, 671-682, 1985
- Cerruti-Sola, M., Perinotto, M.  
Winds in central stars of planetary nebulae  
Astrophys. J., 291, 237-246, 1985
- Nesci, R., Perola, G.C.  
The ultraviolet spectra of normal elliptical galaxies: a  
population synthesis approach  
Astron. Astrophys., 145, 296-304, 1985
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Astron. Astrophys., 145, 286-289, 1985
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The ultraviolet spectrum of the symbiotic star HM Sge  
Astron. Astrophys., 145, 144-156, 1985
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The gaseous component of the disk around Beta Pictoris  
Astrophys. J., 293, L29-L33, 1985 (Obs)



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#####  
#  
#   MERGED LOG OF IUE OBSERVATIONS   #  
#  
#   1 JANUARY 1985 - 30 APRIL 1985   #  
#  
#####
```

The merged log of Vilspa and Goddard images for the above dates is listed in order of right ascension. (For non-standard images the information given can be incomplete.)

The programme reference codes (column 1) identifying the ESA and NASA programmes for the sixth round can be found in ESA IUE Newsletter No.16 p45 and p55 for ESA and NASA respectively, and for the seventh round in ESA IUE Newsletter No.19 p17 and 23.

The Object Classification Codes (column 3) and the Vilspa Exposure Classification Codes (column 16) are listed overleaf.

CLASSIFICATION OF OBJECTS USED IN THE JOINT ESA/SERC LOG OF IUE OBSERVATIONS  
#####

00	SUN	50	R, N OR S TYPES
01	EARTH	51	LONG PERIOD VARIABLE STARS
02	MOON	52	IRREGULAR VARIABLES
03	PLANET	53	REGULAR VARIABLES
04	PLANETARY SATELLITE	54	DWARF NOVAE
05	MINOR PLANET	55	CLASSICAL NOVAE
06	COMET	56	SUPERNOVAE
07	INTERPLANETARY MEDIUM	57	SYMBIOTIC STARS
08	GIANT RED SPOT	58	T TAURI
09		59	X-RAY
10	W C	60	SHELL STAR
11	W N	61	ETA CARINAE
12	MAIN SEQUENCE O	62	PULSAR
13	SUPERGIANT O	63	NOVA-LIKE
14	OE	64	STELLAR OBJECT NOT INCLUDED ABOVE
15	OF	65	MISIDENTIFIED TARGETS
16	SD O	66	INTERACTING BINARIES
17	WD O	67	
18		68	
19	UV-STRONG	69	
20	B0-B2 V-IV	70	PLANETARY NEBULAR+CENTRAL STAR
21	B3-B5 V-IV	71	PLANETARY NEBULAR-CENTRAL STAR
22	B6-B9,5 V-IV	72	H II REGION
23	B0-B2 III-I	73	REFLECTION NEBULA
24	B3-B5 III-I	74	DARK CLOUD (ABSORPTION SPECTRUM)
25	B6-B9,5 III-I	75	SUPERNOVA REMNANT
26	BE	76	RING NEBULA (SHOCK-IONISED)
27	BP	77	
28	SDB	78	
29	WDB	79	
30	A0-A3 V-IV	80	SPIRAL GALAXY
31	A4-A9 V-IV	81	ELLIPTICAL GALAXY
32	A0-A3 III-I	82	IRREGULAR GALAXY
33	A4-A9 III-I	83	GLOBULAR CLUSTER
34	AE	84	SEYFERT GALAXY
35	AM	85	QUASAR
36	AP	86	RADIO GALAXY
37	WDA	87	BL LACERTAE OBJECT
38	HORIZONTAL BRANCH	88	EMISSION LINE GALAXY (NON-SEYFERT)
39	COMPOSITE	89	
40	F0-F2	90	INTERGALACTIC MEDIUM
41	F3-F9	91	
42	FP	92	
43	LATE TYPE DEGENERATE STARS	93	
44	G (TO 1FEB79); GIV-VI (FROM 1FEB79)	94	
45	G I-II (FROM 1FEB79)	95	
46	K (TO 1FEB79); K IV-VI (FROM 1FEB79)	96	
47	K I-III (FROM 1FEB79)	97	
48	M (TO 1FEB79); M DWARFS (FRM 1FEB79)	98	WAVELENGTH CALIBRATION (NASA LOG)
49	M I-III (FROM 1 FEB79)	99	NULLS AND FLAT FIELDS (NASA LOG)

THE CLASSIFICATION IS SUPPLIED BY D STICKLAND FOR USE ONLY WITHIN THE PROJECT

EXPOSURE CLASSIFICATION CODES

#####

The exposure levels of Vilspa images are described by a 3-digit code listed in column 16 in the merged log.

- DIGIT 1: EXPOSURE LEVEL OF CONTINUUM
- DIGIT 2: EXPOSURE LEVEL OF EMISSION LINES
- DIGIT 3: BACKGROUND LEVEL

The CONTINUUM and EMISSION are both classified as follows:-

- 0: NOT APPLICABLE
- 1: NO SPECTRUM VISIBLE
- 2: FAINT SPECTRUM: MAX DN < 20 ABOVE LOCAL BACKGROUND
- 3: UNDEREXPOSED: MAX DN < 100 ABOVE LOCAL BACKGROUND
- 4: WEAK: MAX DN BETWEEN 100 AND 150 ABOVE LOCAL BACKGROUND
- 5: GOOD: NO SATURATION BUT MAX DN OVER 150 ABOVE LOCAL BACKGROUND
- 6: A BIT STRONG: A FEW PIXELS SATURATED
- 7: SATURATED FOR LESS THAN HALF THE SPECTRUM
- 8: MOSTLY SATURATED BUT SOME PARTS USABLE
- 9: COMPLETELY SATURATED

The BACKGROUND is classified in terms of a standard region of each camera outside the area affected by the high resolution orders. The value used is the mean DN given by a subset histogram approximately 10 pixels in width.

The BACKGROUND classification codes are:- (limits inclusive)

- 0 DN<20
- 1 21<DN<30
- 2 31<DN<40
- 3 41<DN<50
- 4 51<DN<60
- 5 61<DN<70
- 6 71<DN<80
- 7 81<DN<90
- 8 91<DN<100
- 9 DN>101
- X SATURATED

NOTES

- 1) No exposure classification code was assigned to VILSPA images before 1 August 1978.
- 2) Prior to 1 Sept 1979, the BACKGROUND digit was not included and the ECC occupied the first two places in the comment line.
- 3) The Goddard images are described in the comments by the gross DN of the CONTINUUM (C), EMISSION LINES (E) and BACKGROUND (B).

PRO	OBJECT	CL	MAG	R.A.	DEC	D C	IMAGE A	DATE	EXP. SMALL	EXP. LARGE	ECC	COMMENT	
PHCAL	CALUV 20%	99	9999	0000000	000000	H 3	25133	85020206	060219	000036	000000	000000	002 V ITF
PHCAL	CALUV 100%	99	9999	0000000	000000	H 3	25132	85020205	052947	000302	000000	000000	007 V ITF
PHCAL	CALUV 100%	99	9999	0000000	000000	H 3	25134	85020206	063842	000302	000000	000000	008 V ITF
PHCAL	CALUV 80%	99	9999	0000000	000000	H 3	25135	85020207	071358	000226	000000	000000	007 V ITF
PHCAL	CALUV 240%	99	9999	0000000	000000	H 3	25136	85020207	075002	000717	000000	000000	009 V ITF
PHCAL	CALUV 160%	99	9999	0000000	000000	H 3	25137	85020208	083351	000451	000000	000000	009 V ITF
PHCAL	CALUV 80%	99	9999	0000000	000000	H 3	25138	85020209	092209	000226	000000	000000	007 V ITF
PHCAL	CALUV 100%	99	9999	0000000	000000	H 3	25139	85020209	095316	000302	000000	000000	008 V ITF
PHCAL	CALUV 280%	99	9999	0000000	000000	H 3	25140	85020210	102208	000830	000000	000000	009 V ITF
PHCAL	CALUV 40%	99	9999	0000000	000000	H 3	25141	85020210	105953	000113	000000	000000	004 V ITF
PHCAL	CALUV80%	99	9999	0000000	000000	H 3	25142	85020211	113338	000226	000000	000000	007 V ITF
PHCAL	CALUV 20%	99	9999	0000000	000000	H 3	25143	85020212	120536	000036	000000	000000	002 V ITF
GC072	NULL IMAGE	99	9999	0000000	000000	L 2	17574 L	85010209	000000	000000	094955	000000	000 V
PHCAL	CALUV 100%	99	9999	0000000	000000	H 3	25144	85020212	123426	000302	000000	000000	008 V ITF
GI031	NULL	99	9999	0000000	000000	L 1	05436	85022804	000000	000000	045500	000000	001 V AFTER TURNON+OVEREXP
GQ127	NULL	99	9999	0000000	000000	L 3	25276 LS	85021906	000000	000000	063200	000000	000 V \$
GQ127	NULL	99	9999	0000000	000000	L 1	05393 LS	85021905	000000	000000	050900	000000	200 V 200\$
PHCAL	FLARE	99	9999	0000000	000000	H 2	17706 L	85040804	000000	000000	045548	006000	002 V
PHCAL	NULL	99	9999	0000000	000000	1	05604 L	85032605	000000	000000	000000	000000	V PREAD
PHCAL	NULL	99	9999	0000000	000000	1	05622 L	85033109	000000	000000	000000	000000	V PREAD
PHCAL	NULL	99	9999	0000000	000000	L 4	01181	85022709	000000	000000	094520	000000	000 V TFDC=18.7
PHCAL	OO UVFLOOD	99	0000	0000000	000000	H 3	25054 L	85013106	000000	000000	060200	000302	G B=138
GQ175	NULL	99	9999	0000000	000000	3	24829 L	85010407	000000	000000	070000	000000	001 V
PHCAL	OO NULL	99	0000	0000000	000000	L 2	17632 L	85022818	000000	000000	185700	000001	G C=30,B=10
PHCAL	CALUV20%	99	9999	0000000	000000	H 3	25103	85020112	122241	000036	000000	000000	002 V ITF
PHCAL	CALUV 60%	99	9999	0000000	000000	H 3	25102	85020111	115014	000149	000000	000000	005 V ITF
PHCAL	CALUV80%	99	9999	0000000	000000	H 3	25101	85020111	111727	000226	000000	000000	007 V ITF
GQ175	NULL	99	9999	0000000	000000	3	24849 L	85010600	000000	000000	000000	000000	V FOR SWP24850
GC072	NULL IMAGE	99	9999	0000000	000000	H 1	05120 L	85010214	000000	000000	141900	000000	V
PHCAL	CALUV160%	99	9999	0000000	000000	H 3	25100	85020110	103528	000451	000000	000000	009 V ITF
PHCAL	CALUV100%	99	9999	0000000	000000	H 3	25099	85020109	095326	000302	000000	000000	008 V ITF
PHCAL	CALUV40%	99	9999	0000000	000000	H 3	25098	85020109	091701	000113	000000	000000	004 V ITF
PHCAL	CALUV130%	99	9999	0000000	000000	H 3	25097	85020108	083834	000357	000000	000000	009 V ITF
PHCAL	CALUV340%	99	9999	0000000	000000	H 3	25096	85020107	075625	001019	000000	000000	009 V ITF
PHCAL	CALUV200%	99	9999	0000000	000000	H 3	25095	85020107	072527	000604	000000	000000	009 V ITF
GQ175	NULL	99	9999	0000000	000000	3	24838 L	85010506	000000	000000	065300	000000	000 V
PHCAL	CALUV100%	99	9999	0000000	000000	H 3	25094	85020106	064946	000302	000000	000000	008 V ITF
PHCAL	CALUV80%	99	9999	0000000	000000	H 3	25093	85020106	061924	000226	000000	000000	006 V ITF
PHCAL	CALUV100%	99	9999	0000000	000000	H 3	25092	85020105	054758	000302	000000	000000	008 V ITF
PHCAL	NULL	99	9999	0000000	000000	3	25091	85020105	051100	000000	000000	000000	001 V ITF
PHCAL	CALUV340%	99	9999	0000000	000000	H 3	25065	85013112	122433	001019	000000	000000	V ITF
PHCAL	CALUV100%	99	9999	0000000	000000	H 3	25064	85013111	115727	000302	000000	000000	V ITF
PHCAL	CALUV240%	99	9999	0000000	000000	H 3	25063	85013111	112202	000717	000000	000000	V ITF
PHCAL	CALUV 200%	99	9999	0000000	000000	H 3	25025	85013014	141551	000604	000000	000000	V ITF
PHCAL	NULL	99	9999	0000000	000000	L 1	05609 L	85032704	000000	000000	000000	000000	000 V

PRO	OBJECT	CL	MAG	R.A.	DEC	D C	IMAGE	A	DATE	EXP. SMALL	EXP. LARGE	ECC	COMMENT	
PHCAL	SKY	07	9999	0000000	000000	L 2	17679	L	85032704	000000	000000	043331 029400	205 U UUC1=-4.7 KU,DAC=103	
PHCAL	CALUV 100%	99	9999	0000000	000000	H 3	25024		85013013	134410	000302	000000 000000	U ITF	
PHCAL	NULL	99	9999	0000000	000000	H 3	25023		85013013	130100	000000	000000 000000	U ITF	
PHCAL	CALUV340%	99	9999	0000000	000000	H 3	25022		85013012	120320	001019	000000 000000	U ITF	
PHCAL	CALUV 130%	99	9999	0000000	000000	H 3	25021		85013011	112225	000357	000000 000000	U ITF	
PHCAL	CALUV 40%	99	9999	0000000	000000	H 3	25020		85013010	104847	000113	000000 000000	U ITF	
PHCAL	NULL IMAGE	99	9999	0000000	000000	2	17677	L	85032604	000000	000000	041100 000000	200 U	
PHCAL	CALUV 100%	99	9999	0000000	000000	H 3	25019		85013010	101404	000302	000000 000000	U ITF	
PHCAL	SKY	07	9999	0000000	000000	L 2	17678	L	85032605	000000	000000	052456 027000	007 U UUC1=-4.74KU,DAC=104	
PHCAL	CALUV 60%	99	9999	0000000	000000	H 3	25018		85013009	094416	000149	000000 000000	U ITF	
PHCAL	SKY	07	9999	0000000	000000	L 2	17681	L	85032905	000000	000000	053128 023500	004 U UUC1=-4.6 KU,DAC=101	
PHCAL	CALUV 20%	99	9999	0000000	000000	H 3	25017		85013009	090125	000036	000000 000000	U ITF	
PHCAL	CALUV 160%	99	9999	0000000	000000	H 3	25016		85013008	082002	000451	000000 000000	U ITF	
PHCAL	SKY	07	9999	0000000	000000	L 2	17708	L	85041907	000000	000000	073810 003000	101 U	
PHCAL	NULL	99	9999	0000000	000000	L 1	05779	L	85041907	000000	000000	000000 000000	000 U	
PHCAL	NULL	99	9999	0000000	000000	L 2	17707		85041900	000000	000000	000000 000000	000 U	
PHCAL	CALUV 100%	99	9999	0000000	000000	H 3	25015		85013007	074043	000302	000000 000000	U ITF	
PHCAL	CALUV 280%	99	9999	0000000	000000	H 3	25014		85013007	070103	000830	000000 000000	U ITF	
GA176	SKY	07	9999	0000000	000000	L 2	17680	L	85032803	000000	000000	034245 033000	005 U UUC1=-4.65KU,DAC=102	
PHCAL	CALUV200%	99	9999	0000000	000000	H 3	25068		85013114	140344	000604	000000 000000	U ITF	
PHCAL	CALUV160%	99	9999	0000000	000000	H 3	25067		85013113	133327	000451	000000 000000	U ITF	
PHCAL	CALUV80%	99	9999	0000000	000000	H 3	25056		85013107	074147	000226	000000 000000	U ITF	
PHCAL	CALUV280%	99	9999	0000000	000000	H 3	25057		85013108	081020	000830	000000 000000	U ITF	
PHCAL	CALUV40%	99	9999	0000000	000000	H 3	25058		85013108	084725	000113	000000 000000	U ITF	
PHCAL	CALUV100%	99	9999	0000000	000000	H 3	25059		85013109	091623	000302	000000 000000	U ITF	
PHCAL	CALUV130%	99	9999	0000000	000000	H 3	25060		85013109	094917	000357	000000 000000	U ITF	
PHCAL	CALUV60%	99	9999	0000000	000000	H 3	25061		85013110	102346	000149	000000 000000	U ITF	
PHCAL	CALUV20%	99	9999	0000000	000000	H 3	25062		85013110	105512	000036	000000 000000	U ITF	
PHCAL	CALUV60%	99	9999	0000000	000000	H 3	25066		85013113	130503	000149	000000 000000	U ITF	
GI244	TW AND	40	1019	0000439	323403	L 3	24970	L	85012507	000000	000000	075247 007500	302 U	
GI244	TW AND	40	1137	0000439	323403	L 3	24971	L	85012509	000000	000000	094754 018000	302 U	
GI244	TW AND	40	1110	0000439	323403	L 1	05261	L	85012509	000000	000000	091655 002500	332 U	
QSGMM	OOMARK	335	84	1370	0003452	+195529	L 3	24944	L	85012200	000000	000000	005900 007500	G E=178,C=90,B=37
QSGMM	OOMARK	335	84	1370	0003452	+195529	L 1	05247	L	85012202	000000	000000	022000 007500	G E=1.5X,C=235,B=71
GA153	HD186	41	0923	0004126	442004	L 3	25178	LS	85020510	105156	000200	104710 000110	500 U 500\$	
GA153	HD186	41	0915	0004126	442004	L 1	05308	LS	85020510	101328	000140	100840 000055	502 U 602\$	
GC230	HD352	47	0629	0005384	-024334	L 1	05224	L	85011812	000000	000000	121833 000400	452 U	
GC230	HD352	47	0630	0005384	-024334	L 3	24923	L	85011812	000000	000000	123350 009000	531 U	
GC230	HD352	47	0632	0005384	-024334	H 1	05225	L	85011814	000000	000000	141022 004000	342 U	
UUGJS	BD 63	0003	39	0830	0006477	+634032	L 3	25492	L	85032019	000000	000000	192300 012000	G E=130,C=95,B=50
UUGJS	BD 63	0003	39	0830	0006477	+634032	L 1	05550	L	85032021	000000	000000	212900 003500	G E=255,C=110,B=45
GA153	HD593	20	0691	0007563	592343	H 3	25175	L	85020506	000000	000000	060616 001354	501 U	
GA153	HD593	20	0695	0007563	592343	H 1	05305	L	85020505	000000	000000	054229 001024	503 U	
QSGMM	OOIII ZW	2	84	1500	0007567	+104148	L 1	05246	L	85012122	000000	000000	223400 012000	G C=145,B=57
CUGWB	OO WW CET	54	1380	0008516	-114525	L 3	24866	L	85010816	000000	000000	162900 016500	G E=142,C=88,B=43	



PRO	OBJECT	CL	MAG	R.A.	DEC	D	C	IMAGE	A	DATE	EXP.SMALL	EXP.LARGE	ECC	COMMENT
GM081	FB5084	20	1115	0016277	311134	H	3	25191	L	85020706	000000	000000	060602	040100 403 U
CSGCI	HD 1835	44	0640	0020189	-122913	L	3	24966	L	85012423	000000	000000	235700	009000 G E=98,C=110,B=39
CSGCI	HD 1835	44	0640	0020189	-122913	L	1	05258	L	85012501	000000	000000	013400	000320 G C=165,B=40
GC072	HD2151	44	0314	0023093	-773208	H	2	17575	L	85010212	000000	000000	120519	001500 741 U
GC072	HD2151	44	0309	0023093	-773208	H	2	17577	L	85010213	000000	000000	132821	001500 742 U
GC072	HD2151	44	0310	0023093	-773208	H	2	17578	L	85010214	000000	000000	141814	001500 742 U
GC072	HD2151	44	0307	0023093	-773208	H	2	17576	L	85010212	000000	000000	124659	001500 742 U
GE057	M244002402	81	1500	0024427	-020326	L	3	24800	L	85010110	000000	000000	100315	028400 302 U
GM081	BD+410080	20	1003	0030144	415857	H	3	25183	L	85020607	000000	000000	070026	034700 703 U
GM081	BD+410080	20	1003	0030144	415857	L	3	25182	L	85020606	000000	000000	062417	000425 701 U
PHCAL	HD 3360	21	0370	0034103	+533719	H	3	24915	L	85011702	000000	000000	023800	000024 G C=190,B=36
PHCAL	HD 3360	21	0370	0034103	+533719	H	1	05211	L	85011702	000000	000000	023300	000021 G C=220,B=45
PHCAL	HD 3360	20	9999	0034103	+533719	L	2	17616	L	85020804	000000	000000	043400	000001 G C=2-3X,B=24
PHCAL	HD 3360	20	9999	0034103	+533719	L	2	17615	L	85020804	000000	000000	040300	000001 G C=2-3X,B=26
PHCAL	HD 3360	21	0370	0034103	+533719	H	2	17627	L	85021922	000000	000000	225200	000021 G C=200,B=32
GQ175	AB5	81	1400	0039185	-093439	L	3	24840	L	85010512	000000	000000	125844	010800 112 U
GQ175	AB5	81	1400	0039185	-093439	L	3	24851	L	85010613	000000	000000	130509	010200 110 U
GQ017	ABELL 85	81	1500	0039186	-093439	L	3	24935	L	85012012	000000	000000	124149	012400 111 U
EGGSF	00 M 32	81	0910	0039581	+403529	L	3	24993	L	85012821	000000	000000	211000	010000 G C=57,B=30
EGGSF	00 M 32	81	0910	0039581	+403529	L	3	24974	L	85012521	000000	000000	212900	008000 G C=82,B=50
EGGAC	00 S219	83	1510	0040342	+393248	L	3	25212	L	85021018	000000	000000	181200	014000 G B=142
ZHGNO	HD 4174	57	0750	0041527	+402423	L	3	25245	SL	85021422	224600	001000	222700	001000 G E=4X,C=70,B=27
IEGCG	00 AV 5	23	1390	0043154	-733936	L	1	05155	L	85010710	000000	000000	180400	005000 G C=195,B=40
IEGCG	00 AV 5	23	1390	0043154	-733936	L	3	24857	L	85010715	000000	000000	154600	008000 G C=125,B=38
GE057	M274 0043-	81	1438	0043321	-015941	L	3	24865	L	85010811	000000	000000	113335	019400 301 U
GM045	AZZ 9	23	1355	0043470	-733030	L	3	25434	L	85031107	000000	000000	075916	004000 502 U
GM045	AZZ 9	23	1339	0043470	-733030	L	1	05488	L	85031108	000000	000000	084808	003500 502 U PARTIAL READ
IEGCG	00 AV43	23	1410	0046594	-730244	L	1	05157	L	85010722	000000	000000	225800	004500 G C=219,B=53
IEGCG	00 AV43	23	1410	0047000	-730234	L	3	24859	L	85010721	000000	000000	213900	006400 G C=195,B=30
IEGCG	00 AV 47	13	1340	0047047	-734219	L	1	05193	L	85011223	000000	000000	234600	002000 G C=215,B=64
IEGCG	00 AV 47	13	1340	0047047	-734219	H	3	24895	L	85011300	000000	000000	001200	002500 G E=130,C=200,B=20
GA153	HD4778	36	0639	0047301	444348	H	3	25177	L	85020509	000000	000000	090125	004534 601 U
GA153	HD4778	36	0639	0047301	444348	H	1	05307	L	85020508	000000	000000	082550	002400 603 U
GM045	AZZ 56	23	1135	0048040	-731158	L	3	25435	L	85031110	000000	000000	100819	001200 401 U PARTIAL READ
IEGCG	00 AV 116	13	1360	0050208	-722421	L	1	05196	L	85011303	000000	000000	033100	001200 G C=230,B=160
IEGCG	00 AV 116	13	1340	0050208	-722421	L	1	05175	L	85011004	000000	000000	042200	002000 G C=2.0X,B=170
IEGCG	00 AV 116	13	1340	0050208	-722421	L	3	24877	L	85011003	000000	000000	034900	002500 G C=210,B=105
IEGCG	00 AV 116	13	1360	0050208	-722421	L	3	24898	L	85011304	000000	000000	040100	001400 G C=210,B=145
IEGCG	00 AV 116	13	1360	0050208	-722421	L	1	05197	L	85011304	000000	000000	043800	001200 G C=254,B=180
IEGCG	00 AV 116	13	1360	0050208	-722421	L	3	24899	L	85011305	000000	000000	051200	001400 G C=180,B=115
CSGMJ	HD 5223	50	0830	0051325	+234746	L	1	05311	L	85020522	000000	000000	225800	003500 G C=230,B=40
PEHAM	OOSMC S18	57	1700	0052259	-725749	L	1	05836	L	85042712	000000	000000	124700	005500 G E=137,C=135,B=60
PEHAM	OOSMC S18	57	1700	0052259	-725749	L	3	25789	L	85042710	000000	000000	101200	015000 G C=85,B=45
GA198	HD 5394	20	0223	0053500	602647	H	1	05361	L	85021406	000000	000000	064559	000006 501 U
GA198	HD 5394	20	0222	0053500	602647	H	3	25238	L	85021406	000000	000000	064146	000008 501 U

PRO	OBJECT	CL	MAG	R.A.	DEC	D C	IMAGE	A	DATE	EXP. SMALL	EXP. LARGE	ECC	COMMENT			
HSGDB	HD	5737	27	0440	0056118	-293736	H 3	24844	L	85010602	000000	000000	021900	000300	G C=1.5X,B=45	
IEGCG	00	AV216	13	1400	0057200	-730044	L 1	05195	L	85011302	000000	000000	020400	002500	G C=170,B=82	
IEGCG	00	AV216	13	1400	0057200	-730044	H 3	24897	L	85011302	000000	000000	023700	001500	G C=95,B=55	
IEGCG	00	AV216	13	1400	0057200	-730044	L 1	05194	L	85011300	000000	000000	005300	002500	G C=150,B=68	
IEGCG	00	AV216	13	1400	0057200	-730044	L 3	24896	L	85011301	000000	000000	012900	002500	G C=100,B=37	
IEGCG	00	AV218	13	1380	0057250	-723547	L 3	24858	L	85010719	000000	000000	191200	007300	G C=140,B=25	
IEGCG	00	AV218	13	1380	0057250	-723547	L 1	05156	L	85010720	000000	000000	203100	004600	G C=210,B=43	
GM045	A22232	15	1247	0057520	-722653	H 3	25438	L	85031203	000000	000000	034347	039300	333 U		
IEGCG	00	AV279	23	1420	0059554	-721917	L 1	05210	L	85011701	000000	000000	010100	004000	G C=210,B=78	
IEGCG	00	AV279	23	1420	0059559	-721917	L 3	24861	L	85010803	000000	000000	030000	005700	G C=218,B=70	
IEGCG	00	AV279	23	1420	0059559	-721917	L 1	05159	L	85010804	000000	000000	040300	004000	G C=1.5X,B=140	
IEGCG	00	AV280	23	1470	0059599	-721839	L 3	24860	L	85010800	000000	000000	000400	008500	G C=175,B=34	
IEGCG	00	AV280	23	1470	0059599	-721839	L 1	05158	L	85010801	000000	000000	013700	006800	G C=210,B=60	
IEGCG	00	AV307	12	1410	0100559	-725548	L 1	05174	L	85011003	000000	000000	030900	003000	G C=210,B=95	
IEGCG	00	AV307	12	1410	0100559	-725548	L 1	05209	L	85011623	000000	000000	235200	003600	G C=190,B=62	
IEGCG	00	AV307	12	1410	0100559	-725548	L 3	24876	L	85011002	000000	000000	021200	005100	G C=200,B=25	
IEGCG	00	AV321	13	1390	0101193	-722415	L 3	24875	L	85011000	000000	000000	003800	004100	G C=260,B=25	
IEGCG	00	AV321	13	1390	0101193	-722415	L 1	05173	L	85011001	000000	000000	012500	003300	G C=220,B=40	
IEGCG	00	AV349	23	1450	0102443	-721247	L 3	24869	L	85010901	000000	000000	015700	007400	G C=180,B=25	
IEGCG	00	AV349	23	1450	0102443	-721247	L 1	05164	L	85010903	000000	000000	031800	006100	G C=210,B=42	
GA153	HD6417	24	0739	0103008	572920	H 1	05309	L	85020511	000000	000000	114503	002300	603 U		
GA153	HD6417	24	0736	0103008	572920	H 3	25179	L	85020512	000000	000000	122422	002300	401 U		
IEGCG	00	AV360	23	1450	0103129	-723811	L 3	24868	L	85010823	000000	000000	233600	007000	G C=220,B=25	
IEGCG	00	AV360	23	1450	0103129	-723811	L 1	05163	L	85010900	000000	000000	005100	005700	G C=220,B=42	
GM045	AZZ	362	23	1157	0103300	-722220	L 1	05486	L	85031104	000000	000000	045950	001000	602 U	
GM045	AZZ	362	23	1155	0103300	-722220	L 3	25432	L	85031104	000000	000000	042027	001200	401 U	
GM045	AZZ	362	23	1160	0103300	-722220	L 1	05485	L	85031103	000000	000000	035456	002000	702 U PARTIAL READ	
IEGCG	00	AV378	13	1390	0103335	-722138	L 1	05165	L	85010905	000000	000000	052100	003300	G C=220,B=40	
IEGCG	00	AV378	13	1390	0103335	-722138	L 3	24870	L	85010904	000000	000000	043100	004000	G C=190,B=20	
IEGCG	00	AV389	23	1390	0104093	-723042	L 3	24874	L	85010923	000000	000000	232300	003000	G C=210,B=30	
IEGCG	00	AV389	23	1390	0104093	-723042	L 1	05172	L	85011000	000000	000000	000100	002500	G C=210,B=42	
GM045	AZZ	390	23	1348	0104100	-720219	L 3	25433	L	85031105	000000	000000	055240	004500	302 U	
GM045	AZZ	390	23	1348	0104100	-720219	L 1	05487	L	85031106	000000	000000	064447	003500	402 U	
IEGCG	00	AV 410	23	1330	0105105	-721926	L 3	24871	L	85010906	000000	000000	060500	002400	G C=160,B=16	
IEGCG	00	AV 410	23	1330	0105105	-721926	L 1	05166	L	85010906	000000	000000	063700	001200	G C=140,B=35	
IEGCG	00	AV 410	23	1330	0105105	-721926	L 1	05198	L	85011386	000000	000000	062000	002000	G C=210,B=52	
CSGTS	HD	6860	49	0200	0106553	+352121	L 1	05345	L	85021102	000000	000000	023400	000030	G E=1.1X,C=86,B=40	
CSGTS	HD	6860	49	0200	0106553	+352121	L 1	05344	L	85021101	000000	000000	015300	000045	G E=1.5X,C=102,B=40	
CSGEB	HD	6903	45	0550	0107085	+192332	H 1	05267	L	85012801	000000	000000	014800	004000	G C=170,B=45	
GA153	HD7254	22	0690	0110280	335002	H 1	05294	L	85020406	000000	000000	062720	001900	603 U		
GA153	HD7254	22	0692	0110280	335002	H 3	25167	L	85020407	000000	000000	071249	002600	501 U		
IRGTA	HD	7351	50	0640	0111197	+281558	L 3	25192	L	85020713	000000	000000	132600	002000	G B=23	
GA153	HD7600	41	0900	0113450	361015	L 3	25166	L	85020405	000000	000000	053944	001500	300 U		
HBHYK	OO	AQ	CAS	66	1000	0115549	+620707	L 3	25601	L	85040613	000000	000000	135200	001000	G C=60,B=20
EGGSF	NG	584	81	1040	0128504	-070742	L 3	24973	L	85012515	000000	000000	155100	029500	G C=105,B=72	

PRO	OBJECT	CL	MAG	R.A.	DEC	D	C	IMAGE	A	DATE	EXP.SMALL	EXP.LARGE	ECC	COMMENT	
ZAGNO	00 AX PER	57	1050	0133050	+540000	L	1	05366	L	85021421	000000	000000	215300	001500	G E=141,C=80,B=41
ZAGNO	00 AX PER	57	1050	0133050	+540000	L	3	25244	L	85021420	000000	000000	200700	001500	G E=171,B=37
ZAGNO	00 AX PER	57	1050	0133050	+540000	L	1	05365	L	85021420	000000	000000	204300	000600	G E=83,C=64,B=42
XBGJR	OOH0139-68	59	1500	0139365	-680838	L	1	05472	L	85030816	000000	000000	163500	006000	G B=185
XBGJR	OOH0139-68	59	1500	0139365	-680838	L	3	25393	L	85030811	000000	000000	114500	027000	G C=140,B=105
GA153	HD10588	45	0667	0140582	315627	L	3	25168	LS	85020408	090713	001500	085045	000730	100 U 100\$
GA153	HD10588	45	0667	0140582	315627	L	1	05295	LS	85020408	082228	000800	081136	000400	602 U 602\$
GA153	HD11037	44	0627	0145504	032612	L	3	25169	L	85020411	000000	000000	110429	001800	101 U
GA153	HD11037	44	0630	0145504	032612	L	1	05296	LS	85020410	103519	001000	100726	000500	602 U 602\$
LGGEH	HD 11353	47	0370	0148594	-103453	L	3	24988	L	85012715	000000	000000	154500	024000	G E=94,C=102,B=41
PHCAL	00 WAUCAL	98	0000	0159071	+721050	L	1	05560	S	85032100	004200	000001	000000	000000	G E=20X,B=100
PHCAL	00 WAUCAL	98	0000	0159071	+721050	H	3	25494	S	85032023	233400	000200	000000	000000	G E=60X,B=125
PHCAL	00 WAUCAL	98	0000	0159071	+721050	L	1	05559	S	85032100	000600	000001	000000	000000	G
PHCAL	00 WAUCAL	98	0000	0159071	+721050	L	3	25493	S	85032023	230700	000002	000000	000000	G E=20X,B=100
PHCAL	00 WAUCAL	98	0000	0159071	+721050	H	1	05561	S	85032101	011100	000016	000000	000000	G E=60X,B=108
GA153	HD12447	30	0397	0159274	023123	H	1	05297	L	85020411	000000	000000	115552	000230	503 U
GA153	HD12447	30	0398	0159274	023123	H	3	25170	L	85020412	000000	000000	122642	000400	400 U
