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IUE ESA NEWSLETTER

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OBSERVATORY CONTROLLER'S MESSAGE

Unfortunately I have to start this message sharing with you the great shock we all felt when Michael Penston passed away just before Christmas last year. Many of the old time Users of IUE will still remember Mike - the second IUE Observatory Controller - for the exuberant and enthusiastic way in which he took up the task of running an actual space observatory for general use in VILSPA. Just as many of us have shared the support which his wife Margaret gave to Mike in those days, we want to assure both Margaret as well as his children of the appreciation of the important and original work done by Mike for Astronomy, during his IUE days. Although his impact on IUE has been felt most strongly by all of us directly involved in IUE, I want also remember him for his personal style as a colleague Astronomer. Never did he fail to find the unusual angles on complex problems, many times stimulating those around him to tackle new venues. Mike's family can be assured that all of us who have known Mike will cherish the memories of his presence.

On the future of the IUE project, I would like to report on the expressions of support raised by all of you as a consequence of the call for action by Harry Nussbaumer. You have made clear that a surprisingly wide community considers the continuation of the IUE Project of extreme importance for European Astronomers.

Let us all hope that your call for continuation has been heard by those who hold the purse strings. Although anyone with interest can feel free to ask me. I suggest that you should inquire with your national authorities for the latest news.

It was also good to see that many of you have not only supported IUE with your voice, but also (to use an Americanism) with their feet, since the response to the Call for Proposals showed again, - for the 2nd year in a row - a significant increase in the demand for IUE time (with respect to the 12th round we saw for the 13th round a 16% increase and in the current cycle 24%). This will make the task of the IUEAC really difficult this year.

The major coordination between the ESA and NASA IUE Project partners with the ROSAT Sky Survey (RIASS program) has been very successfully accomplished and resulted in some 1000 hours of UV, X-ray and EUV coverage of a wide range of sources. I have been informed that the distribution of the ROSAT data to the participants in the RIASS program has started and will be completed within a few months.

Information is currently also being collected about related observations at other wavelengths to create a catalogue of this unique multiwavelength campaign. I would like to express my appreciation to the IUEAC which has approached this unconventional program with the professional reluctancy and foresight expected.

The current year will also see the start of the major activities related to the reprocessing of all IUE spectra with a new and considerably improved S/W package: the production of the IUE Final Archive. This promises to open up a new era of Archival Research.

Wishing all of you a somewhat delayed but still whole-heartily successful 1991.

IUE SPACECRAFT STATUS

JANUARY 1991

D. Hermoso, VILSPA

1. GENERAL

The spacecraft continued to support science operations normally and effectively in its thirteenth year of highly successful in-orbit operations. At the end of December 1990, a total of 21418 images had been collected from 9078 celestial objects (VILSPA only).

2. POWER SUBSYSTEM.

On July 24, the heaters on the IUE gyro package were successfully reconfigured. This reconfiguration was necessary to reduce the load on the aging IUE batteries during the shadow seasons and to extend the operational Beta range. The new configuration resulted in a 10.5 watt reduction to the spacecraft power load while maintaining the temperatures of the two remaining gyroscopes at their original values.

The 10.5 watt reduction in the spacecraft power load has increased the current power positive window Beta range from $37° < \beta < 105$ to $30° < \beta < 112°$.

IUE's 26th Eclipse Season ran from August 2 through August 24, 1990. The general performance of the batteries was good despite their questionable health before this shadow season. Reconditioning of both batteries took place during this past shadow season. Battery reconditioning occurs when a battery is drained close to its minimum capacity and then slowly recharged back to full capacity. The battery cells are rejuvenated during this process, thus, resulting in greater battery capacitance.

3. SOLAR ARRAYS

The accelerated degradation of the Solar Arrays, reported in the last IUE NL, apparently has slowed and returned to the normal rates. The normal degradation rate is approximately 3% to 4% per year.

4. ATTITUDE CONTROL SYSTEM

The gyroscopes are performing nominally: gyro 4's drift rate is holding moderately steady while the magnitude of gyro 5's is slowly increasing.

The 4-kbit-backup-memory flawlessly maintained attitude control during the Spacecraft test on October 17, 1990. This system was primarily designed to provide backup support during the One-Gyro Spacecraft test.

5. THERMAL

The general spacecraft temperatures are remaining reasonably stable.

The OBC temperature has been reduced with a HALT instruction in the flight code's "wait loop."

OBC temperature operating limits were relaxed by eliminating the 55.8° constraint zone; cooling of the OBC needs to take place only when its temperature begins glitching to 57.0°.

The HOT OBC Beta region has changed as follows:

MONTH	LOWER LIMIT	UPPER LIMIT
JANUARY	56°	94°
FEBRUARY	59°	90°
MARCH	64°	86°
APRIL	65°	84°
MAY	68°	81°
JUNE	69°	74° *
JULY	69°	74° *
AUGUST	68°	81°
SEPTEMBER	65°	84°
OCTOBER	62°	88°
NOVEMBER	59°	90°
DECEMBER	57°	93°

* For scheduling purposes only

6. ANOMALIES

The IUE spacecraft has performed satisfactorily well over the last months, only a few anomalies were encountered:

- One case in which a Worker (coded program) was turned on but never scheduled to run.

- Corrupted FSS's data at ß=72 and from 35°-38°. One OBC patch to avoid this range has been uplinked on 21 December 1990.

- Six instances where the OBC's software-load processing code did not execute properly.

- Sun Shutter mysteriously switched from closed to slew mode.

- OBC crash on 27 Dec. 1990 during VILSPA shift. The detailed analysis is proving that it was not an OBC crash but a new instance where the OBC's software-load processing code did not execute on time therefore losing the capability to command to any Worker.

CHANGE IN THE REFERENCE POINT

The new Reference Point was implemented on January 22, 1990 at GSFC and July 23, 1990 in VILSPA. Its coordinates x = -144, y = -176 avoid the "fatigue spot" which affected the old reference point (-16, -208). This should help acquiring faint sources and improve the photometric accuracy of the Fine Error Sensor measurements.

The FES count rates for stars acquired in the overlap mode are about 20 percent larger than recent measurements at the old reference point. A photometric recalibration of the FES is currently underway the results of which will be presented in a forthcoming Newsletter.

J. Clavel

The IUE Final Archive - I

A. Talavera, J.D. Ponz
VILSPA

January 22, 1991

In the last issue of the ESA IUE Newsletter (No. 35) we announced the creation of the IUE Final Archive. We start now a series of articles describing this archive, its contents, the processing methods, the calibration, the format of the files, etc. We shall report as well about the status of the project at both stations, VILSPA and GSFC.

We shall start the series with a description of the data files which will be present in the Final Archive. We remind you that the current IUE data consist of the following files: the Raw Image, the Photometrically Corrected Image, the Line by Line (only for low resolution) and the Extracted Spectral Data.

Due to the new methods which have been developed to process all data for the Final Archive, and to allow the future users to follow through the different steps in the process, it has been decided to store in the Final Archive files of all intermediate data produced during the processing of each image. For this reason the number of files for each original Raw Image, and their contents, will be different from the current data.

At the present time the following files are foreseen :

Raw Image: This is the original image as received from the IUE at the time of the observation.

Linearized Image: This is similar to the current photometrically corrected image. Only the pixels inside the target ring in high dispersion, or in a swath around the spectrum in low dispersion will be corrected. The intensity of each pixel will be given in Flux Numbers (FN). There will be a quality flag for each pixel of the Linearized Image (an extension of the current 'epsilons').

Resampled Image: The Linearized Image will be resampled to account for the following: a) geometrical correction, b) rotation of the image, c) wavelength linearization, d) detilting of large aperture spectra of extended sources, e) alignment of the apertures for constant wavelength in the line direction, and f) de-splaying correction for high dispersion data. There will be a quality flag associated with each pixel after resampling.

Vector Displacement File: This file will provide the displacement between each pixel in the Raw Image and the corresponding final pixel in the Resampled Image. This will be given as a summation of the vectors which account for all the transformations mentioned before. Cross-correlation techniques are used to measure the displacement of the pixels with respect to the ITF. About 500 points (140 for low resolution) are

used to measure the displacement in each image. This information is stored as a table extension containing the x and y positions in the science image, the corresponding x,y positions of the best match in the ITF, the cross correlation coefficient, the number of points used to compute it and the ITF level used in the correlation.

Extracted Low Dispersion Spectra: This file will contain the one-dimensional spectral data extracted with a weighted extraction method. It will consist of net flux spectrum, background, variance of the data obtained through a noise model, quality flags, and absolutely calibrated spectrum.

Extracted High Dispersion Spectra: The extracted spectral data for each order. The precise contents are still under definition.

Concatenated High Dispersion Spectrum: This file will be a one-dimensional spectrum made by splicing together all high dispersion orders with a linear wavelength scale.

The format of all files will be FITS. We have defined the formats according to FITS standards, introducing new keywords which are necessary to account for the peculiarities of the IUE data. The IUE Project will provide readers for the most usual astronomical data reduction packages.

The characteristics of the files are summarised in Table 1 in the case of low dispersion and Table 2 for high dispersion.

Concerning the status of the project the situation is as follows. The prototype processing software is ready and a number of representative images will be processed at GSFC to test the scientific correctness of the new system. At the same time both VILSPA and GSFC are setting up a system to verify the correctness of all the parameters of relevance for the processing of each image and for its scientific interpretation. These parameters have been called Core Data Items and we shall describe them in a future article.

Table 1
File Formats for IUE Final Archive
Low Dispersion

File name	Description	Size	Format	FITS Type
RI	Raw Image	768 × 768	8-bit integer	image
LI	Linearized Image	768 × 768	16-bit integer	image
	LI Flag Image	768 × 768	16-bit integer	image extension
SILO	Resampled Image	640 × 80	16-bit integer	image
	SILO Flag Image	640 × 80	16-bit integer	image extension
VD	Vector Displacement	2 × 768 × 768	32-bit float	image
	Cross-correlation Coeffs	7 × 140	-	table extension
MELORES	Extracted Spectra	-	-	table

Table 2
File Formats for IUE Final Archive
High Dispersion

File name	Description	Size	Format	FITS Type
RI	Raw Image	768 × 768	8-bit integer	image
LI	Linearized Image	768 × 768	16-bit integer	image
	LI Flag Image	768 × 768	16-bit integer	image extension
SIHI	Resampled Image	768 × 768	16-bit integer	image
	SIHI Flag Image	768 × 768	16-bit integer	image extension
VD	Vector Displacement	2 × 768 × 768	32-bit float	image
	Cross-correlation Coeffs	7 × 500	-	table extension
MEHIRES	Extracted Spectra	-	-	table
WHIRES	Concatenated Spectra	-	-	table

USSP/ULDA Status Report.

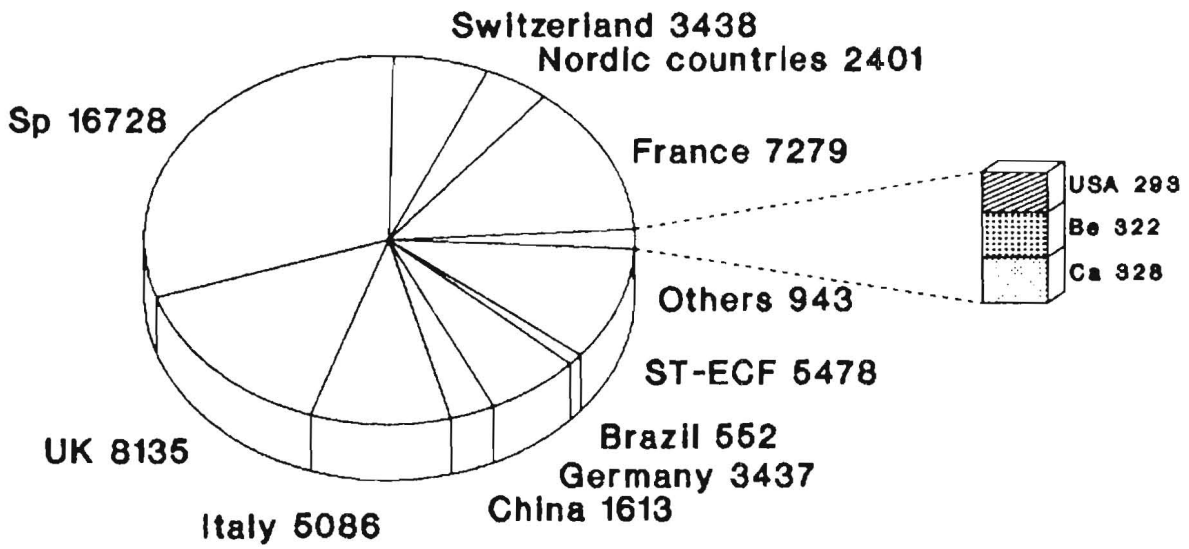
Cornelius Driessen (VILSPA)

The USSP is a software system which effectively puts a large number of absolutely calibrated low dispersion IUE spectra on-line to users the world over. Its utilisation, given in the following table, compares favorably with the various other IUE dearchival systems.

Performance overview

	1 Nov.'90	1 Nov.'89
The number of spectra dearchived:	55,000	30,000
User registrations:	415	300

Dearchivals from the National Hosts
1st Nov.'90



USSP/ULDA version 3.0

A new release of the data and software has been distributed recently. The spectra available in the new and previous versions are compared in the following table.

ULDA

	Vers.3.0	Vers.2.0
Number of spectra:	44,000	37,000
Spectra up till:	End '88	End '86

Software – enlarging the audience

A more flexible 'unscrambler' (software which runs on the end-user's computer) has been written at Trieste Observatory. This will run under VAX VMS as well as on UNIX based workstations (e.g. SUN & Apollo) and 386 PCs. In addition it will automatically downlink your data from the your National Host using either DECnet or TCP/IP protocols. Its adoption will enlarge the customer base significantly, particularly in the coming years. It will continue to be tested at Trieste, VILSPA and ESO before being sent to Lausanne and Uppsala in December for a further checkout. If all goes well it will be distributed to all centres in the new year.

THE IUE - ULDA ACCESS GUIDES

Antonio TALAVERA
VILSPA

The IUE ULDA (Uniform Low Dispersion Archive) with its USSP (ULDA Support Software Package) has become a very useful tool for scientists working in all fields of Astronomy and Astrophysics. This is well proved if we look at the statistics on the usage of the ULDA/USSP (cf. USSP/ULDA Status Report in this Newsletter). Each IUE spectrum has been utilised approximately four times, firstly by the original astronomer who proposed the observation and secondly by other scientists working on archival data. This is largely due to the ULDA/USSP, which supports 58 % of current dearchiving of all IUE data.

To facilitate the further scientific use of the ULDA/USSP the ESA-IUE Project has undertaken the publication of a series of "IUE ULDA Access Guides". These are subject-oriented compilations of data, including details of IUE spectra and complementary information such as bibliography, physical and statistical data, etc. The scientific responsibility for the creation of the Access Guides has been given to expert scientists in each field.

Two guides have been published up to now:

- No. 1 : Dwarf Novae and Nova-like stars
- No. 2 : Comets

The first one, compiled by Dr. Constanze la Dous, contains information on all IUE low resolution spectra of dwarf novae and nova-like stars obtained until the end of 1987. The complementary information includes details on individual exposures, their position in the outburst light curves, physical information about each system and references for observations at other wavelengths.

In the second one, devoted to comets, the compilation of the data has been done by Prof. Michel Festou. It contains information about all spectra of comets obtained with IUE between October 15 1978 and September 14 1989. The complementary information consists of data such as geocentric distance, heliocentric distance and velocity, and position and orientation of the spectrograph slit as well as references for each comet and each observation. This guide includes also information on high resolution spectra of comets obtained with IUE.

A third guide will appear soon. It will deal with spectra of normal galaxies.

The guides have been distributed to institutes and individuals around Europe. Some copies are still available and can be obtained from the ESA Publications Division at ESTEC.

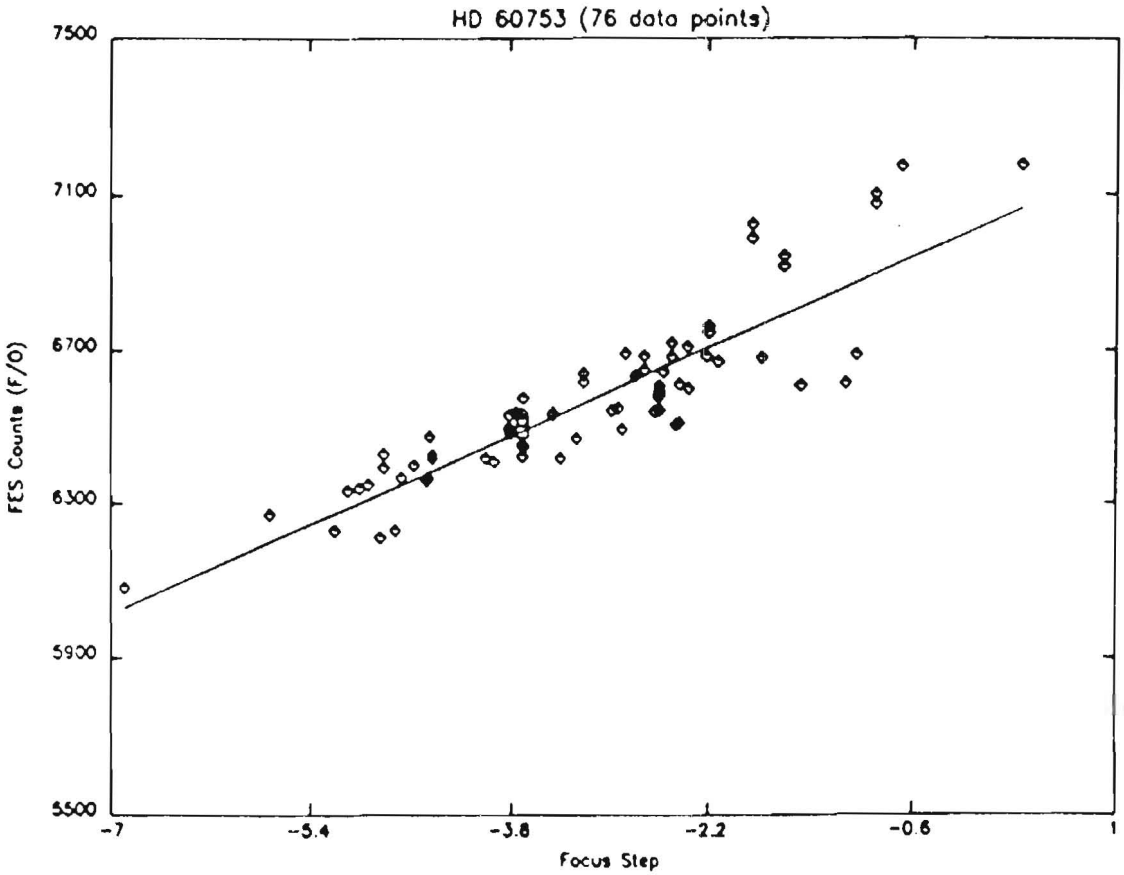
List of IUE -ULDA Access Guides.

No./Title	Author	Reference
No.1: Dwarf Novae and Nova-like stars.	C. la Dous	ESA SP 1114
No.2: Comets.	M. Festou	ESA SP 1134

Order from: Mr. F. de Zwaan
ESA Publications Division - ESTEC
Keplerlaan 1
Postbus 299
2200 AG Noordwijk, The Netherlands

THE V MAGNITUDE CALIBRATION OF THE FES - SENSITIVITY TO FOCUS

Recent attempts to calibrate the V magnitude - FES counts relation (e.g. Imhoff and Wasatonic 1986, Barylak 1989 as amended by Barylak 1990) have parametrised the relation in terms of time and colour. Physically the time dependence arises from the decrease in sensitivity of the FES as it ages and the colour dependence is due to the response function of the FES being different from a standard Johnson V filter. Whilst these two parameter relations give a reasonable overall fit to the data the scatter is unsatisfactorily large. Recently Perez (1990) analysed the FES counts of the IUE standard star HD60753 (V=6.69,B-V=-0.09,Sp.Type=B3IV) and his analysis showed there was a significant dependence on the focus. This is illustrated in the figure below.



Based on these data Perez finds the relation

$$CTS(corr) = CTS(obs)*[1 + 0.022*(-2.653 - focus)]$$

This relation was derived from observations made at the new reference point, however, it is reasonable to assume that a similar dependence exists at the old reference point. In addition further work is required to determine the most appropriate value of the focus step zero-point and the value of -2.653 used above must be considered provisional. When this work is completed the new, three parameter, V magnitude - FES counts relation will be derived.

M. Perez
IUE, GSFC

J. Fernley
IUE, Vilspa

Barylak M. 1989 ESA IUE Newsletter 33 p20
Barylak M. 1990 ESA IUE Newsletter 34 p26
Imhoff C.L. and Wasatonic R. 1986 NASA IUE Newsletter 29 p45
Perez M. 1990 IUE 3-Agency Meeting, GSFC, November 1990

THE ABSOLUTE CALIBRATION OF IUE FLUXES

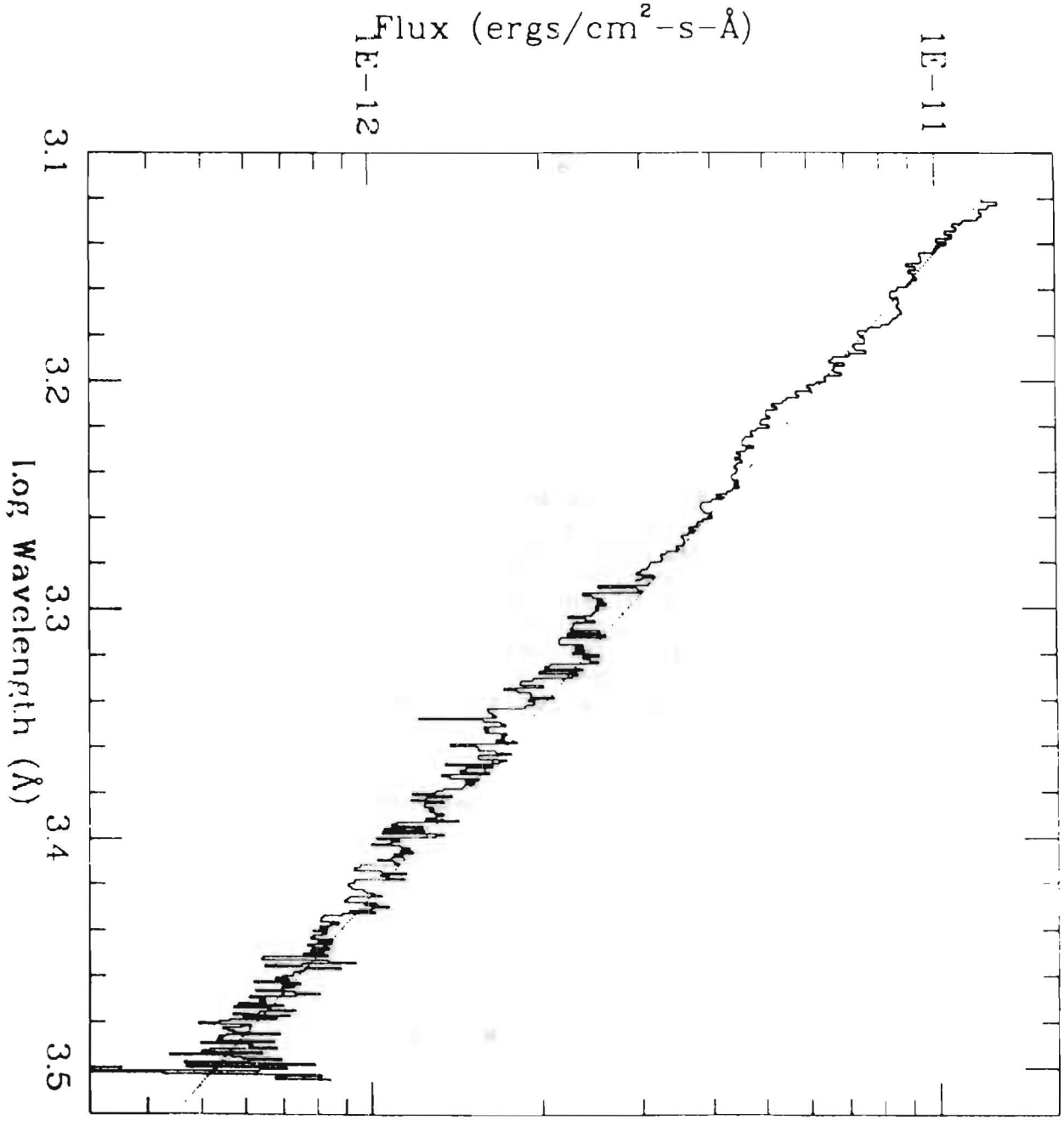
The basis of the present IUE flux scale is the flux adopted for the bright B3V star Eta Uma. These Eta Uma fluxes were determined by Bohlin et al (1980 Astron. Astrophys. 224 p132) using data from previous ultraviolet space missions such as OAO, ANS and TD1. Recent work by Finley,Basri and Bowyer(1990 Ap.J. 359 p483) suggests there are wavelength dependent errors in this calibration. FBB took IUE spectra of several hot, i.e. effective temperatures greater than 25000K, DA White Dwarfs. Because these stars have pure hydrogen atmospheres the ultraviolet spectrum should be a smooth continuum with only Lyman Alpha and interstellar lines. However, the observed IUE spectra show considerable small-scale structure. This is illustrated in the attached plots which compare the observed and modelled ultraviolet spectrum of G191-B2B.This star has an effective temperature of 61170K and a pure hydrogen atmosphere (FBB). Similar discrepancies have also been reported for Main Sequence B stars (Massa 1990, Priv.Comm.), BL Lac objects (FBB) and Eta Uma (Finley 1990, Priv. Comm.). Whilst these latter results are less certain, due to the greater difficulties in modelling, the general convergence of all the results strongly supports the case for there being systematic errors in the present IUE flux scale.

In the near future all IUE spectra will be reprocessed in order to make the final archive (e.g. Talavera 1991, This Newsletter). In addition the HST ultraviolet calibration will be derived from IUE. For both these reasons it was considered important to urgently resolve these discrepancies and on 11 and 12 December 1990 a meeting was held at Vilspa with both IUE staff and observers and theoreticians from the astronomical community in attendance. A list of participants is given below. Based on discussions that took place during this meeting a programme of work was outlined that should lead to an improvement in the accuracy of the IUE absolute calibration and the results of this programme will be presented at a later date.

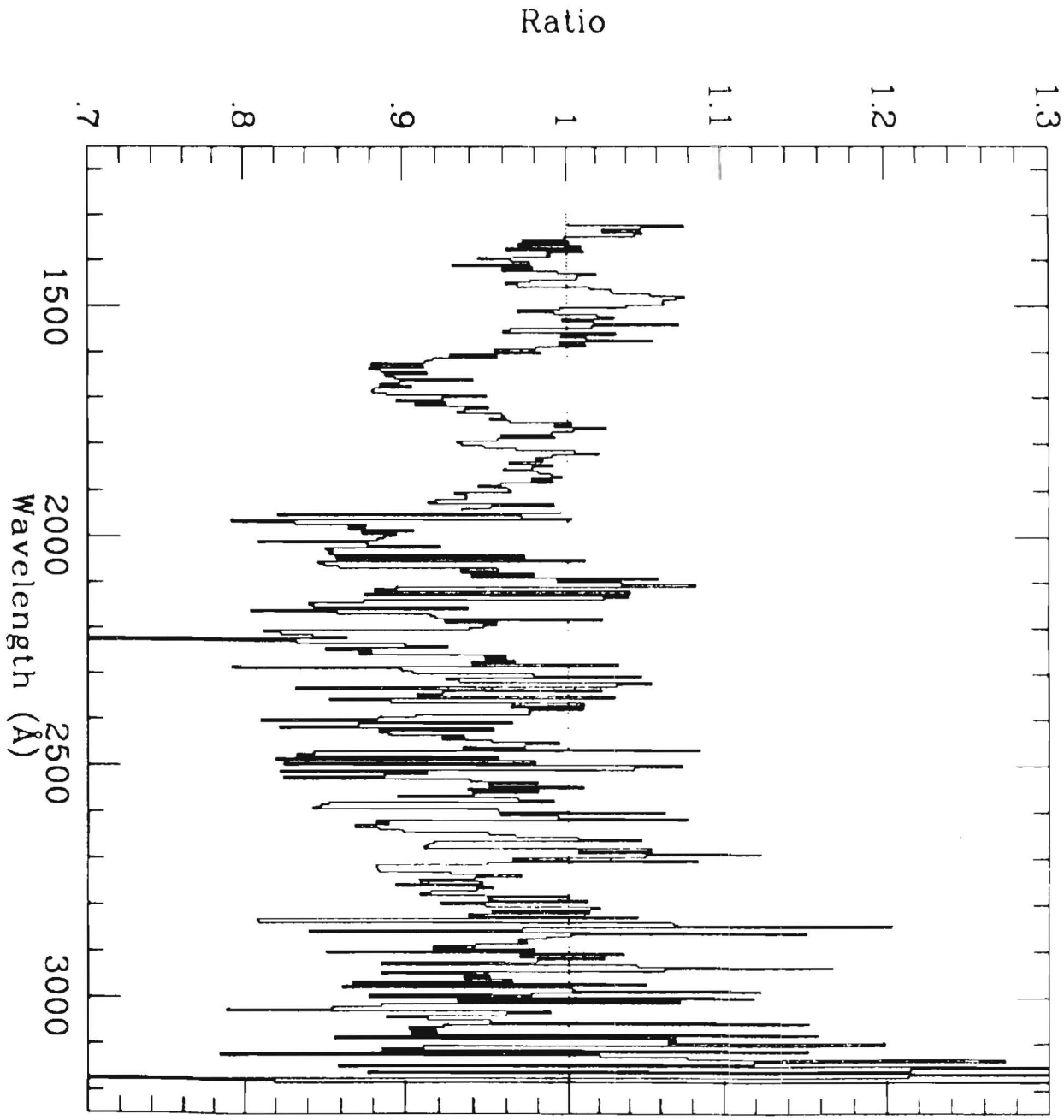
A. Cassatella and J. Fernley

List of Participants

A. Cassatella	- IUE, Vilspa
J. Fernley	- IUE, Vilspa
J. Finley	- Univ. of California, Berkeley
R. Gonzalez-Riestra	- IUE, Vilspa
D. Husfield	- Max Planck Institute, Munich
D. Koester	- Univ. of Louisiana, Baton Rouge
D. Massa	- IUE, GSFC
R. Monier	- IUE, Vilspa
J. Nichols-Bohlin	- IUE, GSFC
N. Oliversen	- IUE, GSFC
W. Wamsteker	- IUE, Vilspa
V. Weidermann	- Univ. of Kiel



G191-B2B: Measured Flux vs. Model Flux


Ratio
.7
.8
.9
1
1.1
1.2
1.3
1500
2000
2500
3000
Wavelength (Å)
G191-B2B Measured Flux to Model Flux Ratio

IUE-ROSAT All Sky Survey (RIASS) News

D. de Martino - W. Wamsteker

The heroic RIASS program has now entered its last operative month. Since the start of the 6 months survey phase in the EUV and soft X-rays of the ROSAT satellite, this program has successfully operated at both the VILSPA and Goddard stations. The adoption of integrated scheduling and service observing has been efficient firstly in minimizing the impact of this large program on the regular IUE operations, secondly in optimizing the allocated IUE time according to the proposed observing plans indicated by P.I.'s and thirdly in adapting to changes in the Sky Survey schedule. A total of 108 shifts have been done up to December and a log of IUE observations is reported in the following pages.