CSGTS	HD 12479	49	0590	0159534	+131411	L	1	05340	L	85021022	000000	000000	223200	002140	G E=1.5X,C=143,B=82
HSHGS	HD 14228	23	0356	0214433	-514434	L	3	25500	SL	85032300	004200	000001	003500	000003	G C=170,B=20
HSHGS	HD 14228	23	0356	0214433	-514434	L	1	05581	SL	85032300	001200	000001	000500	000002	G C=205,B=37
WDGJR	OOFEIGE	24	1240	0232309	+033051	H	3	25163	S	85020313	135600	031000	000000	000000	G C=215,B=110
CCGFF	HD 17878	39	0310	0250419	+523334	H	1	05405	L	85022117	000000	000000	173200	002200	G C=2.0X,B=48
CCGFF	HD 17878	39	0310	0250419	+523334	H	1	05404	L	85022116	000000	000000	163000	002400	G C=2.0X,B=50
CSGTS	HD 18191	49	0560	0252596	+180749	L	1	05343	L	85021101	000000	000000	011300	000400	G E=194,C=86,B=62
LGGEH	HD 18322	47	0410	0253590	-090546	L	3	24989	L	85012721	000000	000000	210200	024000	G E=108,C=102,B=55
LGGEH	HD 18322	47	0290	0253590	-090546	H	1	05266	L	85012720	000000	000000	201100	004500	G E=174,C=200,B=40
GQ017	ABELL 400A	81	1500	0255030	054937	L	3	24942	L	85012111	000000	000000	115944	016700	111 U
LGJL	HD 18884	49	0250	0259399	+035337	H	1	05183	L	85011105	000000	000000	051400	000600	G E=172,C=120,B=80
OD58K	00 RX CAS	20	0850	0303139	+672307	L	3	25605	L	85040623	000000	000000	231000	001000	G E=128,C=110,B=80
OD58K	00 RX CAS	20	0850	0303145	+672315	L	1	05683	L	85040622	000000	000000	222900	001000	G E=2X,C=255,B=160
CSGEB	HD 21120	45	0360	0322071	+085115	H	1	05270	L	85012806	000000	000000	063100	001800	G E=141,C=1.2X,B=42
CSGEB	HD 21120	45	0360	0322071	+085115	L	1	05269	SL	85012804	045900	000020	045000	000040	G C=2.5X,B=35
CSGEB	HD 21120	45	0360	0322071	+085115	L	3	24991	L	85012805	000000	000000	050600	008000	G E=86,C=125,B=25
BLGYK	000323+022	87	1650	0323379	+021447	L	3	24965	L	85012417	000000	000000	172100	021000	G C=82,B=58
HHGTS	00 SSS-107	58	0000	0325525	+310745	L	3	24841	L	85010515	000000	000000	155000	018000	G E=95,B=53
HHGTS	00 SSS-107	58	0000	0325525	+310745	L	1	05147	L	85010515	000000	000000	155200	020000	G B=70
HHGTS	00 HH-12F	64	0000	0325538	+310928	L	3	24842	L	85010519	000000	000000	193100	019500	G B=100
HHGTS	00 HH-12F	64	0000	0325538	+310928	L	1	05148	L	85010520	000000	000000	200000	015000	G B=120
PHCAL	00 WAUCAL	98	0000	0325541	+584225	H	1	05110	S	85010104	043000	000016	000000	000000	G E=50X,B=114
PHCAL	00 WAUCAL	98	0000	0325541	+584225	L	1	05109	S	85010103	035900	000001	000000	000000	G E=10X,B=104
PHCAL	00 WAUCAL	98	0000	0325541	+584225	L	3	24796	S	85010105	051000	000002	000000	000000	G E=10X,B=103
PHCAL	00 WAUCAL	98	0000	0325541	+584225	H	3	24797	S	85010105	054100	000200	000000	000000	G E=50X,B=143
IEGAW	BD+30 0549	22	1050	0326183	+311545	L	2	17598	L	85012218	000000	000000	180800	003700	G C=1.5X,B=26
IEGAW	BD+30 0549	22	1050	0326183	+311545	L	3	24948	L	85012216	000000	000000	161000	010600	G C=225,B=30
IEGAW	BD+30 0549	22	1050	0326183	+311545	L	2	17599	L	85012219	000000	000000	191700	011100	G C=4.5X,B=40



PRO	OBJECT	CL	MAG	R.A.	DEC	D	C	IMAGE	A	DATE	EXP.SMALL	EXP.LARGE	ECC	COMMENT			
HSGDB	HD	21699	21	0547	0328359	+475115	H	3	24845	L	85010603	000000	000000	030500	000700	G C=250,B=45	
CCGFF	HD	22403	44	0770	0334102	254951	L	3	25281	L	85022017	000000	000000	170400	022000	G E=252,C=70,B=55	
CCGFF	HD	22403	44	0770	0334102	+254951	L	3	25292	L	85022118	000000	000000	181900	015000	G E=192,C=127,B=45	
GQ017	0335+096	81	1500	0335574	094828	L	3	24934	L	85012008	000000	000000	083442	018000	111	U	
EGGSF	NG	1407	81	0920	0337570	-184424	L	3	25001	L	85012921	000000	000000	211700	009200	G B=40	
EGGSF	NG	1407	81	0920	0337570	-184424	L	3	25000	L	85012918	000000	000000	184200	012500	G C=115,B=81	
GA198	HD23862	22	0530	0346124	235908	H	3	25237	L	85021405	000000	000000	054706	000630	300	U	
CBGEG	BD+16	0516	46	0590	0347340	+170624	L	3	25307	L	85022404	000000	000000	041000	001800	G C=210,B=25	
CBGEG	BD+16	0516	46	0950	0347340	+170624	L	3	25305	SL	85022323	234000	001800	000600	001600	G C=150,B=27	
CBGEG	BD+16	0516	46	0950	0347340	+170624	L	3	25306	SL	85022401	014200	000800	012200	002400	G C=198,B=30	
CBGEG	BD+16	0516	46	0950	0347340	+170624	L	1	05414	L	85022400	000000	000000	004600	002000	G E=133,C=128,B=50	
CBGEG	BD+16	0516	46	0590	0347340	+170624	L	3	25304	SL	85022321	221600	002400	215700	001200	G C=210,B=25	
CBGEG	BD+16	0516	46	0950	0347340	+170624	L	1	05413	SL	85022322	230700	002400	224700	001200	G E=223,C=187,B=45	
LGGJL	HD	25025	49	0290	0355418	-133903	H	1	05180	L	85011101	000000	000000	010600	002200	G E=255,C=95,B=58	
CCGFF	HD	26337	44	0710	0407152	-080127	L	3	25291	L	85022113	000000	000000	134900	012000	G E=186,C=137,B=45	
CCGFF	HD	26337	44	0710	0407152	-080127	L	3	25280	L	85022013	000000	000000	135700	015000	G E=184,C=130,B=45	
HCGTA	HD	26857	39	0688	0413249	+504434	L	3	25275	SL	85021904	043600	001200	042800	000400	G C=47,B=22	
CBGMP	OO RW	PER	66	0990	0416469	+421159	L	3	25528	L	85032701	000000	000000	012300	005400	G C=50,B=21	
CBGMP	OO RW	PER	66	0990	0416470	+421200	L	3	25524	L	85032619	000000	000000	193700	003500	G C=50,B=28	
CBGMP	OO RW	PER	66	0990	0416470	+421200	L	1	05605	L	85032619	000000	000000	191300	001500	G C=115,B=35	
TTHJL	HD	283751	58	1000	0418507	+281933	L	3	25445	L	85031311	000000	000000	112500	039500	G E=147,C=110,B=83	
TTHJL	HD	283751	58	1000	0418507	+281933	L	1	05515	L	85031314	000000	000000	145100	001000	G E=192,C=75,B=35	
TTHJL	HD	283751	58	1000	0418508	+281934	H	1	05501	L	85031211	000000	000000	112400	038000	G E=206,C=155,B=100	
IMGTS	HD	27778	22	0620	0420586	+241111	H	3	25436	L	85031111	000000	000000	111800	020000	G C=5X,B=125	
GC245	QA297	48	1264	0421070	163614	L	1	05563	L	85032106	000000	000000	061008	012000	133	U	
CSGCI	HD	27836	44	0760	0421227	+143837	L	3	24967	L	85012502	000000	000000	024200	006000	G C=125,B=90	
GC245	QA366	48	1232	0422580	152418	L	1	05564	L	85032108	000000	000000	085228	008500	133	U	
HHGTS	OO HL	TAU	58	1350	0428443	+180735	L	1	05152	L	85010620	000000	000000	200900	018000	G B=70	
HHGTS	OO HL	TAU	58	1350	0428443	+180735	L	1	05151	L	85010615	000000	000000	155700	002500	G E=51,B=38	
HHGTS	OO HL	TAU	58	1350	0428443	+180735	D	9	01625	L	85010620	000000	000000	204000	016000	G NO COMMENTS	
HHGTS	OO HL	TAU	58	1350	0428443	+180735	L	3	24852	L	85010616	000000	000000	162900	039500	G B=85	
GC245	QA640	46	1126	0429020	152324	L	1	05562	L	85032103	000000	000000	031832	012000	343	U	
QSGJO	OO	3C120	84	0000	0430315	+051459	L	3	25530	L	85032711	000000	000000	115700	024000	G E=164,C=93,B=50	
QSGJO	OO	3C120	84	0000	0430315	+051459	L	1	05610	L	85032716	000000	000000	160500	013500	G C=150,B=55	
EGGEH	OO	A	496	88	0000	0431186	-132156	L	3	25497	L	85032119	000000	000000	192600	033500	G B=88
GQ017	ABELL	496	81	1500	0431187	-132158	L	3	24963	L	85012408	000000	000000	080607	015000	003	U
GE118	NGC	1614	82	1300	0431357	-084056	L	3	25483	L	85031904	000000	000000	040510	016500	381	U
CSGTS	HD	29051	47	0710	0432095	+170556	L	1	05339	L	85021021	000000	000000	210400	004700	G E=233,C=180,B=143	
LGGJL	HD	29139	47	0090	0433029	+162438	H	3	24889	L	85011121	000000	000000	212700	006000	G C=110,B=72	
LGGJL	HD	29139	47	0090	0433029	+162438	L	3	24885	L	85011101	000000	000000	015900	004500	G E=2.0X,C=115,B=80	
LGGJL	HD	29139	47	0090	0433029	+162438	H	1	05182	L	85011103	000000	000000	035600	000200	G E=213,C=90,B=52	
LGGJL	HD	29139	47	0090	0433029	+162438	H	1	05184	L	85011106	000000	000000	060800	001000	G E=3X,C=110,B=58	
LGGJL	HD	29139	47	0090	0433029	+162438	H	1	05181	L	85011102	000000	000000	025000	002000	G E=10X,C=215,B=125	
LGGJL	OO WAUCAL	98	9999	0433029	+162438	H	3	24888	S	85011120	204300	000018	000000	000000	G E=10X,B=110		
LGGJL	HD	29139	47	0090	0433029	+162438	H	3	24887	L	85011106	000000	000000	065400	078500	G E=5X,C=195,B=155	

PRO	OBJECT	CL	MAG	R.A.	DEC	D C	IMAGE	A	DATE	EXP. SMALL	EXP. LARGE	ECC	COMMENT	
LGGJL	HD	29139	47	0090	0433029	+162438	L 3	24886	L 85011103	000000	000000	032200	002000	G E=242,C=140,B=115
LGGJL	HD	29139	47	0090	0433029	+162438	D 9	01628	L 85011106	000000	000000	063800	016000	G NO COMMENTS
LGGJL	HD	29139	47	0090	0433029	+162438	H 1	05185	L 85011120	000000	000000	200600	006000	G E=20X,C=250,B=65
DCGEB	00	SZ TAU	53	0680	0434202	+182635	H 1	05265	L 85012701	000000	000000	015300	013500	G C=1.2X,B=157
DCGZB	00	SZ TAU	53	0680	0434202	+182635	L 3	24985	L 85012623	000000	000000	234600	012000	G C=105,B=45
DCGEB	00	SZ TAU	53	0680	0434202	+182635	L 1	05264	SL 85012623	233800	000200	232600	000500	G C=1.2X,B=38
IBGTA	HD	30959	50	0470	0449420	+141007	L 3	25555	L 85033119	000000	000000	191100	020500	G C=115,B=55
IBGTA	HD	30959	50	0470	0449421	+141008	L 1	05244	L 85012106	000000	000000	063200	000800	G E=184,C=88,B=35
IBGTA	HD	30959	50	0470	0449421	+141008	L 1	05320	L 85020716	000000	000000	161100	002500	G E=2.5X,C=220,B=39
IBGTA	HD	30959	50	0470	0449421	+141008	L 1	05623	L 85033118	000000	000000	185000	000800	G E=184,C=103,B=33
IBGTA	HD	30959	50	0470	0449421	+141008	H 1	05319	L 85020714	000000	000000	141800	006000	G E=144,C=75,B=41
IBGTA	HD	30959	50	0470	0449421	+141008	L 3	24940	L 85012105	000000	000000	055600	003000	G C=38,B=23
IBGTA	HD	30959	50	0470	0449421	+141008	L 3	25193	L 85020715	000000	000000	152200	009000	G C=80,B=30
HS231	NULL	99	9999	0451098	145432		1	05626	85040101	000000	000000	012700	000000	000 U
HS231	HALLEY	06	1700	0451160	145210		L 1	05627	L 85040102	000000	000000	021251	039000	114 U
LGHJL	HD	31398	47	0270	0453440	+330520	H 1	05634	L 85040123	000000	000000	232600	001000	G E=153,C=80,B=40
LGHJL	HD	31398	47	0270	0453440	+330520	H 1	05633	L 85040122	000000	000000	221400	003600	G E=2.0X,C=117,B=66
HYGLH	HD	31398	47	0270	0453440	+330520	H 1	05331	L 85020904	000000	000000	043000	001900	G E=227,C=80,B=31
GC167	HD31398	47	0295	0453440	330520		H 1	05200	L 85011308	000000	000000	083545	031000	776 U
GC167	WAUCAL	98	9999	0453440	330520		H 1	05201	85011314	141511	000000	000000	000000	096 U TFL00D=25S; TCAL=16S
GC167	HD31398	47	0299	0453440	330520		H 1	05199	L 85011307	000000	000000	075229	001200	331 U
UUGRC	HD	31964	39	0300	0458225	+434505	H 1	05468	L 85030722	000000	000000	220400	000700	G C=1.5X,B=72
UUGRC	HD	31964	39	0300	0458225	+434505	H 1	05466	L 85030719	000000	000000	192000	000007	G C=255,B=32
UUGRC	HD	31964	39	0300	0458225	+434505	L 3	25382	L 85030719	000000	000000	191400	000220	G C=1.5X,B=20
UUGRC	HD	31964	39	0300	0458225	+434505	H 3	25471	L 85031702	000000	000000	020000	002000	G C=83,B=27
UUGRC	HD	31964	39	0300	0458225	+434505	L 1	05539	L 85031700	000000	000000	004300	000035	G C=4X,B=38
UUGRC	HD	31964	39	0300	0458225	+434505	H 3	25383	L 85030719	000000	000000	195500	004000	G C=240,B=107
UUGRC	HD	31964	39	0300	0458225	+434505	H 1	05537	L 85031623	000000	000000	230900	000700	G C=230,B=41
UUGRC	HD	31964	39	0300	0458225	+434505	H 1	05467	L 85030720	000000	000000	205100	000700	G C=255,B=60
UUGRC	HD	31964	39	0300	0458225	+434505	L 3	25470	L 85031701	000000	000000	011500	000200	G C=190,B=22
UUGRC	HD	31964	39	0300	0458225	+434505	H 3	25469	L 85031623	000000	000000	232400	003000	G C=115,B=40
UUGRC	HD	31964	39	0300	0458225	+434505	L 3	25156	L 85020302	000000	000000	021600	000220	G C=210,B=25
UUGRC	HD	31964	39	0300	0458225	+434505	H 3	25157	L 85020303	000000	000000	033000	002500	G C=215,B=135
UUGRC	HD	31964	39	0300	0458225	+434505	H 1	05282	L 85020302	000000	000000	025900	000700	G B=92
UUGRC	HD	31964	39	0300	0458225	+434505	L 1	05538	L 85031700	000000	000000	001200	000007	G C=225,B=34
UUGRC	HD	31964	39	0300	0458225	+434505	L 1	05281	L 85020302	000000	000000	022300	000007	G C=222,B=35
UUGTA	00	EPS AUR	40	0300	0458226	+434505	L 1	05625	SL 85040100	003200	000110	002800	000007	G C=190,B=37
UUGTA	00	EPS AUR	40	0300	0458226	+434505	L 3	25557	L 85033123	000000	000000	235500	002000	G E=53,C=6X,B=18
UUGTA	00	EPS AUR	40	0300	0458226	+434505	H 1	05391	L 85021902	000000	000000	023300	003000	G E=173,C=5X,B=97
UUGTA	00	EPS AUR	40	0300	0458226	+434505	L 3	25273	L 85021901	000000	000000	015900	000150	G C=220,B=23
UUGTA	00	EPS AUR	40	0300	0458226	+434505	L 3	24938	L 85012103	000000	000000	032200	002000	G E=93,C=10X,B=59
UUGTA	00	EPS AUR	40	0300	0458226	+434505	H 1	05390	L 85021901	000000	000000	013700	000600	G C=230,B=60
UUGTA	00	EPS AUR	40	0300	0458226	+434505	H 1	05624	L 85033123	000000	000000	232500	002500	G E=136,C=4X,B=78
UUGTA	00	EPS AUR	40	0300	0458226	+434505	L 3	25274	L 85021903	000000	000000	030700	002000	G E=59,C=8X,B=41
UUGTA	00	EPS AUR	40	0300	0458226	+434505	L 1	05241	SL 85012103	031600	000050	031200	000005	G C=185,B=37

PRO	OBJECT	CL	MAG	R.A.	DEC	D C	IMAGE	A	DATE	EXP.SMALL	EXP.LARGE	ECC	COMMENT			
UUGTA	00	EPS	AUR	40	0300	0458226	+434505	L 1	05392	SL	85021903	035000	000100	034600	000006	G C=210,B=39
UUGTA	00	EPS	AUR	40	0300	0458226	+434505	L 1	05323	L	85020719	000000	000000	195500	000006	G C=220,B=37
UUGTA	00	EPS	AUR	40	0300	0458226	+434505	L 1	05324	L	85020720	000000	000000	202700	000030	G C=5X,B=33
UUGTA	00	EPS	AUR	40	0300	0458226	+434505	L 3	25556	L	85033123	000000	000000	231700	000150	G C=125,B=15
UUGTA	00	EPS	AUR	40	0300	0458226	+434505	H 1	05321	L	85020717	000000	000000	174400	003000	G E=177,C=5X,B=68
UUGTA	00	EPS	AUR	40	0300	0458226	+434505	L 3	25195	L	85020719	000000	000000	192200	002000	G E=85,C=8X,B=35
UUGTA	00	EPS	AUR	40	0300	0458226	+434505	H 1	05322	L	85020718	000000	000000	185400	000600	G C=230,B=42
UUGTA	00	EPS	AUR	40	0300	0458226	+434505	L 3	24939	L	85012105	000000	000000	051100	000150	G C=132,B=21
UUGTA	00	EPS	AUR	40	0300	0458226	+434505	H 1	05242	L	85012103	000000	000000	035700	000600	G E=92,C=210,B=52
UUGTA	00	EPS	AUR	40	0300	0458226	+434505	L 1	05243	L	85012104	000000	000000	043800	003000	G E=195,C=4X,B=80
UUGTA	00	EPS	AUR	40	0300	0458226	+434505	L 3	25194	L	85020718	000000	000000	181800	000150	G C=185,B=21
ECHJL	HD	32068	47	0380	0458587	+410018	H 3	25580	L	85040416	000000	000000	162000	003000	G E=252,B=62	
ECHJL	HD	32068	47	0380	0458587	+410018	L 1	05661	L	85040416	000000	000000	161500	000200	G E=2X,C=215,B=38	
ECHJL	HD	32068	47	0380	0458587	+410018	H 3	25579	L	85040400	000000	000000	000000	001000	G E=141,B=35	
ECHJL	HD	32068	47	0380	0458587	+410018	H 3	25578	L	85040322	000000	000000	225500	003000	G E=255,B=140	
ECHJL	OO	WAUECAL	98	9999	0458587	+410018	H 1	05660	S	85040415	151800	000016	000000	000000	G E=60X,B=108	
ECHJL	HD	32068	47	0380	0458587	+410018	H 1	05658	L	85040321	000000	000000	214600	000500	G E=202,C=100,B=60	
ECHJL	HD	32068	47	0380	0458587	+410018	L 3	25577	L	85040321	000000	000000	210200	000400	G E=235,C=25,B=12	
ECHJL	HD	32068	47	0380	0458587	+410018	L 1	05657	L	85040320	000000	000000	201500	002500	G E=30X,C=6X,B=110	
ECHJL	HD	32068	47	0380	0458587	+410018	L 3	25576	L	85040319	000000	000000	193600	002000	G E=3X,C=180,B=39	
ECHJL	HD	32068	47	0380	0458587	+410018	H 1	05656	L	85040318	000000	000000	185800	003000	G E=3X,C=190,B=82	
ECHJL	HD	32068	47	0380	0458587	+410018	D 9	01645	L	85040400	000000	000000	004400	016000	G NO COMMENTS	
ECHJL	HD	32068	47	0380	0458587	+410018	H 1	05659	L	85040400	000000	000000	005800	077000	G E=150X,C=15X,B=160	
GC024	HD32068	39	0390	0458590	410030	H 3	25473	L	85031708	000000	000000	080432	002000	601 U		
GC024	HD32068	39	0401	0458590	410030	H 1	05541	L	85031707	000000	000000	072458	001200	114 U		
GC024	HD32068	39	0398	0458590	410030	H 1	05542	L	85031708	000000	000000	083638	001200	604 U		
PHCAL	HD	32630	21	0320	0503002	+411008	L 1	05222	SL	85011805	055900	000001	055500	000001	G C=230,B=35	
PHCAL	HD	32630	21	0320	0503002	+411008	L 1	05475	SL	85030900	004000	000001	003600	000001	G C=2X,B=40	
PHCAL	HD	32630	21	0320	0503002	+411008	L 3	25397	SL	85030900	003200	000001	002700	000001	G C=215,B=15	
PHCAL	HD	32630	21	0320	0503002	+411008	L 2	17652	L	85031319	000000	000000	190500	000001	G C=200,B=28	
PHCAL	HD	32630	21	0320	0503002	+411008	L 2	17653	L	85031319	000000	000000	194400	000002	G C=2X,B=30	
PHCAL	HD	32630	21	0320	0503002	+411008	L 2	17654	L	85031320	000000	000000	202300	000002	G C=2X,B=30	
PHCAL	HD	32630	21	0320	0503002	+411008	L 2	17593	L	85011505	000000	000000	053700	000001	G C=240,B=25	
PHCAL	HD	32630	21	0320	0503002	+411008	L 2	17592	L	85011505	000000	000000	050500	000001	G C=235,B=25	
PHCAL	HD	32630	21	0320	0503002	+411008	L 2	17650	SL	85030923	234300	000001	233900	000001	G C=2X,B=25	
PHCAL	HD	32630	21	0320	0503002	+411008	L 2	17594	L	85011506	000000	000000	062100	000001	G C=195,B=25	
PHCAL	HD	32630	21	0320	0503002	+411008	L 2	17587	SL	85011405	060200	000001	055700	000001	G C=220,B=25	
PHCAL	HD	32630	21	0320	0503002	+411008	L 2	17591	SL	85011504	043200	000001	042400	000001	G C=215,B=25	
PHCAL	HD	32630	21	0320	0503002	+411008	L 2	17647	SL	85030921	214400	000001	214000	000001	G C=2X,B=25	
PHCAL	HD	32630	21	0320	0503002	+411008	L 3	25372	SL	85030622	224500	000001	224000	000001	G C=200,B=18	
PHCAL	HD	32630	21	0320	0503002	+411008	L 2	17649	SL	85030923	230700	000001	230300	000001	G C=2X,B=25	
PHCAL	HD	32630	21	0320	0503002	+411008	L 2	17648	SL	85030922	221800	000001	221500	000001	G C=2X,B=22	
PHCAL	HD	32630	21	0320	0503002	+411008	L 3	25373	SL	85030623	231900	000001	231300	000001	G C=2X,B=18	
PHCAL	HD	32630	21	0320	0503002	+411008	L 1	05223	SL	85011806	063600	000001	063300	000001	G C=245,B=35	
CVGWB	OO	AQ	ERI	54	1670	0503441	-041200	L 3	24907	L	85011416	000000	000000	164400	024000	G B=78

PRO OBJECT CL MAG R.A. DEC D C IMAGE A DATE EXP.SMALL EXP.LARGE ECC COMMENT

CUGUB	OO	AQ ERI	54	1670	0503441	-041200	D 9	01630	L	85011416	000000	000000	162000	002000	G NO COMMENTS
IEGAW	HD	293815	22	1010	0504240	-032500	L 2	17600	L	85012317	000000	000000	171900	001530	G C=195,B=26
IEGAW	HD	293815	22	1010	0504240	-032500	L 3	24949	L	85012222	000000	000000	220100	003800	G C=160,B=25
IEGAW	HD	293815	22	1010	0504240	-032500	L 3	24957	L	85012315	000000	000000	155700	007600	G C=1.5X,B=22
HSHRP	HD	33599	26	0890	0506408	-615208	H 3	25657	L	85041022	000000	000000	224700	007500	G C=230,B=80
IGGJS	HD	34078	12	0581	0512599	+341524	H 1	05226	L	85011902	000000	000000	024200	000900	G C=237,B=60
QSGHM	OOARAK	120	84	1410	0513379	-001215	L 3	24945	L	85012204	000000	000000	042700	007500	G E=161,C=105,B=40
QSGHM	OOARAK	120	84	1410	0513379	-001215	L 1	05248	L	85012205	000000	000000	054600	006200	G E=255,C=210,B=43
AFGEB	HD	34798	21	0620	0517058	-183414	L 3	24998	L	85012906	000000	000000	064000	000006	G C=170,B=18
AFGEB	HD	34798	21	0620	0517058	-183414	L 1	05275	L	85012904	000000	000000	044900	000008	G C=2X,B=30
AFGEB	HD	34798	21	0620	0517058	-183414	L 1	05276	L	85012906	000000	000000	064400	000004	G C=190,B=35
AFGEB	HD	34798	21	0620	0517058	-183414	H 3	24997	L	85012904	000000	000000	041100	000830	G C=218,B=53
AFGEB	HD	34797	22	0640	0517066	-183337	L 1	05272	L	85012901	000000	000000	011800	000012	G C=1.5X,B=35
AFGEB	HD	34797	22	0640	0517066	-183337	L 3	24996	L	85012902	000000	000000	024400	000020	G C=180,B=20
AFGEB	HD	34797	22	0640	0517066	-183337	H 1	05273	L	85012902	000000	000000	020600	001200	G C=245,B=58
AFGEB	HD	34797	22	0640	0517066	-183337	H 3	24995	L	85012901	000000	000000	012500	002000	G C=210,B=40
AFGEB	HD	34797	22	0640	0517066	-183337	H 1	05274	L	85012903	000000	000000	032900	000700	G C=1.2X,B=75
PHCAL	OO	WAUECAL	98	0000	0517161	-131336	H 2	17581	S	85011401	012400	000016	000000	000000	G E=50X,B=115
PHCAL	OO	WAUECAL	98	0000	0517161	-131336	L 2	17580	S	85011400	005600	000001	000000	000000	G E=10X,B=85
PHCAL	OO	SAFE RD	99	9999	0517161	-131336	L 2	17625	L	85021921	000000	000000	210000	000000	G B=33
PHCAL	HD	34816	20	0430	0517162	-131337	L 3	25413	L	85031001	000000	000000	011900	000001	G C=240,B=15
PHCAL	HD	34816	20	0430	0517162	-131337	H 2	17626	L	85021921	000000	000000	214600	000026	G C=205,B=33
PHCAL	HD	34816	20	0430	0517162	-131337	H 1	05452	L	85030401	000000	000000	012200	000022	G C=225,B=45
PHCAL	HD	34816	20	0430	0517162	-131337	L 3	25376	SL	85030701	011800	000001	011400	000001	G C=240,B=18
PHCAL	HD	34816	20	0430	0517162	-131337	L 2	17651	SL	85031000	003500	000001	002600	000001	G C=1.5X,B=25
PHCAL	HD	34816	20	0430	0517162	-131337	H 1	05667	L	85040423	000000	000000	232300	000022	G C=225,B=45
PHCAL	HD	34816	20	0430	0517162	-131337	L 3	25375	SL	85030700	004500	000001	004000	000001	G C=220,B=18
PHCAL	HD	34816	20	0430	0517162	-131337	H 3	24902	L	85011400	000000	000000	002300	000022	G C=200,B=32
PHCAL	HD	34816	20	0430	0517162	-131337	H 3	24901	L	85011323	000000	000000	235500	000022	G C=195,B=32
PHCAL	HD	34816	20	0430	0517162	-131337	H 2	17700	L	85040520	000000	000000	203600	000026	G C=210,B=32
PHCAL	HD	34816	20	0430	0517162	-131337	L 2	17684	L	85033100	000000	000000	004900	000001	G C=175,B=25
PHCAL	HD	34816	20	0430	0517162	-131337	H 3	24916	L	85011703	000000	000000	034900	000022	G C=180,B=38
PHCAL	HD	34816	20	0430	0517162	-131337	L 2	17686	SL	85033102	020800	000001	020300	000001	G C=2X,B=28
PHCAL	HD	34816	20	0430	0517162	-131337	L 3	25374	SL	85030700	001000	000001	000300	000001	G C=2X,B=18
PHCAL	HD	34816	20	0430	0517162	-131337	L 2	17685	SL	85033101	012700	000001	012300	000001	G C=170,B=28
PHCAL	HD	34816	20	0430	0517162	-131337	H 1	05212	L	85011703	000000	000000	034500	000022	G C=210,B=46
PHCAL	HD	34816	20	0430	0517162	-131337	H 3	25584	L	85040423	000000	000000	232700	000022	G C=200,B=35
IBGTA	HD	35155	66	0680	0519548	-084247	L 3	24937	L	85012100	000000	000000	001600	009000	G E=232,C=170,B=53
IBGTA	HD	35155	66	0680	0519548	-084247	L 1	05239	L	85012100	000000	000000	000400	008700	G E=216,C=85,B=38
IBGTA	HD	35155	66	0680	0519548	-084247	L 1	05240	L	85012101	000000	000000	015000	002500	G E=3X,C=155,B=57
GCGBA	NG	1904	83	0780	0522120	-243400	L 3	25303	L	85022313	000000	000000	135900	034500	G C=165,B=73
PMGJL	HD	36486	13	0223	0529269	-002003	H 3	24884	L	85011100	000000	000000	002300	000005	G C=200,B=32
IEGCG	HD	36486	13	0223	0529269	-002003	H 3	24878	L	85011005	000000	000000	053000	000005	G C=200,B=35
GI031	LANNING	10	63	1420	0530098	365729	L 3	25335	L	85022804	000000	000000	043019	015000	331 U
GI031	LANNING	10	63	1420	0530098	365729	L 1	05437	L	85022807	000000	000000	070647	019000	502 U

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PRO	OBJECT	CL	MAG	R.A.	DEC	D C	IMAGE	A	DATE	EXP.SMALL	EXP.LARGE	ECC	COMMENT		
GC083	P1659	52	1230	0532285	-052509	L 3	24904	L	85011409	000000	000000	095443	003000 300 V		
GC083	P1659	52	1230	0532285	-052509	L 1	05206	L	85011410	000000	000000	103055	003000 301 V		
GC083	P1910MTORI	52	1120	0532505	-052438	L 1	05205	L	85011409	000000	000000	092231	002500 553 V		
GC083	P1910MTORI	52	1120	0532505	-052438	L 1	05204	L	85011407	000000	000000	075306	005000 752 V		
GC083	P1910MTORI	52	1120	0532505	-052438	L 3	24903	L	85011408	000000	000000	084824	003000 800 V		
IEGCG	HD	37128	23	0170	0533404	-011355	H 3	24879	S	85011006	060300	000007	000000 000000	G C=225,B=35	
GM138	HH1	72	1550	0533549	-064702	E 9	01634	2	85011609	000000	000000	094000	004000	V FIELD FOR SWP 24914	
HHGKB	OO	HH-1	19	1570	0533549	-064702	L 3	24914	L	85011615	000000	000000	155800	072900	G E=193,C=150,B=115
HHGKB	OO	HH-2	19	1600	0533596	-064901	L 3	24919	L	85011715	000000	000000	155600	086000	G E=221,C=210,B=138
GM138	HH2	72	1550	0533596	-064901	E 9	01635	2	85011708	000000	000000	081100	004000	V FIELD FOR SWP 24919	
HHGKB	NG	1999	73	1000	0534009	-064509	L 1	05208	L	85011621	000000	000000	211000	010000	G C=150,B=103
IEGAW	HD	37140	22	0850	0534160	-002000	L 3	24958	SL	85012318	182500	000954	181400	000318	G C=1.5X,B=20
IEGAW	HD	37140	22	0850	0534160	-002000	L 2	17601	SL	85012319	191100	000800	190100	000200	G C=1.5X,B=28
NEGWB	OO	N 63	72	9999	0535320	-660250	L 1	05364	SL	85021414	145400	006500	145400	006500	G C=79,B=48
NEGWB	OO	N 63A	72	9999	0535361	-660354	L 3	25243	L	85021414	000000	000000	142400	010000	G C=160,B=35
NEGWB	OO	N63A	75	9999	0535372	-660403	L 3	25349	L	85030312	000000	000000	120800	004600	G C=70,B=21
NEGWB	OO	N63A	75	9999	0535372	-660403	L 3	25350	L	85030313	000000	000000	133300	027000	G C=145,B=90
NEGWB	OO	OON63A-P.2	75	9999	0535385	-660356	L 3	25278	L	85021914	000000	000000	141400	039000	G E=223,C=210,B=100
NEGWB	OO	OON63A-P.2	72	9999	0535385	-660356	L 1	05396	L	85021917	000000	000000	170000	012000	G C=230,B=60
NEGWB	OO	OON63A-P.2	72	9999	0535385	-660356	L 1	05395	L	85021914	000000	000000	142000	012000	G C=210,B=50
HHGJS	OO	HH-43	64	1600	0535454	-071104	L 3	24924	L	85011816	000000	000000	160400	058000	G C=170,B=130
ISHJS	HD	37468	12	0380	0536141	-023738	H 1	05760	L	85041522	000000	000000	221300	000010	G C=175,B=40
IBGAB	HD	37453	39	0820	0536443	+300337	L 3	24950	L	85012223	000000	000000	235700	001600	G C=140,B=20
IBGBB	HD	37453	39	0820	0536443	+300337	L 1	05249	L	85012223	000000	000000	234400	000500	G E=213,C=210,B=32