The RIASS program not only triggered a large amount of ground based observations as already mentioned in the IUE Newsletter $N°35$ but also hard X-ray observations of the GINGA satellite have been coordinated for a number of Active Galactic Nuclei.

In order to smoothly distribute both IUE and EUV and X-ray data to the large number of investigators involved in this program, IUE output products have been immediately delivered to all defined P.I.'s. The ROSAT survey extraction has recently started in December and the data will be supplied to RIASS P.I's, as soon as they become available, in the form of position of the X-ray source and fluxes in the various energy bands. Depending on the S/N, X-ray spectra and spectral fits, X-ray light curves and basic time variability analysis will be also supplied. The GINGA data will be also distributed with the EUV and soft X-ray data. Queries about data distribution can be directed to Willem Wamsteker(28843::IUEOBS) or to Miguel Mas at the Max Planck Institute (28773::RIASS). Plans are currently being made to evaluate the feasibility of creating a catalogue of the coordinated observations at all available wavelengths.

Log of IUE observations in support of RIASS program.

Target ID ROSAT Window	Image #	Res.	Time	PI (NASA/ESA)	Program ID	IUE Date/Shift
HD 143454 JUL-30:AUG-01	SWP39385	Low	10+50min	Stencel(N) Selvelli(E)	ZAMRS MI180	AUG-02-1990/US1
	LWP18504	Low	30 min	Stencel(N) Selvelli(E)	ZAMRS MI180	AUG-02-1990/US1
HD 22468 AUG-01:AUG-03	SWP39386	Low	30 min	Guinan(N)	RSMEG	AUG-02-1990/US1
	LWP18552	High	13 min	Guinan(N)	RSMEG	AUG-10-1990/US2
HD 154905 JUL-31:AUG-09	SWP39387	Low	40 min	Ayres(N)	CCMTA	AUG-02-1990/US1
3C 345 AUG-07:AUG-11	SWP39425	Low	485 min	Urry(N) Green(N)	RGMCU AGMRG	AUG-08-1990/VIL
	SWP39431	Low	327 min	Urry(N) Green(N)	RGMCU AGMRG	AUG-09-1990/VIL
HD 109857 AUG-08:AUG-12	SWP39434	High	100 min	de Martino(E)	MI180	AUG-10-1990/US2
HD 128620 AUG-08:AUG-11	SWP39441	Low	23 min	Ayres(N) Jordan(E)	CCMTA MC180	AUG-11-1990/US2
	LWP18562	High	2 min	Ayres(N) Jordan(E)	CCMTA MC180	AUG-11-1990/US2
HD 128621 AUG-08:AUG-11	SWP39442	Low	40 min	Ayres(N) Jordan(E)	CCMTA MC180	AUG-11-1990/US2
	LWP18561	High	3 min	Ayres(N) Jordan(E)	CCMTA MC180	AUG-11-1990/US2
E1615+061 AUG-11:AUG-13	SWP39443	Low	420 min	Piro(E)	MQ180	AUG-11-1990/VIL
	LWP18564	Low	70 min	Piro(E)	MQ180	AUG-11-1990/VIL
HD 24534 AUG-13:AUG-15	SWP39462	High	20 min	de Martino(E)	MI180	AUG-14-1990/US1
HD 21629 AUG-11:AUG-14	LWP18585	Low	80 min	de Martino(E)	MI180	AUG-14-1990/US1
HD 71243 AUG-06:AUG-14	SWP39463	Low	50 min	Haisch(N)	CCMBH	AUG-14-1990/US1
	LWP18586	Low	1min 11s	Haisch(N)	CCMBH	AUG-14-1990/US1
3C 371 AUG-13:SEP-19	SWP39472	Low	314 min	Treves(E)	MQ180	AUG-16-1990/VIL
	LWP18601	Low	157 min	Ulrich(E)	MQ180	AUG-16-1990/VIL
	SWP39502	Low	380 min	Urry(N)	RGMCU	AUG-20-1990/VIL
	LWP18627	Low	180 min	Malkan(N)	AGMMM	AUG-20-1990/VIL
	SWP39540	Low	255 min	Courvoisier(E)	MQ180	AUG-26-1990/VIL
	LWP18668	Low	126 min			AUG-26-1990/VIL
	SWP39555	Low	285 min			AUG-31-1990/US1
	LWP18684	Low	140 min			AUG-31-1990/US1
	SWP39594	Low	130 min			SEP-06-1990/US1
	LWP18715	Low	280 min			SEP-06-1990/US1
	LWP18754	Low	140 min			SEP-10-1990/US1
	SWP39609	Low	290 min			SEP-10-1990/US1
	SWP39637	Low	266 min			SEP-14-1990/VIL
	LWP18784	Low	125 min			SEP-14-1990/VIL
	SWP39655	Low	282 min			SEP-17-1990/VIL
	LWP18806	Low	140 min			SEP-17-1990/VIL

HD 28307	SWP39503	Low	70 min	Ayres(N)	CCMTA	AUG-20-1990/US1
AUG-18:AUG-20						
HD 35072	SWP39504	Low	95 min	Ayres(N)	CCMTA	AUG-20-1990/US1
AUG-15:AUG-22						
HD 25940	SWP39529	High	1min 50s	Peters(N)	XBMGP	AUG-25-1990/US2
AUG-20:AUG-22				de Martino(E)	MI180	
	LWP18672	Low	0.9 sec	Peters(N)	XBMGP	AUG-27-1990/US2
				de Martino(E)	MI180	
	SWP39544	Low	1.3 sec	Peters(N)	XBMGP	AUG-27-1990/US2
				de Martino(E)	MI180	
HD 159181	SWP39543	Low	20 min	Ayres(N)	CCMTA	AUG-27-1990/US2
AUG-19:AUG-28				Harper(E)	MC180	
	LWP18671	High	10 min	Ayres(N)	CCMTA	AUG-27-1990/US2
				Harper(E)	MC180	
HD 33328	SWP39542	High	50 sec	Peters(N)	XBMGP	AUG-27-1990/US2
AUG-26:AUG-28						
HD 31398	LWP18670	High	20 min	Harper(E)	MC180	AUG-27-1990/US2
AUG-27:AUG-30	SWP39541	Low	120 min	Harper(E)	MC180	AUG-27-1990/US2
KAZ 102	SWP39545	Low	435 min	Malkan(N)	AGMMM	AUG-27-1990/VIL
JUL-30:OCT-17	SWP30558	Low	388 min	Wilkes(N)	AGMBW	AUG-31-1990/VIL
	SWP39608	Low	428 min	Ulrich(E)	MQ180	SEP-10-1990/VIL
	SWP39664	Low	420 min	Maraschi(E)	MQ180	SEP-19-1990/VIL
	SWP39718	Low	423 min			SEP-27-1990/VIL
	SWP39788	Low	379 min			OCT-07-1990/VIL
	SWP39831	Low	405 min			OCT-14-1990/VIL
	LWP19011	Low	390 min			OCT-14-1990/US1
3C390.3	SWP39554	Low	414 min	Courvoisier(E)	MQ180	AUG-30-1990/VIL
AUG-29:SEP-08	SWP39565	Low	400 min	Courvoisier(E)	MQ180	SEP-01-1990/VIL
HD31910	SWP39569	Low	50 min	Ayres(N)	CCMTA	SEP-02-1990/US2
SEP-01:SEP-04						
HD34029	SWP39570	Low	1 min	Ayres(N)	CCMTA	SEP-02-1990/US2
SEP-02:SEP-04						
HD150798	LWP18694	High	10 min	Harper(E)	MC180	SEP-02-1990/US2
AUG-31:SEP-04	SWP39568	Low	70 min	Harper(E)	MC180	SEP-02-1990/US2
HD155885	SWP39571	Low	140 min	Ayres(N)	CCMTA	SEP-02-1990/US2
AUG-31:SEP-02						
HD163930	SWP39613	Low	120 min	Linsky(N)	RSMJL	SEP-11-1990/US1
SEP-09:SEP-13				Rodono'(E)	MC180	
	LWP18763	High	90 min	Linsky(N)	RSMJL	SEP-11-1990/US1
				Rodono'(E)	MC180	
HD164284	SWP39614	High	2m 10s	Peters(N)	XBMGP	SEP-11-1990/US1
SEP-10:SEP-13	SWP39631	Low	1.3 sec	Peters(N)	XBMGP	SEP-13-1990/US1
	LWP18778	Low	0.9 sec	Peters(N)	XBMGP	SEP-13-1990/US1
HD39587	LWP18764	High	25 min	Ayres(N)	CCMTA	SEP-11-1990/US1
SEP-09:SEP-11	SWP39615	Low	75 min	Guinan(N)	RSMEG	SEP-11-1990/US1
				Harper(E)	MC180	
				Jordan(E)	MC180	
HD165341	SWP39630	Low	45 min	Ayres(N)	CCMTA	SEP-13-1990/US1
SEP-12:SEP-15						
LB 1800	SWP39632	Low	25 min	Raymond(N)	XBMJR	SEP-13-1990/US1
SEP-14:SEP-21	LWP18779	Low	35 min	Raymond(N)	XBMJR	SEP-13-1990/US1

	SWP39633	Low	40 min	Raymond(N)	XBMJR	SEP-13-1990/US1
HD44982 SEP-12:SEP-17	SWP39634	Low	100 min	Linsky(N) Rodono'(E)	RSMJL MC180	SEP-13-1990/US1
AM HER SEP-18:SEP-25	SWP39670	Low	35 min	Beuermann(E)	MI180	SEP-21-1990/VIL
	LWP18842	Low	25 min	de Martino(E)	MI180	SEP-21-1990/VIL
	SWP39671	Low	70 min			SEP-21-1990/VIL
	LWP18843	Low	50 min			SEP-21-1990/VIL
	SWP39672	Low	60 min			SEP-21-1990/VIL
HD45314 SEP-17:SEP-20	SWP39696	High	15 min	de Martino(E)	MI180	SEP-23-1990/US2
HD48737 SEP-22:SEP-25	SWP39697	Low	20 min	Ayres(N)	CCMTA	SEP-23-1990/US2
HD173667 SEP-26:SEP-29	SWP39698	Low	45 min	Ayres(N)	CCMTA	SEP-23-1990/US2
	LWP18855	High	18 min	Ayres(N)	CCMTA	SEP-23-1990/US2
3C 382	SWP39709	Low	380 min	Clavel(E)	MQ180	SEP-25-1990/VIL
HD 234677 SEP-29:OCT-07	SWP39725	Low	90 min	Barstow(E)	MC180	SEP-29-1990/VIL
	LWP18893	Low	8+8 min	Rodono'(E)	MC180	SEP-29-1990/VIL
	SWP39726	Low	90 min			SEP-29-1990/VIL
	LWP18894	Low	8+8 min			SEP-29-1990/VIL
	SWP39727	Low	97 min			SEP-29-1990/VIL
	LWP18895	Low	8+8 min			SEP-29-1990/VIL
	SWP39733	Low	90 min			SEP-30-1990/VIL
	LWP18904	Low	8+8 min			SEP-30-1990/VIL
	SWP39734	Low	93 min			SEP-30-1990/VIL
	LWP18905	Low	150 min			SEP-30-1990/VIL
	LWP18911	High	75 min			OCT-01-1990/VIL
	SWP39738	Low	75 min			OCT-01-1990/VIL
	LWP18912	High	40 min			OCT-01-1990/VIL
	SWP39739	Low	75 min			OCT-01-1990/VIL
	LWP18913	High	40 min			OCT-01-1990/VIL
	SWP39740	Low	60 min			OCT-01-1990/VIL
	LWP18922	High	75 min			OCT-02-1990/VIL
	SWP39745	Low	75 min			OCT-02-1990/VIL
	LWP18923	High	75 min			OCT-02-1990/VIL
	SWP39746	Low	75 min			OCT-02-1990/VIL
	LWP18924	High	40 min			OCT-02-1990/VIL
	SWP39747	Low	39 min			OCT-02-1990/VIL
	LWP18930	High	75 min			OCT-03-1990/VIL
	SWP39754	Low	75 min			OCT-03-1990/VIL
	LWP18931	High	60 min			OCT-03-1990/VIL
	SWP39755	Low	75 min			OCT-03-1990/VIL
	LWP18932	High	50 min			OCT-03-1990/VIL
	SWP39756	Low	45 min			OCT-03-1990/VIL
	SWP39761	Low	30 min			OCT-04-1990/VIL
	LWP18936	High	75 min			OCT-04-1990/VIL
	SWP39762	Low	50 min			OCT-04-1990/VIL
	LWP18937	High	50 min			OCT-04-1990/VIL
	SWP39763	Low	50 min			OCT-04-1990/VIL
	LWP18938	High	50 min			OCT-04-1990/VIL
	SWP39764	Low	50 min			OCT-04-1990/VIL
HD 72905 OCT-04:OCT-07	SWP39773	Low	65 min	Ayres(N)	CCMTA	OCT-05-1990/VIL
HD 62509 OCT-05:OCT-07	SWP39774	Low	105 min	Ayres(N)	CCMTA	OCT-05-1990/VIL
HD 82210 0CT-07:OCT-11	SWP39793	Low	65 min	Ayres(N)	CCMTA	OCT-08-1990/US2
	LWP18970	High	12 min	Ayres(N)	CCMTA	OCT-08-1990/US2
	SWP39794	Low	70 min	Ayres(N)	CCMTA	OCT-08-1990/US2

HD 61421	SWP39801	Low	4 min	Ayres(N)	CCMTA	OCT-09-1990/VIL
OCT-08:OCT-11						
HD 64511	SWP39800	Low	70 min	de Martino(E)	MI180	OCT-09-1990/VIL
OCT-08:OCT-10	LWP18974	Low	27 min			OCT-09-1990/VIL
HD 58978	SWP39806	High	2m 50s	Henrichs(E)	MI180	OCT-11-1990/US2
OCT-10:OCT-13	LWP18982	High	1m 30s	Henrichs(E)	MI180	OCT-11-1990/US2
HD 61064	SWP39807	Low	55 min	Ayres(N)	CCMTA	OCT-11-1990/US2
OCT-09:OCT-11	LWP18983	High	70 min	Ayres(N)	CCMTA	OCT-11-1990/US2
H1821+643	SWP39826	Low	290 min	Halpern(N)	QSMJH	OCT-13-1990/US1
OCT-13:NOV-19	LWP19005	Low	123 min	Fink(E)	MQ180	OCT-13-1990/US1
	SWP39868	Low	270 min	Malkan(N)	AGMMM	OCT-19-1990/VIL
	LWP19035	Low	108 min	Ulrich(E)	MQ180	OCT-19-1990/VIL
	SWP39930	Low	290 min			OCT-23-1990/US1
	LWP19054	Low	120 min			OCT-23-1990/US1
	SWP39985	Low	279 min			OCT-28-1990/VIL
	LWP19085	Low	120 min			OCT-28-1990/VIL
	SWP40046	Low	280 min			NOV-04-1990/VIL
	LWP19144	Low	106 min			NOV-04-1990/VIL
	SWP40089	Low	272 min			NOV-09-1990/VIL
	LWP19182	Low	100 min			NOV-09-1990/VIL
	SWP40103	Low	271 min			NOV-13-1990/VIL
	LWP19219	Low	100 min			NOV-13-1990/VIL
HM Sge	SWP39837	Low	10 min	Nussbaumer(E)	MI180	OCT-15-1990/US1
OCT-13:OCT:16	LWP19015	Low	8 min	Stencel(N)	ZAMRS	OCT-15-1990/US1
	SWP39838	Low	80 min			OCT-15-1990/US1
	LWP19016	Low	80 min			OCT-15-1990/US1
	LWP19017	High	177 min			OCT-15-1990/US1
Mrk 205	SWP39842	Low	400 min	Ulrich(E)	MQ180	OCT-16-1990/US1
OCT-16:OCT-20						
CK VUL	SWP39860	Low	750 min	Krautter(E)	MI180	OCT-18-1990/COL
OCT-17:OCT-20						
HD 187399	SWP39888	High	80 min	de Martino(E)	MI180	OCT-20-1990/US1
OCT-19:OCT-23						
HD 106677	LWP19045	High	30 min	Linsky(N)	RSMJL	OCT-20-1990/US1
OCT-21:OCT-26	SWP39889	Low	75 min	Rodono'(E)	MC180	OCT-20-1990/US1
HD 72779	SWP39890	Low	95 min	Ayres(N)	CCMTA	OCT-20-1990/US1
OCT-18:OCT-21						
Mrk 509	SWP39925	Low	30 min	Westergaard(E)	MQ180	OCT-23-1990/US2
OCT-23:OCT-25	LWP19048	Low	30 min	Gaskell(N)	AGMCG	OCT-23-1990/US2
	SWP39926	Low	45 min			OCT-23-1990/US2
	LWP19049	Low	20 min			OCT-23-1990/US2
	SWP39928	Low	30 min			OCT-23-1990/VIL
	LWP19053	Low	30 min			OCT-23-1990/VIL
	SWP39929	Low	40+40min			OCT-23-1990/VIL
QQ VUL	SWP39927	Low	94 min	de Martino(E)	MI180	OCT-23-1990/VIL
OCT-22:OCT-25	LWP19052	Low	94 min			OCT-23-1990/VIL
CH Cyg	LWP19071	High	50 min	Cardini(E)	MI180	OCT-27-1990/VIL
OCT-24:OCT-30	SWP39971	High	100 min	Stencel(N)	ZAMRS	OCT-27-1990/VIL
	LWP19072	Low	10 min			OCT-27-1990/VIL
	SWP39972	Low	15 min			OCT-27-1990/VIL
HD 109387	SWP39973	High	1m 25s	Peters(N)	XBMGP	OCT-27-1990/VIL
OCT-28:NOV-01				de Martino(E)	MI180	
HD 203387	LWP19073	High	15+15min	Montesinos(E)	MC180	OCT-27-1990/VIL

OCT-30:NOV-01	SWP39974	Low	15 min	Haisch(N)	CCMBH	OCT-27-1990/VIL
LHG 83	SWP39995	Low	407 min	Pakull(E)	MI180	OCT-29-1990/VIL
SEP-27:NOV-14	SWP40017	Low	380 min			NOV-01-1990/US1
	SWP40047	Low	375 min			NOV-04-1990/US1
	SWP40075	Low	380 min			NOV-07-1990/US1
SN 1987A	SWP40002	Low	270 min	Sonnerborn(N)	SNMGS	OCT-30-1990/US1
OCT-10:NOV-07	LWP19090	Low	105 min			OCT-30-1990/US1
PKS 2155-304	SWP40024	Low	60 min	Urry(N)	RGMCU	NOV-02-1990/US2
NOV-03:NOV-05	LWP19124	Low	30 min			NOV-02-1990/US2
	SWP40025	Low	50 min			NOV-02-1990/US2
	SWP40056	Low	80 min			NOV-05-1990/US1
	LWP19155	Low	30 min			NOV-05-1990/US1
VW HYI	SWP40028	Low	20 min	Naylor(E)	MI180	NOV-03-1990/VIL
	LWP19128	Low	10 min			NOV-03-1990/VIL
	SWP40029	Low	20 min			NOV-03-1990/VIL
	LWP19129	Low	10 min			NOV-03-1990/VIL
	SWP40030	Low	20 min			NOV-03-1990/VIL
	LWP19130	Low	6 min			NOV-03-1990/VIL
	SWP40031	Low	15 min			NOV-03-1990/VIL
	LWP19131	Low	3 min			NOV-03-1990/VIL
	SWP40032	Low	5 min			NOV-03-1990/VIL
	LWP19132	Low	1m 30s			NOV-03-1990/US1
	SWP40033	Low	2 min			NOV-03-1990/US1
	LWP19133	Low	1m 30s			NOV-03-1990/US1
	SWP40034	Low	4 min			NOV-03-1990/US1
	LWP19134	Low	1m 30s			NOV-03-1990/US1
	SWP40035	Low	4m 30s			NOV-03-1990/US1
	LWP19135	Low	1m 45s			NOV-03-1990/US1
	SWP40036	Low	4m 30s			NOV-03-1990/US1
	SWP40037	Low	4m 30s			NOV-03-1990/US1
	LWP19136	Low	1m 45s			NOV-03-1990/US1
	SWP40038	Low	4 min			NOV-03-1990/US1
	LWP19137	Low	1 min			NOV-04-1990/US2
	SWP40039	Low	3 min			NOV-04-1990/US2
	LWP19138	Low	1 min			NOV-04-1990/US2
	SWP40040	Low	2m 30s			NOV-04-1990/US2
	LWP19139	Low	1 min			NOV-04-1990/US2
	SWP40041	Low	2m 30s			NOV-04-1990/US2
	LWP19140	Low	1 min			NOV-04-1990/US2
	SWP40042	Low	2m 30s			NOV-04-1990/US2
	LWP19141	Low	1 min			NOV-04-1990/US2
	SWP40043	Low	2m 15s			NOV-04-1990/US2
	LWP19142	Low	1 min			NOV-04-1990/US2
	SWP40044	Low	2m 15s			NOV-04-1990/US2
	LWP19143	Low	1 min			NOV-04-1990/US2
	SWP40045	Low	2m 30s			NOV-04-1990/US2
	SWP40057	Low	10 min			NOV-05-1990/US1
	LWP19156	Low	7 min			NOV-05-1990/US1
	SWP40058	Low	10 min			NOV-05-1990/US1
	LWP19157	Low	6 min			NOV-05-1990/US1
	SWP40059	Low	10 min			NOV-05-1990/US1
	SWP40073	Low	30 min			NOV-07-1990/VIL
	LWP19172	Low	20 min			NOV-07-1990/VIL
HD 1581	SWP40060	Low	65 min	Ayres(N)	CCMTA	NOV-05-1990/US1
NOV-03:NOV-08						
Mrk 279	SWP40074	Low	120 min	Gakell(N)		NOV-07-1990/VIL
NOV-05:NOV-10	LWP19173	Low	107 min			NOV-07-1990/VIL
H0139-68	SWP40082	Low	227 min	de Martino(E)	MI180	NOV-08-1990/US1
NOV-07:NOV-13	LWP19175	Low	165 min			NOV-08-1990/US1
HD77137;TYPyx	FES 2383	Full-field		Rodono'(E)	MC180	NOV-10-1990/US2

NOV-10:NOV-13	LWP19186	High	60 min	Linsky(N)	RSMJL	NOV-10-1990/US2
	SWP40092	Low	30 min	Gimenez(E)	MC180	NOV-10-1990/US2
	LWP19187	High	60 min			NOV-10-1990/US2
	SWP40093	Low	90 min			NOV-10-1990/US2
	LWP19188	High	60 min			NOV-10-1990/US2
	LWP19189	High	60 min			NOV-10-1990/US2
	FES 2384	Default				NOV-10-1990/US2
	LWP19190	High	60 min			NOV-10-1990/VIL
	SWP40094	Low	90 min			NOV-10-1990/VIL
	LWP19191	High	60 min			NOV-10-1990/VIL
	LWP19192	High	90 min			NOV-10-1990/VIL
	FES 2385	Default				NOV-10-1990/VIL
	LWP19193	High	90 min			NOV-10-1990/US1
	SWP40095	Low	90 min			NOV-10-1990/US1
	LWP19194	High	90 min			NOV-10-1990/US1
	LWP19195	High	90 min			NOV-10-1990/US1
	LWP19196	High	90 min			NOV-10-1990/US1
	SWP40096	Low	90 min			NOV-11-1990/US2
	LWP19197	High	90 min			NOV-11-1990/US2
	LWP19198	High	90 min			NOV-11-1990/US2
	LWP19199	High	90 min			NOV-11-1990/US2
	FES 2386	Default				NOV-11-1990/US2
	SWP40097	Low	30 min			NOV-11-1990/US2
			+90 min			NOV-11-1990/VIL
	LWP19200	High	90 min			NOV-11-1990/VIL
	LWP19201	High	90 min			NOV-11-1990/VIL
	FES 2387	Default				NOV-11-1990/VIL
	LWP19202	High	90 min			NOV-11-1990/US1
	SWP40098	Low	120 min			NOV-11-1990/US1
	LWP19203	High	90 min			NOV-11-1990/US1
	LWP19204	High	90 min			NOV-11-1990/US1
	LWP19205	High	90 min			NOV-11-1990/US1
	SWP40099	Low	100 min			NOV-12-1990/US2
	LWP19206	High	90 min			NOV-12-1990/US2
	LWP19207	High	60 min			NOV-12-1990/US2
	LWP19208	High	90 min			NOV-12-1990/US2
	SWP40100	Low	40 min			NOV-12-1990/US2
			+80 min			NOV-12-1990/VIL
	LWP19209	High	90 min			NOV-12-1990/VIL
	LWP19210	High	90 min			NOV-12-1990/VIL
	LWP19211	High	90 min			NOV-12-1990/VIL
	FES 2388	Default				NOV-12-1990/VIL
	SWP40101	Low	120 min			NOV-12-1990/US1
	LWP19212	High	90 min			NOV-12-1990/US1
	LWP19213	High	90 min			NOV-12-1990/US1
	LWP19214	High	90 min			NOV-12-1990/US1
	SWP40102	Low	110 min			NOV-13-1990/US2
	LWP19215	High	90 min			NOV-13-1990/US2
	LWP19216	High	70 min			NOV-13-1990/US2
	LWP19217	High	75 min			NOV-13-1990/US2
	LWP19218	High	90 min			NOV-13-1990/US2
HD 212697	SWP40124	Low	100 min	Rossi(E)	MC180	NOV-17-1990/US2
NOV-14:NOV-17	LWP19235	High	40 min	Ayres (N)	CCMTA	NOV-17-1990/US2
N LMC 88#2	SWP40135	Low	830 min	Krautter(E)	MI180	NOV-18-1990/COL
NOV-03:NOV-26	FES 2394	Default				NOV-18-1990/VIL
HD 201091	SWP40140	Low	185 min	Ayres(N)	CCMTA	NOV-19-1990/VIL
NOV-18:NOV-22						
HD 85444	LWP19249	High	50 min	Haisch(N)	CCMBH	NOV-20-1990/US2
NOV-18:NOV-20	SWP40145	Low	90 min			NOV-20-1990/US2
	LWP19250	Low	0m 15sec			NOV-20-1990/US2
NGC 4051	SWP40161	Low	133 min	Green(N)		NOV-22-1990/VIL
NOV-21:NOV-24	LWP19265	Low	133 min	Walter(E)	MQ180	NOV-22-1990/VIL
	SWP40162	Low	100 min			NOV-22-1990/VIL