GQ220	PK0537-441	87	1400	0537208	-440644	L 1	05401	L	85022106	000000	000000	061111	016700	304 V	
IEGCG	HD	37742	13	0175	0538140	-015802	H 3	24880	S	85011006	063300	000007	000000	000000	G C=230,B=38
PEHAM	OO	LMC S134	13	1200	0540359	-692359	L 3	25790	L	85042714	000000	000000	144700	003000	G E=1.5X,C=175,B=70
GI215	OO	H0542.407	59	1500	0541445	-410313	L 1	05818	L	85042503	000000	000000	035920	006500	314 V
GI215	OO	H0542.407	59	1500	0541445	-410313	L 3	25773	L	85042502	000000	000000	021458	009730	231 V
XBGJH	OO	CAL 83	59	1700	0543489	-682334	L 3	25309	L	85022412	000000	000000	124700	036000	G C=130,B=70
PHCAL	HD	38666	12	0520	0544084	-321927	L 1	05215	L	85011723	000000	000000	232200	000001	G C=130,B=35
PHCAL	HD	38666	12	0520	0544084	-321927	L 3	25672	L	85041223	000000	000000	230700	000001	G C=2X,B=21
PHCAL	HD	38666	12	0520	0544084	-321927	L 1	05216	L	85011723	000000	000000	235500	000001	G C=139,B=37
PHCAL	HD	38666	12	0520	0544084	-321927	L 3	25387	SL	85030800	002600	000001	002200	000001	G C=160,B=17
PHCAL	HD	38666	12	0520	0544084	-321927	L 3	25386	SL	85030723	235500	000001	235100	000001	G C=155,B=15
PHCAL	HD	38666	12	0520	0544084	-321927	L 3	25385	SL	85030723	232400	000001	232100	000001	G C=150,B=15
PHCAL	HD	38666	12	0520	0544084	-321927	L 1	05217	L	85011800	000000	000000	002900	000004	G C=2X,B=39
PHCAL	HD	38666	12	0520	0544084	-321927	L 1	05789	L	85042112	000000	000000	124800	000001	G C=2X,B=32
PHCAL	HD	38666	12	0520	0544084	-321927	L 3	25384	SL	85030722	225300	000001	224900	000001	G C=150,B=18
PHCAL	HD	38666	12	0520	0544084	-321927	L 3	25673	L	85041223	000000	000000	233800	000003	G C=2X,B=22
PHCAL	HD	38666	12	0520	0544084	-321927	L 3	25675	L	85041300	000000	000000	004100	000001	G C=2X,B=20
PHCAL	HD	38666	12	0520	0544084	-321927	L 3	25674	L	85041300	000000	000000	001100	000003	G C=2X,B=21
PHCAL	HD	38666	12	0520	0544084	-321927	L 2	17655	L	85031321	000000	000000	210800	000001	G C=215,B=28
PHCAL	HD	38666	12	0520	0544084	-321927	L 2	17656	L	85031321	000000	000000	214600	000003	G C=201,B=27
PHCAL	HD	38666	12	0520	0544084	-321927	L 2	17657	L	85031322	000000	000000	222300	000003	G C=200,B=28

PRO	OBJECT	CL	MAG	R.A.	DEC	D	C	IMAGE	A	DATE	EXP. SMALL	EXP. LARGE	ECC	COMMENT		
PHCAL	HD	38666	12	0520	0544084	-321927	L	3	25671	L	85041222	000000	000000	223700	000001	G C=2X,B=20
IEGAW	HD	38563B	20	1050	0544096	+000334	L	2	17602	L	85012319	000000	000000	195700	010000	G C=220,B=48
OD54K	HD	39060	33	0384	0546058	-510500	H	1	05379	L	85021620	000000	000000	203800	000325	G E=107,C=220,B=47
GQ203	PK0548-322	85	1600	0548491	-321702	L	1	05454	L	85030504	000000	000000	041415	015000	111	U
PEHAM	00LHC	S63	57	1700	0548520	-673702	L	3	25791	L	85042716	000000	000000	160200	005000	G C=156,B=130
AFGEB	HD	39283	36	0490	0550392	+554153	H	3	24994	L	85012823	000000	000000	234300	002000	G C=230,B=40
AFGEB	HD	39283	36	0490	0550392	+554153	H	1	05271	L	85012823	000000	000000	233000	000730	G C=220,B=45
GQ220	MCSB-11-11	84	1400	0551097	462551	L	3	25479	L	85031803	000000	000000	033004	030000	343	U
GQ220	MCSB-11-11	84	1400	0551097	-462551	L	1	05547	L	85031808	000000	000000	083534	010000	342	U
PHCAL	00	WAVECAL	98	0000	0552279	+072357	L	3	24932	S	85012004	045000	000002	000000	000000	G E=10X,B=102
LSHAD	HD	39801	49	0050	0552279	+072357	H	3	25710	L	85041720	000000	000000	202400	002800	G E=95,B=40
PHCAL	00	WAVECAL	98	0000	0552279	+072357	H	1	05236	S	85012004	040600	000016	000000	000000	G E=60X,B=110
PHCAL	00	WAVECAL	98	0000	0552279	+072357	L	1	05235	S	85012003	033500	000001	000000	000000	G E=10X,B=100
PHCAL	00	WAVECAL	98	0000	0552279	+072357	H	3	24933	S	85012005	051500	000200	000000	000000	G E=60X,B=123
LSHAD	HD	39801	49	0050	0552279	+072357	H	1	05772	S	85041719	193800	004000	000000	000000	G E=6X,C=125,B=65
PHCAL	00	WAVECAL	98	0000	0552279	+072357	L	1	05665	S	85040421	213100	000001	000000	000000	G E=10X,B=100
PHCAL	00	WAVECAL	98	0000	0552279	+072357	H	1	05666	S	85040421	220100	000016	000000	000000	G E=50X,B=110
LSHAD	HD	39801	49	0050	0552279	+072357	L	3	25709	L	85041717	000000	000000	172800	005000	G E=3X,C=160,B=26
LSHAD	HD	39801	49	0050	0552279	+072357	H	1	05771	L	85041717	000000	000000	171800	000200	G E=194,C=60,B=35
CSGAD	HD	39801	49	0050	0552280	+072358	L	1	05234	SL	85012001	015800	000030	015400	000005	G E=174,C=73,B=31
LSHAD	HD	39801	49	0050	0552280	+072358	H	1	05663	L	85040419	000000	000000	191200	002500	G E=6X,C=255,B=107
CSGAD	HD	39801	49	0050	0552280	+072358	L	3	25206	L	85020922	000000	000000	220100	004000	G E=110,C=220,B=59
LSHAD	HD	39801	49	0050	0552280	+072358	L	3	25582	L	85040418	000000	000000	183600	003000	G E=4X,C=185,B=72
CSGAD	HD	39801	49	0050	0552280	+072358	L	3	25208	L	85021000	000000	000000	002400	001500	G E=231,C=115,B=53
CSGAD	HD	39801	49	0050	0552280	+072358	H	3	25468	L	85031621	000000	000000	215600	002500	G E=75,B=25
CSGAD	HD	39801	49	0050	0552280	+072358	L	1	05280	L	85020300	000000	000000	005300	000005	G E=165,C=70,B=32
CSGAD	HD	39801	49	0050	0552280	+072358	L	1	05334	SL	85020923	235400	000030	234900	000005	G E=180,C=115,B=31
CSGAD	HD	39801	49	0050	0552280	+072358	H	3	25333	L	85022722	000000	000000	220300	002500	G C=60,B=22
CSGAD	HD	39801	49	0050	0552280	+072358	L	3	25207	L	85020923	000000	000000	231800	000500	G E=87,C=49,B=26
CSGAD	HD	39801	49	0050	0552280	+072358	L	1	05433	SL	85022721	212800	000030	212400	000005	G E=193,C=78,B=31
CSGAD	HD	39801	49	0050	0552280	+072358	L	3	24930	L	85012001	000000	000000	012100	001000	G E=152,C=51,B=21
CSGAD	HD	39801	49	0050	0552280	+072358	H	1	05431	L	85022718	000000	000000	185000	000200	G E=213,C=80,B=34
CSGAD	HD	39801	49	0050	0552280	+072358	L	3	25155	L	85020300	000000	000000	001000	000500	G E=100,C=45,B=21
CSGAD	HD	39801	49	0050	0552280	+072358	L	3	24929	L	85011923	000000	000000	233700	005000	G E=4X,C=160,B=40
CSGAD	HD	39801	49	0050	0552280	+072358	L	3	25332	L	85022720	000000	000000	205200	001000	G E=154,C=70,B=26
CSGAD	HD	39801	49	0050	0552280	+072358	L	3	25466	L	85031619	000000	000000	190500	005000	G E=4X,C=160,B=38
CSGAD	HD	39801	49	0050	0552280	+072358	L	3	25154	L	85020223	000000	000000	230600	000500	G E=96,C=45,B=17
CSGAD	HD	39801	49	0050	0552280	+072358	H	3	24931	L	85012002	000000	000000	022800	002700	G E=99,B=50
CSGAD	HD	39801	49	0050	0552280	+072358	H	1	05333	S	85020922	224700	002500	000000	000000	G E=6X,C=200,B=66
CSGAD	HD	39801	49	0050	0552280	+072358	H	1	05279	L	85020223	000000	000000	233900	000200	G E=178,C=85,B=40
LSHAD	HD	39801	49	0050	0552280	+072358	L	3	25583	L	85040420	000000	000000	205400	000800	G E=157,C=90,B=45
LSHAD	HD	39801	49	0050	0552280	+072358	L	3	25581	L	85040417	000000	000000	175900	000500	G E=101,C=60,B=30
CSGAD	HD	39801	49	0050	0552280	+072358	H	1	05535	S	85031620	200000	004000	000000	000000	G E=10X,C=120,B=43
CSGAD	HD	39801	49	0050	0552280	+072358	L	3	25467	L	85031620	000000	000000	204700	001000	G E=150,C=55,B=27
LSHAD	HD	39801	49	0050	0552280	+072358	H	1	05662	L	85040417	000000	000000	174700	000200	G E=200,C=80,B=42

PRO	OBJECT	CL	MAG	R.A.	DEC	D	C	IMAGE	A	DATE	EXP.SMALL	EXP.LARGE	ECC	COMMENT			
CSGAD	HD	39801	49	0050	0552280	+072358	H	1	05233	S	85012000	003500	004000	000000	000000	G E=10X,C=230,B=50	
CSGAD	HD	39801	49	0050	0552280	+072358	H	1	05232	L	85011923	000000	000000	232800	000200	G E=172,C=80,B=37	
LSHAD	HD	39801	49	0050	0552280	+072358	L	1	05664	SL	85040420	201800	000030	201400	000005	G E=203,C=76,B=30	
CSGAD	HD	39801	49	0050	0552280	+072358	H	1	05432	S	85022720	200600	004000	000000	000000	G E=10X,C=200,B=40	
CSGAD	HD	39801	49	0050	0552280	+072358	L	3	25331	L	85022718	000000	000000	185800	005000	G E=4.0X,C=205,B=18	
CSGAD	HD	39801	49	0050	0552280	+072358	H	1	05278	L	85020222	000000	000000	224000	000200	G C=80,B=32	
CSGAD	HD	39801	49	0050	0552280	+072358	L	1	05536	SL	85031621	212700	000030	212300	000005	G E=201,C=75,B=35	
CSGAD	HD	39801	49	0050	0552280	072358	H	1	05534	L	85031618	000000	000000	185300	000200	G E=200,C=80,B=40	
CSGAD	HD	39801	49	0050	0552280	+072358	H	1	05332	L	85020921	000000	000000	215300	000200	G E=179,C=73,B=32	
PMGJL	HD	40409	46	0460	0553430	-630617	L	3	24853	L	85010700	000000	000000	000400	020000	G C=143,B=112	
GQ203	A0556-383	84	1450	0556211	-382016	L	1	05444	L	85030204	000000	000000	043144	020000	304	U	
GAI26	HD	250550	26	0970	0559063	+163058	H	3	24984	L	85012619	000000	000000	192400	064500	G C=1.5X,B=145	
GAI26	HD250550	34	0970	0559064	163059	E	9	01636	2	85012607	000000	000000	075000	016000	U		
GAI26	HD250550	34	0977	0559064	163059	H	1	05263	L	85012608	000000	000000	080548	022200	552	U	
CBGEB	OO RZ GEM	53	0990	0559360	+221415	L	3	24986	L	85012704	000000	000000	044200	012000	G C=63,B=33		
CSGEB	HD	41116	45	0380	0601048	+231604	L	3	24990	L	85012803	000000	000000	032000	000800	G C=118,B=22	
CSGEB	HD	41116	45	0380	0601048	+231604	L	1	05268	SL	85012803	033800	000030	033300	000030	G C=2.5X,B=35	
ISHJS	HD	42087	23	0580	0606418	+230724	H	1	05744	L	85041323	000000	000000	233400	000430	G C=180,B=42	
IBGBB	HD	43246	39	0740	0613117	+285212	H	1	05250	L	85012301	000000	000000	011000	003500	G C=160,B=45	
IBGBB	HD	43246	39	0740	0613117	+285212	L	3	24951	L	85012301	000000	000000	010200	000200	G C=180,B=18	
CSGTS	HD	44478	49	0280	0619561	+223228	L	1	05342	L	85021100	000000	000000	001600	000045	G E=212,C=80,B=35	
CSGTS	HD	44478	49	0280	0619561	+223228	L	1	05341	L	85021023	000000	000000	233300	000100	G E=1.1X,C=100,B=32	
DCGNE	HD	44990	53	0610	0622310	+070657	H	1	05326	L	85020814	000000	000000	140300	036000	G C=2X,B=150	
DCGNE	HD	44990	53	0610	0622310	+070657	L	3	25198	L	85020820	000000	000000	201100	004000	G C=170,B=57	
ISHJS	HD	46056	12	0820	0628415	+045214	H	1	05782	L	85041913	000000	000000	135800	004100	G C=205,B=50	
ISHJS	HD	46149	12	0760	0629129	+050412	H	1	05784	L	85041916	000000	000000	163400	001500	G C=170,B=43	
ISHJS	HD	46202	12	0820	0629310	+050014	H	1	05783	L	85041915	000000	000000	152100	004000	G C=210,B=51	
GM183	HD47306	74	0462	0633524	-525604	H	1	05130	L	85010314	000000	000000	141947	000600	703	U	
GM183	HD47306	74	0462	0633524	-525604	H	3	24822	L	85010314	000000	000000	143837	001200	501	U	
NPGWF	OO MI -7	70	1200	0634177	+240311	L	3	25537	L	85032822	000000	000000	220700	002000	G B=17		
PMGJL	HD	47205	47	0390	0634301	-191243	L	3	24854	L	85010704	000000	000000	041400	015000	G B=1.5X	
GC231	HD47442	47	0479	0635414	-181134	L	3	24922	L	85011808	000000	000000	080849	018000	731	U	
ISHJS	HD	48434	23	0590	0641004	+035901	H	1	05745	L	85041400	000000	000000	001200	000300	G C=210,B=42	
GI041	BT MON	52	1550	0641157	-015807	L	3	25446	L	85031403	000000	000000	034835	006000	211	U	
GI041	BT MON	52	1550	0641158	-015808	L	1	05516	L	85031404	000000	000000	045328	006000	313	U	
CUGJR	OO HL CMA	54	1050	0643034	-164824	L	1	05473	L	85030819	000000	000000	195000	004000	G C=1.5X,B=215		
CUGJR	OO HL CMA	54	1050	0643034	-164824	L	3	25394	L	85030819	000000	000000	190300	004000	G E=185,C=200,B=160		
IGGJH	SA	172499	21	0870	0650508	-214623	D	9	01633	L	85011603	000000	000000	035000	016000	G NO COMMENTS	
IGGJH	SA	172499	21	0870	0650508	-214623	H	3	24912	L	85011604	000000	000000	040200	004500	G C=2X,B=2X	
PHCAL	OO WAUCAL	98	9999	0653436	+334451	H	3	25197	S	85020722	222900	900200	000000	000000	G E=50X,B=128		
PHCAL	OO WAUCAL	98	9999	0653436	+334451	L	3	25196	S	85020721	214100	000002	000000	000000	G E=10X,B=98		
PHCAL	OO WAUCAL	98	9999	0653436	+334451	L	2	17607	S	85020722	224200	000001	000000	000000	G E=10X,B=82		
PHCAL	OO WAUCAL	98	9999	0653436	+334451	H	2	17608	S	85020723	230600	000016	000000	000000	G E=50X,B=137		
IGGJH	HD	51549	21	0270	0654465	-210203	H	3	24910	L	85011523	000000	000000	230400	002300	G C=170,B=40	
GAI33	HD	52721	20	0675	0659286	-111340	H	3	25377	L	85030704	000000	000000	043047	001700	502	U

PRO	OBJECT	CL	MAG	R.A.	DEC	D	C	IMAGE	A	DATE	EXP.	SMALL	EXP.	LARGE	ECC	COMMENT
GA133	HD 52721	20	0673	0659286	-111340	H	3	25389	L	85030804	000000	000000	042709	001400	501	V
GA133	HD 52721	20	0673	0659286	-111340	H	1	05462	L	85030704	000000	000000	040647	000700	502	V
GA133	HD52721	20	0673	0659286	-111340	H	1	05469	L	85030804	000000	000000	040704	000600	501	V ANALOGUE PLAYBACK
CBGMP	HD 53244	25	0412	0701297	-153328	H	3	25526	L	85032622	000000	000000	225500	000200		G C=210,B=35
CBGMP	HD 53244	25	0412	0701297	-153328	H	1	05607	L	85032622	000000	000000	221400	000400		G C=1.2X,B=50
OD62K	007 ZW 118	84	1510	0702240	+644038	L	3	25370	L	85030617	000000	000000	173500	004500		G E=145,C=92,B=70
OD62K	007 ZW 118	84	1510	0702240	+644038	L	1	05459	L	85030615	000000	000000	150500	014500		G E=217,C=225,B=103
OD62K	007 ZW 118	84	1510	0702240	+644038	L	3	25369	L	85030611	000000	000000	113600	020500		G E=1.5X,C=115,B=56
GI172	NGC 2346	70	1360	0706495	-004329	H	3	25202	L	85020905	000000	000000	055200	041500	034	V
NCHWF	NG 2346	70	0000	0706496	-004329	L	3	25821	L	85043017	000000	000000	173300	016000		G E=193,C=105,B=75
IGGJH	HD 55714	22	0910	0710578	-224731	H	2	17595	L	85011600	000000	000000	005000	011100		G C=1.5X,B=90
IGGJH	HD 55714	22	0910	0710578	-224731	D	9	01632	L	85011603	000000	000000	033400	016000		G NO COMMENTS
ISHJS	HD 55879	23	0600	0712060	-101344	H	1	05743	L	85041322	000000	000000	225200	000200		G C=205,B=45
CSEHJ	HD 56167	50	0800	0716204	+694553	L	1	05310	L	85020521	000000	000000	212500	004000		G C=240,B=42
CSEHJ	HD 56167	50	0740	0716204	+694553	L	1	05302	L	85020501	000000	000000	015300	002500		G C=1.5X,B=188
IGGJH	HD 57236	20	0390	0717216	-215440	H	3	24911	L	85011600	000000	000000	000200	003000		G C=72,B=30
NPGTB	NG 2392	71	0970	0726132	+210042	L	3	25235	L	85021401	000000	000000	015800	001000		G E=177,C=125,B=93
NPGTB	NG 2392	71	0970	0726132	+210110	L	1	05360	L	85021402	000000	000000	025600	001200		G E=139,C=150,B=102
NPGTB	NG 2392	71	0970	0726133	+210057	L	1	05359	SL	85021401	014200	000600	013100	000300		G C=3X,B=115
NPGTB	NG 2392	71	0970	0726134	+210110	L	3	25236	L	85021403	000000	000000	034700	005700		G E=2X,C=90,B=52
LGSEB	HD 59294	47	0128	0727008	+120642	L	3	25475	L	85031711	000000	000000	115200	025500		G C=85,B=50
GI224	3A0729+103	54	1450	0728444	100247	L	3	25755	L	85042102	000000	000000	020220	004000	231	V
GI224	3A0729+103	54	1450	0728444	100247	L	1	05785	L	85042102	000000	000000	024658	002500	333	V
GI224	3A0729+103	54	1450	0728444	100247	L	3	25756	L	85042103	000000	000000	031658	006000	331	V
GI224	3A0729+103	54	1450	0728444	100247	L	1	05788	L	85042107	000000	000000	073640	003000	333	V
GI224	3A0729+103	54	1450	0728444	100247	L	3	25758	L	85042106	000000	000000	063413	006000	331	V
GI224	3A0729+103	54	1450	0728444	100247	L	1	05786	L	85042104	000000	000000	042506	003000	333	V
GI224	3A0729+103	54	1450	0728444	100247	L	3	25757	L	85042104	000000	000000	045917	006000	331	V
GI224	3A0729+103	54	1450	0728444	100247	L	1	05787	L	85042106	000000	000000	060223	003000	333	V
GI224	3A0729+103	54	1450	0728444	100247	L	3	25759	L	85042108	000000	000000	080837	003000	231	V
CSEHJ	HD 59643	50	0800	0728527	+243638	L	3	25181	L	85020600	000000	000000	002700	012000		G E=2X,C=2X,B=35
CSEHJ	HD 59643	50	0800	0728527	+243638	L	1	05312	L	85020602	000000	000000	023300	003000		G E=2X,C=230,B=45
PHCAL	HD60753	21	0686	0732080	-502829	L	2	17692	L	85033106	000000	000000	061135	000009	501	V
PHCAL	HD60753	21	0687	0732080	-502829	L	2	17691	L	85033105	000000	000000	053944	000009	501	V
PHCAL	HD60753	21	0692	0732080	-502829	L	2	17690	L	85033105	000000	000000	050317	000104	702	V TRAIL R=0.31 I=1
PHCAL	HD60753	21	0686	0732080	-502829	L	2	17689	L	85033104	000000	000000	042623	000104	702	V TRAIL R=0.31 I=1
PHCAL	HD 60753	21	0684	0732080	-502829	H	3	25399	L	85030903	000000	000000	034251	001300	301	V
PHCAL	HD60753	21	0681	0732080	-502829	L	2	17688	L	85033103	000000	000000	034625	000031	501	V TRAIL R=0.64 I=1
PHCAL	HD60753	21	0673	0732080	-502829	L	2	17687	L	85033103	000000	000000	030857	000031	501	V TRAIL R=0.64 I=1
PHCAL	HD 60753	21	0670	0732081	-502829	L	2	17699	L	85040519	000000	000000	195700	000007		G C=190,B=20
PHCAL	HD 60753	21	0670	0732081	-502829	L	2	17662	L	85032513	000000	000000	130800	000021		G C=200,B=25
PHCAL	HD 60753	21	0670	0732081	-502829	L	1	05574	L	85032216	000000	000000	165200	000019		G C=165,B=34
PHCAL	HD 60753	21	0670	0732081	-502829	L	2	17663	L	85032514	000000	000000	140100	000012		G C=115,B=25
PHCAL	HD 60753	21	0670	0732081	-502829	L	2	17664	L	85032515	000000	000000	150800	000038		G C=235,B=25
PHCAL	HD 60753	21	0670	0732081	-502829	L	2	17665	L	85032515	000000	000000	154500	000050		G C=255,B=25



PRO	OBJECT	CL	MAG	R.A.	DEC	D	C	IMAGE	A	DATE	EXP.	SMALL	EXP.	LARGE	ECC	COMMENT
PHCAL	HD	60753	21	0670	0732081	-502829	L	2	17666	L	85032516	000000	000000	162900	000031	G C=200,B=25
PHCAL	HD	60753	21	0670	0732081	-502829	L	3	25626	L	85040800	000000	000000	003000	000010	G C=165,B=15
PHCAL	HD	60753	21	0670	0732081	-502829	L	2	17668	L	85032519	000000	000000	191100	000019	G C=150,B=25
PHCAL	HD	60753	21	0670	0732081	-502829	L	2	17669	L	85032519	000000	000000	195200	000006	G C=93,B=28
PHCAL	HD	60753	21	0670	0732081	-502829	L	2	17670	L	85032520	000000	000000	203000	000031	G C=193,B=28
PHCAL	HD	60753	21	0670	0732081	-502829	L	1	05573	L	85032216	000000	000000	161600	000005	G C=90,B=33
PHCAL	HD	60753	21	0670	0732081	-502829	L	1	05576	L	85032218	000000	000000	180500	000026	G C=200,B=35
PHCAL	HD	60753	21	0670	0732081	-502829	L	1	05694	L	85040800	000000	000000	003500	000006	G C=185,B=32
PHCAL	HD	60753	21	0670	0732081	-502829	L	2	17642	L	85030916	000000	000000	164500	000010	G C=230,B=25
PHCAL	HD	60753	21	0670	0732081	-502829	L	3	25412	L	85030916	000000	000000	161200	000041	G C=200,B=22
PHCAL	HD	60753	21	0670	0732081	-502829	L	3	25411	SL	85030915	154200	000001	154100	000008	G C=65,B=20
PHCAL	HD	60753	21	0670	0732081	-502829	L	3	25410	L	85030915	000000	000000	150900	000024	G C=137,B=20
PHCAL	HD	60753	21	0670	0732081	-502829	L	3	25388	SL	85030801	010800	000021	010300	000012	G C=210,B=18
PHCAL	HD	60753	21	0670	0732081	-502829	L	1	05566	L	85032211	000000	000000	115300	000026	G C=195,B=33
PHCAL	HD	60753	21	0050	0732081	-502829	L	3	25334	L	85022723	000000	000000	233300	000010	G C=180,B=18
PHCAL	OO	NULL	99	9999	0732081	-502829	L	3	25409	L	85030914	000000	000000	144300	000000	G B=18
PHCAL	HD	60753	21	9999	0732081	-502829	L	2	17614	L	85020803	000000	000000	031000	000021	G C=2X,B=25
PHCAL	HD	60753	21	9999	0732081	-502829	L	2	17613	L	85020802	000000	000000	024000	000010	G C=230,B=23
PHCAL	HD	60753	21	0670	0732081	-502829	L	1	05567	L	85032212	000000	000000	123700	000010	G C=110,B=32
PHCAL	HD	60753	21	0670	0732081	-502829	L	1	05434	L	85022723	000000	000000	233800	000006	G C=210,B=32
PHCAL	HD	60753	21	0670	0732081	-502829	L	3	24917	L	85011704	000000	000000	045800	000010	G C=175,B=18
PHCAL	HD	60753	21	0670	0732081	-502829	L	1	05213	L	85011704	000000	000000	045300	000006	G C=180,B=35
PHCAL	HD	60753	21	9999	0732081	-502829	L	2	17612	L	85020802	000000	000000	020500	000010	G C=230,B=24
PHCAL	HD	60753	21	0670	0732081	-502829	L	3	25398	L	85030901	000000	000000	012100	000012	G C=230,B=18
PHCAL	HD	60753	21	0670	0732081	-502829	L	2	17658	L	85031323	000000	000000	231800	000031	G C=205,B=30
PHCAL	OO	SAFE RD	99	9999	0732081	-502829	L	2	17641	L	85030910	000000	000000	105300	000000	G
PHCAL	HD	60753	21	0670	0732081	-502829	L	1	05568	L	85032213	000000	000000	131600	000030	G C=215,B=35
PHCAL	HD	60753	21	0670	0732081	-502829	L	1	05569	L	85032213	000000	000000	135500	000041	G C=250,B=35
PHCAL	HD	60753	21	9999	0732081	-502829	L	2	17611	SL	85020801	013300	000017	012900	000010	G C=235,B=26
PHCAL	HD	60753	21	9999	0732081	-502829	L	2	17610	L	85020800	000000	000000	005300	000105	G C=2X,B=31
PHCAL	HD	60753	21	9999	0732081	-502829	L	2	17609	L	85020800	000000	000000	001600	000031	G C=200,B=23
PHCAL	HD	60753	21	0670	0732081	-502829	H	1	05612	L	85032800	000000	000000	003100	000900	G C=215,B=42
PHCAL	HD	60753	21	0670	0732081	-502829	L	3	25408	L	85030914	000000	000000	141300	000041	G C=194,B=20
PHCAL	HD	60753	21	0670	0732081	-502829	L	3	25407	L	85030913	000000	000000	132900	000105	G C=1.5X,B=20
PHCAL	HD	60753	21	0670	0732081	-502829	L	3	25406	L	85030912	000000	000000	125200	000049	G C=210,B=20
PHCAL	HD	60753	21	0670	0732081	-502829	L	3	25405	L	85030912	000000	000000	121900	000016	G C=100,B=20
PHCAL	HD	60753	21	0670	0732081	-502829	L	3	25404	L	85030911	000000	000000	112600	000041	G C=190,B=20
PHCAL	HD	60753	21	0670	0732081	-502829	L	3	25366	SL	85030600	002900	000021	002300	000024	G C=2X,B=20
PHCAL	HD	60753	21	0670	0732081	-502829	L	3	25367	SL	85030600	010200	000021	005800	000012	G C=205,B=18
PHCAL	HD	60753	21	0670	0732081	-502829	L	1	05572	L	85032215	000000	000000	153700	000015	G C=145,B=33
PHCAL	OO	NULL	99	0670	0732081	-502829	L	1	05571	L	85032215	000000	000000	150600	000001	G B=30
PHCAL	HD	60753	21	0670	0732081	-502829	L	1	05570	L	85032214	000000	000000	143400	000026	G C=200,B=33
PHCAL	HD	60753	21	0670	0732081	-502829	L	1	05575	L	85032217	000000	000000	172900	000005	G C=90,B=32
HSHRP	HD	61355	26	0870	0735336	-321658	H	3	25658	L	85041100	000000	000000	003600	001300	G C=70,B=23
ORHJS	HD	61347	13	0860	0735572	-134409	H	3	25708	L	85041713	000000	000000	133300	011700	G C=207,B=58

PRO	OBJECT	CL	MAG	R.A.	DEC	D	C	IMAGE	A	DATE	EXP.SMALL	EXP.LARGE	ECC	COMMENT			
OBBJS	HD	61347	13	0860	0735572	-134409	H	1	05770	L	85041715	000000	000000	153800	005300	G C=210,B=58	
NPGTB	NG	2440	71	1140	0739407	-180524	L	1	05354	S	85021202	022300	001200	000000	000000	G B=174	
NPGTB	NG	2440	71	1140	0739407	-180524	L	3	25219	S	85021203	030100	002000	000000	000000	G E=161,B=124	
NPGTB	NG	2440	71	1140	0739414	-180523	L	1	05358	S	85021322	223500	006500	000000	000000	G E=185,C=170,B=138	
NPGTB	NG	2440	71	1140	0739414	-180547	L	3	25233	L	85021321	000000	000000	212500	016000	G B=119	
NPGTB	NG	2440	71	1140	0739414	-180551	L	1	05355	L	85021203	000000	000000	034400	006500	G B=136	
NPGTB	NG	2440	71	1140	0739414	-180523	L	3	25234	S	85021323	234700	005000	000000	000000	G E=1.1X,B=118	
CBGMP	HD	62623	66	0409	0741479	-284959	H	3	25525	L	85032621	000000	000000	211400	001400	G C=162,B=30	
CBGMP	HD	62623	66	0409	0741479	-284959	H	1	05606	L	85032620	000000	000000	205600	001000	G C=2.0X,B=50	
PHCAL	00	WAUCAL	98	0000	0742031	+034032	L	3	25353	S	85030323	234700	000002	000000	000000	G E=10X,B=99	
PHCAL	00	WAUCAL	98	0000	0742031	+034032	H	3	25354	S	85030400	001500	000200	000000	000000	G E=50X,B=130	
PHCAL	00	WAUCAL	98	0000	0742031	+034032	L	1	05450	S	85030322	225900	000001	000000	000000	G E=10X,B=100	
PHCAL	00	WAUCAL	98	0000	0742031	+034032	H	1	05451	S	85030323	233200	000016	000000	000000	G E=50X,B=110	
FSGBH	00	GL285	52	1120	0742032	+034033	L	1	05449	L	85030320	000000	000000	204200	003000	G E=197,B=80	
FSGBH	00	GL285	52	1120	0742032	+034033	L	1	05441	L	85030121	000000	000000	210900	003000	G E=187,B=72	
FSGBH	00	GL285	52	1120	0742032	+034033	L	3	25351	L	85030319	000000	000000	191800	006000	G B=60	
FSGBH	00	GL285	52	1120	0742032	+034033	L	3	25352	L	85030321	000000	000000	212600	004500	G B=40	
FSGBH	00	GL285	52	1120	0742032	+034033	L	3	25341	L	85030123	000000	000000	235400	006000	G C=2.0X,B=210	
FSGBH	00	GL285	52	1120	0742032	+034033	L	1	05443	L	85030201	000000	000000	011100	002000	G E=220,B=160	
FSGBH	00	GL285	52	1120	0742032	+034033	L	3	25339	L	85030119	000000	000000	195100	006000	G B=65	
FSGBH	00	GL285	52	1120	0742032	+034033	L	1	05442	L	85030123	000000	000000	231000	003000	G E=237,C=150,B=135	
FSGBH	00	GL285	52	1120	0742032	+034033	L	3	25340	L	85030121	000000	000000	215200	006000	G B=72	
GQ175	PKS745	86	1700	0745182	-191013	L	3	24850	L	85010608	000000	000000	080227	024000	112	U	
GQ175	PKS0745	86	1700	0745182	-191013	L	3	24839	L	85010507	000000	000000	075852	024000	113	U	
IBGBB	CD-30	5135	39	0980	0747081	-310006	L	1	05251	L	85012302	000000	000000	025000	002500	G E=183,C=140,B=40	
HYGLH	HD	63700	45	0330	0747114	-244359	L	3	25200	L	85020901	000000	000000	015100	003000	G E=212,B=200,B=160	
HYGLH	HD	63700	45	0330	0747114	-244359	H	1	05330	L	85020902	000000	000000	022600	001500	G E=225,C=232,B=139	
HYGLH	HD	63700	45	0330	0747114	-244359	L	3	25201	L	85020902	000000	000000	025700	004500	G E=215,C=180,B=130	
IBGPS	00	U GEM	54	1400	0752078	+220804	L	3	25371	L	85030619	000000	000000	191400	004500	G C=140,B=85	
IBGPS	00	U GEM	54	1400	0752078	+220804	L	1	05461	L	85030621	000000	000000	212600	004500	G E=255,C=195,B=138	
IBGPS	00	U GEM	54	1400	0752078	+220804	L	1	05460	L	85030620	000000	000000	201000	004500	G E=255,C=200,B=130	
IEGAW	HD	64802	20	0550	0752196	-354443	L	2	17606	SL	85012406	062800	000007	062100	000006	G C=190,B=30	
HSGCG	HD	65575	21	0360	0755304	-525051	L	1	05579	SL	85032221	213100	000001	212200	000002	G C=2X,B=35	