Fairall 9	LWP19270	Low	50 min	Walter(E)	MQ180	NOV-23-1990/US1
NOV-22:NOV-26	SWP40179	Low	100 min			NOV-23-1990/US1
	SWP40180	Low	20 min			NOV-23-1990/US1
HD 129333	LWP19285	High	90 min	Guinan(N)	RSMEG	NOV-26-1990/US1
NOV-23:NOV-29	SWP40203	Low	300 min			NOV-26-1990/US1
NGC 4151	SWP40207	Low	100 min	Walter(E)	MQ180	NOV-27-1990/VIL
NOV-26:NOV-29	LWP19289	Low	50 min			NOV-27-1990/VIL
HD 200120	SWP40208	High	1m 15sec	Peters(N)	XBMGP	NOV-27-1990/VIL
NOV-24:NOV-29						
AG DRA	SWP40226	Low	10+2 min	Stencel(N)	ZAMRS	NOV-29-1990/VIL
NOV-24:DEC-04	LWP19313	Low	10+4 min	Nussbaumer(E)	MI180	NOV-29-1990/VIL
	SWP40227	High	71 min	Viotti(E)	MI180	NOV-29-1990/VIL
MRK 876	SWP40246	Low	240 min	Ulrich(E)	MI180	DEC-02-1990/VIL
NOV-30:DEC-11	LWP19339	Low	125 min			DEC-02-1990/VIL
	SWP40274	Low	240 min			DEC-05-1990/VIL
	LWP19355	Low	109 min			DEC-05-1990/VIL
	SWP40289	Low	240 min			DEC-08-1990/VIL
	LWP19372	Low	170 min			DEC-08-1990/VIL
	SWP40305	Low	240 min			DEC-10-1990/VIL
	LWP19380	Low	154 min			DEC-10-1990/VIL
HD 222800	SWP40263	Low	30 min	Viotti(E)	MI180	DEC-03-1990/US1
DEC-02:DEC-05	LWP19348	Low	30 min	Stencel(N)	ZAMRS	DEC-03-1990/US1
	SWP40265	High	115 min			DEC-03-1990/US1
(JET)	SWP40264	Low	180 min			DEC-03-1990/US1
HD 222107	LWP19349	High	4 min	Guinan(N)	RSMEG	DEC-04-1990/US2
DEC-30:JAN-03	SWP40266	Low	30 min	Rodono'(E)	MC180	DEC-04-1990/US2
HD 108102	LWP19377	High	210 min	Linsky(N)	RSMJL	DEC-09-1990/VIL
DEC-07:DEC-09	SWP40294	Low	120 min	Rodono'(E)	MC180	DEC-09-1990/VIL
	LWP19378	Low	4m 40sec			DEC-09-1990/VIL
HD102870	SWP40307	Low	65 min	Ayres(N)	CCMTA	DEC-11-1990/VIL
DEC-09:DEC12						
PG 1211+143	SWP40308	Low	200 min	Ulrich(E)	MI180	DEC-11-1990/VIL
DEC-10:DEC12	LWP19386	Low	60 min			DEC-11-1990/VIL
HD 218356	SWP40309	Low	72 min	Harper(E)	MC180	DEC-11-1990/US1
DEC-11:DEC-14	LWP19387	High	20 min			DEC-11-1990/US1
HD 222368	SWP40310	Low	125 min	Ayres(N)	CCMTA	DEC-11-1990/US1
DEC_10:DEC-13	LWP19388	High	20 min			DEC-11-1990/US1
HD 102870	LWP19389	High	20 min	Ayres(N)	CCMTA	DEC-11-1990/US1
DEC-10:DEC-12						
HD 210334	LWP19393	High	60 min	Rodono'(E)	MC180	DEC-12-1990/VIL
DEC-10:DEC-14	SWP40313	Low	30 min	Gimenez(E)	MC180	DEC-12-1990/VIL
	LWP19394	High	70 min			DEC-12-1990/VIL
	SWP40314	Low	30+30 min			DEC-12-1990/VIL
	LWP19395	High	70 min			DEC-12-1990/VIL
	FES2399	Default				DEC-12-1990/VIL
	LWP19396	High	70 min			DEC-12-1990/US1
	SWP40315	Low	60 min			DEC-12-1990/US1
	LWP19397	High	70 min			DEC-12-1990/US1
	LWP19398	High	70 min			DEC-12-1990/US1
	SWP40316	Low	30 min			DEC-12-1990/US1
	SWP40317	Low	30+30 min			DEC-13-1990/VIL
	LWP19404	High	70 min			DEC-13-1990/VIL
	LWP19405	High	60 min			DEC-13-1990/VIL

	SWP40318	Low	30 min			DEC-13-1990/VIL
	LWP19406	High	60 min			DEC-13-1990/VIL
	SWP40319	Low	40 min			DEC-13-1990/VIL
	LWP19407	High	60 min			DEC-13-1990/VIL
	FES2400	Default				DEC-13-1990/VIL
	SWP40320	Low	50 min			DEC-13-1990/US1
	LWP19408	High	50 min			DEC-13-1990/US1
	SWP40321	Low	50 min			DEC-13-1990/US1
	LWP19409	High	32 min			DEC-13-1990/US1
	LWP19410	High	22 min			DEC-13-1990/US1
HD 126660	SWP40329	Low	25 min	Ayres(N)	CCMTA	DEC-14-1990/VIL
DEC-14:DEC:18						
HD 111812	SWP40330	Low	10+10 min	Haisch(N)	CCMBH	DEC-14-1990/VIL
DEC-12:DEC-15						
HD 4128	SWP40363	Low	35 min	Montesinos(E)	MC180	DEC-16-1990/US2
DEC-15:DEC-18	LWP19419	High	10 min	Haisch(N)	CCMBH	DEC-16-1990/US2
HD 220657	SWP40364	Low	20 min	Haisch(N)	CCMBH	DEC-16-1990/US2
DEC-15:DEC-17	LWP19420	High	20 min			DEC-16-1990/US2
HD 114710	SWP40380	Low	130 min	Ayres(N)	CCMTA	DEC-18-1990/VIL
DEC-17:DEC-19						
3C 273	LWP19447	Low	30 min	Courvoisier(E)	MQ180	DEC-19-1990/US1
DEC-18:DEC-21	SWP40391	Low	70 min	Urry(N)	RGMCU	DEC-19-1990/US1
	LWP19448	Low	27 min			DEC-19-1990/US1
	SWP40392	Low	30 min			DEC-19-1990/US1
	SWP40393	Low	25 min			DEC-19-1990/US1
	SWP40412	Low	25 min			DEC-20-1990/US1
	LWP19450	Low	27 min			DEC-20-1990/US1
	SWP40413	Low	30 min			DEC-20-1990/US1
	LWP19451	Low	27 min			DEC-20-1990/US1
	SWP40414	Low	30 min			DEC-20-1990/US1
HD 93497	LWP19165	High	15 min	Montesinos(E)	MC180	DEC-23-1990/VIL
DEC-23:DEC:26	SWP40444	Low	25 min	Ayres(N)	CCMTA	DEC-23-1990/VIL
Mrk 335	SWP40445	Low	193 min	Ulrich(E)	MQ180	DEC-23-1990/VIL
DEC-23:DEC-25	LWP19166	Low	94 min	Gaskell(N)	AGMCG	DEC-23-1990/VIL
				Walter(E)	MQ180	
HD 117555	LWP19468	High	130 min	Guinan(N)	RSMEG	DEC-24-1990/VIL
DEC-23:DEC-26	SWP40449	Low	140 min			
HD 16157	LWP19479	High	15 min	Jordan(E)	MC180	DEC-26-1990/US1
DEC-26:DEC-29	SWP40462	Low	90 min			DEC-26-1990/US1
	LWP19480	Low	5 min			DEC-26-1990/US1
HD 223460	SWP40463	Low	105 min	Ayres(N)	CCMTA	DEC-26-1990/US1
DEC-26:DEC-29	LWP19481	High	45 min			DEC-26-1990/US1
HD 224085	SWP40464	Low	60 min	Guinan(N)	RSMEG	DEC-26-1990/US1
DEC-24:DEC-26	LWP19482	High	40 min			DEC-26-1990/US1
NGC 3783	SWP 40469	Low	55+55+55m	Gaskell(N)	AGMCG	DEC-27-1990/VIL
DEC-25:DEC28						
HD 88661	LWP19483	High	3 min	Peters(N)	XBMGP	DEC-27-1990/US2
DEC-25:DEC-30	SWP40465	High	4m 30s	de Martino(E)	MI180	DEC-27-1990/US2
3C 279	SWP40489	Low	240 min	Urry(N)	RGMCU	DEC-29-1990/VIL
DEC-28:DEC-30	LWP19492	Low	120 min			
X0748-67	SWP40490	Low	440 min	Penninx(E)	MI180	DEC-29-1990/US1
DEC-27:JAN-07	SWP40507	Low	393 min			DEC-31-1990/US1

HD 36705	SWP40491	Low	70 min	Collier(E)	MI180	DEC-30-1990/US2
DEC-12:JAN-16	LWP19493	Low	3 min	Rodono'(E)	MI180	DEC-30-1990/US2
	SWP40492	Low	90 min	Vilhu(E)	MI180	DEC-30-1990/US2
	LWP19494	Low	2 min			DEC-30-1990/US2
	SWP40493	Low	90 min			DEC-30-1990/US2
	LWP19495	Low	2 min			DEC-30-1990/US2
	SWP40494	Low	90 min			DEC-30-1990/VIL
	LWP19496	High	20 min			DEC-30-1990/VIL
	SWP40495	Low	90 min			DEC-30-1990/VIL
	SWP49496	Low	90 min			DEC-30-1990/VIL
	LWP19497	High	25+25 min			DEC-30-1990/VIL
	SWP40497	Low	90 min			DEC-30-1990/US1
	LWP19498	High	50 min			DEC-30-1990/US1
	SWP40498	Low	90 min			DEC-30-1990/US1
	SWP40499	Low	90 min			DEC-30-1990/US1
	LWP19499	High	70 min			DEC-30-1990/US1
HD 222107	LWP19500	High	4 min	Guinan(N)	RSMEG	DEC-31-1990/US2
DEC-30:JAN-02	SWP40500	Low	30 min	Rodono'(E)	MI180	DEC-31-1990/US2
HD 4502	LWP19501	High	15 min	Linsky(N)	RSMJL	DEC-31-1990/US2
JAN-02:JAN-04	SWP40501	Low	20 min	Rodono'(E)	MI180	DEC-31-1990/US2
	LWP19502	High	10 min			DEC-31-1990/US2

ELECTRO-OPTICAL DISTORTIONS IN IUE CAMERAS

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ABSTRACT

We describe our unsuccessful attempt to characterize the distortions that are present in *IUE* images (and are common to all SEC Vidicon cameras) with a simple set of functions. The distortions seen on these cameras are produced by small components of the electric and magnetic fields that are not parallel to the electro-optical axis, and the effects on the images for non-diverging fields should be exactly analogous to classical Seidel aberrations in optical elements. However, we conclude that the simple Seidel aberrations do not fully describe the distortions of the reseau grid on any of the *IUE* cameras. Our main interest in characterizing the distortions was to facilitate the creation of Line-by-Line files for the *IUE* Final Archive for both high and low dispersion images. We achieve this goal through an interpolative/extrapolative approach and describe a superior method for determining the observed reseau positions.

1. Introduction

We have been investigating a means to create the equivalent of "Line-by-Line" (LBL) files for all images (i.e., both high and low dispersion) in the *IUE* archive. Here we define LBL files as spectral images in which the orders are all parallel to one row, and the dispersion is linear within each order. Our approach, to be discussed in detail in a future paper, has been to construct a vector field that maps each pixel from its raw space to a geometrically ideal space. These vectors include the displacements between the science image and the Intensity Transfer Function (ITF) due to thermal distortions, the correction of the reseau pattern to its original regular grid, the rotation of the spectral format to lie along rows, the correction for the splaying of the orders (for high dispersion) or the correction for the tilt of the large aperture (for certain low dispersion spectra), and the small change of scale needed to linearize the dispersion. This paper will focus on the second step, correcting the reseau pattern to a rectilinear grid, which in the context of early IUESIPS processing (see Turnrose & Harvel 1984, and references therein) used to be known as the "geometric correction". Since the reseaux are etched on the camera faceplate in a rectilinear grid, they provide an absolute correspondence

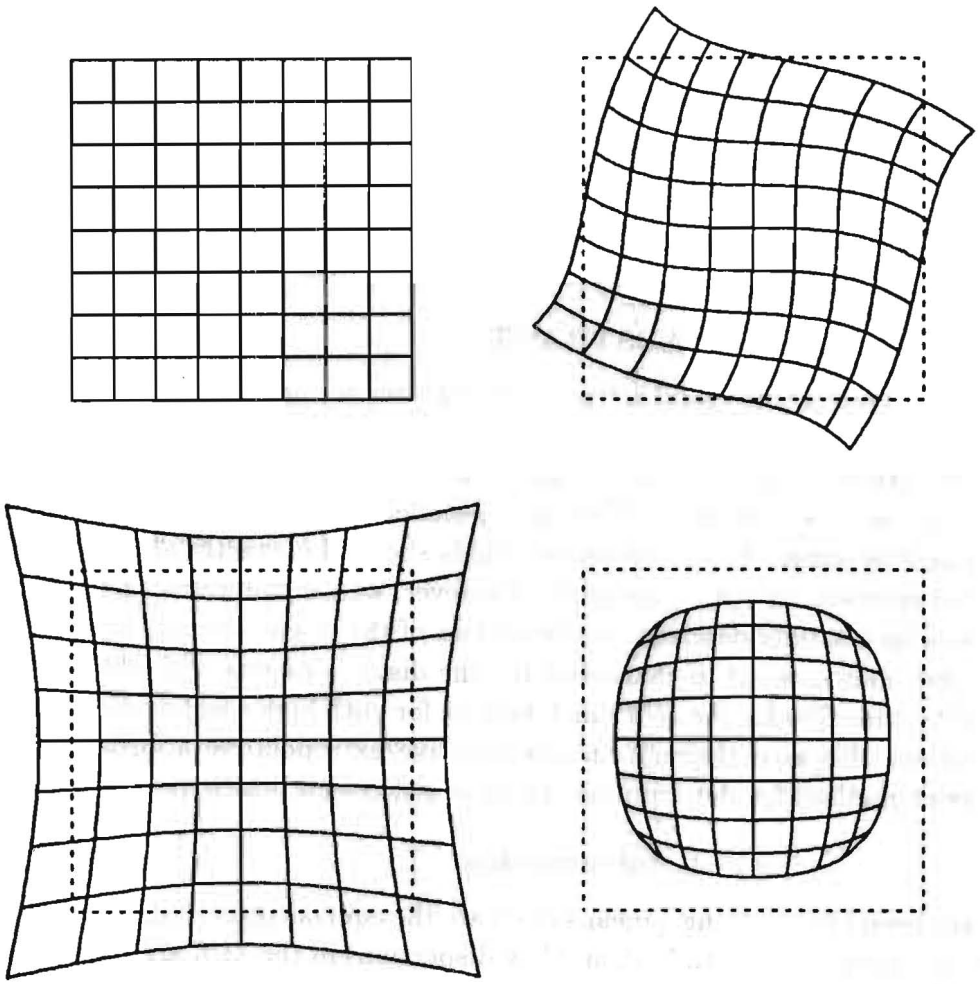

FIG. 1—Illustration of the effect of different Seidel distortions upon a reference grid (*a, upper left*): S–distortion (*b, upper right*), Pincushion distortion (*c, lower left*), and Barrel distortion (*d, lower right*).

between the undistorted geometry of the spectrograph focal plane and the image as formed by the electron optics of the camera. In order to map the distortions accurately for all parts of the image, it is important to measure the observed position of each reseau accurately, and to have a good model for how the distortions change across the image.

It has been known for some time (Busch 1926; Pilkington & Hartley 1972) that the combination of axially symmetric electric and magnetic fields have the properties of electron lenses. This follows from a relatively straightforward application of the Biot–Savart Law and Newton's Third Law of motion for an electron that is accelerated

through an electric potential, and is constrained to spiral around magnetic field lines that are parallel to the electric field (see, e.g., Zworykin, et al. 1945). The aberrations are produced by transverse components to the magnetic and electric fields resulting in a displacement of points in the image plane. These displacements vary across the camera face in a way that can be thought of as radially differential. That these aberrations affect *IUE* images is apparent from a comparison of Figs. 1 and 2. Figures 1*a–d* show how the image of a reference grid would appear after suffering S-distortion, pincushion-distortion or barrel-distortion, while Figs. 2*a–c* show the actual displacements of the reseaux in the three *IUE* cameras. The shapes of the reseaux also suggest the presence of coma at the edge of the field, as shown in Figs. 3*a,b*. Since these aberrations seem to be present, the displacements in Fig. 2 might be entirely attributable to non-divergent components of the electric and/or magnetic fields that do not lie along the optical axis. If this is the case, then the Seidel aberrations would yield the correct functional form of the reseau displacements.

2. Analysis of the Seidel Aberrations

The aberrations alluded to refer to the perturbation function which Schwarzchild called the Seidel Eikonal. A derivation of the classical, or Seidel, aberrations is beyond the scope of this paper, but a thorough discussion of the functions presented here may be found in Born & Wolf 1975. Instead we merely give the two third order equations that describe how position in the plane of the exit pupil (ξ, η) relates to a point displacement in the image (x, y) plane:

$$\Delta x = B\rho^3 \sin\theta - 2Fy_0\rho^2 \sin\theta\cos\theta + Dy_0^2\rho\sin\theta$$

and

$$\Delta y = B\rho^3\cos\theta - Fy_0\rho^2(1 + 2\cos^2\theta) + (2C + D)y_0^2\rho\cos\theta - Ey_0^3$$

Here ρ is the distance of the point from the origin in the plane of the exit pupil (i.e., $\rho^2 = \xi^2 + \eta^2$), θ is the angle between the point and the η axis, and y_0 is the position of the point in the object plane. For simplicity, the above equations show the relationships when the yz-plane is chosen to pass through the object point (i.e., $x_0 = 0$). In general the coefficients will have finite values, and each term corresponds to one of the Seidel aberrations. For spherical aberration, all the coefficients except B are zero; for astigmatism, C $\neq$ 0; for curvature of field, D $\neq$ 0; and for coma, F $\neq$ 0. The aberration of interest here, distortion, is represented by the E coefficient:

$$\Delta x = -Ex_0^3$$

$$\Delta y = -Ey_0^3$$

For the above relations, and all that follow, we do not require that $x_0 = 0$.

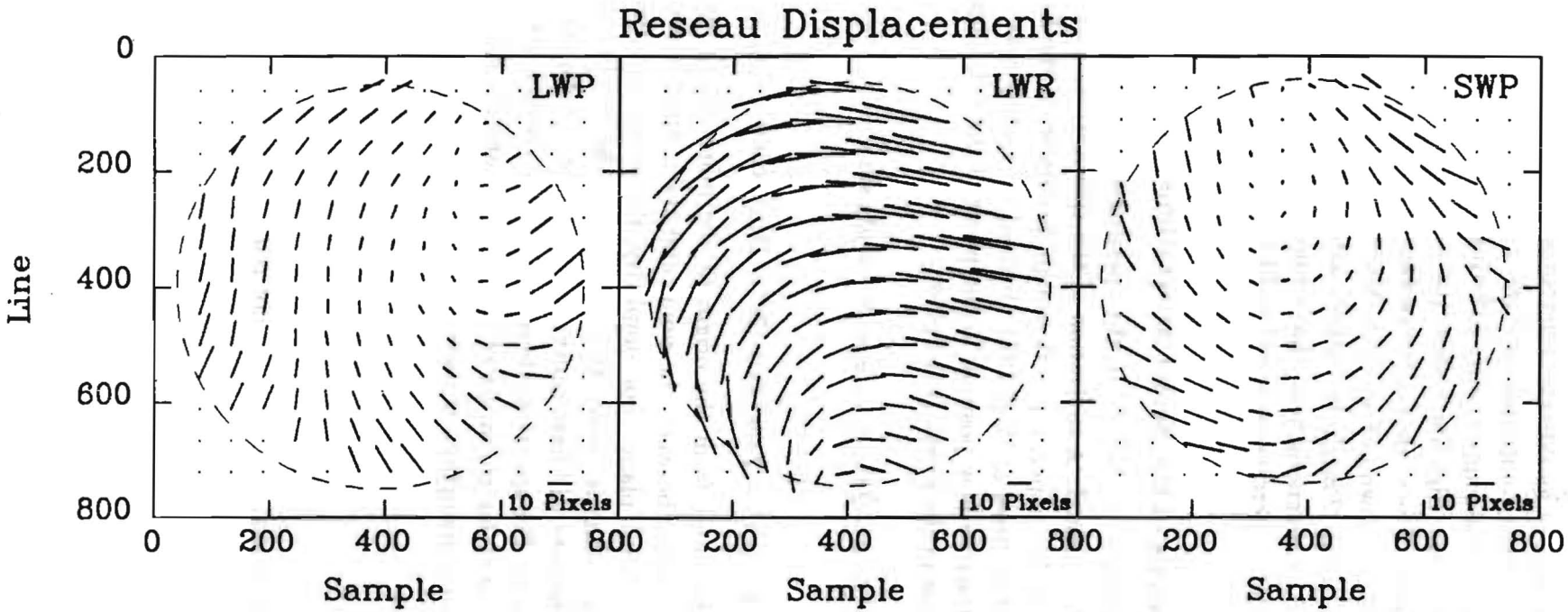

Fig. 2—Actual reseau displacements for the LWP (a, left), the LWR (b, center), and the SWP (c, right) cameras. The reseaux that fall outside the illuminated portion of the target (dashed line) are plotted as points, and the scale of the displacement vectors is given at the lower right of each panel.

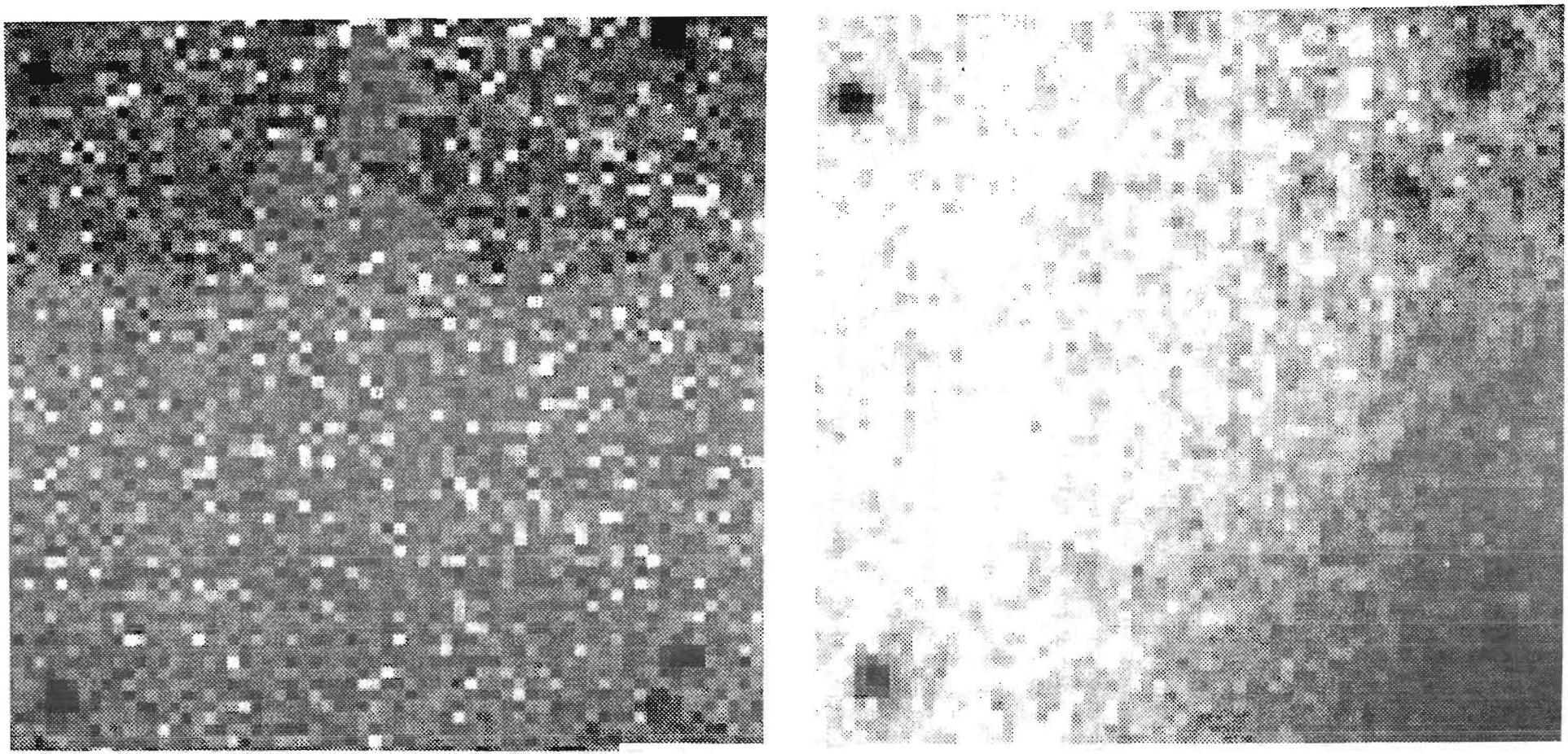

FIG. 3—Two portions of the 100% level of the SWP ITF, comparing the sharpness of the reseaux near the center (*a, left*) to those near the edge (*b, right*) of the image. The shapes of the reseaux near the edge are suggestive of the presence of coma.

These expressions are independent of angle, which means that the imaging will be stigmatic and independent of the radius of the exit pupil. The off-axis distance will not be proportional to that of the object in question. For barrel distortion, E will be greater than zero, and for pincushion, E will be less than zero. If there is distortion, the place where a straight line in the object plane meets the axis will be imaged as a straight line but the image of any other straight line will be curved (c.f. Fig. 1). For the Seidel aberrations listed above, spherical aberration, coma, and astigmatism cause lack of sharpness in features in the image. Curvature of field and distortion relate to the position and form of the image, and are often the dominant aberrations in Vidicons. But the primary aberration present in *IUE* cameras is distortion:

$$\phi = E\ y_0^3\ \rho\ \cos\theta$$

This includes S-distortion, and pincushion or barrel distortion. All the aberrations except distortion cause no significant point displacement.

3. Fitting the Distortion Function

In order to map the geometric distortions present in *IUE* images, the image plane must be defined as a differentiable surface. Since this surface can now be parameterized, a linear transformation can be induced. The constant coefficients in the aberration function can be solved directly from the field displacement vectors.

3.1. Determining the Reseau Positions

Before proceeding to fit the distortion function to the displacement vectors, we investigated the accuracy of the measured reseau positions for each camera. According to the IUESIPS V.2.0 Image Processing Manual (Turnrose & Harvel 1984, hereafter the SIPS Manual), the reseaux are located using a routine described by Perry & Turnrose 1977. Correlations of reseau positions with time, temperature, and exposure level are described by Thompson, Turnrose & Bohlin 1982 and Thompson, et al. 1980. All of these studies used essentially the same algorithm, wherein some assumed reseau shape was cross-correlated against portions of floodlamp images at specified approximate reseau locations. The method adopted in the above studies was to calculate a mean position for each reseau as measured from single, well-exposed images (e.g., 60%) and extrapolate to the null (0% exposure) level using correlations (among the higher levels) between exposure level and reseau position. The use of single images was necessary largely because the reseau positions are not generally constant from one image to another, but change with camera temperature (THDA). See the SIPS Manual for details. A major problem encountered in these earlier studies was that the reseaux are difficult to locate on single, weakly exposed images due to their low signal-to-noise ratio (SNR). And yet it is important to use the lowest possible floodlamp exposure level because it most closely approximates the background level on most science images.

We believe that this earlier method for determining reseau positions could be very inaccurate because of the low SNR of single images and because the correlations with THDA and exposure level, which were based upon these uncertain reseau positions, may not yield very accurate extrapolations to reseau positions on the null level. We elected to use a mean of several 20% UV-Flood exposures, and subtract from it the mean of over twenty null exposures. The null correction is necessary because the reseaux are still apparent on unexposed images due to the nature of the preparation sequence, but they are smaller and have a different shape. Using mean images here is viable largely because the series of UV-Flood images that were obtained for the 1984–85 epoch ITFs were all taken at nearly the same THDA (for a given camera), which is also near the median THDA for all images in the *IUE* archive. We found that the software had no difficulty establishing the reseau centers on the net 20% levels, even for reseaux on the edge of the illuminated field. Generally, the revised reseau positions differed with those listed in the SIPS manual by a few tenths of a pixel, but a few discrepancies as large as one pixel were noted.

3.2. Fit Parameters

As noted in the previous section, we need consider only those aberrations that correspond to image distortions since the other aberrations do not change the geometry of the image. Note again that the magnitude of a particular distortion scales as the cube of the distance from the electro-optical axis, and that its direction lies either along the radial vector (for pincushion/barrel distortion), or perpendicular to it (S–distortion). We therefore converted our coordinate system from measured displacements in `line` and `sample` to components parallel to and perpendicular to the radius vector.

Note that other factors, which are not strictly speaking aberrations, may affect our results as well. For example, the field may be slightly magnified or rotated by the electro-optical system. These effects can be easily represented with a term that scales with r parallel or perpendicular to the radius vector, respectively. It is also possible that the electro-optical axis does not correspond to the center of the target. Our approach here was to consider successively several different places (i.e., the positions of each of the $\sim$ 130 illuminated reseaux) on the image as the origin of our coordinate system.

In sum, then, we fit our displacements with equations of the form:

$$Q_{perp} = A_1 r + A_3 r^3$$

and

$$Q_{para} = B_1 r + B_3 r^3$$

The perpendicular and parallel components were fit individually and together in a further effort to insure a complete test of the field. Note that an r^2 term is not

required to fit these point displacements and does not improve the fits to the observed displacements.

4. Results and Summary

Using the above method the distortions (as represented by the constructed vector field) were subtracted from the reseau displacement vectors, as Figs. 4*a–c* illustrate for representative fits for each of the cameras. While the differences between the original displacement vectors and the functional fits are smaller than the displacement vectors themselves, a sizable 1–2 pixel average residual remains, and the fit is particularly poor near the edges. *We conclude that the simple Seidel aberrations do not fully describe the distortions of the reseau grid on any of the IUE cameras.* However, at least some of the reseau displacement pattern might be attributed to Seidel aberrations since the distortion vectors decline (on average) after subtracting out the characterization.

The real distortions may result from a violation of the initial assumption that the focussing magnetic field is close to uniform—e.g., the cameras may be immersed in a divergent magnetic field. There are at least two possible sources for such a field, the first being induction from power cables that run along two of the three cameras. We calculated the magnitude of the magnetic field within these cameras by treating the cables as a series of straight wires conducting the maximum current that they were likely to carry during normal operations. The contributions from induction to the total magnetic field were at least a factor of 30 less than the strength of the focussing fields, which we took to be $\sim$ 80 Gauss. While we cannot be certain that the divergence of the inducted field accross the width of the cameras is too small to cause the distortions, this possibility seems unlikely since the aberrations seem to become worse from center to edge, rather than from one side of the cameras to the other. Finally, we would have expected the functional fit to the LWR distortions to be better than the others since that camera is not so near a power cable, but the fit is, if anything, worse.