HSGCG	HD	65575	21	0360	0755304	-525051	L	1	05580	L	85032222	000000	000000	222200	000001	G C=225,B=35	
HSGCG	HD	65575	21	0360	0755304	-525051	L	3	25499	SL	85032221	214400	000001	213700	000001	G C=188,B=20	
CBGMP	HD	65607	66	0820	0756500	-072200	L	3	25527	L	85032623	000000	000000	234500	001400	G C=1.2X,B=18	
CBGMP	HD	65607	66	0820	0756500	-072200	L	1	05608	L	85032700	000000	000000	002500	000500	G C=1.5X,B=35	
ISHJS	HD	67536	20	0630	0804004	-624133	H	1	05741	L	85041321	000000	000000	211300	000400	G C=200,B=50	
PHCAL	BD+75	325	16	0952	0804430	750648	L	3	25403	LS	85030910	101729	000040	101330	000014	501 U \$	
PHCAL	BD+75	325	16	0952	0804430	750648	L	2	17623	L	85020810	000000	000000	104710	000320	701 U TRAIL R=0.1 I=1	
PHCAL	BD+75	325	16	0957	0804430	750648	L	2	17624	L	85020811	000000	000000	112021	000320	701 U TRAIL R=0.1 I=1	
PHCAL	BD+75	325	16	0960	0804430	750648	L	2	17622	L	85020810	000000	000000	100550	000144	501 U TRAIL R=0.193 I=1	
OD57K	BD	+75325	16	0950	0804431	+750647	L	1	05291	L	85020402	000000	000000	024900	002001	G B=153	
OD57K	BD	+75325	16	0950	0804431	+750647	L	1	05292	L	85020403	000000	000000	034600	000024	G C=235,B=35	
PHCAL	BD	+75	325	16	0954	0804431	+750647	H	1	05611	L	85032723	000000	000000	231100	002700	G C=210,B=44

PRO	OBJECT	CL	MAG	R.A.	DEC	D	C	IMAGE	A	DATE	EXP.SMALL	EXP.LARGE	ECC	COMMENT		
PHCAL	BD	+75325	16	0950	0804431	+750647	L	1	05293	SL	85020404	042300	000037	041900	000021	G C=215,B=35
PHCAL	BD	+75325	16	0950	0804431	+750647	L	3	25165	SL	85020404	043100	000028	042700	000016	G C=190,B=15
PHCAL	BD+75	0325	16	0950	0804432	+750648	L	3	25495	L	85032102	000000	000000	021800	000016	G C=170,B=18
PHCAL	BD+75	0325	16	0950	0804432	+750648	L	1	05859	L	85042920	000000	000000	201400	000320	G C=2X,B=92
PHCAL	BD+75	0325	16	0950	0804432	+750648	L	1	05423	L	85022600	000000	000000	004100	000020	G C=195,B=35
PHCAL	BD+75	0325	16	0950	0804432	+750648	L	3	25822	L	85043021	000000	000000	213400	000017	G C=195,B=15
PHCAL	BD+75	0325	16	0950	0804432	+750648	H	3	25531	L	85032722	000000	000000	224500	002000	G C=150,B=35
PHCAL	BD+75	0325	16	0950	0804432	+750648	L	3	25321	L	85022600	000000	000000	004500	000014	G C=175,B=18
PHCAL	BD+75	0325	16	0950	0804432	+750648	L	1	05860	L	85042921	000000	000000	210000	000021	G C=220,B=34
PHCAL	BD+75	0325	16	0950	0804432	+750648	L	1	05702	L	85040823	000000	000000	230600	000020	G C=190,B=32
PHCAL	BD+75	0325	16	0950	0804432	+750648	L	3	25634	L	85040823	000000	000000	231100	000014	G C=190,B=17
PHCAL	BD+75	0325	16	0950	0804432	+750648	L	1	05703	L	85040900	000000	000000	001300	000140	G C=210,B=35
PHCAL	BD+75	0325	16	0950	0804432	+750648	L	3	25635	L	85040900	000000	000000	002600	000043	G C=158,B=17
PHCAL	BD+75	0325	16	0950	0804432	+750648	L	2	17705	L	85040600	000000	000000	001600	000114	G C=165,B=28
PHCAL	BD+75	0325	16	0950	0804432	+750648	L	3	25823	L	85043022	000000	000000	220700	000059	G C=190,B=18
PHCAL	BD+75	0325	16	0950	0804432	+750648	L	2	17635	L	85022821	000000	000000	211800	000056	G C=2X,B=28
PHCAL	BD+75	0325	16	0950	0804432	+750648	L	2	17634	SL	85022820	203700	000049	203700	000027	G C=210,B=25
PHCAL	BD+75	0325	16	0950	0804432	+750648	L	2	17702	L	85040522	000000	000000	221300	000024	G C=180,B=25
PHCAL	BD+75	0325	16	0950	0804432	+750648	L	2	17633	SL	85022819	195700	000049	195200	000028	G C=220,B=25
PHCAL	BD+75	0325	16	0950	0804432	+750648	L	3	25824	SL	85043022	224400	000028	224100	000017	G C=200,B=15
PHCAL	BD+75	0325	16	0950	0804432	+750648	L	1	05861	L	85042921	000000	000000	213600	000042	G C=2X,B=38
PHCAL	BD+75	0325	16	0950	0804432	+750648	L	1	05219	L	85011802	000000	000000	023600	000020	G C=175,B=38
PHCAL	BD+75	0325	16	0950	0804432	+750648	L	1	05218	L	85011801	000000	000000	015500	000020	G C=167,B=31
PHCAL	BD+75	0325	16	0950	0804432	+750648	L	3	24920	L	85011801	000000	000000	015100	000014	G C=160,B=21
PHCAL	BD+75	0325	16	0950	0804432	+750648	L	2	17628	L	85021923	000000	000000	234900	000024	G C=175,B=25
IGGJH	HD	67888	21	0640	0806475	-373203	H	2	17596	L	85011605	000000	000000	051700	001100	G C=230,B=43
IGGJH	HD	68217	21	0520	0807568	-435828	H	2	17597	L	85011606	000000	000000	061200	000200	G C=230,B=35
IGGJH	HD	68217	21	0520	0807568	-435828	H	3	24913	L	85011606	000000	000000	062300	000400	G C=3X,B=50
GI041	CPD-48		52	0960	0813496	-490403	H	3	25448	L	85031408	000000	000000	080257	006000	331 V
GI041	CPD-48		52	0960	0813496	-490403	H	3	25449	L	85031409	000000	000000	094124	003600	331 V
GI041	CPD-48		52	0959	0813496	-490403	H	1	05517	L	85031407	000000	000000	073320	002300	332 V
GI041	CPD-48		52	0959	0813496	-490403	H	1	05518	L	85031409	000000	000000	091238	002300	332 V
GI041	CPD-48		52	0958	0813496	-490403	H	3	25447	L	85031406	000000	000000	062749	006000	331 V
OBHJS	HD	69648	13	0805	0814229	-441003	H	1	05769	L	85041712	000000	000000	121300	005500	G C=230,B=50
CBHJS	HD	69648	13	0805	0814229	-441003	H	3	25707	L	85041709	000000	000000	093700	015000	G C=215,B=60
IGGRF	HD	69882	23	0730	0815344	-422154	H	1	05524	L	85031421	000000	000000	210700	002300	G C=200,B=50
IGGRF	HD	69882	23	0730	0815344	-422154	H	3	25451	L	85031421	000000	000000	213600	004000	G C=132,B=38
IGGRF	CP	42 2357	20	0990	0817190	-424223	L	3	25452	L	85031423	000000	000000	230500	000900	G C=105,B=23
IGGRF	CP	42 2357	20	0990	0817190	-424223	L	1	05525	L	85031422	000000	000000	223500	000600	G C=240,B=38
IGGRF	HD	70614	21	0940	0819262	-421505	L	1	05526	L	85031423	000000	000000	235600	000700	G C=2X,B=40
IGGRF	HD	70614	21	0940	0819262	-421505	L	3	25453	L	85031500	000000	000000	002800	000900	G C=100,B=23
IGGRF	CP	41 2449	20	0986	0821013	-420129	L	3	25454	L	85031501	000000	000000	012200	000800	G C=160,B=23
IGGRF	HD	71019	24	0830	0821416	-423840	H	3	25450	L	85031420	000000	000000	201100	004500	G C=180,B=41
IGGRF	HD	71019	24	0830	0821416	-423840	H	1	05523	L	85031419	000000	000000	193600	003000	G C=215,B=54
ISHJS	HD	72179	21	0810	0827555	-435552	H	1	05739	L	85041319	000000	000000	192800	002700	G C=210,B=65

PRO	OBJECT	CL	MAG	R.A.	DEC	D	C	IMAGE	A	DATE	EXP.SMALL	EXP.LARGE	ECC	COMMENT		
ISHJS	HD	72350	21	0630	0828579	-443405	H	1	05740	L	85041320	000000	000000	202700	000700	G C=195,B=51
CSGCI	HD	72905	44	0560	0834466	+651148	L	1	05259	L	85012504	000000	000000	044600	000140	G C=195,B=43
CSGCI	HD	72905	44	0560	0834466	+651148	L	3	24968	L	85012504	000000	000000	045800	003000	G C=108,B=39
PHCAL	00SAFETYRD	99	9999	0835251	+522249	L	1	05553	L	85031913	000000	000000	130700	000001	G B=16	
GE118	NGC2623	82	1350	0835252	255550	L	3	25484	L	85031908	000000	000000	081727	011400	101	V
GE118	NGC2623	82	1350	0835252	255550	L	1	05552		85031907	000000	000000	075413	012600	103	V SERENDIPITY,SWP25484
INGTS	HD	73882	12	0724	0837189	-401429	H	3	25437	L	85031115	000000	000000	152900	009000	G C=200,B=55
INGTS	HD	73882	12	0724	0837189	-401429	H	1	05489	L	85031117	000000	000000	170600	002000	G C=170,B=45
GM183	HD74067	74	0537	0838290	-400509	H	3	24821	L	85010313	000000	000000	130300	005000	701	V
GM183	HD74067	74	0541	0838290	-400509	H	1	05129	L	85010312	000000	000000	124504	001200	703	V
IEGAW	HD	74273	20	0590	0839300	-484436	L	3	24962	SL	85012405	051400	000006	050600	000006	G C=217,B=20
IEGAW	HD	74273	20	0590	0839300	-484436	L	2	17605	SL	85012405	052800	000007	052000	000006	G C=180,B=28
PHCAL	00 T FLOOD	99	0000	0844192	+665336	H	3	25043	L	85013023	000000	000000	233300	000032	G B=254	
PHCAL	00 T FLOOD	99	0000	0844192	+665336	H	3	25044	L	85013023	000000	000000	235600	000032	G B=254	
PHCAL	HD	74604	22	0620	0844192	+665336	L	3	25047	L	85013101	000000	000000	013700	000044	G C=225,B=20
PHCAL	HD	74604	22	0620	0844192	+665335	H	3	25116	L	85020120	000000	000000	204600	000424	G C=108,B=30
PHCAL	HD	74604	22	0620	0844192	+665336	L	3	25048	L	85013102	000000	000000	021100	000013	G C=160,B=85
PHCAL	HD	74604	22	0620	0844192	+665336	L	3	25049	L	85013103	000000	000000	030800	000012	G C=177,B=108
PHCAL	HD	74604	22	0620	0844192	+665336	L	3	25051	L	85013104	000000	000000	042100	000039	G C=205,B=20
PHCAL	HD	74604	22	0620	0844192	+665335	L	3	25087	L	85020102	000000	000000	023500	000012	G C=208,B=135
PHCAL	HD	74604	22	0620	0844192	+665335	L	3	25089	L	85020103	000000	000000	035300	000039	G C=212,B=24
PHCAL	00 TFLOOD	99	0000	0844192	+665336	H	3	25040	L	85013022	000000	000000	221100	000032	G B=2X	
PHCAL	00 T FLOOD	99	9999	0844192	+665335	H	3	25128	L	85020203	000000	000000	030700	000028	G B=2.0X	
PHCAL	00 T FLOOD	99	9999	0844192	+665335	H	3	25129	L	85020203	000000	000000	033000	000028	G B=2.0X	
PHCAL	HD	74604	22	0620	0844192	+665335	H	3	25117	L	85020121	000000	000000	212000	000424	G C=105,B=30
PHCAL	HD	74604	22	0620	0844192	+665335	H	3	25118	L	85020121	000000	000000	215800	001630	G B=1.5X,B=58
PHCAL	00 NULL	99	0000	0844192	+665335	H	3	25151	L	85020216	000000	000000	164200	000000	G B=21	
PHCAL	00 NULL	99	0000	0844192	+665335	H	3	25150	L	85020216	000000	000000	161600	000000	G B=22	
PHCAL	00 NULL	99	9999	0844192	+665335	H	3	25131	L	85020204	000000	000000	043000	000000	G B=19	
PHCAL	00 NULL	99	9999	0844192	+665335	H	3	25130	L	85020203	000000	000000	035200	000000	G B=21	
PHCAL	00 T FLOOD	99	0000	0844192	+665336	H	3	25041	L	85013022	000000	000000	223600	000032	G B=254	
PHCAL	00 NULL	99	9999	0844192	+665335	H	3	25127	L	85020202	000000	000000	024400	000000	G B=22	
PHCAL	00 T FLOOD	99	0000	0844192	+665336	H	3	25036	L	85013020	000000	000000	203300	000016	G B=1.2X	
PHCAL	00 T FLOOD	99	0000	0844192	+665336	H	3	25035	L	85013019	000000	000000	195800	000016	G B=1.2X	
PHCAL	00 NULL	99	9999	0844192	+665335	H	3	25126	L	85020202	000000	000000	022300	000000	G B=22	
PHCAL	00 T FLOOD	99	0000	0844192	+665336	H	3	25033	L	85013018	000000	000000	184700	000016	G B=1.2X	
PHCAL	00 T FLOOD	99	9999	0844192	+665335	H	3	25125	L	85020202	000000	000000	020000	000014	G B=255	
PHCAL	00 NULL	99	9999	0844192	+665335	H	3	25123	L	85020201	000000	000000	011100	000000	G B=22	
PHCAL	00 T FLOOD	99	9999	0844192	+665335	H	3	25120	L	85020123	000000	000000	234000	000000	G B=255	
PHCAL	00 NULL	99	0000	0844192	+665335	H	3	25114	L	85020119	000000	000000	191100	000000	G B=22	
PHCAL	00 T FLOOD	99	0000	0844192	+665336	H	3	25032	L	85013018	000000	000000	182400	000016	G B=1.2X	
PHCAL	00 NULL	99	9999	0844192	+665335	L	3	25090	L	85020104	000000	000000	043000	000000	G B=21	
PHCAL	00 NULL	99	9999	0844192	+665335	L	3	25088	L	85020103	000000	000000	032300	000000	G B=22	
PHCAL	HD	74604	22	0620	0844192	+665335	L	3	25086	L	85020102	000000	000000	020400	000012	G C=205,B=19
PHCAL	HD	74604	22	0620	0844192	+665335	L	3	25085	L	85020101	000000	000000	011100	000012	G C=205,B=17



PRO	OBJECT	CL	MAG	R.A.	DEC	D	C	IMAGE	A	DATE	EXP.SMALL	EXP.LARGE	ECC	COMMENT		
PHCAL	HD	74604	22	0620	0844192	+665335	L	3	25084	L	85020100	000000	000000	002300	000012	G C=205,B=18
PHCAL	HD	74604	22	0620	0844192	+665335	H	3	25119	L	85020122	000000	000000	224700	001100	G C=200,B=42
PHCAL	OUU	FLOOD	99	9999	0844192	+665336	H	3	25013	L	85013006	000000	000000	061400	000302	G B=138
PHCAL	OO	UUFLOOD	99	0000	0844192	+665336	H	3	25026	L	85013015	000000	000000	151200	000226	G B=167
PHCAL	OO	UUFLOOD	99	0000	0844192	+665336	H	3	25027	L	85013015	000000	000000	155500	000036	G B=55
PHCAL	OO	UUFLOOD	99	0000	0844192	+665336	H	3	25029	L	85013017	000000	000000	170300	000302	G B=198
PHCAL	OO	T FLOOD	99	9999	0844192	+665335	H	3	25121	L	85020200	000000	000000	002000	000014	G B=255
PHCAL	OO	UUFLOOD	99	0000	0844192	+665335	H	3	25055	L	85013106	000000	000000	063300	000451	G B=190
PHCAL	OUU	FLOOD	99	0000	0844192	+665335	H	3	25070	L	85013115	000000	000000	152400	000717	G B=1.5X
PHCAL	OO	UUFLOOD	99	0000	0844192	+665335	H	3	25147	L	85020214	000000	000000	143000	001018	G B=2X
PHCAL	OO	UUFLOOD	99	0000	0844192	+665336	H	3	25028	L	85013016	000000	000000	162500	000717	G B=1.5X
PHCAL	OUU	FLOOD	99	0000	0844192	+665335	H	3	25071	L	85013116	000000	000000	160000	000830	G B=1.7X
PHCAL	HD	74604	22	0620	0844192	+665335	L	3	25083	L	85013123	000000	000000	235500	000012	G C=205,B=19
PHCAL	OO	UUFLOOD	99	0000	0844192	+665335	H	3	25149	L	85020215	000000	000000	155100	000302	G B=193
PHCAL	OO	UUFLOOD	99	0000	0844192	+665335	H	3	25148	L	85020215	000000	000000	150900	000302	G B=192
PHCAL	OO	UUFLOOD	99	0000	0844192	+665335	H	3	25146	L	85020213	000000	000000	135300	000356	G B=1.1X
PHCAL	OO	UUFLOOD	99	0000	0844192	+665335	H	3	25113	L	85020118	000000	000000	184700	000302	G B=200
PHCAL	HD	74604	22	0620	0844192	+665335	L	3	25082	L	85013122	000000	000000	224900	000012	G
PHCAL	HD	74604	22	0620	0844192	+665335	L	3	25081	L	85013122	000000	000000	221000	000012	G C=215,B=18
PHCAL	HD	74604	22	0620	0844192	+665335	L	3	25080	L	85013121	000000	000000	213400	000012	G C=207,B=20
PHCAL	HD	74604	22	0620	0844192	+665335	L	3	25079	L	85013120	000000	000000	204300	000012	G C=205,B=18
PHCAL	HD	74604	22	0620	0844192	+665335	L	3	25078	L	85013120	000000	000000	200300	000012	G C=210,B=16
PHCAL	OO	UUFLOOD	99	0000	0844192	+665335	H	3	25111	L	85020117	000000	000000	173900	000113	G B=98
PHCAL	OO	UUFLOOD	99	0000	0844192	+665335	H	3	25110	L	85020116	000000	000000	165600	000149	G B=120
PHCAL	OO	NULL	99	0000	0844192	+665335	H	3	25077	L	85013119	000000	000000	191700	000000	G B=22
PHCAL	OUU	FLOOD	99	0000	0844192	+665335	H	3	25076	L	85013118	000000	000000	185200	000302	G B=207
PHCAL	OUU	FLOOD	99	0000	0844192	+665335	H	3	25075	L	85013118	000000	000000	181900	000113	G B=100
PHCAL	OUU	FLOOD	99	0000	0844192	+665335	H	3	25074	L	85013117	000000	000000	174600	000302	G B=210
PHCAL	OO	UUFLOOD	99	0000	0844192	+665335	H	3	25109	L	85020116	000000	000000	160200	000302	G B=200
PHCAL	OUU	FLOOD	99	0000	0844192	+665335	H	3	25073	L	85013117	000000	000000	171300	000149	G B=142
PHCAL	OUU	FLOOD	99	0000	0844192	+665335	H	3	25072	L	85013116	000000	000000	163700	000356	G B=1.2X
PHCAL	OUU	FLOOD	99	0000	0844192	+665335	H	3	25069	L	85013114	000000	000000	145000	000302	G C=1.1X,B=186
PHCAL	OO	NULL	99	9999	0844192	+665336	L	3	25053	L	85013105	000000	000000	051300	000000	G B=22
PHCAL	OO	NULL	99	9999	0844192	+665336	L	3	25052	L	85013104	000000	000000	045300	000000	G B=21
PHCAL	OO	NULL	99	9999	0844192	+665336	L	3	25050	L	85013103	000000	000000	035500	000000	G B=22
PHCAL	OO	NULL	99	0000	0844192	+665336	H	3	25046	L	85013100	000000	000000	004800	000000	G B=21
PHCAL	OO	NULL	99	0000	0844192	+665336	H	3	25045	L	85013100	000000	000000	002400	000000	G B=21
PHCAL	OO	NULL	99	0000	0844192	+665336	H	3	25042	L	85013023	000000	000000	230200	000000	G B=20
PHCAL	OO	NULL	99	0000	0844192	+665336	H	3	25039	L	85013021	000000	000000	214900	000000	G B=22
PHCAL	OO	NULL	99	0000	0844192	+665336	H	3	25038	L	85013021	000000	000000	212200	000000	G B=22
PHCAL	OO	NULL	99	0000	0844192	+665336	H	3	25037	L	85013021	000000	000000	210100	000000	G B=21
PHCAL	OO	NULL	99	0000	0844192	+665336	H	3	25034	L	85013019	000000	000000	191000	000000	G B=21
PHCAL	OO	NULL	99	0000	0844192	+665336	H	3	25031	L	85013017	000000	000000	175700	000000	G B=21
PHCAL	OO	NULL	99	0000	0844192	+665336	H	3	25030	L	85013017	000000	000000	173000	000000	G B=21
PHCAL	OO	NULL	99	0620	0844192	+665336	L	3	25012	L	85013005	000000	000000	051600	000000	G B=22

PRO	OBJECT	CL	MAG	R.A.	DEC	D C	IMAGE	A	DATE	EXP.SMALL	EXP.LARGE	ECC	COMMENT	
PHCAL	00 UVFLOOD	99	0000	0844192	+665335	H 3	25107	L	85020115	000000	000000	150000	000036	G B=50
PHCAL	HD 74604	22	0620	0844192	+665336	L 3	25011	L	85013004	000000	000000	045000	000010	G C=185,B=17
PHCAL	HD 74604	22	0620	0844192	+665336	L 3	25010	L	85013004	000000	000000	042000	000016	G C=250,B=18
PHCAL	HD 74604	22	0620	0844192	+665336	L 3	25009	L	85013003	000000	000000	035000	000012	G C=200,B=18
PHCAL	00 UVFLOOD	99	0000	0844192	+665335	H 3	25104	L	85020113	000000	000000	131600	000302	G B=200
PHCAL	HD 74604	22	0620	0844192	+665336	L 3	25008	L	85013003	000000	000000	032200	000003	G C=75,B=17
PHCAL	HD 74604	22	0620	0844192	+665336	L 3	25007	L	85013002	000000	000000	025500	000006	G C=120,B=18
PHCAL	HD 74604	22	0620	0844192	+665336	L 3	25006	L	85013002	000000	000000	022500	000003	G C=76,B=18
PHCAL	HD 74604	22	0620	0844192	+665336	L 3	25005	L	85013001	000000	000000	015700	000010	G C=175,B=17
PHCAL	HD 74604	22	0620	0844192	+665336	H 3	25004	L	85013001	000000	000000	011900	000609	G C=136,B=41
PHCAL	HD 74604	22	0620	0844192	+665336	H 3	25003	L	85013000	000000	000000	003400	001522	G C=250,B=53
PHCAL	HD 74604	22	0620	0844192	+665336	L 3	25002	L	85012923	000000	000000	235700	000007	G C=138,B=18
PHCAL	00 UVFLOOD	99	0000	0844192	+665335	H 3	25105	L	85020113	000000	000000	134700	001019	G B=2X
PHCAL	00 UVFLOOD	99	0000	0844192	+665335	H 3	25106	L	85020114	000000	000000	142400	000604	G B=1.8X
PHCAL	00 UVFLOOD	99	0000	0844192	+665335	H 3	25108	L	85020115	000000	000000	152600	000830	G B=1.7X
PHCAL	00 UVFLOOD	99	0000	0844192	+665335	H 3	25112	L	85020118	000000	000000	181000	000604	G B=1.2X
PHCAL	00 UVFLOOD	99	0000	0844192	+665335	H 3	25145	L	85020213	000000	000000	131800	000717	G B=1.5X
PHCAL	00 T FLOOD	99	9999	0844192	+665335	H 3	25122	L	85020200	000000	000000	004800	000014	G B=255
PHCAL	00 T FLOOD	99	9999	0844192	+665335	H 3	25124	L	85020201	000000	000000	013500	000014	G B=255
PHCAL	HD 74604	22	0620	0844192	+665335	H 3	25115	L	85020119	000000	000000	195300	001100	G C=205,B=41
HCGBC	BD-12 2669	40	1030	0844240	-131100	L 3	25293	L	85022121	000000	000000	215500	010000	G C=1.2X,B=40
HSGCG	HD 75311	21	0460	0845250	-563507	L 1	05577	SL	85032218	190500	000003	185700	000006	G C=3X,B=40
HSGCG	HD 75311	21	0460	0845250	-563507	L 1	05578	L	85032220	000000	000000	201600	000002	G C=190,B=35
HSGCG	HD 75311	21	0460	0845250	-563507	L 3	25498	SL	85032219	192200	000002	191200	000003	G C=210,B=20
GA133	HD 76534	20	0813	0853206	-431629	L 3	25378	L	85030706	000000	000000	065737	000130	501 U
GA133	HD 76534	20	0822	0853206	-431629	H 1	05463	L	85030705	000000	000000	054207	006500	502 U
NPGHB	K 1-2	16	1700	0855387	-284600	L 3	24987	L	85012708	000000	000000	082823	037800	302 U
XBHTK	HD 77581	59	0690	0900120	-402200	H 3	25761	L	85042117	000000	000000	173400	012000	G C=190,B=62
XBHTK	HD 77581	59	0690	0900120	-402200	H 3	25764	L	85042122	000000	000000	225200	011500	G C=180,B=60
XBHTK	HD 77581	59	0690	0900120	-402200	H 3	25762	L	85042120	000000	000000	200300	007500	G C=2X,B=190
XBHTK	HD 77581	59	0690	0900120	-402200	H 3	25763	L	85042121	000000	000000	215500	003000	G C=190,B=130
HSGSA	HD 78316	22	0520	0905024	+105214	H 3	24825	L	85010402	000000	000000	020900	001100	G C=2.1X,B=60
HSGSA	HD 78316	22	0520	0905024	+105214	H 3	24826	L	85010403	000000	000000	031700	000826	G C=1.5X,B=61
HSGSA	HD 78316	22	0520	0905024	+105214	H 3	24835	L	85010501	000000	000000	015700	000518	G C=197,B=40
HSGSA	HD 78316	22	0520	0905024	+105214	H 1	05136	L	85010403	000000	000000	035200	000235	G C=215,B=60
HSGSA	HD 78316	22	0520	0905024	+105214	H 1	05115	L	85010202	000000	000000	024100	000928	G C=3.5X,B=60
HSGSA	HD 78316	22	0520	0905024	+105214	H 3	24804	L	85010202	000000	000000	022200	001158	G C=2.4X,B=50
HSGSA	HD 78316	22	0520	0905024	+105214	H 3	24803	L	85010201	000000	000000	012100	000835	G C=1.0X,B=42
HSGSA	HD 78316	22	0520	0905024	+105214	H 1	05114	L	85010201	000000	000000	010900	000625	G C=2X,B=50
HSGSA	HD 78316	22	0520	0905024	+105214	H 1	05122	L	85010302	000000	000000	021800	000617	G C=2.5X,B=55
HSGSA	HD 78316	22	0520	0905024	+105214	H 3	24805	L	85010203	000000	000000	031400	001150	G C=2.4X,B=50
HSGSA	HD 78316	22	0520	0905024	+105214	H 1	05144	L	85010503	000000	000000	032200	000330	G C=255,B=57
HSGSA	HD 78316	22	0520	0905024	+105214	H 1	05123	L	85010303	000000	000000	032500	000910	G C=3.0X,B=68
HSGSA	HD 78316	22	0520	0905024	+105214	H 3	24815	L	85010303	000000	000000	035700	000511	G C=210,B=53
HSGSA	HD 78316	22	0520	0905024	+105214	H 3	24814	L	85010302	000000	000000	024800	000826	G C=1.0X,B=48

PRO	OBJECT	CL	MAG	R.A.	DEC	D C	IMAGE	A	DATE	EXP.SMALL	EXP.LARGE	ECC	COMMENT		
HSGSA	HD	78316	22	0520	0905024	+105214	H 3	24802	L	85010200	000000	000000	000500	000500	G C=187,B=35
HSGSA	HD	78316	22	0520	0905024	+105214	H 3	24836	L	85010503	000000	000000	034700	000009	G C=1.7X,B=78
HSGSA	HD	78316	22	0520	0905024	+105214	H 1	05113	L	85010123	000000	000000	233700	000246	G C=210,B=45
HSGSA	HD	78316	22	0520	0905024	+105214	H 1	05135	L	85010402	000000	000000	024500	000910	G C=3.7X,B=70
HSGSA	HD	78316	22	0520	0905024	+105214	H 1	05143	L	85010502	000000	000000	023300	000600	G C=2.0X,B=60
HSGSA	HD	78316	22	0520	0905024	+105214	H 1	05142	L	85010500	000000	000000	005400	000803	G C=2.0X,B=60
HSGSA	HD	78316	22	0520	0905024	+105214	L 1	05145	L	85010504	000000	000000	043200	000009	G C=195,B=50
GE173	NGC2768	81	1302	0907449	601429	E 9	01637	2	85012809	000000	000000	090800	004000	U	
EGGSF	NG	2768	81	1000	0907450	+601430	L 3	24992	L	85012808	000000	000000	082300	069500	G C=160,B=115
ISHFB	HD	80007	30	0170	0912397	-693040	H 1	05640	S	85040217	174000	000110	000000	000000	G C=1.5X,B=45
PHCAL	OO WAVECAL	98	0000	0930070	+813259	L 1	05857	S	85042917	173000	000001	000000	000000	G E=10X,B=100	
PHCAL	OO WAVECAL	98	0000	0930073	+813259	H 1	05858	S	85042917	180100	000016	000000	000000	G E=50X,B=105	
PHCAL	OO WAVECAL	98	0000	0930073	+813259	L 3	25811	S	85042918	185900	000002	000000	000000	G E=10X,B=105	
PHCAL	OO WAVECAL	98	0000	0930073	+813259	H 3	25812	S	85042919	192600	000200	000000	000000	G E=50X,B=122	
GI244	HD82829	46	0801	0931200	-445911	L 1	05262	LS	85012514	141736	000400	141345	000100	502 U 402\$	
GI244	HD82829	46	0804	0931200	-445911	L 3	24972	L	85012514	000000	000000	142425	002300	702 U	
HSRGS	HD	83953	22	0480	0939000	-232148	L 3	25662	SL	85041117	180600	000005	175600	000006	G C=169,B=21
HSRGS	HD	83953	22	0480	0939000	-232148	L 1	05714	SL	85041117	175100	000006	174300	000005	G C=195,B=39
NPGWF	OO HE2-36	70	1140	0941506	-570311	L 3	24908	L	85011421	000000	000000	214200	006000	G E=157,C=138,B=115	
NPGWF	OO HE2	36	70	1040	0941507	-570312	L 3	25536	L	85032819	000000	000000	193000	009000	G E=88,C=54,B=30
HC017	HD84903	45	0830	0945179	-411308	L 1	05768	L	85041708	000000	000000	081200	000500	301 U	
HC017	HD84903	45	0825	0945179	-411308	L 3	25706	L	85041708	000000	000000	082125	002500	100 U	
GC246	HD85444	45	0448	0949050	-143700	H 3	24926	L	85011907	000000	000000	073606	043100	313 U	
GC246	HD85444	45	0448	0949051	-143700	H 1	05557	L	85032009	000000	000000	092957	004700	431 U	
GQ220	NGC3031	80	1100	0951299	691759	L 3	25298	L	85022211	000000	000000	112914	007800	220 U	
GQ220	NGC3031	80	1100	0951299	691759	L 1	05407	L	85022211	000000	000000	113757	005000	111 U SERENDIP FOR S25298	
QSHBW	Q 0955+326	85	1570	0955254	+323823	L 3	25496	L	85032111	000000	000000	113600	040000	G E=193,C=125,B=67	
QSHBW	Q 0955+326	85	1570	0955254	+323823	L 2	17661	L	85032011	000000	000000	114000	038500	G C=162,B=70	
ISHFB	HD	87901	22	0130	1005426	+121245	H 3	25803	S	85042823	232300	000028	000000	000000	G C=1.2X,B=25
ISHFB	HD	87901	22	0130	1005426	+121245	H 1	05850	S	85042823	233000	000013	000000	000000	G C=250,B=42
ISHFB	OO WAVECAL	98	9999	1005426	+121245	H 3	25804	S	85042900	001900	000200	000000	000000	G C=50X,B=122	
HC230	S CAR	51	0609	1007460	-611800	L 1	05841	LS	85042801	021741	000800	015133	002000	571 U 331\$	
HC230	S CAR	51	0596	1007460	-611800	H 1	05842	L	85042804	000000	000000	040736	007000	231 U	
HC230	S CAR	51	0605	1007460	-611800	L 3	25795	L	85042801	000000	000000	013218	009000	001 U	
HSRGS	HD	89080	26	0330	1012330	-694721	L 3	25665	SL	85041122	221200	000005	220500	000006	G C=230,B=26
HSRGS	HD	89080	26	0330	1012330	-694721	L 1	05717	SL	85041122	222500	000005	221800	000002	G C=205,B=41
IGDYY	OO WY ANT	33	1110	1013480	-292848	L 1	05382	L	85021702	000000	000000	020600	003000	G C=3X,B=199	
WDHGS	OO1015+014	29	1620	1015306	+012627	L 3	25760	L	85042109	000000	000000	094100	023500	G C=115,B=82	
GA146	HR4049	25	0567	1015499	-284428	L 3	25474	L	85031710	000000	000000	100150	001600	501 U	
HC126	AD LEO	48	0932	1016540	200718	L 1	05723	L	85041207	000000	000000	073945	004540	352 U MULTIPLE(5) EXPS.	
HC126	AD LEO	48	0925	1016540	200718	L 3	25668	L	85041203	000000	000000	030326	005600	770 U 2*28 MIN - 04:27:20	
HC126	AD LEO	48	0937	1016540	200718	L 1	05729	L	85041301	000000	000000	015745	003831	142 U MULT. EXP. (X5) IN LAP	
HC126	AD LEO	48	0932	1016540	200718	L 1	05719	L	85041202	000000	000000	021335	004510	242 U MULTIPLE(5) EXPS.	
HC126	AD LEO	48	0839	1016540	200718	L 1	05721	L	85041204	000000	000000	045957	002455	682 U 5 EXPS. IN LAP	
HC126	AD LEO	48	0922	1016540	200718	L 1	05720	L	85041203	000000	000000	033919	004209	241 U MULTIPLE(5) EXPS.	

PRO	OBJECT	CL	MAG	R.A.	DEC	D	C	IMAGE	A	DATE	EXP. SMALL	EXP. LARGE	ECC	COMMENT				
HC126	AD LEO	48	0927	1016540	200718	L	3	25676	L	85041302	000000	000000	024211	011200	331	U	4X28 MIN EXPS.	
HC126	AD LEO	48	0925	1016540	200718	L	1	05730	L	85041303	000000	000000	032132	004016	143	U	5 EXPS. IN LAP	
HC126	AD LEO	48	0938	1016540	200718	L	1	05731	L	85041304	000000	000000	045017	004118	342	U	5 EXPS. IN LAP	
HC126	AD LEO	48	0924	1016540	200718	L	1	05732	L	85041306	000000	000000	061617	004038	143	U	5 EXPS. IN LAP	
HC126	AD LEO	48	0934	1016540	200718	L	1	05733	L	85041307	000000	000000	074130	003937	242	U	5 EXPS. IN LAP	
HC126	AD LEO	48	0927	1016540	200718	L	1	05722	L	85041206	000000	000000	062259	004255	371	U	5 EXPS. IN LAP	
QSHRG	OO TON 34	85	1580	1017076	+275906	L	1	05708	L	85041009	000000	000000	093900	043000				G C=215,B=130
WRGLA	HD 90657	11	0980	1024408	-582310	L	3	24978	L	85012601	000000	000000	014100	000900				G E=208,C=140,B=25
WRGLA	HD 90657	11	0980	1024408	-582310	L	3	25532	L	85032801	000000	000000	011500	000900				G C=140,B=18
WRGLA	HD 90657	11	0980	1024408	-582310	L	3	25533	L	85032802	000000	000000	020400	000900				G C=135,B=17
IGGJS	HD 91969	23	0651	1033545	-575754	H	1	05227	L	85011904	000000	000000	041700	000400				G C=180,B=60
GQ017	NGC 3311	81	1500	1034212	-271608	L	3	24964	L	85012412	000000	000000	120915	015800	002			U
IGGJS	HD 92850	13	0810	1040022	-564449	H	1	05229	L	85011906	000000	000000	062600	001800				G C=165,B=42
IGGJS	HD 92850	13	0810	1040022	-564449	H	3	24925	L	85011905	000000	000000	053500	003900				G C=170,B=40
IBHJH	HD 93033	66	0710	1042243	+454946	H	3	25792	L	85042718	000000	000000	181500	002600				G C=230,B=82
IBHJH	HD 93033	66	0710	1042243	+454946	H	1	05838	L	85042719	000000	000000	195200	001000				G C=250,B=145
IBHJH	HD 93033	66	0710	1042243	+454946	H	3	25793	L	85042719	000000	000000	191800	002100				G C=1.2X,B=135
IBHJH	HD 93033	66	0710	1042243	+454946	H	1	05839	L	85042720	000000	000000	205700	000730				G C=255,B=170
IBHJH	HD 93033	66	0710	1042243	+454946	H	3	25794	L	85042720	000000	000000	202300	001130				G C=1.5X,B=162
IBHJH	HD 93033	66	0710	1042243	+454946	H	1	05840	L	85042800	000000	000000	001500	003400				G C=208,B=50
IBHJH	HD 93033	66	0710	1042243	+454946	H	1	05837	L	85042718	000000	000000	184700	001500				G C=238,B=90
HA196	HD93308	61	0606	1043070	-592500	H	3	25796	L	85042805	000000	000000	054803	009000	112			U
HA196	HD93308	61	0608	1043070	-592500	H	3	25418	L	85031009	000000	000000	094806	002800	362			U
HA196	HD93308	61	0614	1043070	-592500	H	1	05843	L	85042807	000000	000000	073926	002500	582			U
HA196	HD93308	61	0606	1043070	-592500	H	1	05482	L	85031009	000000	000000	091948	002000	571			U
HA196	HD93308	61	0614	1043070	-592500	H	3	25797	L	85042808	000000	000000	081000	003700	461			U
PHCAL	HD 93521	12	0700	1044336	+375004	L	3	25283	L	85022022	000000	000000	225600	000026				G C=2X,B=20
PHCAL	OO WAUCAL	98	0000	1045335	+375003	L	2	17643	S	85030917	175700	000001	000000	000000				G E=20X,B=85
PHCAL	OO WAUCAL	98	0000	1045335	+375003	H	2	17644	S	85030918	182400	000016	000000	000000				G E=50X,B=115
PHCAL	HD 93521	12	0700	1045336	+375004	L	1	05389	L	85021822	000000	000000	222000	000003				G C=205,B=38
PHCAL	HD 93521	12	0700	1045336	+375004	L	2	17674	L	85032600	000000	000000	004100	000008				G C=1.5X,B=28
PHCAL	HD 93521	12	0700	1045336	+375004	L	3	25633	L	85040821	000000	000000	214300	000003				G C=178,B=17
PHCAL	HD 93521	12	0700	1045336	+375004	L	3	25268	L	85021822	000000	000000	221600	000003				G C=172,B=22
PHCAL	HD 93521	12	0700	1045336	+375004	L	1	05237	L	85012006	000000	000000	064300	000011				G C=180,B=34
PHCAL	HD 93521	12	0700	1045336	+375004	L	2	17683	SL	85033023	234400	000007	234800	000009				G C=190,B=24
PHCAL	HD 93521	12	0700	1045336	+375004	L	2	17673	L	85032600	000000	000000	000800	000004				G C=173,B=25
PHCAL	HD 93521	12	0700	1045336	+375004	L	1	05221	L	85011804	000000	000000	044800	000003				G C=190,B=38
PHCAL	HD 93521	12	0700	1045336	+375004	L	1	05220	L	85011804	000000	000000	040700	000003				G C=180,B=35
PHCAL	HD 93521	12	0700	1045336	+375004	L	3	24921	L	85011804	000000	000000	040300	000003				G C=160,B=21
PHCAL	HD 93521	12	0700	1045336	+375004	L	3	25269	SL	85021823	230900	000007	230500	000004				G C=210,B=22
PHCAL	HD 93521	12	0700	1045336	+375004	L	3	25270	SL	85021823	234300	000007	233900	000004				G C=215,B=23
PHCAL	HD 93521	12	0700	1045336	+375004	L	1	05398	L	85022021	000000	000000	215200	000014				G C=205,B=35
PHCAL	HD 93521	12	0700	1045336	+375004	L	2	17682	L	85033023	000000	000000	230900	000009				G E=2.0X,B=28
PHCAL	HD 93521	12	0700	1045336	+375004	L	3	25271	SL	85021900	001900	000007	001500	000004				G C=205,B=23
PHCAL	HD 93521	12	0700	1045336	+375004	L	2	17629	L	85022000	000000	000000	003100	000003				G C=152,B=25



PRO	OBJECT	CL	MAG	R.A.	DEC	D	C	IMAGE	A	DATE	EXP. SMALL	EXP. LARGE	ECC	COMMENT				
PHCAL	HD	93521	12	0700	1045336	+375004	L	2	17630	L	85022001	000000	000000	011400	000012	G C=165,B=25		
PHCAL	HD	93521	12	0700	1045336	+375004	L	3	25282	L	85022021	000000	000000	213900	000013	G C=180,B=20		
PHCAL	HD	93521	12	0700	1045336	+375004	L	1	05399	L	85022023	000000	000000	230900	000028	G C=2X,B=40		
PHCAL	HD	93521	12	0700	1045336	+375004	L	3	25272	L	85021900	000000	000000	004600	000004	G C=200,B=23		
PHCAL	HD	93521	12	0700	1045336	+375004	L	2	17675	S	85032601	011900	000007	000000	000000	G C=185,B=27		
PHCAL	HD	93521	12	0700	1045336	+375004	L	2	17676	L	85032601	000000	000000	015700	000005	G C=200,B=28		
PHCAL	HD	93521	12	0700	1045336	+375004	L	2	17701	L	85040521	000000	000000	212300	000003	G C=155,B=25		
PHCAL	HD	93521	12	0700	1045336	+375004	L	1	05701	L	85040821	000000	000000	214800	000003	G C=196,B=33		
PHCAL	HD	93521	12	0710	1045340	375004	L	3	25549	L	85033008	000000	000000	080711	000003	501 U		
PHCAL	HD	93521	12	0711	1045340	375004	L	1	05618	L	85033008	000000	000000	081103	000003	501 U		
PHCAL	HD93521	12	0699	1045340	375004	L	2	17693	L	85033107	000000	000000	071015	000014	501 U	TRAIL R=1.43 I=1		
PHCAL	HD93521	12	0709	1045340	375004	L	2	17617	L	85020806	000000	000000	061038	000014	501 U	TRAIL R=1.43 I=1		
PHCAL	HD93521	12	0704	1045340	375004	L	2	17619	L	85020807	000000	000000	072356	000028	701 U	TRAIL R=0.71 I=1		
PHCAL	HD93521	12	0705	1045340	375004	L	2	17695	L	85033108	000000	000000	082035	000028	601 U	TRAIL R=0.71 I=1		
PHCAL	HD93521	12	0707	1045340	375004	L	2	17694	L	85033107	000000	000000	074953	000014	501 U	TRAIL R=1.43 I=1		
PHCAL	HD93521	12	0707	1045340	375004	L	3	25569	L	85040303	000000	000000	031018	000012	500 U	R=1.67 N=1 T=11.976		
PHCAL	HD93521	12	0704	1045340	375004	L	2	17696	L	85033109	000000	000000	090335	000028	601 U	TRAIL R=0.71 I=1		
PHCAL	HD93521	12	0709	1045340	375004	L	1	05646	L	85040303	000000	000000	031748	000011	502 U	R=1.80 N=1 T=11.11 S		
PHCAL	HD93521	12	0700	1045340	375004	L	3	25568	L	85040302	000000	000000	021315	000003	500 U			
PHCAL	HD93521	12	0701	1045340	375004	L	2	17620	L	85020808	000000	000000	080217	000028	701 U			
PHCAL	HD93521	12	0704	1045340	375004	L	2	17621	L	85020808	000000	000000	083841	000004	501 U			
PHCAL	HD93521	12	0700	1045340	375004	L	1	05645	L	85040302	000000	000000	021615	000003	502 U			
PHCAL	HD93521	12	0707	1045340	375004	L	2	17618	L	85020806	000000	000000	064747	000014	501 U	TRAIL R=1.43 I=1		
EGGTT	NG	3395	80	1240	1047025	+331437	L	3	25465	L	85031611	000000	000000	114100	038500	G C=130,B=90		
EGGTT	NG	3396	82	1380	1047088	+331517	L	3	25485	L	85031911	000000	000000	112600	040000	G C=130,B=79		
HC071	DM	UMA	52	0992	1052364	604411	L	3	25571	L	85040306	000000	000000	061314	003000	100 U		
HC071	DM	UMA	52	0985	1052364	604411	L	1	05648	L	85040305	000000	000000	053612	003000	452 U		
HC071	DM	UMA	52	0986	1052364	604411	L	3	25572	L	85040307	000000	000000	072404	002500	100 U		
HC071	DM	UMA	52	0980	1052364	604411	L	1	05650	L	85040307	000000	000000	075607	004000	342 U	2X20M EXPS. IN LAP	
HC071	DM	UMA	52	0988	1052364	604411	L	1	05649	L	85040306	000000	000000	065405	002500	353 U		
HCGBC	OOLLT	4013	37	1430	1053166	-550351	L	3	25543	L	85032921	000000	000000	211700	006500	G B=22		
LDGJL	OO	SY	CHA	58	1280	1055184	-765534	L	1	05169	L	85010917	000000	000000	172100	003000	G E=109,C=70,B=40	
HC204	HRC	244	58	1156	1057500	-764533	L	3	25521	L	85032506	000000	000000	060130	025600	112 U		
HC204	HRC	244	58	1139	1057500	-764533	L	1	05603	L	85032504	000000	000000	045721	006000	331 U		
HC204	HRC	244	58	1155	1057500	-764533	L	1	05596	L	85032409	000000	000000	095431	002300	232 U		
LDGJL	OOLH332-20	58	1110	1057507	-764533	L	3	24882	L	85011016	000000	000000	165700	025000	G B=94			
LDGJL	OOLH332-20	58	1110	1057507	-764533	L	1	05178	L	85011021	000000	000000	211400	003000	G E=116,C=96,B=72			
PHCAL	OONULL	IMG	99	9999	1100394	-251820	L	2	17667	L	85032517	000000	000000	174100	000001	G B=22		
LDGJL	OO	HM	07	58	1150	1101077	-771725	L	1	05202	L	85011321	000000	000000	213300	002500	G E=169,C=115,B=85	
LDGJL	OO	HM	07	58	1150	1101077	-771725	L	3	24900	L	85011315	000000	000000	154700	034000	G E=163,C=148,B=120	
LDGJL	OO	HM	07	58	1150	1101077	-771725	L	1	05177	L	85011016	000000	000000	161100	003000	G E=116,C=63,B=39	
HQ234	MKN	421	87	1394	1101406	382845	L	1	05790	L	85042203	000000	000000	035245	009000	404 U		
HQ234	MKN	421	87	1394	1101406	382845	L	3	25765	L	85042205	000000	000000	052845	020000	302 U		
BLGCB	OO	MK	421	87	1350	1101410	+382843	L	1	05139	L	85010419	000000	000000	190900	004000	G C=120,B=41	
BLGCB	OO	MK	421	87	1350	1101410	+382843	L	3	24832	L	85010419	000000	000000	195500	012000	G C=150,B=74	

PRO	OBJECT	CL	MAG	R.A.	DEC	D C	IMAGE	A	DATE	EXP. SMALL	EXP. LARGE	ECC	COMMENT	
BLGCB	00 MK 421	87	1350	1101410	+382843	H 1	05140	L	85010422	000000	000000	220000	084000	G C=170, B=90
BLGCB	00 MK 421	87	1350	1101410	+382843	L 3	24831	L	85010415	000000	000000	154000	020000	G C=160, B=55
LDGJL	00 HM 09	58	1260	1102418	-761100	L 1	05187	L	85011202	000000	000000	023000	002600	G E=158, C=125, B=98
HC204	SZ 19	58	1092	1105580	-772202	L 1	05595	L	85032400	000000	000000	000000	003000	332 U
HC204	SZ 19	58	1097	1105580	-772202	L 3	25513	L	85032406	000000	000000	061024	021000	112 U
LDGJL	CP 7600486	58	1060	1106010	-772148	L 1	05188	L	85011203	000000	000000	034200	001500	G B=193
LDGJL	00 UW CHA	58	1250	1106380	-772611	L 3	24872	L	85010909	000000	000000	091000	042000	G E=121, C=113, B=84
GC112	UW CHA	58	1280	1106381	-772612	L 1	05168	L	85010910	000000	000000	104613	003000	232 U
GC112	UW CHA	58	1280	1106381	-772612	E 9	01626	2	85010909	000000	000000	090200	004000	U FOR SWP 24872
LDGJL	00 UZ CHA	58	1250	1107518	-760701	L 3	24881	L	85011007	000000	000000	075900	042000	G C=115, B=83
GC112	UZ CHA	58	1345	1107519	-760702	L 1	05167	L	85010908	000000	000000	082011	003000	231 U
GC112	UZ CHA	58	1370	1107520	-760702	E 9	01627	2	85011010	000000	000000	100000	004000	U
WRGLA	HD 97152	10	0830	1107569	-604227	L 3	24982	L	85012606	000000	000000	060600	000035	G E=235, C=140, B=19
WRGLA	HD 97152	10	0830	1107569	-604227	L 3	24983	L	85012606	000000	000000	063600	000035	G E=246, C=145, B=19
WRGLA	HD 97152	10	0830	1107569	-604227	L 3	24977	L	85012600	000000	000000	005800	000035	G E=223, C=140, B=18
WRGLA	HD 97152	10	0830	1107569	-604227	L 3	24976	L	85012600	000000	000000	002400	000035	G E=239, C=145, B=20
WRGLA	HD 97152	10	0830	1107569	-604227	L 3	24975	L	85012523	000000	000000	235200	000030	G E=214, C=125, B=18
LDGJL	00 SZ 41	58	1120	1110501	-762045	L 1	05171	L	85010922	000000	000000	221400	003000	G E=118, C=93, B=70
LDGJL	00LH332-21	58	1090	1110537	-762801	L 3	24873	L	85010918	000000	000000	181600	018000	G C=180, C=85, B=56
LDGJL	00LH332-21	58	1090	1110537	-762801	L 1	05170	L	85010921	000000	000000	212300	001000	G E=225, C=87, B=40
LDGJL	00LH332-21	58	1090	1110537	-762801	L 1	05203	L	85011322	000000	000000	223200	000800	G E=100, C=100, B=55
PHCAL	OOSAFETYRD	99	1090	1110537	-762801	L 2	17579	L	85011323	000000	000000	230800	000001	G C=55, B=17
LDGJL	OOX-RAY 22	58	1050	1111035	-770613	L 1	05179	L	85011023	000000	000000	231300	003000	G E=103, C=78, B=103
GM183	HD98664	74	0431	1118336	061813	H 1	05126	L	85010308	000000	000000	084527	000400	703 U
GM183	HD98664	74	0428	1118336	061813	H 3	24818	L	85010308	000000	000000	082225	000900	701 U
HSRGS	HD 98718	21	0390	1118432	-541301	L 3	25667	L	85041200	000000	000000	003500	000003	G C=240, B=23
CSGHJ	HD 100764	50	0880	1133109	-141900	L 1	05313	L	85020604	000000	000000	042700	002000	G C=230, B=40
BLGYK	00 MRK180	87	1500	1133326	+702559	L 3	25593	L	85040511	000000	000000	112900	025000	G B=105
BLGYK	00 MRK180	87	1500	1133327	+702600	L 1	05238	L	85012022	000000	000000	220000	004600	G C=81, B=50
BLGYK	00 MRK180	87	1500	1133327	+702600	L 3	24936	L	85012016	000000	000000	162800	029000	G C=110, B=60
GQ064	MKN 739	84	1470	1133526	215222	L 3	25652	L	85041002	000000	000000	024644	035600	203 U PA 46.6-NON OPT ROLL
GM183	HD100889	74	0479	1134086	-093132	H 1	05127	L	85010310	000000	000000	100916	000500	703 U
GM183	HD100889	74	0494	1134086	-093132	H 3	24819	L	85010309	000000	000000	093801	001300	701 U
IGGJS	HD 101190	13	0732	1135494	-625512	H 1	05228	L	85011905	000000	000000	050900	001000	G C=190, B=50
GQ220	NGC3783	84	1350	1136300	-372800	L 3	24855	L	85010709	000000	000000	094955	010000	350 U
GQ220	NGC3783	84	1350	1136300	-372800	L 1	05154	L	85010711	000000	000000	113550	010800	571 U
GQ220	NGC 3783	84	1345	1136300	-372800	L 3	25296	L	85022205	000000	000000	054950	010000	350 U
GQ220	NGC3783	84	1345	1136300	-372800	L 3	25297	L	85022208	000000	000000	083512	010000	350 U
GQ220	NGC 3783	84	1348	1136300	-372800	L 1	05406	L	85022207	000000	000000	073921	005000	451 U
GQ220	NGC3783	84	1341	1136300	-372800	L 1	05153	L	85010708	000000	000000	085346	005000	351 U
GQ220	NGC3783	84	1344	1136300	-372800	L 3	24856	L	85010713	000000	000000	132158	008500	350 U
IGGDY	NG3783 SKY	07	1600	1136330	-372743	L 3	25262	SL	85021706	060500	081500	060400	081500	G B=130
IGGDY	NG 3783	84	1600	1136330	-372740	H 1	05388	L	85021813	000000	000000	133300	087500	G C=230, B=162
IGGDY	NG3783 SKY	84	9999	1136330	-372740	L 3	25267	L	85021813	000000	000000	133400	084500	G B=128
IGGDY	NG 3783	84	1600	1136330	-372743	H 1	05383	L	85021713	000000	000000	133200	081500	G C=240, B=160

PRO	OBJECT	CL	MAG	R.A.	DEC	D	C	IMAGE	A	DATE	EXP. SMALL	EXP. LARGE	ECC	COMMENT	
GM208	NGC3783	84	1335	1136331	-372741	E	9	01641	2	85021806	000000	000000	060000	004000	V FOR LWP 5388
GM208	NGC 3783	84	1342	1136331	-372741	E	9	01640	2	85021707	000000	000000	070000	016000	V FOR LWP 5383
GC246	RW UMA	41	1043	1138060	521630	L	3	25490	L	85032003	000000	000000	033452	012000	211 V
HI103	N MUS	55	1400	1149358	-665542	L	3	25807	L	85042908	000000	000000	081523	003400	141 V PARTIAL READ
HI103	N MUS	55	1400	1149358	-665542	L	1	05852	L	85042907	000000	000000	074640	002200	332 V
HI103	N MUS	55	1400	1149358	-665542	L	3	25806	L	85042907	000000	000000	072908	001000	131 V
RRHRB	HD 103095	44	0650	1150062	+380439	L	1	05802	L	85042314	000000	000000	140500	000600	G C=3X,B=40
GM183	HD103192	74	0450	1150227	-333748	H	3	24820	L	85010311	000000	000000	112918	000800	701 V
GM183	HD103192	74	0452	1150227	-333748	H	1	05128	L	85010311	000000	000000	112325	000300	703 V
EHGEJ	Q 1150+497	85	1610	1150479	+494749	L	3	25220	SL	85021207	070600	036500	070500	036500	G B=65
EHGEJ	OOSKY BKGD	85	9999	1150479	+494749	L	1	05356	SL	85021213	132800	036000	132700	036000	G B=135
EHGEJ	Q 1150+497	85	1610	1150479	+494749	L	3	25221	SL	85021213	135400	028500	135300	028500	G B=85
GE157	PK1150+497	85	1671	1150479	494749	F	9	01639	2	85021207	000000	000000	071720	000000	V FOR SWP 25220
EHGEJ	Q 1150+497	85	9999	1150480	+494750	L	3	25229	SL	85021306	061900	060800	061800	060800	G E=165,C=165,B=128
EHGEJ	OOSKY BKGD	85	9999	1150480	+494750	L	1	05357	SL	85021306	062100	057100	062000	057100	G B=135
BLHAG	Q 1156+295	85	1580	1156576	+293125	L	3	25779	L	85042610	000000	000000	100000	019500	G C=73,B=39
XQHMS	Q 1202+281	85	0000	1202089	+281053	L	3	25798	L	85042810	000000	000000	100000	017000	G E=125,C=80,B=40
XQGMS	Q 1202+281	85	0000	1202089	+281053	L	3	25551	L	85033011	000000	000000	111900	028500	G E=187,C=112,B=72
XQGMS	Q 1202+281	85	1630	1202089	+281053	L	3	25257	L	85021613	000000	000000	134300	024000	G C=120,B=62
EGHFB	NG 4151	84	1150	1207599	+394059	L	1	05755	L	85041510	000000	000000	101200	037000	G E=197,C=155,B=120
EGHFB	NG 4151	84	1150	1208003	+394101	L	3	25695	L	85041610	000000	000000	102600	036500	G E=181,B=80
EGHFB	NG 4151	84	1150	1208003	+394101	L	3	25682	L	85041410	000000	000000	103100	036000	G E=182,C=120,B=92
GQ205	NGC4151	84	1234	1208004	394102	L	3	24864	L	85010808	000000	000000	085727	003500	351 V
GQ205	NGC4151	84	1229	1208004	394102	L	3	24808	L	85010207	000000	000000	074313	004500	360 V
GQ205	NGC4151	84	1231	1208004	394102	L	3	24809	LS	85010209	094955	003000	090353	004000	350 V 230\$
GQ205	NGC4151	84	1230	1208004	394102	L	1	05119	L	85010210	000000	000000	103257	001500	341 V
GQ205	NGC4151	84	1242	1208004	394102	L	1	05207	L	85011413	000000	000000	134134	002000	352 V
GQ205	NGC4151	84	1230	1208004	394102	L	1	05118	L	85010208	000000	000000	083414	002000	351 V
GQ205	NGC4151	84	1234	1208004	394102	L	3	24905	L	85011412	000000	000000	125041	004500	351 V
GQ205	NGC4151	84	1234	1208004	394102	L	3	24863	L	85010807	000000	000000	074031	004000	351 V
GQ205	NGC4151	84	1241	1208004	394102	L	3	24906	L	85011414	000000	000000	140923	003800	352 V
GQ205	NGC4151	84	1236	1208004	394102	L	1	05161	L	85010808	000000	000000	082526	002500	454 V
CBGEB	OO S MUS	53	0620	1210042	-695226	H	1	05543	L	85031716	000000	000000	162200	015000	G C=2X,B=93
BLHAG	Q 1215+303	87	1550	1215211	+302340	L	3	25785	L	85042623	000000	000000	233000	005000	G C=45,B=20
CSGEB	HD 107950	45	0480	1221361	+515020	H	1	05532	L	85031601	000000	000000	010100	003000	G E=96,C=180,B=44
CSGEB	HD 107950	45	0480	1221361	+515020	L	1	05531	SL	85031523	233000	000030	232600	000040	G C=230,B=33
CSGEB	HD 107950	45	0480	1221361	+515020	L	3	25459	L	85031522	000000	000000	225000	011000	G C=110,B=60
HC017	HD108283	60	0520	1223542	273242	L	3	25704	LS	85041702	025459	000050	024649	000140	500 V 300\$
HC017	HD108283	60	0523	1223542	273242	L	1	05765	LS	85041702	024040	000025	022806	000006	440 V 550\$
LGGJL	HD 108903	49	0160	1228229	-565000	H	1	05192	L	85011220	000000	000000	202400	006000	G E=20X,C=208,B=108
LGGJL	HD 108903	49	0160	1228229	-565000	H	1	05189	L	85011204	000000	000000	043600	000200	G E=183,B=70
LGGJL	OO WAUECAL	98	9999	1228229	-565000	H	3	24893	S	85011220	210100	000018	000000	000000	G E=10X,B=110
LGGJL	HD 108903	49	0160	1228229	-565000	L	3	24883	L	85011022	000000	000000	220400	004500	G E=255,C=85,B=65
LGGJL	HD 108903	49	0160	1228229	-565000	H	1	05190	L	85011205	000000	000000	051300	000500	G E=2X,C=130,B=90
LGGJL	HD 108903	49	0160	1228229	-565000	L	3	24891	L	85011201	000000	000000	011300	002000	G E=145,C=55,B=32

PRO	OBJECT	CL	MAG	R.A.	DEC	D	C	IMAGE	A	DATE	EXP. SMALL	EXP. LARGE	ECC	COMMENT	
LGGJL	HD 108903	49	0160	1228229	-565000	H	3	24892	L	85011206	000000	000000	064900	079500	G E=3X,B=165
LGGJL	HD 108903	49	0160	1228229	-565000	H	1	05191	L	85011205	000000	000000	055200	001500	G E=5X,C=120,B=90
LGGJL	HD 108903	49	0160	1228229	-565000	H	3	24894	L	85011221	000000	000000	215000	006000	G B=99
LGGJL	HD 108903	49	0160	1228229	-565000	D	9	01629	L	85011206	000000	000000	062900	016000	G NO COMMENTS
OD50K	NG 4579	80	1250	1235119	+120535	L	1	05338	L	85021014	000000	000000	140100	018000	G E=129,C=112,B=70
OD47K	HD 109995	38	0760	1236231	+393505	H	3	25180	L	85020513	000000	000000	135300	040000	G C=2X,B=113
GQ127	NGC 4593	84	1353	1237047	-050410	L	3	25302	L	85022305	000000	000000	054443	028100	341 U
GQ127	NGC 4593	84	1350	1237047	-050410	L	1	05411	L	85022310	000000	000000	103646	013000	454 U
GQ127	NGC4593	84	1351	1237047	-050410	L	1	05348	L	85021105	000000	000000	054825	015000	465 U
GQ127	NGC4593	84	1348	1237047	-050410	L	3	25213	L	85021108	000000	000000	082445	026300	342 U
GQ127	NGC 4593	84	1350	1237047	-050410	L	3	25329	L	85022706	000000	000000	063443	020300	332 U PARTIAL READ
GQ127	NGC 4593	84	1351	1237047	-050410	L	3	25249	L	85021508	000000	000000	081627	027000	342 U
GQ127	NGC 4593	84	1347	1237047	-050410	L	1	05371	L	85021505	000000	000000	050506	014000	464 U
GQ127	NGC 4593	84	1353	1237047	-050410	L	1	05430	L	85022704	000000	000000	042531	012000	454 U
GQ127	NGC4593	84	1347	1237047	-050410	L	3	25277	L	85021908	000000	000000	082837	025900	341 U
GQ127	NGC4593	84	1348	1237047	-050410	L	1	05394	L	85021906	000000	000000	061322	013000	454 U
HSNGS	HD 110335	26	0490	1239030	-592442	L	3	25666	SL	85041123	233400	000012	232700	000019	G C=192,B=25
HSNGS	HD 110335	26	0490	1239030	-592442	L	1	05718	SL	85041123	234700	000018	234000	000010	G C=210,B=40
GE173	NGC 4621	81	1222	1239308	115513	E	9	01638	2	85012910	000000	000000	104000	004000	U FIELD FOR SWP24999
EGGSF	NG 4621	81	0980	1239312	+115512	L	3	24999	L	85012911	000000	000000	110100	030000	G C=100,B=57
GI082	HD 110863	23	0931	1242576	-601642	L	1	05476	L	85030905	000000	000000	051836	000400	701 U
GI082	HD110863	23	0936	1242576	-601642	L	3	25400	L	85030904	000000	000000	044532	000530	301 U PARTIAL READ
GQ203	CS1244-62	17	1440	1244585	-624848	L	3	25342	L	85030208	000000	000000	084028	003000	300 U
GQ203	CS1244-62	17	1440	1244585	-624848	L	1	05445	L	85030209	000000	000000	091606	006000	503 U
GQ203	CS1244-62	12	1200	1244585	-624848	L	3	25362	L	85030510	000000	000000	101635	000300	200 U
ISHJS	HD 112078	21	0460	1251401	-585231	H	1	05742	L	85041321	000000	000000	215800	000100	G C=200,B=43
GQ202	NGC 4826	88	1205	1254170	215704	L	3	25368	L	85030608	000000	000000	082716	010900	211 U
GQ203	NGC 4826	80	1204	1254175	215704	L	1	05439	L	85030107	000000	000000	075744	014200	304 U
GQ203	NGC 4826	80	1202	1254175	215704	L	3	25337	L	85030104	000000	000000	044048	018500	302 U
HC087	HD113703B	46	1080	1303231	-481142	L	1	05775	S	85041802	023549	002000	000000	000000	301 U
HC087	HD113703B	46	1080	1303231	-481142	L	3	25713	S	85041803	032912	011300	000000	000000	531 U
GM183	HD113797	74	0527	1303242	360358	H	1	05125	L	85010307	000000	000000	074000	000900	703 U
GE228	POX124	88	1550	1304449	-125600	L	3	25348	L	85030304	000000	000000	041712	036000	313 U
SPGRN	OO41DAPHNE	05	1000	1305120	+070931	L	1	05829	L	85042523	000000	000000	233200	005000	G C=235,B=26
WDGFW	OO GD154	37	1530	1307382	+352539	L	3	24801	L	85010117	000000	000000	172100	032800	G C=145,B=85
OD57K	OO1308+326	85	1600	1308075	+323639	L	1	05290	L	85020401	000000	000000	012000	004000	G B=1.5X
OD57K	OO1308+326	85	1600	1308075	+323639	L	1	05289	L	85020323	000000	000000	231100	007000	G B=180
HC017	HD115444	46	0930	1314246	363842	L	1	05766	LS	85041704	045019	001000	042357	002000	501 U 211s
CCGSB	BD+46 1865	49	0750	1317170	+454722	L	3	25190	L	85020704	000000	000000	040300	004500	G B=32
CCGSB	BD+46 1865	49	0750	1317170	+454722	L	1	05318	L	85020703	000000	000000	033200	001500	G E=88,B=61
CCGSB	BD+46 1865	49	0750	1317170	+454722	L	3	25189	L	85020702	000000	000000	025500	003000	G B=72
XGHCB	NGS128 JET	88	9999	1322361	-424458	L	3	25554	L	85033111	000000	000000	115000	036000	G C=110,B=70
EGHRP	NG 5128	86	1900	1322398	-424442	L	3	25561	SL	85040210	100200	040500	100100	040500	G B=88
EGHRP	NG 5128	86	1900	1322398	-424442	L	1	05639	SL	85040210	102800	037000	102700	037000	G C=158,B=118
EGHRP	NG 5128	86	1900	1322398	-424442	D	9	01644	L	85040214	000000	000000	145400	002000	G NO COMMENTS



PRO	OBJECT	CL	MAG	R.A.	DEC	D	C	IMAGE	A	DATE	EXP.	SMALL	EXP.	LARGE	ECC	COMMENT	
EGHRP	NG	5128	86	1830	1322478	-424323	D	9	01643	L	85040115	000000	000000	154300	002000	G NO COMMENTS	
EGHRP	NG	5128	86	1830	1322478	-424323	L	3	25558	L	85040110	000000	000000	101200	039500	G B=72	
EGHRP	NGNGC	5128	86	1830	1322478	-424323	L	1	05628	SL	85040115	150600	009200	150500	009200	G B=45	
GCHRB	HD	5139	83	0000	1323299	-470817	L	1	05791	L	85042210	000000	000000	104000	029500	G C=2X,B=180	
WDGJL	PG1326-034	29	1570	1326408	-034321	L	1	05409	L	85022222	000000	000000	225600	006000		G C=115,B=53	
WDGJL	PG1326-034	29	1570	1326408	-034321	L	3	25300	L	85022220	000000	000000	205200	012000		G C=105,B=40	
EHGEJ	OOWOLF	485	29	1220	1327372	-081853	L	1	05384	L	85021721	000000	000000	213900	001000	G C=160,B=39	
EHGEJ	OOWOLF	485	29	1220	1327372	-081853	L	3	25263	L	85021721	000000	000000	210700	001000	G C=83,B=20	
EHGEJ	OOWOLF	485	29	1220	1327372	-081853	L	3	25264	L	85021722	000000	000000	221700	001000	G C=82,B=21	
EHGEJ	OOWOLF	485	29	1220	1327372	-081853	L	3	25266	L	85021801	000000	000000	015300	001000	G C=95,B=34	
EHGEJ	OOWOLF	485	29	1220	1327372	-081853	L	1	05387	L	85021801	000000	000000	012300	001000	G C=150,B=52	
EHGEJ	OOWOLF	485	29	1220	1327372	-081853	L	3	25265	L	85021800	000000	000000	004800	001000	G C=90,B=25	
EHGEJ	OOWOLF	485	29	1220	1327372	-081853	L	3	25231	L	85021319	000000	000000	192700	001000	G C=95,B=28	
EHGEJ	OOWOLF	485	29	1220	1327372	-081853	L	1	05385	L	85021723	000000	000000	230000	001000	G C=160,B=35	
EHGEJ	OOWOLF	485	29	1220	1327372	-081853	L	3	25232	L	85021320	000000	000000	200800	001000	G C=105,B=30	
EHGEJ	OOWOLF	485	29	1220	1327372	-081853	L	3	25230	L	85021318	000000	000000	184600	001000	G C=90,B=25	
EHGEJ	OOWOLF	485	29	1220	1327372	-081853	L	3	25260	L	85021622	000000	000000	220200	001000	G C=93,B=34	
EHGEJ	OOWOLF	485	29	1220	1327372	-081853	L	1	05380	L	85021622	000000	000000	224400	001000	G C=165,B=51	
EHGEJ	OOWOLF	485	29	1220	1327372	-081853	L	3	25261	L	85021623	000000	000000	231700	001000	G C=98,B=36	
EHGEJ	OOWOLF	485	29	1220	1327372	-081853	L	1	05381	L	85021623	000000	000000	235500	001000	G C=170,B=62	
EHGEJ	OOWOLF	485	29	1220	1327372	-081853	L	1	05386	L	85021800	000000	000000	002400	001000	G C=150,B=40	
EHGEJ	OOWOLF	485	29	1220	1327400	-081824	L	3	25223	L	85021222	000000	000000	225200	001000	G B=40	
EHGFJ	OOWOLF	485	29	1220	1327400	-081824	L	3	25228	L	85021302	000000	000000	024200	001000	G C=172,B=102	
EHGEJ	OOWOLF	485	29	1220	1327400	-081824	L	3	25227	L	85021301	000000	000000	015900	001000	G C=185,B=119	
EHGEJ	OOWOLF	485	29	1220	1327400	-081824	L	3	25226	L	85021301	000000	000000	011700	001000	G C=159,B=99	
EHGEJ	OOWOLF	485	29	1220	1327400	-081824	L	3	25225	L	85021300	000000	000000	003100	001000	G C=128,B=73	
EHGEJ	OOWOLF	485	29	1220	1327400	-081824	L	3	25224	L	85021223	000000	000000	234800	001000	G C=113,B=58	
EHGEJ	OOWOLF	485	29	1220	1327400	-081824	L	3	25222	L	85021221	000000	000000	212100	002000	G B=68	
CUGWB	OO BU CEN	54	1350	1328089	-544259	L	1	05162	L	85010821	000000	000000	215300	006000		G C=2X,B=45	
CUGWB	OO BU CEN	54	1350	1328089	-544259	L	3	24867	L	85010820	000000	000000	204800	006000		G E=118,C=117,B=30	
NPGJH	NG	5189	70	1410	1329562	-654310	L	3	25365	L	85030520	000000	000000	201900	010000		G E=141,C=97,B=75
NPGJH	NG	5189	70	1410	1329562	-654310	L	1	05457	L	85030522	000000	000000	222100	007500		G C=165,B=130
NPGJH	NG	5189	70	1410	1329596	-654255	H	3	25363	L	85030511	000000	000000	114600	035000		G E=130,C=165,B=98
NPGJH	NG	5189	70	1410	1329596	-654255	L	1	05456	L	85030519	000000	000000	190600	006000		G C=200,B=85
NPGJH	NG	5189	70	1410	1329596	-654255	L	3	25364	L	85030518	000000	000000	180100	006000		G E=255,C=100,B=30
IGGJS	HD	118198	13	0850	1333316	-632328	H	3	24927	L	85011916	000000	000000	163800	010000		G C=217,B=50
IGGJS	HD	118198	13	0850	1333316	-632328	H	1	05230	L	85011915	000000	000000	154800	004000		G C=185,B=58
QSHRG	PG1338+416	85	1610	1338519	+413821	L	1	05713	L	85041110	000000	000000	101000	038500		G E=236,C=195,B=110	
GCHRB	HD	5272	83	0000	1339540	+283800	L	1	05801	L	85042309	000000	000000	094200	018000		G C=185,B=65
PHCAL	ETA UMA	21	0201	1345340	493344	H	1	05616	L	85033005	000000	000000	052604	000005	502	U	
PHCAL	ETA UMA	21	0201	1345340	493344	H	3	25548	L	85033005	000000	000000	052123	000006	501	U	