We believe the most likely source for divergent electric and/or magnetic fields are the cameras themselves. That is, the design of the accelerating potential and/or focussing fields may make some spatial non-uniformity unavoidable. The distortions seen in *IUE* cameras are certainly common for this type of device, in spite of serious attempts to shield them from stray electro-magnetic fields. In any case, the distortions particular to *IUE* cameras cannot be completely characterized by simple aberration theory, which renders an accurate functional characterization of the reseau displacements a difficult task.

Our original goal was to construct a vector field which maps pixels from the geometry of raw images to an ideal space—i.e., one in which the electronic distortions are removed and the orders are parallel to a single row. In this paper we described our unsuccessful attempt to characterize the distortion of the reseau grid with simple

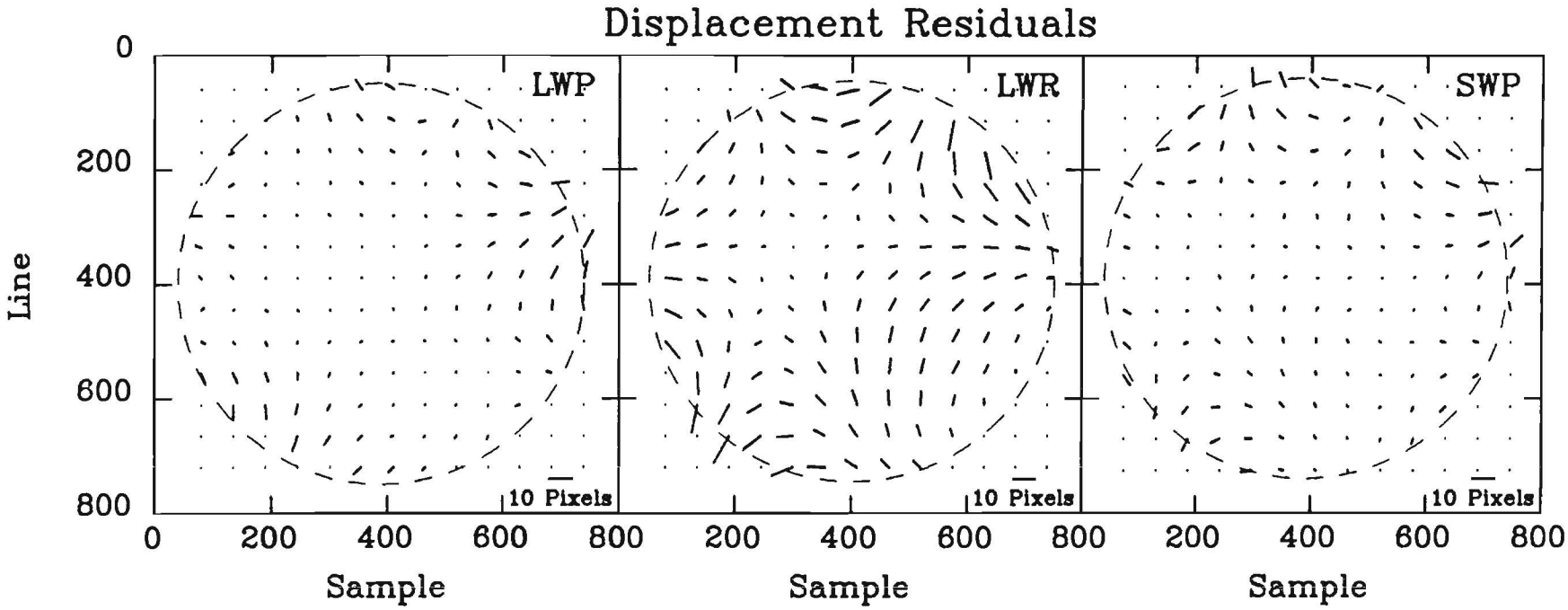

FIG. 4—Residual vector fields for the LWP (*a, left*), LWR (*b, center*), and SWP (*c, right*) cameras after the best fit of the distortion function (see text) has been subtracted from the reseau displacements of Fig. 2.

Seidel aberrations. This component of the geometric transformation will instead be evaluated by spatially interpolating the displacement vectors using a bicubic spline. But this approach is obviously inferior to having an *a priori* knowledge of the behavior of the distortions between the reseaux, and beyond them to the edge of the target ring. Still, the bicubic spline is superior to the linear interpolation that is used for coordinate transforms in current IUESIPS processing. When combined with our more robust and accurate means of finding the reseau positions, we believe the techniques described here will improve the quality of the image processing for the *IUE* Final Archive.

We wish to acknowledge the *IUE* Project for it's support with this analysis and we also wish to acknowledge partial funding support for this work from the National Aeronautics and Space Administration through the *IUE* Operations Support Contract NAS 5–29375 to the Computer Sciences Corporation.

References

Born, M., and Wolf, E. 1975, Principles of Optics (Oxford, Pergamon Press)

Busch, H. 1926, Ann. Physik, 81, 974

Perry, P., and Turnrose, B. E. 1977, IUE Image Processing Overview and Mathematical Description (Computer Sciences Corp. CSC/TM–77/6250)

Pilkington, J. D. H., and Hartley, K. F. 1972, Advances in Electronics and Electron Physics, 33A, 545

Press, W. H., Flannery, B. P., Teukolsky, S. A., and Vetterling, W. T. 1986, Numerical Recipes (Cambridge, Cambridge Univ. Press)

Thompson, R. W., Bohlin, R. C., Turnrose, B. E., and Harvel, C. A. 1980, IUE Newsletter, 11, 10

Thompson, R. W., Turnrose, B. E., and Bohlin, R. C. 1982, A&A, 107, 11

Turnrose, B. E., and Thompson, R. W. 1984, IUE Image Processing Information Manual, Version 2.0, (Computer Sciences Corp., CSC/TM–84/6058)

Zworykin, V. K., Morton, G. A., Ramberg, E. G., Hillier, J., and Vance, A. W. 1945, Electron Optics and the Electron Microscope (New York, Wiley & Sons)

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Dr. T. Ake The Eclipse of Gamma Persei	CSC - GHRS	E8MTA
Dr. B. Altner Spatially Resolved Spectroscopy of AG Carina	CSC - GHRS	LBMBA
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Dr. E. Bohm-Vitense UV Extinction Law and CIV, SiIV Column Densities in NGC 6530	U Washington	IMMEB
Dr. H. Bond A Search for Binary Nuclei of Planetary Nebulae	ST Scl	BNMHB
Dr. J. Bookbinder Rapid Variability of the MG II Line Profiles of the MIRA S Carina	Harvard SAO - CFA	MGMJB
Dr. J. Bookbinder Stellar Flares on Ad Leo: Multiband Observations	Harvard SAO - CFA	FSMJB
Dr. B. Bopp UV Observations of Interacting F + B(E) Binary Star Systems	U Toledo	IBMBB

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Dr. C. Bowyer	UC Berkeley	NOMSB
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Long-Term MG II Variability of Hybrid-Chromosphere Stars		
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Dr. D. Brown	U Washington	ISMDB
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Dr. E. Brugel	U Colorado - CASA	RVMEB
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Dr. D. Burstein	Arizona State	EGMDB
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Low Density Extinction in the Disk and Halo		
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Dr. A. Caulet	NASA - GSFC	ISMAC
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Dr. P. Conti	U Colorado - CASA	WRMPC
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Dr. M. Corcoran	NASA - GSFC	MBMMC
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Dr. M. Corcoran	NASA - GSFC	OBMMC
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Dr. D. Crenshaw	NASA - GSFC	AGMDC
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Dr. A. Danks	ARC	EGMAD
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Dr. L. Danly	ST ScI	IGMLD
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Dr. J. Drilling	Louisiana State Universit	RCMJD
UV Spectroscopy of MV Sgr		
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Dr. P. Feldman	Johns Hopkins	SCMPF
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Small Scale Structure in the Interstellar Matter Towards Zeta Oph		

PI NAME/TITLE	INSTITUTION	PROGID
Dr C. Garmany	U Colorado - CASA	OBMCG
B Supergiants in the Large Magellanic Cloud		
Dr. C. Gaskell	U Michigan	AGMCG
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Dr. E. Guinan	Villanova	RSMEG
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Dr. E. Guinan	Villanova	SAMEG
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Dr. B. Haisch	Lockheed	CCMBH
The Corona-Transition Region Relationship in Evolved Stars		
Dr. J. Halpern	Columbia University	QSMJH
IUE and ROSAT Monitoring of the Bright QSO H1821+643		
Dr. S. Heap	NASA - GSFC	PNMSH
Direct Evidence for Stellar Evolution: The Central Star of NGC 2392		
Dr. P. Hodge	U Washington	MCMPH
Ultraviolet Colors of Young LMC Clusters		
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Central Stars Detected in the Soft X-Ray		
Dr. A. Holm	CSC - ST ScI	WDMAH
Searching for the White Dwarf in Dwarf Novae		
Dr. D. Huenemoerder	Penn State	RSMDH
Fixed-Phase Variability in RS CVn Stars		
Dr. C. Imhoff	CSC - IUE Observatory	IMMCI
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Dr. P. Judge	U Colorado - JILA	CSMPJ
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Dr. P. Judge	U Colorado - JILA	LGMPJ
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In Search of Possible Companions to Three Anomalous Carbon Stars		

PI NAME/TITLE	INSTITUTION	PROGID
Dr. M. Kafatos	George Mason University	ZAMMK
Observations of Symbiotic Stars		
Dr. M. Karovska	Harvard SAO - CFA	LGMMK
Coordinated IUE and Speckle Observations of the MIRA AB System		
Dr. W. Keel	U Alabama	RGMWK
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Dr. R. Kirshner	Harvard SAO - CFA	SNMRK
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PN G327.7-05.5: A New Planetary Nebula		
Dr. T. Kreidl	Lowell Observatory	APMTK
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Dr. J. Linsky	U Colorado - JILA	RSMJL
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Dr. D. Luttermoser	U Colorado - JILA	LGMDL
Fluorescent Clues to the Atmospheric Shock Structure of Cool, Variable Stars		
Dr. A. Magalhaes	U Wisconsin	ISMAM
Dust in the Small Magellanic Cloud		
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Multi-Wavelength Variability of Ecliptic Pole Active Galactic Nuclei		
Dr. S. Maran	NASA - GSFC	PNMSM
High Temperature Planetary Nebulae in the Magellanic Clouds		
Dr. T. Marsh	ST ScI	EBMTM
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Dr. A. Michalitsianos	NASA - GSFC	RAMAM
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Dr. H. Moos	Johns Hopkins	SSMHM
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Dr. J. Nichols-Bohlin	CSC - Astronomy Programs	OBMJN
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FUV Variability and Mass Loss in the "Rapid Variable" Be Stars		
Dr. G. Peters	USC	IBMGP
Mass and Angular Momentum Loss in the Interacting Binary AU Monocerotis		
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Wind and FUV Flux Variability in X-Ray Emitting Be Stars		
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Dr. R. Polidan	NASA - GSFC	IBMRP
CNO Processing in Massive Algol Binaries		
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Dr. J. Raymond	Harvard SAO - CFA	SNMJR
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Dr. R. Remillard Luminous Symbiotic-Like Variable in the LMC	MIT	ZAMRR
Dr. R. Rich Ultraviolet Spectroscopy of Galactic Globular Clusters	Columbia University	GCMRR
Dr. S. Roby Elemental Abundances of the HGMN Stars MU Leporis and Upsilon Herculis	SUNY - Oswego	APMSR
Dr. R. Rubin Silicon and Carbon Abundances in tne Orion Nebula	NASA - Ames	ENMRR
Dr. S. Saar Studies of Intermediate Activity M Dwarfs	Harvard SAO - CFA	DMMSS
Dr. J. Sahade Discrete Absorption Components and Dynamics of Eclipsing Binaries	ARGENTINA	EBMJS
Dr. A. Schultz UV Spectroscopy of Starburst Regions in Selected Ring Galaxies	CSC - ST ScI	EGMAS
Dr. C. Seab Differential Extinction in Clusters and Associations	U New Orleans	ISMCS
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Dr. D. Shemansky A Search for Cometesimal Derived Atmosphere on the Moon	U Arizona	SMMDS
Dr. S. Shore Coordinated UV and X-Ray Studies of V444 Cygni	CSC - GHRS	WRMSS
Dr. C. Shrader X-ray Transients as Targets of Opportunity	CSC - IUE Observatory	XBMCS
Dr. J. Shull Absorption-Line Studies of Seyfert Galaxies	U Colorado - CASA	AGMJS
Dr. J. Shull UV Fluorescent Background from Interstellar Ions and H2	U Colorado - CASA	IMMJS
Dr. J. Shull High-Velocity Gas Along the SW Edge of the Monoceros Loop	U Colorado - CASA	IGMJS
Dr. T. Simon Activity Cycle of the Herbig Ae Star AB Aurigae	U Hawaii	HAMTS
Dr. T. Simon The Alpha Persei Cluster Revisted	U Hawaii	APMTS
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Dr. E. Sion	Villanova	WDMES
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Dr. D. Soderblom	ST ScI	CCMDS
Chromospheres and Transition Regions of Stars in the Ursa Major Group II		
Dr. G. Sonneborn	NASA - GSFC	SNMGS
Continuing Ultraviolet Spectroscopy of SN 1987A		
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Target of Opportunity Observations of Classical and Recurrent Novae		
Dr. S. Starrfield	Arizona State	CNMSS
Late Stages in the Outburst of Classical Novae		
Dr. S. Starrfield	Arizona State	NOMSS
Target of Opportunity Observations of Galactic Novae in Outburst		
Dr. R. Stencel	U Colorado - CASA	CSMRS
Mapping the UV Circumstellar Nebulae of Cool Stars		
Dr. R. Stencel	U Colorado - CASA	ZAMRS
IUE - ROSAT Observations of Symbiotic Binaries		
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The Peculiar CVs FSV 1132-11 and S193		
Dr. T. Teays	CSC - IUE Observatory	RRMTT
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Cepheid Temperatures		
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Gravities and Space Densities of O Subdwarfs		
Dr. J. Thorstensen	Dartmouth College	CVMJT
IUE Spectra of a Complete Sample of Cataclysmic Variables		
Dr. C. Urry	ST ScI	RGMCU
ROSAT-Coordinated IUE Observations of Superluminal Radio Sources		
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UV Variability of the Sun, Uranus and Neptune		

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Dr. J. Webb Observations of AGN During Outbursts	CSC - IUE Observatory	AGMJW
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Dr. F. Wesemael Stratified Atmospheres in the DAB White Dwarfs	CANADA	DAMFW
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Dr. D. Whittle Anisotropic Continuum Emission in Seyferts	U Virginia	SYMDW
Dr. B. Wilkes A First Complete View of the Big Blue Bump in Quasar Continua	Harvard SAO - CFA	AGMBW
Dr. B. Wills Polarization, Hot Dust and Broad Absorption Lines in IRAS QSO's	U Texas - Austin	IRMBW
Dr. L. Willson Asymptotic Giants with "Detached" Circumstellar Shells	Iowa State University	AGMLW
Dr. P. Winkler Circumstellar Material in the Puppis A Supernova Remnant	Middlebury College	SNMPW
Dr. A. Witt Scattering in the 2175 Angstrom Interstellar Extinction Feature	U Toledo	IMMAW
Dr. C. Wu Augmentation of the IUE Ultraviolet Spectral Atlas	CSC - ST ScI	SAMCW
Dr. F. Yusef-Zadeh Herbig Haro Streamers in Orion	Northwestern	PMMFY

PUBLICATIONS IN MAIN JOURNALS
PUBLISHED 1 MAY - 31 OCTOBER 1990

This list contains all papers that have appeared between the above dates in major refereed journals (Mon. Not. R. astr. Soc., Astron. & Astrophys., Astrophys. J.) and which make reference the IUE data.