PHCAL	ETA UMA	21	0197	1345340	493344	H	1	05617	L	85033006	000000	000000	060020	000020	802	U	
PHCAL	HD	120315	21	0180	1345343	+493344	H	2	17703	L	85040522	000000	000000	224600	000006		G C=210,B=32
PHCAL	HD	120315	21	0180	1345343	+493344	L	2	17646	L	85030920	000000	000000	202500	000001		G C=2X,B=30
PHCAL	HD	120315	21	0180	1345343	+493344	L	2	17645	L	85030919	000000	000000	194000	000001		G C=200,B=25

PRO	OBJECT	CL	MAG	R.A.	DEC	D C	IMAGE	A	DATE	EXP. SMALL	EXP. LARGE	ECC	COMMENT			
ISHFB	HD	120315	21	0190	1345343	+493344	H	1	05849	S	85042821	215700	000010	000000	000000	G C=180, B=40
ISHFB	HD	120315	21	0190	1345343	+493344	H	1	05644	S	85040223	230000	000009	000000	000000	G C=190, B=45
PHCAL	HD	120315	21	0180	1345343	+493344	L	2	17636	L	85022822	000000	000000	222300	000000	G B=25
PHCAL	HD	120315	21	0180	1345343	+493344	L	1	05862	L	85042922	000000	000000	222900	000001	G C=220, B=38
PHCAL	HD	120315	21	0180	1345343	+493344	L	2	17637	L	85022823	000000	000000	230700	000001	G C=2.0X, B=30
PHCAL	HD	120315	21	0180	1345343	+493344	L	2	17638	L	85022823	000000	000000	235200	000000	G B=28
PHCAL	HD	120315	21	0180	1345343	+493344	L	1	05863	L	85042923	000000	000000	231100	000001	G C=2X, B=40
PHCAL	HD	120315	21	0180	1345343	+493344	L	2	17672	L	85032523	000000	000000	230100	000001	G C=2.5X, B=30
PHCAL	HD	120315	21	0180	1345343	+493344	L	2	17659	L	85031400	000000	000000	003400	000001	G C=210, B=28
PHCAL	HD	120315	21	0180	1345343	+493344	L	2	17660	L	85031401	000000	000000	011500	000001	G C=205, B=25
PHCAL	HD	120315	21	0180	1345343	+493344	L	2	17671	L	85032521	000000	000000	215900	000033	G C=188, B=28
PHCAL	HD	120315	21	0180	1345343	+493344	L	1	05864	L	85042923	000000	000000	235200	000001	G C=2X, B=40
PHCAL	HD	120315	21	0180	1345343	+493344	L	2	17639	L	85030100	000000	000000	003400	000001	G B=26
PHCAL	HD	120315	21	0180	1345343	+493344	L	2	17640	L	85030101	000000	000000	011500	000001	G C=2X, B=33
PHCAL	HD	120315	21	0180	1345343	+493344	H	3	25813	L	85043000	000000	000000	003300	000006	G C=180, B=35
PHCAL	HD	120315	21	0180	1345343	+493344	H	1	05400	L	85022100	000000	000000	003400	000006	G C=240, B=45
PHCAL	HD	120315	21	0180	1345343	+493344	H	3	25284	L	85022100	000000	000000	004100	000006	G C=170, B=35
ISHFB	HD	120315	21	0190	1345343	+493344	H	3	25565	S	85040223	230400	000012	000000	000000	G C=182, B=35
PHCAL	HD	120315	21	0180	1345343	+493344	H	1	05422	L	85022523	000000	000000	232400	000005	G C=230, B=45
PHCAL	HD	120315	21	0180	1345343	+493344	H	1	05111	L	85010106	000000	000000	064500	000005	G C=200, B=40
ISHFB	HD	120315	21	0190	1345343	+493344	H	3	25802	S	85042821	215200	000016	000000	000000	G E=210, B=35
EGGEH	OO	A 1795	88	0000	1346339	+265027	D	9	01642	L	85032201	000000	000000	015600	016000	G NO COMMENTS
GQ158	A1795	81	1400	1346340	265028	L	1	05565	L	85032202	000000	000000	021755	047700	216 U	
BEHGP	HD	120324	26	0332	1346356	-421331	H	3	25545	L	85033001	000000	000000	013400	000020	G C=190, B=34
BEHGP	HD	120324	26	0332	1346356	-421331	H	3	25546	L	85033002	000000	000000	020400	000020	G C=190, B=35
BEHGP	OO	MU CEN	26	0320	1346356	-421331	H	3	25656	L	85041021	000000	000000	215000	000020	G C=210, B=38
HCGTA	HD	120901	39	0700	1349547	-182745	L	1	05300	L	85020422	000000	000000	224700	000150	G C=100, B=38
HCGTA	HD	120901	39	0700	1349547	-182745	L	3	25172	L	85020422	000000	000000	225200	000430	G C=50, B=21
WDGJL	PG1351+485	29	1640	1351119	+485506	L	1	05408	L	85022217	000000	000000	174500	012000	G C=125, B=65	
WDGJL	PG1351+485	29	1640	1351119	+485506	L	3	25299	L	85022213	000000	000000	134000	024000	G C=125, B=58	
GQ060	Q1356+58	85	1600	1356362	580638	L	3	25769	L	85042401	000000	000000	014502	042200	313 U	
IGGJS	HD	123008	13	0880	1403444	-641353	H	1	05231	L	85011918	000000	000000	183300	010000	G C=200, B=58
CSGTS	HD	123657	49	0420	1405558	+440530	L	1	05346	L	85021103	000000	000000	033100	000300	G E=156, C=75, B=44
WDHFB	OO	1406+59	37	1330	1406539	+595421	L	3	25670	SL	85041220	211300	001300	205800	000620	G C=127, B=38
SSHJL	OO0HE20104	70	0000	1408332	-511217	L	3	25770	L	85042412	000000	000000	122000	016000	G E=219, B=85	
SSHJL	OO0HE20104	70	0000	1408332	-511217	L	1	05810	L	85042410	000000	000000	103900	008000	G E=229, C=70, B=45	
HCGTA	HD	124147	39	0560	1409536	-532555	L	3	25174	L	85020500	000000	000000	004400	000500	G C=1.5X, B=35
SSHJL	OO HE2-106	70	0000	1410239	-631147	L	1	05811	L	85042415	000000	000000	152500	004000	G E=214, C=165, B=140	
SSHJL	OO0HE20106	57	0000	1410240	-631147	L	3	25771	L	85042416	000000	000000	161100	004000	G B=94	
SPGRN	OO	VESTA	05	0700	1421183	-011901	L	1	05602	L	85032501	000000	000000	015500	000215	G C=190, B=35
SPGRN	OO	VESTA	05	0730	1421528	-012620	L	1	05590	L	85032318	000000	000000	184000	000230	G C=190, B=35
SPGRN	OO	VESTA	05	0730	1421528	-012620	L	1	05589	L	85032318	000000	000000	180300	000120	G C=150, B=33
FSGBH	OO	GL551	52	1070	1426005	-622739	L	1	05448	SL	85030222	231900	001500	225900	001500	G E=156, B=105
FSGBH	OO	GL551	52	1070	1426005	-622739	L	3	25344	L	85030219	000000	000000	192400	006000	G B=80
FSGBH	OO	GL551	52	1070	1426005	-622739	L	1	05447	L	85030220	000000	000000	204000	003000	G E=168

PRO	OBJECT	CL	MAG	R.A.	DEC	D	C	IMAGE	A	DATE	EXP. SMALL	EXP. LARGE	ECC	COMMENT			
FSGPH	00	GL551	52	1070	1426005	-622739	L	3	25345	L	85030221	000000	000000	213700	006000	G B=48	
FSGBH	00	GL551	52	1070	1426005	-622739	L	3	25347	L	85030301	000000	000000	010300	002600	G B=105	
FSGBH	00	GL551	52	1070	1426005	-622739	L	3	25346	L	85030223	000000	000000	234400	004000	G B=145	
Q060	NGC5635	86	1400	1426188	273755	L	3	25766	L	85042304	000000	000000	040203	028500	113	V	
QSGAB	OOMRK	1383	84	1510	1426338	+013027	L	1	05446	L	85030211	000000	000000	111600	030000	G C=245, B=85	
QSGAB	OOMRK	1383	84	1510	1426338	+013027	L	1	05440	L	85030117	000000	000000	170300	007500	G C=200, B=75	
QSGAB	OOMRK	1383	84	1510	1426338	+013027	L	3	25338	L	85030111	000000	000000	112300	033000	G C=175, B=72	
QSGAB	OOMRK	1383	84	1510	1426338	+013027	L	3	25343	L	85030216	000000	000000	162600	010000	G E=244, C=126, B=45	
IBGBB	HD	127208	39	0690	1427501	-221422	L	3	24952	L	85012304	000000	000000	046000	000050	G C=190, B=19	
IBGBB	HD	127208	39	0690	1427501	-221422	H	1	05252	L	85012304	000000	000000	040600	001500	G E=160, C=170, B=45	
MLGF9	HD	128220B	16	0850	1432560	+192519	H	3	25287	L	85022104	000000	000000	042100	002700	G C=150, B=37	
MLGFB	HD	128220B	16	0850	1432560	+192519	H	3	24847	L	85010605	000000	000000	051200	002500	G C=202, B=90	
MLGFB	HD	128220B	16	0850	1432560	+192519	H	3	25295	L	85022203	000000	000000	035900	003800	G C=190, B=42	
MLGFB	HD	128220B	16	0850	1432560	+192519	H	3	25258	L	85021618	000000	000000	182300	003800	G C=200, B=50	
MLGFB	HD	128220B	16	0850	1432560	+192519	H	3	25259	L	85021619	000000	000000	193600	002000	G C=130, B=41	
MLGFB	HD	128220B	16	0850	1432560	+192519	H	3	25286	L	85022103	000000	000000	033000	002000	G C=125, B=30	
MLGFB	HD	128220B	16	0850	1432560	+192519	H	3	24846	L	85010604	000000	000000	042000	002500	G C=205, B=90	
MLGFB	HD	128220B	16	0850	1432560	+192519	H	3	25285	L	85022101	000000	000000	014000	002000	G C=148, B=60	
MLGFB	HD	128220B	16	0850	1432560	+192519	H	3	24848	L	85010606	000000	000000	060600	003200	G C=200, B=65	
HC087	HD	129791B	46	1280	1442385	-443958	L	1	05776	S	85041806	061035	003000	000000	000000	111	V
HC087	HD	129791B	46	1284	1442385	-443958	L	3	25714	S	85041806	065803	010600	000000	000000	111	V
HCGBC	OOLTT	5864	46	1190	1443260	-350848	L	3	25204	L	85020917	000000	000000	170100	008000	G B=28	
Q060	Q1444+41	85	1600	1444502	404738	L	3	25778	L	85042602	000000	000000	021927	038800	343	V	
WDGTL	PG1445+151	29	1570	1445530	+151717	L	1	05410	L	85022303	000000	000000	035400	005500	G C=93, B=40		
WDGTL	PG1445+151	29	1570	1445530	+151717	L	3	25301	L	85022300	000000	000000	003700	010000	G C=199, B=85		
CSGCI	HD	130948	44	0580	1448019	+240703	L	3	24969	L	85012506	000000	000000	062000	003000	G C=100, B=25	
CSGCI	HD	130948	44	0580	1448019	+240703	L	1	05260	L	85012506	000000	000000	061300	000016	G C=135, B=35	
HSNGS	HD	130807	21	0430	1448219	-432211	L	3	25664	L	85041120	000000	000000	205300	000005	G C=205, B=21	
GQ175	A1991	81	1400	1452133	185041	L	3	24830	L	85010408	000000	000000	080656	040000	114	V	
WDGJL	PG1456+102	29	1600	1455549	+101345	L	1	05416	L	85022501	000000	000000	010800	004500	G C=105, B=65		
WDGJL	PG1456+102	29	1600	1456073	+102014	L	3	25311	L	85022422	000000	000000	224900	013000	G C=105, B=65		
CSGTS	HD	132813	49	0470	1456468	+660752	L	1	05347	L	85021104	000000	000000	042500	000330	G E=2X, C=80, B=35	
WDGHS	OOH1504+65	37	1500	1501230	+662408	L	3	25323	S	85022611	112500	009000	000000	000000	G C=160, B=25		
RRHRB	HD	134678	42	0800	1504103	+773352	L	3	25767	L	85042315	000000	000000	151500	002000	G C=115, B=48	
HC017	HD	134319	45	0873	1504567	641414	L	1	05636	LS	85040202	022059	001000	020456	001000	602	V 502\$
HC017	HD	134319	45	0874	1504567	641414	L	3	25559	L	85040201	000000	000000	013650	012200	211	V 22 + 100 = 122 MINS
ISHJS	HD	134411	20	0960	1507542	-394032	H	1	05737	L	85041315	000000	000000	155900	006700	G C=245, B=80	
EGGEH	OO	A 2052	88	1550	1514169	+071216	L	3	24909	L	85011508	000000	000000	083100	079500	G B=133	
GQ158	A2052	88	9999	1514170	071217	P	9	01631	2	85011508	000000	000000	083000	000500	V		
GA176	N5944-II15	38	1527	1515434	021622	L	3	25529	L	85032704	000000	000000	043015	034300	102	V	
PHCAL	OO	WAUCAL	98	0000	1518374	-360453	H	2	17698	S	85040519	190600	000016	000000	000000	G E=50X, B=105	
PHCAL	OO	WAUCAL	98	0000	1518374	-360453	L	3	25594	S	85040517	175500	000002	000000	000000	G E=10X, B=105	
PHCAL	OO	WAUCAL	98	0000	1518374	-360453	H	3	25595	S	85040518	182100	000200	000000	000000	G E=50X, B=120	
PHCAL	OO	WAUCAL	98	0000	1518374	-360453	L	2	17697	S	85040518	184100	000001	000000	000000	G E=10X, B=85	
GM163	HD	136488	10	0952	1519582	-623000	L	3	25314	L	85022507	000000	000000	071208	000650	560	V

PRO	OBJECT	CL	MAG	R.A.	DEC	D	C	IMAGE	A	DATE	EXP.	SMALL	EXP.	LARGE	ECC	COMMENT
GM163	HD 136488	10	0952	1519582	-623000	L	1	05419	L	85022507	000000	000000	074753	000345	773	U
GM163	HD 136488	10	0945	1519582	-623000	L	3	25315	L	85022510	000000	000000	101322	000500	450	U
CSGHJ	HD 137613	50	0740	1524500	-245947	L	1	05304	L	85020504	000000	000000	042600	001300		G C=205, B=45
CSGHJ	HD 137613	50	0740	1524500	-245947	L	1	05303	L	85020503	000000	000000	032600	001500		G C=1.5X, B=120
GM163	HD137603	10	1009	1525449	-582433	L	3	25308	L	85022406	000000	000000	061135	034600	444	U
GM163	HD 137603	10	1008	1525449	-582433	L	1	05420	L	85022508	000000	000000	085139	005000	773	U
HCGBC	HD 138004	44	0750	1525560	+430327	L	3	25542	L	85032917	000000	000000	175200	007500		G C=60, B=26
GC075	BD-8 3999	47	0938	1529412	-082158	H	1	05712	L	85041106	000000	000000	063113	013600	232	U
GC075	BD-8 3999	47	0963	1529412	-082158	L	3	25681	L	85041403	000000	000000	030324	026900	222	U
GC075	BD-8 3999	47	0943	1529412	-082158	L	3	25661	L	85041103	000000	000000	034010	016500	221	U
GC075	BD-8 3999	47	0934	1529412	-082158	L	1	05711	L	85041103	000000	000000	031040	000900	331	U
GC075	BD-8 3999	47	0930	1529412	-082158	L	1	05764	L	85041608	000000	000000	083514	001800	342	U
GC075	BD-8 3999	47	0933	1529412	-082158	L	1	05763	L	85041603	000000	000000	033040	001200	331	U
GC075	BD-8 3999	47	0932	1529412	-082158	L	3	25694	L	85041602	000000	000000	022919	032500	313	U
GC075	BD-8 3999	47	0963	1529412	-082158	L	1	05748	L	85041404	000000	000000	045614	003500	461	U
GC075	BD-8 3999	47	0966	1529412	-082158	L	1	05747	L	85041403	000000	000000	035029	001200	342	U
ISHJS	HD 134485	20	0550	1530054	-164105	H	1	05738	L	85041317	000000	000000	175300	000148		G C=205, B=43
GA198	HD138749	26	0433	1530547	313136	H	3	25462	L	85031607	000000	000000	075950	000145	501	U
GA198	HD 138749	22	0428	1530547	313136	H	3	25240	L	85021408	000000	000000	082926	000145	501	U
GA198	HD138749	26	0429	1530547	313136	H	1	05533	L	85031607	000000	000000	075734	000115	602	U
QSGMM	OOMARK 290	84	1480	1534448	+580400	L	1	05245	L	85012117	000000	000000	175300	012000		G C=175, B=50
QSGMM	OOMARK 290	84	1480	1534448	+580400	L	3	24943	L	85012119	000000	000000	195700	011000		G E=141, C=82, B=40
GI031	LX SER	66	1485	1535449	190149	L	1	05425	L	85022604	000000	000000	043548	018000	462	U
GI031	LX SER	66	1485	1535449	190149	L	3	25322	L	85022607	000000	000000	074318	015000	351	U
HS139	SATURN	03	0020	1538508	-170434	L	3	25689	L	85041504	000000	000000	042129	003500	750	U
HS139	SATURN	03	0020	1538508	-170434	F	9	01646	2	85041504	000000	000000	042600	016000		U
SSGJH	OOSAT RING	03	0020	1540180	-171012	L	3	25630	L	85040809	000000	000000	095700	033500		G C=10, OX, B=73
SPGRN	OO DIONE	04	1050	1542326	-171944	L	1	05601	L	85032422	000000	000000	224300	012500		G C=235, B=65
SPGRN	OO NULL	99	9999	1542326	-171944	L	3	25519	L	85032423	000000	000000	234900	000001		G B=5
SPGRN	OO NULL	99	9999	1542326	-171944	L	3	25520	L	85032500	000000	000000	003500	000001		G B=18
SPGRN	OO NULL	99	9999	1542332	-171956	L	3	25518	L	85032421	000000	000000	211300	000000		G B=18
SPGRN	OOSKY BKGD	07	9999	1542332	-171956	L	3	25517	L	85032417	000000	000000	175000	012000		G B=35
SPGRN	OO DIONE	04	1050	1542332	-171956	L	1	05600	L	85032419	000000	000000	191000	014000		G C=240, B=65
SPGRN	OONULL IMG	99	9999	1542362	-171956	L	3	25514	L	85032412	000000	000000	124500	000001		G B=12
SPGRN	OO TETHYS	04	1040	1542363	-172000	L	1	05597	L	85032411	000000	000000	115000	006000		G C=195, B=42
SPGRN	OOENCELEDS	04	1110	1542401	-172018	L	1	05594	L	85032401	000000	000000	010500	006500		G C=95, B=48
SPGRN	OOENCELEDS	04	1110	1542401	-172000	L	1	05599	L	85032416	000000	000000	160800	012000		G C=185, B=55
SPGRN	OONULL IMG	99	9999	1542401	-172000	L	3	25516	L	85032417	000000	000000	171200	000001		G B=18
SPGRN	OO NULL	99	9999	1542401	-172018	L	3	25512	L	85032401	000000	000000	013100	000001		G B=15
SPGRN	OOENCELDUS	04	1110	1542403	-171959	L	1	05598	L	85032413	000000	000000	135700	008000		G C=180, B=50
SPGRN	OOSKY BKGD	07	9999	1542403	-171959	L	3	25515	L	85032414	000000	000000	141100	007000		G B=19
SPGRN	OOENCELEDS	04	1100	1542406	-172023	L	1	05593	L	85032323	000000	000000	230100	006500		G C=147, B=63
SPGRN	OOSKY BKGD	07	9999	1542464	-172048	L	3	25509	L	85032315	000000	000000	153600	001000		G B=13
SPGRN	OO TETHYS	04	1080	1542464	-172048	L	1	05588	L	85032315	000000	000000	152200	005500		G C=1.5X, B=45
SPGRN	OOSKY BKGD	07	9999	1542487	-172023	L	3	25511	L	85032321	000000	000000	212100	002500		G B=22



PRO	OBJECT	CL	MAG	R.A.	DEC	D C	IMAGE	A	DATE	EXP.SMALL	EXP.LARGE	ECC	COMMENT			
SPGRN	00	DIONE	04	1060	1542487	-172043	L	1	05587	L	85032313	000000	000000	133200	006800	G C=220,B=45
SPGRN	00	RHEA	04	1010	1542487	-172023	L	1	05592	L	85032321	000000	000000	211400	004300	G C=218,B=45
SPGRN	00	NULL	99	9999	1542487	-172043	L	3	25508	L	85032313	000000	000000	135600	000001	G B=10
SPGRN	00	RHEA	04	1010	1542489	-172021	L	1	05591	L	85032319	000000	000000	194100	005000	G C=1.2X,B=45
SPGRN	00	NULL	99	9999	1542489	-172021	L	3	25510	L	85032320	000000	000000	200200	000001	G C=1.2X,B=45
SPGRN	00	DIONE	04	1060	1542493	-172043	L	1	05586	L	85032311	000000	000000	113400	006500	G C=210,B=42
SPGRN	00	NULL	99	9999	1542493	-172042	H	3	25507	L	85032312	000000	000000	121300	000001	G B=20
MGGJW	00	SATURN	03	0040	1543054	-172228	L	1	05555	L	85032001	000000	000000	011800	000020	G C=20X,B=38
MGGJW	00	SATURN	03	0040	1543054	-172228	L	3	25489	L	85032001	000000	000000	012500	003500	G C=2X,B=23
SUGJC	00	SATURN	99	0000	1543232	-172707	L	3	25336	L	85022811	000000	000000	114000	033000	G C=20X,B=60
CCGDS	HD	141003B	46	0990	1543527	+153437	L	1	05465	L	85030717	000000	000000	175700	002000	G E=123,C=120,B=72
PHCAL	BD+33	2642	20	1105	1550010	330528	L	1	05478	L	85030909	000000	000000	091554	000310	501 U
PHCAL	BD+33	2642	20	1109	1550010	330528	L	3	25402	L	85030908	000000	000000	084302	000400	401 U
PHCAL	BD+33	2642	20	1103	1550010	330528	L	3	25547	L	85033003	000000	000000	033949	000400	500 U
PHCAL	BD+33	2642	20	1096	1550010	330528	L	3	25570	L	85040304	000000	000000	041230	000400	500 U
PHCAL	BD+33	2642	20	1099	1550010	330528	L	1	05647	L	85040304	000000	000000	044452	000310	501 U
PHCAL	BD+33	2642	20	1096	1550010	330528	L	1	05615	L	85033003	000000	000000	035528	000310	501 U
PHCAL	00	WAUCAL	98	0000	1550018	+330527	L	1	05435	S	85022801	011400	000001	000000	000000	G E=20X,B=100
PHCAL	BD+33	2642	20	1080	1550019	+330528	L	1	05424	L	85022601	000000	000000	014400	000310	G C=233,B=35
PHCAL	BD+33	2642	20	1080	1550019	+330528	L	2	17704	L	85040523	000000	000000	233100	000310	G C=125,B=32
PHCAL	BD+33	2642	20	1080	1550019	+330528	L	3	25625	L	85040722	000000	000000	222500	000400	G C=180,B=18
PHCAL	BD+33	2642	20	1080	1550019	+330528	L	3	24918	L	85011706	000000	000000	061800	000400	G C=160,B=18
PHCAL	BD+33	2642	20	1080	1550019	+330528	L	1	05214	L	85011706	000000	000000	060800	000310	G C=200,B=38
PHCAL	BD+33	2642	20	1080	1550019	+330528	L	1	05692	L	85040722	000000	000000	223500	000310	G C=225,B=40
PHCAL	BD+33	2642	20	1080	1550019	+330528	L	2	17631	L	85022004	000000	000000	041000	000310	G C=170,B=25
GC142	HD	142560	58	1157	1553240	-374058	L	3	25472	L	85031704	000000	000000	042555	012000	351 U
GC142	HD	142560	58	1131	1553740	-374058	L	3	25460	L	85031604	000000	000000	040219	013600	351 U
GC142	HD	142560	58	1175	1553240	-374058	L	1	05540	LS	85031703	040129	001000	034317	001000	472 U 362\$
MGGJW	SA	101821	25	0627	1553253	+184556	L	3	25487	L	85031920	000000	000000	204100	000010	G C=145,B=19
MGGJW	SA	101821	25	0627	1553253	+184556	L	3	25486	L	85031919	000000	000000	191000	000145	G C=6X,B=20
MGGJW	SA	101821	25	0627	1553253	+184556	L	1	05554	L	85031920	000000	000000	203800	000007	G C=210,B=35
HI197	T	CRB	63	1009	1557245	260339	L	3	25401	L	85030906	000000	000000	065110	004000	461 U
HI197	T	CRB	63	1013	1557245	260339	L	1	05477	L	85030907	000000	000000	073827	002000	571 U
HI197	T	CR B	63	1024	1557245	260339	L	3	25733	L	85041904	000000	000000	045559	004000	331 U
HI197	T	CR B	63	1026	1557245	260339	L	1	05778	L	85041904	000000	000000	041136	002000	561 U
HSGSA	HD	143807	30	0500	1559259	+295926	H	3	24806	L	85010205	000000	000000	051390	000600	G C=200,B=60
HSGSA	HD	143807	30	0500	1559259	+295926	H	1	05121	L	85010300	000000	000000	000800	000833	G C=25X,B=60
HSGSA	HD	143807	30	0500	1559259	+295926	L	3	24817	L	85010306	000000	000000	062300	000019	G C=163,B=25
HSGSA	HD	143807	30	0500	1559259	+295926	L	3	24837	L	85010506	000000	000000	061300	000024	G C=190,B=22
HSGSA	HD	143807	30	0500	1559259	+295926	H	1	05116	L	85010205	000000	000000	052600	000312	G C=200,B=60
HSGSA	HD	143807	30	0500	1559259	+295926	L	1	05146	L	85010505	000000	000000	054300	000012	G C=195,B=48
HSGSA	HD	143807	30	0500	1559259	+295926	H	3	24812	L	85010223	000000	000000	234900	001230	G C=2.5X,B=54
HSGSA	HD	143807	30	0500	1559259	+295926	H	1	05124	L	85010305	000000	000000	052200	000315	G C=217,B=68
HSGSA	HD	143807	30	0500	1559259	+295926	H	3	24827	L	85010405	000000	000000	052800	000930	G C=2.0X,B=98
HSGSA	HD	143807	30	0500	1559259	+295926	H	3	24834	L	85010500	000000	000000	001900	001220	G C=1.8X,B=58

PRO	OBJECT	CL	MAG	R.A.	DEC	D C	IMAGE	A	DATE	EXP.SMALL	EXP.LARGE	ECC	COMMENT		
HSGSA	HD	143807	30	0500	1559259	+295926	H	1	05141 L	85010423	000000	000000	234700	001330	G C=4.0X,B=70
HSGSA	HD	143807	30	0500	1559259	+295926	H	1	05138 L	85010406	000000	000000	060600	000655	G C=2.0X,B=80
HSGSA	HD	143807	30	0500	1559259	+295926	H	1	05117 L	85010206	000000	000000	062600	000323	G C=200,B=50
HSGSA	HD	143807	30	0500	1559259	+295926	H	3	24828 L	85010406	000000	000000	063500	000635	G C=195,B=45
HSGSA	HD	143807	30	0500	1559259	+295926	H	3	24833 L	85010423	000000	000000	230900	001700	G C=2.2X,B=70
HSGSA	HD	143807	30	0500	1559259	+295926	H	3	24813 L	85010301	000000	000000	011500	001648	G C=2.5X,B=53
HSGSA	HD	143807	30	0500	1559259	+295926	H	1	05137 L	85010405	000000	000000	051400	000655	G C=2.0X,B=105
HSGSA	HD	143807	30	0500	1559259	+295926	H	1	05134 L	85010400	000000	000000	005100	001330	G C=3.8X,B=70
HSGSA	HD	143807	30	0500	1559259	+295926	H	3	24824 L	85010400	000000	000000	001500	002000	G C=3.5X,B=75
HSGSA	HD	143807	30	0500	1559259	+295926	H	3	24807 L	85010206	000000	000000	063500	000624	G C=185,B=40
HSGSA	HD	143807	30	0500	1559259	+295926	H	1	05133 L	85010323	000000	000000	235700	001220	G C=40X,B=70
HSGSA	HD	143807	30	0500	1559259	+295926	H	3	24816 L	85010305	000000	000000	053200	000605	G C=180,B=83
ZAHNO	OO	AG DRA	57	0970	1601230	+665622	L	1	05614 L	85033000	000000	000000	000300	000500	G C=1.2X,B=35
ZAHNO	OO	AG DRA	57	0970	1601230	+665622	L	3	25544 SL	85032923	235300	000200	233600	001000	G E=10X,C=100,B=20
GI041	AG	DRA	57	0966	1601240	665625	L	1	05513 LS	85031308	081754	000300	080930	000400	563 U 333\$
GI041	AG	DRA	57	0966	1601240	665625	H	1	05514 L	85031309	000000	000000	094419	003300	242 U
PHCAL	AG	DRA	57	0949	1601240	665625	H	3	25550 L	85033009	000000	000000	094614	003100	172 U
GI041	AG	DRA	57	0967	1601240	665625	L	3	25443 LS	85031307	080224	000400	075307	000600	361 U 251\$
GI041	AG	DRA	57	0966	1601240	665625	H	3	25444 L	85031308	000000	000000	084933	005000	261 U
GA133	HR	5999	20	0776	1605128	-385823	L	3	25379 L	85030709	000000	000000	094235	003500	831 U
GA133	HR	5999	33	0770	1605128	-385823	H	1	05470 L	85030805	000000	000000	055842	009000	552 U
GA133	HR	5999	33	0774	1605128	-385823	L	3	25390 L	85030807	000000	000000	073500	003000	831 U
GA133	HR	5999	20	0770	1605128	-385823	H	1	05464 L	85030708	000000	000000	080426	009000	452 U
HCGBC	OCLTT	6447	44	1290	1607240	-285400	L	3	25294 L	85022201	000000	000000	010600	006500	G B=43
HYGLH	HD	145544	45	0380	1610521	-633337	H	1	05329 L	85020900	000000	000000	005300	002000	G E=197,C=182,B=59
LGHJL	HD	145544	45	0380	1610521	-633337	H	1	05631 L	85040119	000000	000000	192300	005000	G E=4X,C=2.0X,B=50
LGHJL	HD	145544	45	0380	1610521	-633337	H	1	05632 L	85040120	000000	000000	205500	001800	G E=169,C=165,B=40
IEGAW	HD	147394	21	0390	1618140	+462553	L	3	24961 SL	85012402	030400	000003	025400	000003	G C=190,B=22
IEGAW	HD	147394	21	0390	1618140	+462553	L	2	17604 SL	85012403	035200	000003	031900	000003	G C=215,B=35
DAHJH	CD-3810980	37	1100	1620120	-390700	H	3	25669 L	85041210	000000	000000	100400	012000	G C=150,B=48	
DAHJH	CD-3810980	37	1100	1620120	-390700	H	1	05725 L	85041213	000000	000000	132200	016700	G C=220,B=80	
DAHJH	OO WAUECAL	98	9999	1620377	-390441	H	1	05728 S	85041219	191900	000016	000000	000000	G E=50X,B=110	
DAHJH	BS	6094	44	0540	1620377	-390441	H	1	05727 S	85041218	181100	003500	000000	000000	G E=154,C=200,B=60
DAHJH	BS	6094	44	0540	1620377	-390441	H	1	05847 L	85042817	000000	000000	174600	006000	G C=2.5X,B=138
DAHJH	BS	6094	44	0540	1620377	-390441	H	1	05675 L	85040516	000000	000000	163500	001600	G E=186,C=210,B=90
DAHJH	BS	6094	44	0540	1620377	-390441	H	1	05724 L	85041212	000000	000000	121200	001600	G C=148,B=40
DAHJH	BS	6094	44	0540	1620377	-390441	H	1	05726 L	85041216	000000	000000	164500	002000	G E=161,C=190,B=45
IMGTS	HD	147933	20	0510	1622349	-231958	H	1	05509 L	85031223	000000	000000	234500	000145	G C=215,B=45
IMGTS	HD	147933	20	0510	1622349	-231958	H	1	05510 S	85031300	002300	000515	000000	000000	G C=225,B=54
IMGTS	HD	147933	20	0510	1622349	-231958	H	1	05511 L	85031301	000000	000000	010300	000145	G C=210,B=43
IMGTS	HD	147933	20	0510	1622349	-231958	H	3	25439 L	85031301	000000	000000	010900	000300	G C=185,B=35
IMGTS	HD	147933	20	0510	1622349	-231958	H	1	05508 S	85031223	230800	000530	000000	000000	G C=230,B=52
IMGTS	HD	147933	20	0510	1622349	-231958	H	1	05507 L	85031222	000000	000000	222000	000145	G C=215,B=44
IMGTS	HD	147933	20	0510	1622349	-231958	H	3	25425 L	85031021	000000	000000	212800	000300	G C=190,B=32
IMGTS	HD	147933	20	0510	1622349	-231958	H	3	25424 L	85031020	000000	000000	205100	000300	G C=205,B=40

PRO	OBJECT	CL	MAG	R.A.	DEC	D	C	IMAGE	A	DATE	EXP.SMALL	EXP.LARGE	ECC	COMMENT			
IMGTS	HD	147933	20	0510	1622349	-231958	H	3	25423	L	85031020	000000	000000	201600	000300	G C=210,B=40	
IMGTS	HD	147933	20	0510	1622349	-231958	H	3	25422	L	85031019	000000	000000	193600	000300	G C=205,B=40	
IMGTS	HD	147933	20	0510	1622349	-231958	H	1	05506	S	85031221	214000	000530	000000	000000	G C=210,B=43	
IMGTS	HD	147933	20	0510	1622349	-231958	H	1	05505	L	85031221	000000	000000	210500	000145	G C=220,B=42	
IMGTS	HD	147933	20	0510	1622349	-231958	H	3	25421	L	85031018	000000	000000	185900	000300	G C=200,B=45	
IMGTS	HD	147933	20	0510	1622349	-231958	H	1	05504	S	85031220	201300	000530	000000	000000	G C=220,B=45	
IMGTS	HD	147933	20	0510	1622349	-231958	H	1	05503	L	85031219	000000	000000	192400	000145	G C=215,B=43	
IMGTS	HD	147933	20	0510	1622349	-231958	H	1	05502	S	85031218	184400	000530	000000	000000	G C=185,B=44	
IMGTS	HD	147933	20	0510	1622349	-231958	H	3	25426	L	85031022	000000	000000	220700	000300	G C=195,B=32	
IMGTS	HD	147933	20	0510	1622349	-231958	H	1	05500	L	85031201	000000	000000	012600	000145	G C=210,B=45	
IMGTS	HD	147933	20	0510	1622349	-231958	H	1	05499	S	85031200	004100	000530	000000	000000	G C=235,B=65	
IMGTS	HD	147933	20	0510	1622349	-231958	H	3	25430	L	85031100	000000	000000	004000	000300	G C=190,B=33	
IMGTS	HD	147933	20	0510	1622349	-231958	H	3	25431	L	85031101	000000	000000	011300	000300	G C=210,B=35	
IMGTS	HD	147933	20	0510	1622349	-231958	H	1	05498	L	85031200	000000	000000	000200	000145	G C=205,B=50	
IMGTS	HD	147933	20	0510	1622349	-231958	H	1	05497	S	85031123	231900	000530	000000	000000	G C=230,B=60	
IMGTS	HD	147933	20	0510	1622349	-231958	H	1	05496	L	85031122	000000	000000	223800	000145	G C=210,B=45	
IMGTS	HD	147933	20	0510	1622349	-231958	H	1	05495	S	85031121	215600	000530	000000	000000	G C=215,B=50	
IMGTS	HD	147933	20	0510	1622349	-231958	H	1	05494	L	85031121	000000	000000	211400	000200	G C=225,B=41	
IMGTS	HD	147933	20	0510	1622349	-231958	H	1	05493	S	85031120	203400	000530	000000	000000	G C=210,B=45	
IMGTS	HD	147933	20	0510	1622349	-231958	H	1	05492	L	85031119	000000	000000	195600	000200	G C=230,B=45	
IMGTS	HD	147933	20	0510	1622349	-231958	H	1	05491	S	85031119	191800	000600	000000	000000	G C=230,B=45	
IMGTS	HD	147933	20	0510	1622349	-231958	H	1	05490	L	85031118	000000	000000	183900	000200	G C=215,B=45	
IMGTS	HD	147933	20	0510	1622349	-231958	H	3	25427	L	85031023	000000	000000	230300	000300	G C=190,B=32	
IMGTS	HD	147933	20	0510	1622349	-231958	H	3	25428	L	85031023	000000	000000	233500	000300	G C=200,B=40	
IMGTS	HD	147933	20	0510	1622349	-231958	H	3	25429	L	85031100	000000	000000	000700	000300	G C=205,B=40	
CCGDS	HD	147584	44	0490	1623038	-695829	L	3	25381	L	85030715	000000	000000	153800	010000	G E=136,C=2X,B=85	
ISHJS	HD	148265	20	0970	1623514	+261511	H	1	05736	L	85041313	000000	000000	133500	008000	G C=180,B=58	
PHCAL	HD	149438	20	0280	1632459	-280651	H	1	05421	L	85022522	000000	000000	221900	000006	G C=230,B=45	
PHCAL	HD	149438	20	0280	1632459	-280651	H	1	05693	L	85040723	000000	000000	233300	000006	G C=220,B=45	
PHCAL	HD	149438	20	0280	1632459	-280651	H	3	25320	L	85022522	000000	000000	222400	000006	G C=210,B=37	
PHCAL	HD	149438	20	0280	1632459	-280651	H	3	25585	L	85040500	000000	000000	003700	000006	G C=210,B=32	
IMGRF	HD	149452	12	0950	1633296	-470146	H	1	05519	L	85031411	000000	000000	111900	010000	G C=140,B=50	
GA198	HD	149757	12	0274	1634240	-102803	H	3	25461	L	85031607	000000	000000	071245	000025	501 U	
GQ256	PG	1634+706	85	1479	1634516	703737	L	3	25279	L	85022007	000000	000000	074302	030400	302 U	
GE157	PG	1634+706	85	1490	1634516	703736	L	1	05378	L	85021605	000000	000000	054611	042000	673 U	
GQ256	PG	1634+706	85	1485	1634516	703736	L	1	05397	L	85022005	000000	000000	053516	012000	473 U	
GA133	HD	150193	33	0911	1637164	-234756	L	3	25392	L	85030810	000000	000000	101813	000700	301 U PARTIAL READ	
IMGRF	HD	150288	23	0880	1638353	-465514	H	1	05520	L	85031413	000000	000000	134200	006000	G C=200,B=50	
IMGRF	HD	150422	26	0880	1639275	-462445	H	1	05521	L	85031415	000000	000000	152600	010000	G C=210,B=60	
WDGHC	OO	GD	356	29	1500	1639490	+534654	L	1	05426	L	85022614	000000	000000	143300	012000	G C=105,B=52
WDGHS	OO	GD	356	29	1500	1639490	+534654	L	3	25324	S	85022616	165500	008500	000000	000000	G B=22
NPGWF	OO	KE2	177	70	1300	1640004	-623140	H	3	25325	L	85022619	000000	000000	193900	010500	G B=57
CUGCW	OO	RS	OPH	55	9999	1640004	-623140	H	1	05429	L	85022701	000000	000000	013500	001100	G C=160,B=57
NPGWF	OO	KE2	177	70	1300	1640004	-623140	L	1	05427	L	85022621	000000	000000	213100	002000	G C=75,B=42
CUGCW	OO	RS	OPH	55	9999	1640004	-623140	H	3	25328	L	85022700	000000	000000	003400	005500	G C=200,B=65

PRO	OBJECT	CL	MAG	R.A.	DEC	D	C	IMAGE	A	DATE	EXP.	SMALL	EXP.	LARGE	ECC	COMMENT
NPGWF	OOHE2	177	70	1300	1640004	-623140	L	3	25326	L	85022622	000000	000000	220300	002000	G B=20
IMGRF	HD	150574	13	0850	1640279	-460254	H	1	05522	L	85031417	000000	000000	175100	004500	G C=190,B=55
LGHJL	HD	150798	47	0190	1643211	-685620	H	1	05629	L	85040117	000000	000000	173300	000500	G E=220,C=84,B=35
LGHJL	HD	150798	47	0190	1643211	-685620	H	1	05630	L	85040118	000000	000000	181300	002400	G E=4X,C=175,B=42
HYGLH	HD	150798	47	0190	1643211	-685620	L	3	25199	L	85020823	000000	000000	234100	006000	G E=196,C=145,B=45
HYGLH	HD	150798	47	0190	1643211	-685620	H	1	05328	L	85020823	000000	000000	232300	001200	G E=2X,C=120,B=31
WDGJL	OO	GD 358	29	1360	1645249	+323359	L	1	05415	L	85022420	000000	000000	203000	003400	G C=1.2X,B=40
WDGJL	OO	GD 358	29	1360	1645249	+323359	L	3	25310	L	85022419	000000	000000	195100	003400	G C=197,B=23
WPGLA	HD	152270	10	0690	1650487	-414421	L	3	24979	L	85012602	000000	000000	025800	000020	G E=253,C=160,B=20
BLGYK	OO	MRK501	87	1380	1652117	+395025	L	1	05680	L	85040614	000000	000000	145000	009000	G C=190,B=125
BLGYK	OO	MRK501	87	1380	1652117	+395025	H	1	05679	L	85040610	000000	000000	100100	012000	G B=55
BLGYK	OO	MRK501	87	1380	1652117	+395025	L	1	05257	L	85012421	000000	000000	213800	007500	G C=150,B=93
XBHTK	HD	153919	59	0660	1700326	-374628	H	3	25616	L	85040710	000000	000000	100800	002100	G C=190,B=38
XBHTK	HD	153919	59	0660	1700326	-374628	H	3	25615	L	85040709	000000	000000	091500	002000	G C=185,B=38
XBHTK	HD	153919	59	0660	1700326	-374628	H	1	05688	L	85040710	000000	000000	103500	001500	G C=1.2X,B=45
XBHTK	HD	153919	59	0660	1700326	-374628	H	3	25617	L	85040711	000000	000000	110700	002100	G C=185,B=40
XBHTK	HD	153919	59	0660	1700326	-374628	H	3	25618	L	85040711	000000	000000	115700	002100	G C=185,B=39
XBHTK	HD	153919	59	0660	1700326	-374628	H	1	05689	L	85040712	000000	000000	122500	001400	G C=245,B=45
XBHTK	HD	153919	59	0660	1700326	-374628	H	3	25619	L	85040712	000000	000000	125400	002100	G C=185,B=38
XBHTK	HD	153919	59	0660	1700326	-374628	H	3	25620	L	85040715	000000	000000	152100	002100	G C=183,B=40
XBHTK	HD	153919	59	0660	1700326	-374628	H	1	05690	L	85040715	000000	000000	155000	001400	G C=250,B=47
XBHTK	HD	153919	59	0660	1700326	-374628	H	3	25621	L	85040716	000000	000000	161900	002100	G C=150,B=18
HI110	HD153919	59	0677	1700327	-374629	H	3	25608	L	85040702	000000	000000	024028	002000	450	U
HI110	HD153919	59	0679	1700327	-374629	H	3	25607	L	85040701	000000	000000	014749	002000	450	U
HI110	HD153919	59	0673	1700327	-374629	H	1	05678	L	85040608	000000	000000	082438	002000	601	U
HI110	HD153919	59	0675	1700327	-374629	H	1	05677	L	85040606	000000	000000	063509	001500	501	U
HI110	HD153919	59	0677	1700327	-374629	H	1	05676	L	85040605	000000	000000	051530	004000	702	U
HI110	HD153919	59	0681	1700327	-374629	H	3	25610	L	85040704	000000	000000	042210	002000	450	U
HI110	HD153919	59	0672	1700327	-374629	H	3	25600	L	85040607	000000	000000	075849	002000	450	U
HI110	HD153919	59	0674	1700327	-374629	H	3	25599	L	85040607	000000	000000	071258	002000	450	U
HI110	HD153919	59	0675	1700327	-374629	H	3	25598	L	85040606	000000	000000	060309	002000	450	U
HI110	HD153919	59	0676	1700327	-374629	H	3	25597	L	85040604	000000	000000	044658	002000	450	U
HI110	HD153919	59	0679	1700327	-374629	H	3	25596	L	85040603	000000	000000	035906	002000	450	U
HI110	HD153919	59	0660	1700327	-374629	H	3	25590	L	85040506	000000	000000	060438	002000	450	U
HI110	HD153919	59	0674	1700327	-374629	H	3	25592	L	85040508	000000	000000	080434	002000	450	U
HI110	HD153919	59	0671	1700327	-374629	H	3	25591	L	85040507	000000	000000	070430	002000	450	U
HI110	HD153919	59	0680	1700327	-374629	H	3	25589	L	85040504	000000	000000	045735	002500	551	U
HI110	HD153919	59	0682	1700327	-374629	H	3	25588	L	85040503	000000	000000	034442	002500	551	U
HI110	HD153919	59	0678	1700327	-374629	H	3	25587	L	85040502	000000	000000	024027	002000	451	U
HI110	HD153919	59	0679	1700327	-374629	H	3	25586	L	85040501	000000	000000	014357	002000	450	U
HI110	HD153919	59	0664	1700327	-374629	H	3	25611	L	85040705	000000	000000	051749	002000	450	U
HI110	HD153919	59	0676	1700327	-374629	H	1	05674	L	85040508	000000	000000	083531	001100	501	U
HI110	HD153919	59	0665	1700327	-374629	H	3	25612	L	85040706	000000	000000	060948	002000	450	U
HI110	HD153919	59	0682	1700327	-374629	H	3	25613	L	85040707	000000	000000	070209	002000	450	U
HI110	HD153919	59	0678	1700327	-374629	H	1	05671	L	85040505	000000	000000	052910	003000	702	U



PRO	OBJECT	CL	MAG	R.A.	DEC	D	C	IMAGE	A	DATE	EXP.SMALL	EXP.LARGE	ECC	COMMENT	
HI110	HD153919	59	0678	1700327	-374629	H	3	25614	L	85040707	000000	000000	074939	002000	450 U
HI110	HD153919	59	0677	1700327	-374629	H	1	05670	L	85040504	000000	000000	042120	003000	702 U
HI110	HD153919	59	0681	1700327	-374629	H	1	05669	L	85040503	000000	000000	031502	001500	602 U
HI110	HD153919	59	0671	1700327	-374629	H	3	25609	L	85040703	000000	000000	032754	002000	450 U
HI110	HD153919	59	0680	1700327	-374629	H	1	05668	L	85040502	000000	000000	021147	002000	703 U
HI110	HD153919	59	0677	1700327	-374629	H	1	05673	L	85040507	000000	000000	073600	002000	702 U
HI110	HD153919	59	0680	1700327	-374629	H	1	05686	L	85040706	000000	000000	063532	001500	603 U
HI110	HD153919	59	0672	1700327	-374629	H	1	05687	L	85040708	000000	000000	082316	001400	502 U
HI110	HD153919	59	0676	1700327	-374629	H	1	05672	L	85040506	000000	000000	063722	001500	602 U
HI110	HD153919	59	0678	1700327	-374629	H	1	05685	L	85040703	000000	000000	035403	002000	702 U
GI172	M2-9	71	1400	1702526	-100416	L	3	25211	L	85021006	000000	000000	060121	022000	334 U
GI172	M2-9	71	1400	1702526	-100416	L	1	05337	L	85021009	000000	000000	094553	018100	334 U
SUGSD	00 URANUS	03	0580	1704233	-225019	L	3	25318	L	85022517	000000	000000	170000	012000	G C=150,B=40
SUGSD	00 URANUS	03	0580	1704233	-225019	L	3	25319	L	85022519	000000	000000	195400	009000	G C=130,B=40
SUGSD	00 URANUS	03	0580	1704233	-225019	L	3	25317	L	85022514	000000	000000	140600	012000	G C=150,B=32
SUGSD	00 URANUS	03	0580	1704233	-225019	L	3	25316	L	85022511	000000	000000	110900	012000	G C=150,B=32
HI041	HD154791	59	0786	1704296	240213	L	3	25456	L	85031504	000000	000000	045436	008000	111 U
HI041	HD154791	59	0786	1704296	240213	L	3	25457	L	85031507	000000	000000	075258	014400	111 U
HI041	HD154791	59	0785	1704296	240213	L	1	05527	L	85031504	000000	000000	042236	002000	233 U
HI041	HD154791	59	0787	1704296	240213	L	1	05528	L	85031506	000000	000000	062115	008500	353 U
HI041	HD154791	59	0788	1704296	240213	L	3	25455	L	85031503	000000	000000	035752	002000	131 U
HS139	URANUS	03	0588	1704376	-225107	L	3	25690	S	85041506	064101	012000	000000	000000	331 U
SPGHM	00 URANUS	03	0600	1704586	-225107	L	3	25357	L	85030418	000000	000000	180500	006000	G E=150,C=145,B=80
SPGHM	00 URANUS	03	0600	1704586	-225107	L	3	25356	L	85030411	000000	000000	110300	032000	G C=3X,B=83
SPGHM	00 URANUS	03	0600	1704586	-225107	L	3	25359	L	85030422	000000	000000	220100	006000	G E=181,C=150,B=82
SPGHM	OOSKYBKGRD	07	9999	1704586	-225007	L	3	25360	L	85030500	000000	000000	000700	007500	G E=226,B=175
SPGHM	00 URANUS	03	0600	1704586	-225107	L	3	25358	L	85030419	000000	000000	194600	009000	G E=237,C=222,B=150
HCGTA	HD 155341	39	0610	1709594	-564950	L	3	25173	L	85020423	000000	000000	232900	002000	G C=180,B=41
HCGTA	HD 155341	39	0610	1709594	-564950	L	1	05301	L	85020500	000000	000000	000100	000700	G C=1.4X,B=50
NPGLA	NG 6309	70	1240	1711148	-125110	L	1	05483	L	85031014	000000	000000	141300	005500	G C=90,B=47
NPGLA	NG 6309	70	1240	1711148	-125110	L	3	25419	L	85031011	000000	000000	113400	015000	G B=40
NPGLA	NG 6309	70	1270	1711148	-125110	L	3	25420	L	85031015	000000	000000	153200	012000	G E=215,C=160,B=120
NPGLA	NG 6309	70	1270	1711148	-125110	L	1	05484	L	85031017	000000	000000	174000	004000	G C=165,B=132
GM163	HD156327	10	0958	1715044	-342123	L	3	25312	L	85022504	000000	000000	041602	002400	440 U
GM163	HD 156327	10	0960	1715044	-342123	L	1	05417	L	85022504	000000	000000	044935	000912	562 U
GM163	HD 156385	10	0709	1715490	-453520	L	3	25313	L	85022505	000000	000000	053922	000010	450 U
GM163	HD156385	10	0709	1715490	-453520	L	1	05418	L	85022506	000000	000000	061145	000011	563 U
CBGEB	000636 SCO	53	0700	1719055	-453401	H	1	05529	L	85031515	000000	000000	150500	022500	G C=195,B=75
PHCAL	00 WAWCAL	98	0000	1723585	-050238	H	1	05369	S	85021502	024000	000016	000000	000000	G E=60X,B=105
PHCAL	00 WAWCAL	98	0000	1723585	-050238	L	1	05368	S	85021502	021100	000001	000000	000000	G E=10X,B=105
HSRGS	HD 158094	22	0360	1726347	-603841	L	1	05716	L	85041120	000000	000000	204400	000003	G C=220,B=39
HSRGS	HD 158094	22	0360	1726347	-603841	L	1	05715	SL	85041119	193700	000002	193000	000003	G C=205,B=39
HSRGS	HD 158094	22	0360	1726347	-603841	L	3	25663	SL	85041119	192100	000003	191400	000004	G C=175,B=20
BEHCG	HD 158643	26	0480	1728217	-235533	H	3	25784	L	85042621	000000	000000	215400	000751	G C=173,B=37
BEHCG	HD 158643	26	0480	1728217	-235533	H	1	05834	L	85042621	000000	000000	214400	000320	G C=178,B=45

PRO	OBJECT	CL	MAG	R.A.	DEC	D	C	IMAGE	A	DATE	EXP. SMALL	EXP. LARGE	ECC	COMMENT		
UOHSP	HD	161387	39	0860	1743187	-261054	L	1	05823	L	85042516	000000	000000	162800	002400	G C=218,B=124
UOHSP	HD	161387	39	0860	1743187	-261054	L	3	25711	L	85041722	000000	000000	221100	002000	G C=55,B=25
GCGBA	HD	161796	41	0730	1743413	+500348	L	1	05412	L	85022320	000000	000000	203400	001500	G C=1.5X,B=40
HC017	HD161579	40	0883	1744567	-450042	L	1	05637	L	85040205	000000	000000	051008	002500	712	U
HC017	HD161579	40	0887	1744567	-450042	L	3	25705	L	85041706	000000	000000	064843	003000	300	U
HC017	HD161579	40	0881	1744567	-450042	L	3	25560	L	85040205	000000	000000	054048	017000	711	U
HC017	HD161579	40	0881	1744567	-450042	L	1	05638	L	85040208	000000	000000	083745	001000	612	U
HC017	HD161579	40	0884	1744567	-450042	L	1	05767	L	85041706	000000	000000	063906	000500	401	U
FIT00	RS OPH	63	0734	1747314	-064147	L	1	05325	L	85020812	000000	000000	125302	000200	681	U
CUGCW	00 RS OPH	55	0300	1747314	-064147	H	3	25248	L	85021504	000000	000000	042900	002000		G E=80,B=24
CUGCW	00 RS OPH	55	0750	1747314	-064147	L	3	25209	SL	85021001	020600	000100	015800	000300		G E=170,C=102,B=55
CUGCW	00 RS OPH	55	0900	1747314	-064147	L	3	25246	SL	85021500	002300	000130	001200	000500		G E=2X,B=32
CUGCW	00 RS OPH	55	0650	1747314	-064147	L	3	25152	SL	85020218	185300	000030	183800	000500		G C=160,B=22
CUGCW	00 RS OPH	55	0650	1747314	-064147	L	1	05277	SL	85020219	200500	000045	195500	000500		G E=200X,C=10X,B=42
CUGCW	00 RS OPH	55	0650	1747314	-064147	H	3	25153	L	85020220	000000	000000	201000	003000		G C=110,B=57
CUGCW	00 RS OPH	55	0900	1747314	-064147	H	3	25247	L	85021503	000000	000000	030900	004500		G E=177,C=129,B=84
CUGCW	00 RS OPH	55	0750	1747314	-064147	L	1	05335	SL	85021002	023300	000010	022800	000100		G E=12X,C=190,B=50
GIT00	RS OPH	55	0919	1747314	-064147	L	1	05480	L	85031004	000000	000000	042957	001500	B91	U
CUGCW	00 RS OPH	55	0800	1747314	-064147	H	1	05370	L	85021504	000000	000000	040000	000700		G E=165,C=70,B=40
GIT00	RS OPH	55	0915	1747314	-064147	L	3	25415	L	85031004	000000	000000	044037	004000	481	U
GIT00	RS OPH	55	0918	1747314	-064147	L	1	05481	L	85031007	000000	000000	074638	000300	461	U PARTIAL READ
CUGCW	00 RS OPH	55	0970	1747314	-064147	L	1	05613	SL	85032823	234000	000500	233300	000020		G E=16.0X,B=32
CUGCW	00 RS OPH	55	0970	1747314	-064147	L	3	25538	SL	85032901	013600	000300	014700	001000		G C=174,B=18
GIT00	RS OPH	55	0915	1747314	-064147	H	1	05479	L	85031004	000000	000000	040945	002300	252	U
CUGCW	00 RS OPH	55	0750	1747314	-064147	L	1	05336	SL	85021003	034800	000013	033800	000330		G E=40X,C=3X,B=50
GIT00	RS OPH	55	0918	1747314	-064147	L	3	25414	L	85031003	000000	000000	035828	000400	161	U
CUGCW	00 RS OPH	55	0750	1747314	-064147	H	3	25210	L	85021004	000000	000000	041100	003500		G E=120,C=70,B=32
GIT00	RS OPH	55	0917	1747314	-064148	L	3	25417	L	85031008	000000	000000	082858	000200	151	U
GIT00	RS OPH	55	0918	1747314	-064147	H	3	25416	L	85031006	000000	000000	060120	010000	252	U
CUGCW	00 RS OPH	55	0800	1747314	-064147	L	1	05367	SL	85021500	004200	000015	003100	000600		G E=20X,C=3X,B=53
GIT00	RS OPH	55	0948	1747315	-064148	H	3	25506	L	85032308	000000	000000	081346	012400	151	U
GIT00	RSOPH	55	0821	1747315	-064148	L	3	25289	L	85022110	000000	000000	103735	002100	491	U
GIT00	RS OPH	55	1118	1747315	-064148	L	3	25814	L	85043002	000000	000000	022329	000500	131	U
CUGCW	00 RS OPH	55	9999	1747315	-064148	L	3	25327	SL	85022623	235300	000100	234700	000100		G B=17
GIT00	RS OPH	55	0948	1747315	-064148	H	1	05585	L	85032307	000000	000000	073641	003000	352	U
GIT00	RS OPH	55	0998	1747315	-064148	L	3	25636	L	85040901	000000	000000	014046	000230	150	U
GIT00	RS OPH	55	1123	1747315	-064148	L	1	05865	L	85043002	000000	000000	023427	002500	481	U
CUGCW	00 RS OPH	55	9999	1747315	-064148	L	1	05428	SL	85022623	233900	000300	233200	000011		G E=8.0X,C=74,B=32
GIT00	RS OPH	55	1008	1747315	-064148	H	3	25638	L	85040904	000000	000000	041838	015000	252	U
GIT00	RS OPH	55	1001	1747315	-064148	L	3	25637	L	85040902	000000	000000	024027	005000	381	U
GIT00	RS OPH	55	1001	1747315	-064148	L	1	05704	L	85040902	000000	000000	021145	002000	783	U
GIT00	RS OPH	55	1000	1747315	-064148	L	1	05706	L	85040906	000000	000000	065508	000100	352	U
GIT00	RSOPH	55	0814	1747315	-064148	L	1	05402	L	85022110	000000	000000	100718	000700	891	U
GIT00	RS OPH	55	0944	1747315	-064148	L	1	05583	L	85032305	000000	000000	053830	002000	682	U
GIT00	RS OPH	55	1000	1747315	-064148	H	1	05707	L	85040907	000000	000000	073408	007200	363	U

PRO	OBJECT	CL	MAG	R.A.	DEC	D	C	IMAGE	A	DATE	EXP.SMALL	EXP.LARGE	ECC	COMMENT	
GIT00	RS OPH	55	1126	1747315	-064148	H	1	05866	L	85043004	000000	000000	043946	003000	232 U
GIT00	RS OPH	55	1128	1747315	-064148	L	3	25815	L	85043003	000000	000000	030454	009000	281 U
GIT00	RS OPH	55	1120	1747315	-064148	H	3	25816	L	85043005	000000	000000	051359	017200	143 U
GIT00	RSOPH	55	0832	1747315	-064148	H	3	25290	L	85022111	000000	000000	114621	006800	403 U
GIT00	RS OPH	55	0945	1747315	-064148	L	3	25505	L	85032306	000000	000000	060645	005000	291 U
GIT00	RS OPH	55	0946	1747315	-064148	L	1	05584	L	85032307	000000	000000	070240	000300	472 U
GIT00	RS OPH	55	0816	1747315	-064148	L	3	25288	L	85022109	000000	000000	095934	000300	261 U
GIT00	RSOPH	55	0826	1747315	-064148	L	1	05403	L	85022111	000000	000000	111539	000200	581 U
GIT00	RS OPH	55	0780	1747315	-064148	H	3	25242	L	85021411	000000	000000	110452	008600	153 U
GIT00	RS OPH	55	0775	1747315	-064148	H	1	05363	L	85021412	000000	000000	123641	001200	052 U
GIT00	RS OPH	55	1001	1747315	-064148	H	1	05705	L	85040903	000000	000000	034146	003000	343 U
GIT00	RS OPH	55	0775	1747315	-064148	H	1	05362	L	85021410	000000	000000	100709	005000	482 U
GIT00	RS OPH	55	0941	1747315	-064148	L	3	25504	L	85032305	000000	000000	052700	000200	151 U
GIT00	RS OPH	55	0775	1747315	-064148	L	3	25241	L	85021409	000000	000000	095812	000200	151 U
GA198	HD162732	26	0704	1748447	482425	L	1	05534	L	85031610	000000	000000	100934	000013	602 U
GA198	HD162732	26	0691	1748447	482425	H	3	25464	L	85031609	000000	000000	093945	002200	501 U
GA133	HD 163296	33	0710	1753207	-215657	H	1	05471	L	85030808	000000	000000	083530	003000	552 U
GA133	HD 163296	33	0715	1753207	-215657	L	3	25391	L	85030809	000000	000000	091817	002000	801 U PARTIAL READ
LGHJL	HD 163770	47	0390	1754320	+371522	H	1	05635	L	85040200	000000	000000	002500	002200	G E=176,C=90,B=40
HYGLH	HD 163770	47	0380	1754322	+371522	H	1	05327	L	85020821	000000	000000	214600	005000	G C=140,B=50
BEHGP	OO 66 OPH	26	0480	1757470	+042210	H	3	25653	L	85041017	000000	000000	174800	000210	G C=245,B=40
GA198	HD164284	26	0485	1757471	042211	H	3	25463	L	85031608	000000	000000	084708	000130	501 U
IEGEB	OOW 42 20	0920	1801109	-242339	H	3	25476	L	85031719	000000	000000	194900	012000	G C=210,B=70	
IEGEB	OOW 42 20	0920	1801109	-242339	L	1	05544	SL	85031720	203200	000200	202600	000200	G C=3X,B=34	
IEGEB	OOW 42 20	0920	1801109	-242339	H	1	05545	L	85031722	000000	000000	221600	006000	G C=215,B=74	
IEGEB	OOW 42 20	0920	1801109	-242339	L	3	25477	SL	85031722	225500	000200	224900	000200	G C=250,B=18	
IEGEB	OO W43 20	1500	1801111	-241432	H	1	05548	L	85031818	000000	000000	185200	006500	G C=188,B=58	
IEGEB	OOW 56 20	0910	1801172	-242130	H	1	05550	L	85031823	000000	000000	232000	006000	G C=200,B=70	
IEGEB	OOW 56 20	0910	1801172	-242130	H	3	25482	L	85031822	000000	000000	224000	009000	G C=158,B=53	
IEGEB	OOW 59 20	0890	1801190	-242629	H	3	25478	L	85031723	000000	000000	233800	006500	G C=155,B=60	
IEGEB	OOW 59 20	0890	1801190	-242629	H	1	05551	L	85031901	000000	000000	013900	004000	G C=153,B=45	
IEGEB	OO W 73 20	0830	1801227	-242208	H	1	05549	L	85031821	000000	000000	215300	003500	G C=210,B=53	
IEGEB	OOW 93 20	0860	1801319	-242005	L	3	25481	SL	85031820	203900	000100	203200	000200	G C=1.5X,B=20	
CCGDS	HD 165185	44	0590	1803009	-360132	L	3	25380	L	85030711	000000	000000	110300	024000	G E=128,C=2X,B=65
GI941	DQ HER	52	1400	1806052	455100	L	3	25440	L	85031303	000000	000000	035951	002400	231 U
GI041	DQ HER	52	1400	1806053	455101	L	3	25442	L	85031305	000000	000000	055604	006000	231 U
GI041	LQ HER	52	1400	1806053	455101	L	3	25441	L	85031304	000000	000000	044441	004000	231 U ECLIPSE
GI041	DQ HER	52	1400	1806053	455101	L	1	05512	L	85031305	000000	000000	052835	002000	112 U
SUGJC	OO NEPTUNE	03	0750	1812010	-221719	L	1	05438	L	85022817	000000	000000	174500	003300	G C=3X,B=55
ISHJS	HD 167263	13	0600	1812144	-202417	H	1	05753	L	85041422	000000	000000	224600	000348	G C=235,B=52
XBGJR	OO AM HER	54	1250	1814587	+495054	L	3	25396	L	85030823	000000	000000	230600	001500	G E=233,C=228,B=180
XBGJR	OO AM HER	54	1250	1814587	+495054	L	1	05474	L	85030822	000000	000000	224500	001500	G E=255,C=230,B=175
XBGJR	OO AM HER	54	1250	1814587	+495054	L	3	25395	L	85030822	000000	000000	220500	002000	G E=230,C=160,B=122
XBGJR	OO AM HER	54	1250	1814587	+495054	H	3	25330	L	85022711	000000	000000	115000	037200	G C=150,B=75
XBGJR	OO AM HER	54	1250	1814587	+495054	L	1	05288	L	85020321	000000	000000	211100	003000	G E=1.5X,C=160,B=80

PRO	OBJECT	CL	MAG	R.A.	DEC	D	C	IMAGE	A	DATE	EXP.SMALL	EXP.LARGE	ECC	COMMENT		
XBGJR	00 AM HER	54	1250	1814587	+495054	L	3	25164	L	85020320	000000	000000	201900	003000	G E=205,C=90,B=47	
IGGJS	HD 238846	20	0960	1817246	+552531	H	3	24928	L	85011921	000000	000000	210100	009000	G C=165,B=52	
LGGEH	HD 168454	47	0270	1817476	-295105	L	3	25458	L	85031510	000000	000000	105800	022500	G E=255,C=165,B=58	
ISHFB	HD 169022	25	0180	1820512	-342437	H	1	05642	S	85040220	201800	000048	000000	000000	G C=187,B=41	
ISHFB	HD 169022	25	0180	1820512	-342437	H	3	25563	S	85040220	202200	000115	000000	000000	G C=135,B=26	
ISHFB	HD 169022	25	0180	1820512	-342437	H	3	25801	S	85042820	203900	000320	000000	000000	G C=1.5X,B=72	
HSGCG	HD 169467	23	0376	1823158	-455952	L	3	25501	SL	85032302	021500	000001	020500	000001	G C=215,B=20	
RHRB	HD 134678	42	0800	1829092	+773351	L	3	25768	L	85042316	000000	000000	160400	004000	G C=205,B=78	
NRGH	00ABELL	46	70	1510	1829180	+265359	L	3	25203	L	85020914	000000	000000	143400	009000	G C=119,B=28
NRGH	00ABELL	46	70	1510	1829180	+265359	L	3	25205	L	85020919	000000	000000	192800	007500	G C=221,B=98
QSGJO	00 3C382	84	0000	1833118	+323918	L	3	25535	L	85032811	000000	000000	112100	042000	G E=220,C=170,B=81	
HQ117	3C382	86	1470	1833120	323918	L	3	25786	L	85042702	000000	000000	023903	020000	342 U	
HCGBC	00 G206-34	44	1140	1833209	+283935	L	3	25540	L	85032911	000000	000000	111300	013000	G C=97,B=41	
GQ203	E103-G35	85	1600	1833220	-682818	L	1	05458	L	85030604	000000	000000	041802	018000	212 U	
STHRP	00 A LYRAE	30	0003	1835145	+384409	L	1	05620	L	85033017	000000	000000	175609	000001	G C=10X,B=52	
STHRP	00 A LYRAE	30	0003	1835145	+384409	L	1	05619	L	85033017	000000	000000	172200	000001	G C=10X,B=38	
GQ203	A1839-78	85	1600	1839051	-783458	L	1	05453	L	85030404	000000	000000	042431	016500	332 U	
CQ203	A1839-78	85	1600	1839051	-783458	L	3	25355	L	85030407	000000	000000	071648	018000	331 U	
HS-RRP	HD 173219	26	0830	1841514	-070946	H	3	25654	L	85041018	000000	000000	182900	010000	G C=1.5X,B=85	
QSGJO	00 3C390.3	84	0000	1845385	+794302	L	3	25523	L	85032611	000000	000000	113500	040500	G E=172,C=108,B=75	
HCGTA	HD 175535	39	0490	1851592	+503843	L	3	25171	L	85020421	000000	000000	213700	000630	G C=55,B=30	
HCGTA	HD 175535	39	0490	1851592	+503843	L	1	05299	SL	85020421	212500	000600	211800	000100	G C=300,B=45	
ISHFB	HD 175191	20	0200	1852099	-262138	H	1	05643	S	85040221	213300	000012	000000	000000	G C=220,B=45	
ISHFB	HD 175191	20	0200	1852099	-262138	H	3	25564	S	85040221	213800	000012	000000	000000	G C=180,B=35	
GQ202	JL 9	12	1345	1902230	-723515	L	1	05455	L	85030508	000000	000000	084507	001640	500 U	
GQ202	JL 9	12	1345	1902230	-723515	L	3	25361	L	85030508	000000	000000	081915	001140	500 U	
GA176	N6752-1112	38	1761	1907016	-600853	L	3	25539	L	85032905	000000	000000	052958	028200	302 U	
GA176	N6752-841	38	1642	1907054	-600714	L	3	25534	L	85032803	000000	000000	031935	040800	403 U	
GA176	N6752-602	38	1745	1907116	-600815	L	3	25522	L	85032605	000000	000000	051928	029400	201 U PARTIAL READ	
FM192	HD181869	22	0415	1920250	-404243	H	1	05746	L	85041401	000000	000000	014306	000410	800 U	
FM192	HD181869	22	0416	1920250	-404243	H	3	25679	L	85041401	000000	000000	013833	000050	300 U	
FM192	HD181869	22	0406	1920250	-404243	H	3	25680	L	85041402	000000	000000	021247	000230	601 U	
GC022	CH CYG	57	0623	1923140	500831	H	1	05256	L	85012314	000000	000000	140947	003700	473 U	
GC022	CH CYG	57	0629	1923140	500831	H	3	24955	L	85012311	000000	000000	114749	007000	253 U	
GC022	CH CYG	57	0620	1923140	500831	H	1	05255	L	85012313	000000	000000	130451	002500	362 U	
GC022	CH CYG	57	0617	1923140	500831	L	3	24956	L	85012313	000000	000000	133617	000600	471 U	
CUGCW	00N UUL #1	55	1170	1924034	+271554	H	3	25624	L	85040719	000000	000000	193700	006000	G E=47,B=55	
CUGCW	00N UUL #1	55	1170	1924034	+271554	L	3	25623	SL	85040718	190400	000500	185500	000500	G E=173,B=22	
CUGCW	00N UUL #1	55	1170	1924034	+271554	L	1	05691	SL	85040718	182800	000200	180900	000400	G E=190,C=58,B=38	
CUGCW	00NOVA UUL	55	0700	1924034	+271554	L	3	25622	L	85040717	000000	000000	173900	002000	G E=4X,C=45,B=25	
HGSGJW	00 EARTH	01	0000	1936192	+314908	L	3	25488	L	85031922	000000	000000	224500	001100	G E=43,B=20	
NPGWF	00 HM SGE	70	1150	1939409	+163732	H	3	25553	L	85033020	000000	000000	203700	007300	G E=157,C=120,B=41	
NPGWF	00 HM SGE	70	1150	1939410	+163733	L	3	25552	L	85033019	000000	000000	191100	004500	G E=2X,C=52,B=32	
NPGWF	00 HM SGE	70	1150	1939410	+163733	L	1	05621	L	85033020	000000	000000	200600	001500	G E=1.5X,C=83,B=41	
NPGHB	00 UU SGE	70	1470	1939550	+165806	L	3	25541	L	85032914	000000	000000	140900	018500	G C=130,B=40	



PRO	OBJECT	CL	MAG	R.A.	DEC	D C	IMAGE	A	DATE	EXP.SMALL	EXP.LARGE	ECC	COMMENT	
EGGTT	001941-543	80	1500	1941030	-542218	L 3	25480	L	85031811	000000	000000	115000	038500	G E=167,C=125,B=75
OD63K	HD 186688	53	0700	1942484	+290833	L 1	05652	L	85040312	000000	000000	124000	000230	G C=3X,B=35
OD63K	HD 186688	53	0700	1942484	+290833	H 1	05651	L	85040309	000000	000000	094400	013500	G C=1.5X,B=70
OD63K	HD 186688	53	0700	1942484	+290833	L 3	25573	L	85040312	000000	000000	120600	001200	G C=1.2X,B=22
CBGEB	00 SU CYG	53	0690	1942485	+290834	H 1	05546	L	85031801	000000	000000	011200	006700	G C=140,B=52
CBGEB	00 SU CYG	53	0690	1942485	+290834	H 1	05530	L	85031519	000000	000000	193500	015000	G C=1.5X,B=78
ISHFB	00 MAUECAL	98	9999	1943247	+450026	H 3	25567	S	85040300	003600	000200	000000	000000	G E=50X,B=125
ISHFB	HD 186882	22	0290	1943247	+450026	H 3	25566	S	85040300	000400	000400	000000	000000	G C=200,B=40
NFGTB	NG 6826	71	0840	1943259	+502349	L 1	05376	L	85021602	000000	000000	020700	000800	G C=160,B=100
NPGTB	NG 6826	71	0840	1943259	+502349	L 3	25255	L	85021602	000000	000000	023400	000800	G E=110,C=61,B=60
NFGTB	NG 6826	71	0840	1943259	+502349	L 3	25253	L	85021523	000000	000000	235800	003000	G E=2X,C=205,B=120
NPGTB	NG 6826	71	0840	1943259	+502349	L 1	05374	L	85021523	000000	000000	231400	004000	G C=4X,B=145
NPGTB	NG 6826	71	0840	1943259	+502407	L 3	25256	S	85021603	034600	005800	000000	000000	G B=50
NPGTB	NG 6826	71	0840	1943259	+502407	L 1	05377	S	85021603	031700	002000	000000	000000	G B=90
NPGTB	NG 6826	71	0840	1943262	+502404	L 1	05353	S	85021123	234900	005000	000000	000000	G C=1.5X,B=208
NPGTB	NG 6826	71	0840	1943262	+502404	L 3	25252	S	85021521	213600	008000	000000	000000	G E=213,C=146,B=110
NPGTB	NG 6826	71	0840	1943262	+502404	L 1	05373	S	85021520	203100	006000	000000	000000	G C=157,B=120
NPGTB	NG 6826	71	0840	1943262	+502404	L 3	25217	S	85021122	223300	007000	000000	000000	G E=207,C=145,B=105
NPGTB	NG 6826	71	0840	1943266	+502402	L 1	05352	S	85021121	213700	005000	000000	000000	G E=194,C=200,B=160
NPGTB	NG 6826	71	0840	1943266	+502402	L 3	25216	S	85021120	204200	005000	000000	000000	G E=208,C=155,B=113
NPGTB	NG 6826	71	0840	1943266	+502402	L 3	25251	S	85021518	184000	010000	000000	000000	G E=255,C=143,B=83
NPGTB	NG 6826	71	0840	1943269	+502405	L 3	25218	S	85021200	004500	002000	000000	000000	G E=176,C=155,B=110
NPGTB	NG 6826	71	0840	1943269	+502359	L 1	05372	S	85021516	161800	012000	000000	000000	G C=97,B=60
NPGTB	NG 6826	71	0840	1943270	+502400	L 3	25215	S	85021117	173600	012000	000000	000000	G E=1.2X,C=148,B=105
NPGTB	NG 6826	71	0840	1943270	+502400	L 3	25250	S	85021514	141300	012000	000000	000000	G E=110,C=55,B=32
NPGTB	NG 6826	71	0840	1943270	+502400	L 1	05350	S	85021115	155700	009000	000000	000000	G E=87,C=83,B=60
NPGTB	NG 6826	71	0840	1943270	+502400	L 1	05349	SL	85021113	140800	000200	135800	000100	G C=165,B=30
NPGTB	NG 6826	71	0840	1943270	+502400	L 3	25214	S	85021114	142200	009000	000000	000000	G E=80,C=45,B=25
NPGTB	NG 6826	71	0840	1943270	+502400	L 1	05351	S	85021119	194300	005000	000000	000000	G C=190,B=146
NPGTB	NG 6826	71	0840	1943279	+502409	L 1	05375	L	85021600	000000	000000	004600	002200	G C=235,B=175
NPGTB	NG 6826	71	0840	1943279	+502409	L 3	25254	L	85021601	000000	000000	012500	001000	G E=133,C=110,B=81
LGHJL	HD 186791	47	0270	1943529	+102924	H 1	05655	L	85040317	000000	000000	172300	003600	G E=4X,C=150,B=80
IBHRP	00V38855GR	63	0960	1944126	-420755	L 1	05709	L	85041021	000000	000000	210600	000400	G C=3X,B=40
IBHRP	00V38855GR	63	0960	1944126	-420755	L 3	25655	L	85041020	000000	000000	205500	000500	G C=1.1X,B=18
GC246	HD187949	53	0712	1950172	-144358	H 1	05556	L	85032006	000000	000000	063740	002500	302 U
GC246	HD187949	53	0747	1950172	-144358	L 3	25491	LS	85032007	080042	002000	071347	003000	700 U 600\$
HA194	WR 137	10	0811	2012394	363028	L 1	05695	LS	85040802	021206	000200	020521	000030	443 U 113\$
HA194	WR 137	10	0810	2012394	363028	L 1	05697	LS	85040807	080507	000130	075654	000200	773 U 553\$
HA194	WR 137	10	0810	2012394	363028	H 1	05696	L	85040803	000000	000000	032248	004500	443 U
HA194	WR 137	10	0811	2012394	363028	H 3	25628	L	85040804	000000	000000	042118	020000	552 U
HA194	WR 137	10	0810	2012394	363028	L 3	25627	LS	85040802	023856	000400	022919	000230	451 U 341\$
HA194	WR 137	10	0814	2012394	363028	L 3	25629	L	85040808	000000	000000	083348	000300	450 U
UOHSP	HD 192713	39	0840	2013204	+232116	L 1	05773	L	85041723	000000	000000	230400	000106	G C=1.2X,B=33
UOHSP	HD 192713	39	0840	2013205	+232117	H 1	05821	L	85042514	000000	000000	143000	004000	G E=255,C=220,B=115
UOHSP	HD 192713	39	0840	2013205	+232117	L 3	25777	L	85042515	000000	000000	151500	000300	G C=200,B=16

PRO	OBJECT	CL	MAG	R.A.	DEC	D	C	IMAGE	A	DATE	EXP. SMALL	EXP. LARGE	ECC	COMMENT		
UUHSP	HD	192713	39	0840	2013205	+232117	L	1	05822	L	85042515	000000	000000	154500	000106	G C=240,B=38
UUHSP	HD	192713	39	0840	2013205	+232117	L	1	05856	L	85042916	000000	000000	161200	000130	G C=1.5X,B=38
UUHSP	HD	192713	39	0840	2013205	+232117	H	3	25810	L	85042914	000000	000000	143700	012000	G C=220,B=98
UUHSP	HD	192713	39	0840	2013205	+232117	L	3	25809	L	85042913	000000	000000	134800	000315	G C=175,B=21
UUHSP	HD	192713	39	0840	2013205	+232117	H	1	05855	L	85042913	000000	000000	131300	006500	G E=2X,C=215,B=65
UUHSP	HD	192713	39	0840	2013205	+232117	L	1	05854	L	85042912	000000	000000	123000	000212	G C=2X,B=35
UUHSP	HD	192713	39	0840	2013205	+232117	L	3	25632	L	85040820	000000	000000	202000	000245	G C=195,B=18
UUHSP	HD	192713	39	0840	2013205	+232117	L	1	05700	L	85040820	000000	000000	201500	000100	G C=245,B=35
UUHSP	HD	192713	39	0840	2013205	+232117	H	1	05699	L	85040818	000000	000000	185600	004500	G E=246,C=200,B=72
UUHSP	HD	192713	39	0840	2013205	+232117	L	3	25631	L	85040818	000000	000000	182000	000250	G C=200,B=18
UUHSP	HD	192713	39	0840	2013205	+232117	H	1	05698	L	85040817	000000	000000	172900	004500	G E=242,C=190,B=72
UUHSP	HD	192713	39	0840	2013205	+232117	L	3	25574	L	85040313	000000	000000	135200	000240	G C=188,B=17
UUHSP	HD	192713	39	0840	2013205	+232117	H	1	05653	L	85040314	000000	000000	140000	006000	G E=1.5X,C=215,B=60
UUHSP	HD	192713	39	0840	2013205	+232117	H	3	25575	L	85040315	000000	000000	150700	009000	G C=185,B=80
UUHSP	HD	192713	39	0840	2013205	+232117	L	1	05654	L	85040315	000000	000000	154300	000100	G C=225,B=34
UUHSP	HD	192713	39	0840	2013205	+232117	H	3	25808	L	85042909	000000	000000	095500	018000	G C=220,B=62
UUHSP	HD	192713	39	0840	2013205	+232117	L	1	05853	L	85042909	000000	000000	094900	000112	G C=210,B=34
UUHSP	HD	192713	39	0840	2013205	+232117	L	1	05846	L	85042816	000000	000000	161100	000212	G C=2X,B=40
UUHSP	HD	192713	39	0840	2013205	+232117	L	1	05781	L	85041911	000000	000000	113100	000106	G C=225,B=32
UUHSP	HD	192713	39	0840	2013205	+232117	H	3	25736	L	85041910	000000	000000	104700	012300	G C=180,B=58
UUHSP	HD	192713	39	0840	2013205	+232117	L	3	25735	L	85041910	000000	000000	100500	000300	G C=195,B=15
UUHSP	HD	192713	39	0840	2013205	+232117	H	1	05780	L	85041909	000000	000000	093400	005500	G C=185,B=50
UUHSP	HD	192713	39	0840	2013205	+232117	L	3	25712	L	85041800	000000	000000	001200	000300	G E=1.2X,C=205,B=15
UUHSP	HD	192713	39	0840	2013205	+232117	H	1	05774	L	85041723	000000	000000	233800	005900	G E=1.2X,C=210,B=52
UUHSP	HD	192713	39	0840	2013205	+232117	L	3	25817	L	85043008	000000	000000	085600	000500	G C=165,B=20
UUHSP	HD	192713	39	0840	2013205	+232117	H	1	05867	L	85043009	000000	000000	090800	006000	G E=254,C=185,B=43
UUHSP	HD	192713	39	0840	2013205	+232117	L	3	25677	L	85041309	000000	000000	094600	000250	G C=200,B=15
UUHSP	HD	192713	39	0840	2013205	+232117	H	1	05734	L	85041309	000000	000000	095400	004500	G E=213,C=165,B=50
UUHSP	HD	192713	39	0840	2013205	+232117	H	3	25678	L	85041310	000000	000000	104200	013000	G C=185,B=53
UUHSP	HD	192713	39	0840	2013205	+232117	L	1	05735	L	85041311	000000	000000	114500	000100	G C=210,B=32
UUHSP	HD	192713	39	0840	2013205	+232117	L	3	25818	L	85043009	000000	000000	094300	000700	G E=103,C=201,B=21
UUHSP	HD	192713	39	0840	2013205	+232117	L	1	05868	L	85043011	000000	000000	111500	000118	G C=195,B=32
UUHSP	HD	192713	39	0840	2013205	+232117	L	1	05869	L	85043012	000000	000000	122600	000230	G C=1.8X,B=35
UUHSP	HD	192713	39	0840	2013205	+232117	H	3	25819	L	85043012	000000	000000	123400	022000	G E=11,C=185,B=70
UUHSP	HD	192713	39	0840	2013205	+232117	L	1	05870	L	85043013	000000	000000	133800	000124	G C=205,B=32
UUHSP	HD	192713	39	0840	2013205	+232117	H	1	05871	L	85043015	000000	000000	150200	005500	G E=255,C=180,B=65
UUHSP	HD	192713	39	0840	2013205	+232117	H	3	25800	L	85042815	000000	000000	153500	009000	G C=230,B=122
UUHSP	HD	192713	39	0840	2013205	+232117	L	3	25820	L	85043016	000000	000000	160200	000800	G E=86,C=130,B=25
UUHSP	HD	192713	39	0840	2013205	+232117	H	1	05820	L	85042512	000000	000000	122200	009000	G E=1.5X,C=1.1X,B=76
UUHSP	HD	192713	39	0840	2013205	+232117	H	3	25775	L	85042509	000000	000000	091800	018000	G C=225,B=65
UUHSP	HD	192713	39	0840	2013205	+232117	L	1	05845	L	85042815	000000	000000	152900	000106	G C=240,B=37
UUHSP	HD	192713	39	0840	2013205	+232117	L	3	25776	L	85042513	000000	000000	135700	000300	G C=190,B=15
UUHSP	HD	192713	39	0840	2013205	+232117	L	3	25799	L	85042814	000000	000000	141300	000300	G C=183,B=21
UUHSP	HD	192713	39	0840	2013205	+232117	L	3	25772	L	85042417	000000	000000	174200	000300	G C=200,B=17
UUHSP	HD	192713	39	0840	2013205	+232117	H	1	05812	L	85042417	000000	000000	175100	004000	G E=255,C=245,B=130

PRO	OBJECT	CL	MAG	R.A.	DEC	D	C	IMAGE	A	DATE	EXP.SMALL	EXP.LARGE	ECC	COMMENT		
UOHSP	HD 192713	39	0840	2013205	+232117	L	1	05813	L	85042419	000000	000000	190200	000106	G C=1.5X,B=40	
UOHSP	HD 192713	39	0840	2013205	+232117	H	1	05844	L	85042813	000000	000000	134000	005000	G E=238,C=210,B=80	
UOHSP	HD 192713	39	0840	2013205	+232117	H	1	05814	L	85042419	000000	000000	193700	002000	G E=237,C=240,B=160	
GA146	HD193237	23	0499	2015565	375236	H	1	05112	L	85010107	000000	000000	074011	000500	561 U	
GA146	HD193237	23	0508	2015565	375236	H	3	25731	L	85041902	000000	000000	020816	002500	560 U	
GA146	HD193237	23	0508	2015565	375236	H	1	05777	L	85041901	000000	000000	013746	000500	661 U	
GA146	HD193237	23	0503	2015565	375236	L	3	25732	L	85041903	000000	000000	032007	000018	500 U	
GA146	HD193237	23	0495	2015565	375236	H	3	24798	L	85010107	000000	000000	075013	002500	600 U	
GA146	HD193237	23	0491	2015565	375236	H	1	05582	L	85032303	000000	000000	034543	000500	602 U	
GA146	HD193237	23	0497	2015565	375236	H	3	25502	L	85032303	000000	000000	031403	002500	601 U	
GA146	HD193237	23	0489	2015565	375236	L	3	25503	L	85032304	000000	000000	041305	000018	501 U	
GA146	HD193237	23	0491	2015565	375236	L	3	24799	L	85010108	000000	000000	085309	000018	500 U	
OD58K	OO U SGE	20	1140	2017499	+205640	L	1	05684	L	85040700	000000	000000	004000	000400	G E=255,C=215,B=36	
OD58K	OO U SGE	20	1140	2017499	+205640	L	3	25606	L	85040700	000000	000000	001300	000500	G E=1.1X,C=150,B=30	
OD58K	OO U SGE	20	1140	2018230	+205641	L	3	25604	SL	85040620	210700	000600	205200	000600	G E=1.5X,C=185,B=72	
OD58K	OO U SGE	20	1140	2018230	+205641	L	3	25603	SL	85040619	191700	000600	190200	000600	G E=255,C=135,B=45	
OD58K	OO U SGE	20	1140	2018230	+205641	L	1	05681	SL	85040618	183300	001600	181400	000800	G E=218,C=3X,B=105	
OD58K	OO U SGE	20	1140	2018230	+205641	L	3	25602	SL	85040617	175300	001600	173900	000800	G E=2X,C=200,B=70	
OD58K	OO U SGE	20	1140	2018230	+205641	L	1	05682	SL	85040620	201100	000400	200200	000400	G E=1.1X,C=240,B=65	
HAT00	HD193793	10	0706	2018466	434142	H	3	25788	L	85042707	000000	000000	074708	006000	441 U	
HAT00	HD193793	10	0708	2018466	434142	L	1	05835	LS	85042707	071724	000040	071326	000020	552 U 552s	
HAT00	HD193793	10	0707	2018466	434142	L	3	25787	LS	85042707	070841	000110	070254	000130	551 U 341s	
IEGAW	BD+41 3737	23	0930	2023021	+421317	L	3	24959	SL	85012322	230200	001218	224900	000406	G C=210,B=23	
IEGAW	BD+41 3737	23	0930	2023021	+421317	L	3	24960	SL	85012400	004200	001218	011400	000818	G C=1.5X,B=25	
IEGAW	BD+41 3737	23	0930	2023021	+421317	L	2	17603	SL	85012323	232600	001145	234400	000903	G C=2.5X,B=30	
HSGBM	002023+523	28	1550	2023520	+523938	L	1	05298	L	85020414	000000	000000	140500	038957	G C=2.0X,B=182	
HI103	N UUL2	55	0967	2024405	274048	L	3	25805	L	85042902	000000	000000	025620	001500	451 U PARTIAL READ	
HI103	N UUL2	55	0975	2024405	274048	L	1	05851	LS	85042903	033706	000400	031741	001000	681 U 461s	
CUGCW	00NCOLLINS	55	0670	2024406	+274040	L	1	05150	SL	85010600	011700	000230	005000	000035	G E=228,C=1.5X,B=36	
CUGCW	00NCOLLINS	55	0717	2024406	+274040	L	3	24890	L	85011123	000000	000000	232800	001500	G E=2X,C=1.5X,B=42	
CUGCW	00NCOLLINS	55	0717	2024406	+274040	L	1	05186	SL	85011123	234900	000500	232400	000035	G E=2X,C=160,B=38	
CUGCW	00NCOLLINS	55	0699	2024406	+274040	L	3	24862	L	85010805	000000	000000	055900	001500	G E=2.0X,C=1.5X,B=38	
CUGCW	00NCOLLINS	55	0699	2024406	+274040	L	1	05160	L	85010805	000000	000000	055300	000035	G E=1.5X,C=1.5X,B=32	
CUGCW	00NCOLLINS	55	0630	2024406	+274040	H	1	05108	L	85010102	000000	000000	021000	003000	G C=235,B=50	
CUGCW	00NCOLLINS	55	0630	2024406	+274040	L	3	24795	L	85010101	000000	000000	012300	002000	G C=220,B=23	
CUGCW	00NCOLLINS	55	0630	2024406	+274040	L	1	05107	SL	85010101	010900	000800	010000	000035	G E=244,C=190,B=39	
CUGCW	00NCOLLINS	55	0670	2024406	+274040	L	3	24843	L	85010600	000000	000000	005400	001800	G E=2.0X,C=1.5X,B=33	
NSGRF	HD 197702	21	0800	2042239	+313049	L	3	25686	L	85041423	000000	000000	234900	000200	G C=205,B=20	
NSGRF	HD 197702	21	0800	2042239	+313049	L	1	05754	L	85041423	000000	000000	235400	000150	G C=3X,B=38	
NSGRF	00LS	672	25	1120	2042378	+313458	L	1	05759	L	85041520	000000	000000	202400	003200	G C=240,B=100
NSGRF	00LS	672	25	1120	2042378	+313458	L	3	25692	L	85041519	000000	000000	194300	003500	G C=85,B=57
NSGRF	SA 70472	22	0900	2044079	+310759	L	1	05750	L	85041419	000000	000000	190800	000320	G B=38	
NSGRF	SA 70472	22	0900	2044079	+310759	L	3	25684	L	85041418	000000	000000	185400	000435	G B=20	
NSGRF	SA 70472	22	0900	2044079	+310759	L	1	05751	L	85041420	000000	000000	200700	001500	G C=90,B=55	
NSGRF	SA 70472	22	0900	2044079	+310759	L	3	25685	L	85041420	000000	000000	202800	002000	G B=40	

PRO	OBJECT	CL	MAG	R.A.	DEC	D	C	IMAGE	A	DATE	EXP. SMALL	EXP. LARGE	ECC	COMMENT	
NSGRF	BD+31 4218	21	0880	2044195	+312342	L	3	25691	L	85041518	000000	000000	182300	000255	G B=21
NSGRF	BD+31 4218	21	0880	2044195	+312342	L	1	05758	L	85041519	000000	000000	190200	001000	G C=160, B=42
NSGRF	BD+31 4218	21	0880	2044195	+312342	L	1	05757	L	85041518	000000	000000	181600	000100	G C=55, B=35
BEHCG	HD 198183	26	0450	2045275	+361822	H	3	25780	L	85042614	000000	000000	144700	000147	G C=167, B=33
BEHCG	HD 198183	26	0450	2045275	+361822	H	1	05830	L	85042614	000000	000000	145500	000121	G C=217, B=45
NSGRF	HD 198820	24	0640	2049581	+323937	L	3	25693	L	85041523	000000	000000	233600	000008	G C=200, B=18
NSGRF	HD 198820	24	0640	2049581	+323937	L	1	05761	L	85041523	000000	000000	234000	000008	G C=2X, B=35
GI215	A2050+455	59	1390	2050267	440804	L	3	25774	L	85042506	000000	000000	064544	006500	211 U
GI215	A2050+455	59	1390	2050267	440804	L	1	05819	L	85042508	000000	000000	080006	004700	313 U
NSGRF	HD 198946	24	0800	2050498	+290832	L	1	05749	L	85041417	000000	000000	174400	000105	G C=3X, B=40
NSGRF	HD 198946	24	0800	2050498	+290832	L	3	25683	L	85041417	000000	000000	173900	000100	G C=190, B=21
NSGRF	HD 199042	22	0770	2051280	+304541	L	3	25687	L	85041500	000000	000000	002900	000105	G C=185, B=21
NSGRF	HD 199042	22	0770	2051280	+304541	L	1	05756	L	85041517	000000	000000	173500	000050	G C=1.5X, B=48
NSGRF	HD 199140	24	0640	2052149	+281952	L	1	05762	L	85041600	000000	000000	001700	000007	G C=2X, B=34
SJHDS	00 JUPITER	03	-0140	2056502	-174425	L	3	25639	L	85040912	000000	000000	125800	001200	G E=116, C=5X, B=19
SJHDS	00 JUPITER	03	-0140	2056502	-174425	L	3	25640	L	85040913	000000	000000	134900	006000	G E=2X, C=30X, B=30
SJHDS	00 JUPITER	03	-0140	2056502	-174425	L	3	25641	L	85040915	000000	000000	153900	001800	G E=178, C=8X, B=23
SJHDS	00 JUPITER	03	-0140	2057397	-174054	L	3	25650	L	85040923	000000	000000	233200	001600	G E=145, C=8X, B=40
SJHDS	00 JUPITER	03	-0140	2057461	-174031	L	3	25648	L	85040922	000000	000000	220200	001600	G E=170, C=8X, B=43
SJHDS	00 JUPITER	03	-0140	2057461	-174031	L	3	25644	L	85040918	000000	000000	182800	001800	G E=160, C=8X, B=38
SJHDS	00 JUPITER	03	-0140	2057461	-174031	L	3	25642	L	85040916	000000	000000	163800	001800	G E=158, C=8X, B=40
SJHDS	00 JUPITER	03	-0140	2057461	-174031	L	3	25647	L	85040921	000000	000000	210800	001600	G E=150, C=8X,
SJHDS	00 JUPITER	03	-0140	2057461	-174031	L	3	25646	L	85040920	000000	000000	201000	001600	G E=140, C=8X, B=42
SJHDS	00 JUPITER	03	-0140	2057461	-174031	L	3	25649	L	85040922	000000	000000	224900	001600	G E=175, C=8X, B=43
SJHDS	00 JUPITER	03	-0140	2057461	-174031	L	3	25645	L	85040919	000000	000000	192100	001800	G E=150, C=8X, B=40
SJHDS	00 JUPITER	03	-0140	2057461	-174031	L	3	25643	L	85040917	000000	000000	173200	001800	G E=158, C=8X, B=40
SJHDS	OOSKY BACK	07	9999	2058029	-174337	L	3	25651	L	85041000	000000	000000	002100	002800	G E=75, B=25
GA198	HD 200120	20	0479	2058074	471930	H	3	25239	L	85021407	000000	000000	073951	000130	501 U
GA146	HD200775	20	0760	2100597	675756	H	3	25734	L	85041906	000000	000000	065552	009600	301 U
HS139	JUPITER	03	0220	2100599	-172800	F	9	01647	2	85041502	000000	000000	022756	016000	U OFF APERTURE
HS139	JUPITER	03	0220	2100599	-172800	L	3	25688	L	85041502	000000	000000	022756	001000	101 U
SJHDM	00 JUPITER	03	-0190	2101549	-172426	L	3	25700	L	85041621	000000	000000	213800	001500	G E=105, B=27
SJHDM	00 JUPITER	03	-0190	2101549	-172426	L	3	25699	L	85041620	000000	000000	204600	001500	G E=165, C=6X, B=25
SJHDM	00 JUPITER	03	-0190	2101549	-172426	L	3	25697	L	85041618	000000	000000	185500	001500	G E=189, C=6X, B=12
SJHDM	00 JUPITER	03	-0190	2101549	-172426	L	3	25696	L	85041618	000000	000000	180100	001500	G E=41, B=18
SJHDM	00 JUPITER	03	-0190	2101549	-172426	L	3	25698	L	85041619	000000	000000	195300	001500	G E=49, B=20
SJHDM	00 JUPITER	03	-0190	2101549	-172426	L	3	25703	L	85041700	000000	000000	001800	001500	G E=145, C=6X, B=23
SJHDM	00 JUPITER	03	-0190	2101549	-172426	L	3	25702	L	85041623	000000	000000	233000	001500	G E=50, C=20
SJHDM	00 JUPITER	03	-0190	2101549	-172426	L	3	25701	L	85041622	000000	000000	223300	001500	G E=166, C=6X, B=25
SJHDM	00 JUPITER	03	-0190	2102429	-172058	L	3	25717	L	85041812	000000	000000	121400	001500	G C=3.0X, B=17
SJHDM	00 JUPITER	03	-0190	2102429	-172058	L	3	25720	L	85041814	000000	000000	145000	001500	G C=5.0X, B=19
SJHDM	00 JUPITER	03	-0190	2102429	-172058	L	3	25721	L	85041815	000000	000000	154200	001500	G C=3.0X, B=18
SJHDM	00 JUPITER	03	-0190	2102429	-172058	L	3	25722	L	85041816	000000	000000	163600	001500	G C=3X, B=23
SJHDM	00 JUPITER	03	-0190	2102429	-172058	L	3	25723	L	85041817	000000	000000	173900	001500	G C=3X, B=22
SJHDM	00 JUPITER	03	-0190	2102429	-172058	L	3	25724	L	85041818	000000	000000	184500	001500	G E=70, C=3X, B=35



PRO	OBJECT	CL	MAG	R.A.	DEC	D	C	IMAGE	A	DATE	EXP. SMALL	EXP. LARGE	ECC	COMMENT	
SJHM	00 JUPITER	03	-0190	2102429	-172058	L	3	25725	L	85041819	000000	000000	194400	001500	G C=3X, B=25
SJHM	00 JUPITER	03	-0190	2102429	-172058	L	3	25726	L	85041820	000000	000000	203500	001500	G C=6X, B=25
SJHM	00 JUPITER	03	-0190	2102429	-172058	L	3	25727	L	85041821	000000	000000	212800	001500	G E=98, C=3X, B=26
SJHM	00 JUPITER	03	-0190	2102429	-172058	L	3	25728	L	85041822	000000	000000	222900	001500	G E=98, C=2.5X, B=25
SJHM	00 JUPITER	03	-0190	2102429	-172058	L	3	25729	L	85041823	000000	000000	232100	001500	G E=69, C=2.5X, B=20
SJHM	00 JUPITER	03	-0190	2102429	-172058	L	3	25718	L	85041813	000000	000000	130600	001500	G C=3.0X, B=19
SJHM	00 JUPITER	03	-0190	2102429	-172058	L	3	25716	L	85041811	000000	000000	111200	001500	G C=3.0X, B=17
SJHM	00 JUPITER	03	-0190	2102429	-172058	L	3	25719	L	85041814	000000	000000	140200	001500	G B=17
SJHM	00 JUPITER	03	-0190	2102432	-172043	L	3	25715	L	85041810	000000	000000	101300	001500	G C=3.0X, B=17
SPGRN	OOGANYMEDE	04	0510	2103082	-172557	L	1	05817	L	85042500	000000	000000	003900	000115	G C=190, B=35
SJHM	00 JUPITER	03	-0190	2103102	-171932	L	3	25730	L	85041900	000000	000000	001000	001500	G C=6X, B=21
SJHM	00 JUPITER	03	-0190	2103424	-171730	L	3	25739	L	85041921	000000	000000	211300	001500	G C=3X, B=19
HS145	JUPITER	04	9999	2103424	-171731	E	9	01648	2	85042003	000000	000000	030500	016000	V
SJHM	00 JUPITER	03	-0190	2103424	-171730	L	3	25742	L	85041923	000000	000000	234800	001500	G E=87, C=3X, B=19
SJHM	00 JUPITER	03	-0190	2103424	-171730	L	3	25741	L	85041922	000000	000000	225700	001500	G E=74, C=3X, B=20
SJHM	00 JUPITER	03	-0190	2103424	-171730	L	3	25740	L	85041922	000000	000000	220300	001500	G E=65, C=3X, B=20
SJHM	00 JUPITER	03	-0190	2103424	-171730	L	3	25737	L	85041919	000000	000000	191600	001500	G E=59, C=2.5X, B=18
SJHM	00 JUPITER	03	-0190	2103424	-171730	L	3	25738	L	85041920	000000	000000	202000	001500	G C=3X, B=20
SIHM	00 IO TORUS	04	0500	2103435	-171723	L	3	25743	L	85042001	000000	000000	011400	004000	G E=220, C=175, B=145
SJHM	00 JUPITER	03	-0190	2104030	-171606	L	3	25748	L	85042019	000000	000000	191300	001500	G E=91, C=3X, B=20
SJHM	00 JUPITER	03	-0190	2104030	-171606	L	3	25747	L	85042018	000000	000000	182400	001500	G E=91, C=3X, B=20
SJHM	00 JUPITER	03	-0190	2104030	-171606	L	3	25746	L	85042017	000000	000000	173200	001500	G C=5X, B=21
SJHM	00 JUPITER	03	-0190	2104030	-171606	L	3	25749	L	85042020	000000	000000	200400	001500	G E=111, C=3X, B=20
SJHM	00 JUPITER	03	-0190	2104030	-171606	L	3	25753	L	85042023	000000	000000	233700	001500	G E=118, C=3X, C=17
SJHM	00 JUPITER	03	-0190	2104030	-171606	L	3	25752	L	85042022	000000	000000	223500	001500	G E=83, B=19
SJHM	00 JUPITER	03	-0190	2104030	-171606	L	3	25751	L	85042021	000000	000000	214400	001500	G E=83, C=3X, B=20
SJHM	00 JUPITER	03	-0190	2104030	-171606	L	3	25745	L	85042016	000000	000000	164600	001500	G E=128, C=5X, B=20
SJHM	00 JUPITER	03	-0190	2104030	-171606	L	3	25744	L	85042015	000000	000000	155700	001500	G E=61, C=4X, B=15
SJHM	00 JUPITER	03	-0190	2104030	-171606	L	3	25750	L	85042020	000000	000000	205700	001500	G E=103, C=3X, B=22
SJHM	00 JUPITER	03	-0190	2104135	-171526	L	3	25754	L	85042100	000000	000000	002400	001500	G E=110, C=3X, B=19
GC024	HD201251	47	0488	2104525	472648	L	3	24947	L	85012212	000000	000000	121233	015500	343 U
SPGRN	OOCALLISTO	04	0630	2105060	-171150	L	1	05799	L	85042223	000000	000000	232600	000400	G C=245, B=38
SPGRN	OOCALLISTO	04	0630	2105060	-171150	L	1	05798	L	85042222	000000	000000	224700	000400	G C=1.2X, B=44
SPGRN	OOGANYMEDE	04	0510	2105060	-171150	L	1	05797	L	85042221	000000	000000	214600	000300	G C=220, B=64
SPGRN	OOGANYMEDE	04	0510	2105060	-171150	L	1	05796	L	85042221	000000	000000	210200	000400	G C=1.5X, B=80
SPGRN	00 IO	04	0550	2105060	-171150	L	1	05795	L	85042220	000000	000000	200000	001400	G C=1.5X, B=125
SPGRN	NG IO	04	0560	2105060	-171150	L	1	05800	L	85042300	000000	000000	000600	001400	G C=200, B=37
SPGRN	EUROPA	04	5800	2105060	-171150	L	1	05792	L	85042217	000000	000000	171700	000520	G C=1.3X, B=45
SPGRN	90 IO	04	0550	2105060	-171150	L	1	05793	L	85042218	000000	000000	180900	001500	G C=225, B=80
SPGRN	00 IO	04	0550	2105060	-171150	L	1	05794	L	85042219	000000	000000	191000	001530	G C=240, B=86
SPGRN	30 EUROPA	04	0580	2105368	-171000	L	1	05803	L	85042317	000000	000000	174100	000500	G C=210, B=45
SPGRN	00 IO	04	0550	2105368	-171000	L	1	05804	L	85042319	000000	000000	190800	001240	G C=218, B=73
SPGRN	00 EUROPA	04	0580	2105368	-171000	L	1	05805	L	85042320	000000	000000	203000	000400	G C=208, B=72
SPGRN	OOGANYMEDE	04	0510	2105368	-171000	L	1	05806	L	85042321	000000	000000	212200	000300	G C=233, B=68
SPGRN	OOCALLISTO	04	0630	2105368	-171000	L	1	05807	L	85042322	000000	000000	221100	000350	G C=1.4X, B=59

PRO	OBJECT	CL	MAG	R.A.	DEC	D	C	IMAGE	A	DATE	EXP. SMALL	EXP. LARGE	ECC	COMMENT		
SPGRN	00	EUROPA	04	0580	2105368	-171000	L	1	05808	L	85042322	000000	000000	225900	000420	G C=185, B=40
SPGRN	00	EUROPA	04	0580	2105368	-171000	D	9	01649	L	85042317	000000	000000	172800	000000	G NO COMMENTS
SPGRN	00	IO	04	0550	2105525	-170850	L	1	05809	L	85042323	000000	000000	234900	002700	G C=210, B=40
SPGRN	00	OOGANYMEDE	04	0510	2106103	-170740	L	1	05815	L	85042421	000000	000000	213700	000230	G C=245, B=73
SPGRN	00	EUROPA	04	0580	2106139	-170727	L	1	05816	L	85042423	000000	000000	234800	000245	G B=22
SPGRN	00	OOCALLISTO	04	0580	2106339	-170605	L	1	05827	L	85042520	000000	000000	204800	000300	G C=1.2X, B=68
SPGRN	00	IO	04	9999	2106339	-170605	L	1	05824	L	85042517	000000	000000	174300	001240	G C=239, B=80
SPGRN	00	OOGANYMEDE	04	0510	2106339	-170605	L	1	05825	L	85042518	000000	000000	185000	000300	G C=1.5X, B=50
SPGRN	00	EUROPA	04	0580	2106339	-170605	L	1	05826	L	85042519	000000	000000	195400	000240	G C=1.2X, B=65
SPGRN	00	OOCALLISTO	04	0630	2106340	000000	L	1	05828	L	85042521	000000	000000	213200	000250	G C=255, B=73
WDGFB	00G231-040	37	1230	2117219	+535953	H	3	25184	L	85020613	000000	000000	135400	041500	G C=220, B=120	
ISHJS	HD 205637	20	0470	2134170	-194128	H	1	05752	L	85041421	000000	000000	212800	000040	G C=220, B=43	
IBGGB	HD 207739	39	0010	2147598	+434354	H	1	05253	L	85012305	000000	000000	053400	006000	G E=132, C=105, B=45	
IBGGB	HD 207739	39	0010	2147598	+434354	L	3	24953	L	85012306	000000	000000	063800	001200	G C=160, B=18	
PHCAL	BD+28 4211	16	1050	2148574	+283734	L	2	17590	SL	85011503	032300	000206	030900	000112	G C=200, B=40	
PHCAL	BD+28 4211	16	1050	2148574	+283734	L	2	17589	SL	85011501	015300	000206	014800	000112	G C=190, B=31	
PHCAL	BD+28 4211	16	1050	2148574	+283734	L	2	17588	L	85011500	000000	000000	002300	000350	G C=190, B=33	
FM192	HD207971	22	0319	2150540	-373604	H	3	25660	L	85041102	000000	000000	021444	000050	500 U	
FM192	HD207971	22	0323	2150540	-373604	H	1	05710	L	85041101	000000	000000	014616	000030	502 U	
FM192	HD207971	22	0321	2150540	-373604	H	3	25659	L	85041101	000000	000000	014056	000140	700 U	
BEHCG	HD 209014	26	0540	2157581	-284140	H	3	25782	L	85042618	000000	000000	181200	001000	G C=240, B=45	
BEHCG	HD 209014	26	0540	2157581	-284140	H	1	05832	L	85042619	000000	000000	190000	000410	G C=210, B=50	
ISHFB	HD 209952	22	0170	2205055	-471214	H	1	05641	S	85040218	185400	000017	000000	000000	G C=235, B=45	
ISHFB	HD 209952	22	0170	2205055	-471214	H	3	25562	S	85040219	190100	000022	000000	000000	G C=208, B=39	
WRGLA	HD 211853	11	0920	2216545	+555230	L	3	24981	L	85012604	000000	000000	045900	000800	G E=220, C=127, B=22	
WRGLA	HD 211853	11	0920	2216545	+555230	L	3	24980	L	85012604	000000	000000	041800	000730	G E=230, C=165, B=25	
GA153	HD212044	20	0715	2218248	513632	H	3	25160	L	85020308	000000	000000	084807	002000	501 U	
GA153	HD212044	20	0719	2218250	513632	H	1	05285	L	85020308	000000	000000	081745	001500	703 U	
GA153	HD212791	26	0831	2223428	521102	L	3	25159	LS	85020307	072148	000200	071628	000200	700 U 500s	
GA153	HD212791	26	0832	2223430	521102	L	1	05284	LS	85020307	071155	000120	070542	000120	704 U 604s	
BEHCG	HD 212581	26	0450	2223480	-651318	H	3	25783	L	85042620	000000	000000	202500	000713	G C=250, B=50	
BEHCG	HD 212581	26	0450	2223480	-651318	H	1	05833	L	85042620	000000	000000	201600	000230	G C=210, B=45	
GA153	HD214443	30	0844	2235110	510133	L	3	25158	LS	85020305	055356	000430	054330	000430	500 U 300s	
GA153	HD214443	30	0842	2235110	510133	L	1	05283	LS	85020305	053502	000400	052648	000400	703 U 503s	
PHCAL	HD 214680	12	0490	2237008	+384722	L	2	17586	L	85011405	000000	000000	051300	000001	G C=210, B=25	
PHCAL	HD 214680	12	0490	2237008	+384722	L	2	17584	L	85011404	000000	000000	040400	000001	G C=210, B=25	
PHCAL	HD 214680	12	0490	2237008	+384722	L	2	17583	L	85011403	000000	000000	032500	000002	G C=200, B=35	
PHCAL	HD 214680	12	0490	2237008	+384722	L	2	17582	L	85011402	000000	000000	023800	000002	G C=200, B=27	
PHCAL	HD 214680	12	0490	2237008	+384722	L	2	17585	L	85011404	000000	000000	044000	000001	G C=210, B=25	
BEHCG	HD 214748	26	0420	2237536	-271818	H	3	25781	L	85042617	000000	000000	172400	000400	G C=1.5X, B=45	
BEHCG	HD 214748	26	0420	2237536	-271818	H	1	05831	L	85042617	000000	000000	170500	000119	G C=208, B=42	
GA153	HD214859	30	0980	2238101	464710	L	3	25161	LS	85020311	111800	000400	110828	000400	401 U 301s	
GA153	HD214859	30	0977	2238101	464710	L	1	05286	LS	85020310	103338	000540	102641	000250	503 U 303s	
GA153	HD215106	30	0807	2240005	464820	L	3	25162	L	85020312	000000	000000	123240	000050	601 U	
GA153	HD215106	30	0813	2240005	464820	L	1	05287	L	85020312	000000	000000	123619	000025	504 U	



PRO	OBJECT	CL	MAG	R.A.	DEC	D C	IMAGE	A	DATE	EXP. SMALL	EXP. LARGE	ECC	COMMENT		
ISHFB	HD	216956	30	0120	2254535	-295316	H 1	05848	S	85042819	194500	000320	000000 000000	G C=5.0X,B=90	
OD36K	HD	218356	47	0480	2304402	+251152	H 1	05149	L	85010523	000000	000000	233100 003500	G E=1.5X,C=100,B=52	
GS050	VENUS	03	9999	2318506	-042030	H 3	24946	S	85012208	000000	000000	084924	012000 933 U		
GS050	VENUS	03	-0450	2322246	-035106	H 1	05254	S	85012310	100923	000120	000000	000000 733 U	LAP CLOSED	
GS050	VENUS	03	-0450	2322246	-035106	H 3	24954	S	85012308	085217	007500	000000	000000 833 U	LAP CLOSED	
CCGSB	HD	222107	45	0390	2335065	+461114	L 3	25187	L	85020623	000000	000000	235700 003000	G E=205,C=105,B=25	
CCGSB	HD	222107	45	0390	2335065	+461114	L 3	25186	L	85020622	000000	000000	224400 003000	G E=191,C=100,B=23	
CCGSB	HD	222107	45	0390	2335065	+461114	L 3	25185	L	85020621	000000	000000	213700 003000	G E=193,C=100,B=33	
CCGSB	HD	222107	45	0390	2335065	+461114	H 1	05316	L	85020700	000000	000000	003700 000500	G E=1.1X,C=85,B=32	
CCGSB	HD	222107	45	0390	2335065	+461114	L 3	25188	L	85020701	000000	000000	010900 003000	G E=222,C=125,B=53	
CCGSB	HD	222107	45	0390	2335065	+461114	H 1	05314	L	85020622	000000	000000	221400 000500	G E=243,C=90,B=32	
CCGSB	HD	222107	45	0390	2335065	+461114	L 1	05317	L	85020701	000000	000000	014400 000025	G E=1.5X,C=225,B=32	
CCGSB	HD	222107	45	0390	2335065	+461114	H 1	05315	L	85020623	000000	000000	232100 000500	G E=1.1X,C=90,B=27	
GQ017	ABELL	2634	81	1500	2335589	264515	L 3	24941	L	85012107	000000	000000	074959 018000	111 U	
NJGAM	OO	R AQR	57	1060	2341140	-153344	L 1	05131	L	85010315	000000	000000	155300 004000	G E=2X,C=120,B=40	
NJGAM	OO	RAQR	JET	57	1100	2341140	-153345	L 3	24811	L	85010221	000000	000000	215800 005000	G E=3.0X,C=70,B=34
NJGAM	OO	RAQR	JET	57	1100	2341146	-153334	L 3	24823	L	85010316	000000	000000	165700 030000	G E=200,C=110,B=65
NJGAM	OO	RAQR	JET	57	1100	2341146	-153334	L 3	24810	L	85010216	000000	000000	162100 030000	G E=5.0X,C=125,B=70
NJGAM	OO	RAQR	JET	57	1100	2341146	-153334	L 1	05132	L	85010322	000000	000000	220000 005000	G E=130,B=80
GA153	HD	224801	22	0657	2358100	445830	H 3	25176	L	85020507	000000	000000	072531 003606	601 U	
GA153	HD	224801	22	0659	2358100	445830	H 1	05306	L	85020506	000000	000000	065609 000944	502 U	

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