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 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).

Kinney, A.L., Rivolo, A.R., Koratkar, A.P.
A study of the Baldwin effect in the IUE data set
Astrophysical Journal., 357, 338-345, 1990
(NASA)

Feibelman, W.A., Bruhweiler, F.C.
Ultraviolet Fe VII absorption lines in planetary nebula nuclei, hot subdwarfs, and hot degenerate objects
Astrophysical Journal., 357, 548-559, 1990
(NASA)

Boggs, D., Bohm-Vitense, E.
Ultraviolet gas absorption and dust extinction towards M8
Astrophysical Journal., 358, 441-458, 1990
(NASA)

Crenshaw, D.M., Blackwell, Jr., J.H.
Evidence for a supermassive black hole in the nucleus of the Seyfert Galaxy NGC 5548
Astrophysical Journal., 358, L37-L40, 1990
(NASA)

Edelson, R.A., Krolik, J.H., Pike, G.F.
Broad-band properties of the CfA Seyfert galaxies. III. Ultraviolet variability
Astrophysical Journal., 359, 86-97, 1990
(NASA)

Treves, A., Bonelli, G., Chiappetti, L., Falomo, R., Maraschi, L., Tagliaferri, G., Tanzi, E.G.
X-ray and Ultraviolet observations of the Seyfert galaxy MCG 8-11-11
Astrophysical Journal., 359, 98-103, 1990
(ESA)

Finley, D.S., Basri, G., Bowyer, S.
The temperature scale of hot DA white dwarfs: temperatures from far-ultraviolet continuum fluxes
Astrophysical Journal., 359, 483-498, 1990
(NASA)

Simon, T.
IUE observations of rapidly rotating low-mass stars in young clusters: The relation between chromospheric activity and rotation
Astrophysical Journal., 359, L51-L54, 1990
(NASA)

Walter, R., Courvoisier, T.J.-L.
The ultraviolet and X-ray spectrum of NGC5548: evidence for thermal Comptonization and geometrical variations
Astron. & Astrophysics., 233, 40-52, 1990
(ESA)

Walter, R., Ulrich, M.-H., Courvoisier, T.J.-L., Buson, L.M.
The variable ultraviolet absorption lines in the Seyfert 1 galaxy NGC3516
Astron. & Astrophysics., 233, 53-61, 1990
(ESA)

Unglaub, K., Bues, I.,
The nature of the hot subdwarf SB744
Astron. & Astrophysics., 233, 159-167, 1990
(ESA)

Augarde, R., Figon, P., Vanderriest, C., Lemonnier, J.P.
Spectro-imagery of small diameter galaxies.
I. Markarian 600=MCG 1-08-008
Astron. & Astrophysics., 233, 348-356, 1990
(ESA)

Torres-Peimbert, S., Peimbert, M., Peña, M.
Planetary nebulae with a high degree of ionization: NCG 2242 and NGC 4361
Astron. & Astrophysics., 233, 540-552, 1990
(NASA)

Courvoisier, T.J.-L., Robson, E.I., Blecha, A., Bouchet, P., Falomo, R., Maisack, M., Staubert, R., Terasranta, H., Turner, M.J.L., Valtaoja, E., Walter, R., Wamsteker, W.
Multi-wavelength observations of 3C273. II. 1986-1988
Astron. & Astrophysics., 234, 73-83, 1990
(ESA)

Reitermann, A., Baschek, B., Stahl, O., Wolf, B.
Abundances from B stars of the Magellanic Clouds
Astron. & Astrophysics., 234, 109-118, 1990
(ESA)

Elgaroy, O., Engvold, O., Carlsson, M.
Deviation from the Wilson-Bappu relationship in faint red dwarf stars
Astron. & Astrophysics., 234, 308-314, 1990
(ESA)

Altamore, A., Rossi, C., Rossi, L., Villada de Arnedo, M.
The ultraviolet spectrum of solar analogs
Astron. & Astrophysics., 234, 332-342, 1990
(ESA)

Kameswara Rao, N., Giridhar, S., Nandy, K.
The UV spectrum of the WC 11 star CPD - 56 8032
Astron. & Astrophysics., 234, 410-418, 1990
(SERC)

Vrtilek, S.D., Raymond, J.C., Garcia, M.R., Verbunt, F., Hasinger, G., Kurster, M.
Observations of Cygnus X-2 with IUE: ultraviolet results from a multiwavelength campaign
Astron. & Astrophysics., 235, 162-173, 1990
(ESA+NASA)

Faraggiana, R., Gerbaldi, M., Bohm, C.
The UV spectrum as a signature of the Lambda Bootis character
Astron. & Astrophysics., 235, 311-325, 1990
(ESA)

Goldsmith, M.J., Evans, A., Albinson, J.S., Bode, M.F.
Effective temperatures of RCB stars
Mon. Not. R. astr. Soc., 245, 119-129, 1990
(SERC)

Woods, J.A., Drew, J.E., Verbunt, F.
Time dependence of the UV resonance lines in the cataclysmic variables SU UMa, RX And and 0623+71
Mon. Not. R. astr. Soc., 245, 323-330, 1990
(ESA+SERC)

Meatheringham, S.J., Maran, S.P., Stecher, T.P., Michalitsianos, A.G., Gull, T.R., Aller, L.H., Keyes, C.D.
An extremely carbon-poor planetary nebula in the Small Magellanic Cloud
Astrophysical Journal., 361, 101-106, 1990
(NASA)

Savage, B.D., Edgar, R.J., Diplas, A.
The distribution of interstellar Al III away from the galactic plane
Astrophysical Journal., 361, 107-115, 1990
(NASA)

Dupree, A.K., Harper, G.M., Hartmann, L., Jordan, C., Rodgers, A.W., Smith, G.H.
Chromospheres of two red giants in NGC 6752
Astrophysical Journal., 361, L9-L13, 1990
(NASA+SERC)

Haisch, B.M., Bookbinder, J.A., Maggio, A., Vaiana, G.S., Bennett, J.O.
IUE and Einstein survey of late-type giant and supergiant stars and the dividing line
Astrophysical Journal., 361, 570-589, 1990
(NASA+ESA)

Chiappetti, L., Treves, A., Branduardi-Raymont, G., Ciapi, A.L., Ercan, E.N., Freeman, P.E., Kahn, S.M., Maraschi, L., Paerels, F.B.S., Tanzi, E.G.
Exosat observations of Cygnus X-2 continuum and line spectrum
Astrophysical Journal., 361, 596-605, 1990
(ESA+NASA+SERC)

Nussbaumer, H., Vogel, M.
HM Sagittae: the evolution of a symbiotic nova
Astron. & Astrophys., 236, 117-132, 1990
(ESA)

Schroder, K.-P.,
A study of ultraviolet spectra of zeta-Aurigae/VV Cephei systems XII. The physical state of supergiant chromospheres at the transition from coronae to cool winds
Astron. & Astrophys., 236, 165-174, 1990
(ESA)

Beust, H., Lagrange-Henri, A.M., Vidal-Madjar, A., Ferlet, R.
The beta-Pictoris circumstellar disk. X. Numerical simulations of infalling evaporating bodies.
Astron. & Astrophys., 236, 202-216, 1990
(ESA)

Grewing, M., Neri, R.
Extinction-independent determination of temperatures for central stars of planetary nebulae
Astron. & Astrophys., 236, 223-230, 1990
(ESA)

Reimers, D., Baade, R., Schroder, K.-P., Ising, J.
First observations of a corona of a cool bright giant with height resolution
Astron. & Astrophys., 236, L25-L28, 1990
(ESA)

Byrne, P.B., Butler, C.J., Lyons, M.A.
Activity in late-type stars. VI. Optical photometry and UV spectroscopy of the active dMe star, FK Aquarii in late 1983
Astron. & Astrophys., 236, 455-460, 1990
(SERC)

Gonzalez-Riestra, R., Cassatella, A., Fernandez-Castro, T.
The UV variability of BF Cygni
Astron. & Astrophys., 237, 385-394, 1990
(ESA)

Monier, R., Megessier, C.
LTE analysis of the far-ultraviolet variations of 21 Comae
Astron. & Astrophys., 237, 402-408, 1990
(ESA)

Peña, M., Ruiz, M.T., Torres-Peimbert, S., Maza, J.
A newly discovered carbon-poor planetary nebula: PN 242-37.1
Astron. & Astrophys., 237, 454-460, 1990
(NASA)

Cuttela, M., Ringuelet, A.E.
A model for the Ae star with detected magnetic field, HD 190073
Mon. Not. R. astr. Soc., 246, 20-28, 1990
(NASA)

Schmid, H.M., Schild, H.
Physical conditions and elemental abundances in the symbiotic novae V1016 Cyg, HM Sge and HBV 475
Mon. Not. R. astr. Soc., 246, 84-97, 1990
(ESA+SERC)

Laor, A.
Massive thin accretion discs - III. Comparison with the observations
Mon. Not. R. astr. Soc., 246, 369-383, 1990
(SERC)

Prinja, R.K.
Photospheric absorption lines in the UV spectra of O and B type stars
Mon. Not. R. astr. Soc., 246, 392-407, 1990
(SERC)

Clavel, J., Boksenberg, A., Bromage, G.E., Elvius, A., Penston, M.V., Perola, G.C., Santos-Lleo, M., Snijders, M.A.J., Ulrich, M.-H.
The ultra-compact broad emission line region in NGC 4151
Mon. Not. R. astr. Soc., 246, 668-677, 1990
(ESA+SERC)

Mufson, S.L., Hutter, D.J., Kondo, Y., Urry, C.M., Wisniewski, W.Z.
An evolving relativistic jet model for the BL Lacertae object Markarian 421
The Astrophysical Journal., 354: 116-123, 1990
(NASA)

Feibelman, W.A., Bruhweiler, F.C.
Ultraviolet observations of the enigmatic Bipolar Nebula M1-92
The Astrophysical Journal., 354: 262-266, 1990
(NASA)

Wamsteker, W., Rodriguez-Pascual, P., Wills, B.J., Netzer, H., Wills, D., Gilmozzi, R., Barylak, M., Talavera, A., Maoz, D., Barr, P., Heck, A.
Ultraviolet and optical variations in active galactic nuclei: The Seyfert 1 Galaxy NGC 5548
The Astrophysical Journal., 354: 446-467, 1990
(ESA+NASA)

Savage, B.D., Massa, D., Sembach, K.
Ultraviolet interstellar absorption toward HD 163522, a halo star at 9 kiloparsecs in the direction l = 350 and b = -9
The Astrophysical Journal., 355: 114-129, 1990
(NASA)

Genova, R., Molaro, P., Vladilo, G., Beckman, J.E.
Mg II observed in the local interstellar medium: The local cloud
The Astrophysical Journal., 355: 150-158, 1990
(ESA)

Schmutz, W., Abbott, D.C., Russell, R.S., Hamann, W.-R., Wessolowski, U.
Non-LTE model calculations for SN 1987A and the extragalactic distance scale
Astrophysical Journal., 355, 255-270, 1990
(ESA+NASA)

Polidan, R.S., Mauche, C.W., Wade, R.A.
A Study of extreme-ultraviolet emission from cataclysmic variables
The Astrophysical Journal., 356: 211-222, 1990
(NASA)

Murthy, J., Henry, R.C., Moos, H.W., Vidal-Madjar, A., Linsky, J.L. Gry, C.
Studies of H I and D I in the local interstellar medium
The Astrophysical Journal., 356: 223-228, 1990
(ESA+NASA)

Zheng, W., O'Brien, P.T.
Differential line development and the complex structure of the broad-line region in Fairall 9
The Astrophysical Journal., 356: 463-466, 1990
(SERC)

Evans, N.R., Bolton, C.T.
The mass of the classical Cepheid SU Cygni
The Astrophysical Journal., 356: 630-640, 1990
(NASA)

Polcaro, V.F., Rossi, C., Giovannelli, F., Ferrari-Toniolo, M., La Padula, C., Persi, P., Manchanda, R.K., Golinnskaya, I.M., Kurt, V.G., Misykima, T.A., Shafer, E.Yu., Shamolin, V.M., Smirnov, A.S., Sheffer, E.K., Boyarchuck, A.A., Gershberg, R.
BD+37 1160: a probable optical counterpart of the X-ray source 1H 0521+373
Astron. & Astrophysics., 231, 354-364, 1990
(ESA)

Willis, A.J., Stickland, D.J.
The ultraviolet and optical spectrum and evolutionary status of HD 62910(WN6-C4)
Astron. & Astrophysics., 232, 89-113, 1990
(SERC)

Mathioudakis, M., Doyle, J.G.
IUE observations of Gl644AB(=Wolf630) in the wavelength region 1150-1950 A, in June 1981
Astron. & Astrophysics., 232, 114-118, 1990
(SERC)

Prinja, R.K.
Similarities in the wind characteristics of hot stars
Astron. & Astrophysics., 232, 119-125, 1990
(SERC)

Haisch, B.M., Butler, C.J., Foing, F., Rodono, M., Giampapa, M.S.
Rotational modulation and flares on RS Canum Venaticorum and BY Draconis-type stars. XV. Observations of Proxima Centauri and solar calibration data
Astron. & Astrophysics., 232, 387-395, 1990
(ESA+NASA+SERC)

MERGED LOG OF IUE OBSERVATIONS

1 JUNE 1990 - 31 OCTOBER 1990

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 twelfth round can be found in ESA IUE Newsletter, 33, page 45.

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	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
PHCAL	NULL	99	99.99	0000000	+000000	H	3	39012	L	00000		90060421	210000	000000	000	V
PHCAL	WAVCAL	98	0.0	0000000	000000	H	2	18491				90080212	120700	000010		G
PHCAL	NULL	99	99.99	0000000	+000000	L	2	18460	L	00000		90062601	012200	000000	001	V SAFETY READ
PHCAL	WAVCAL	98	0.0	0000000	000000	H	3	39562	S			90090110	104200	000200	379	G E=60X,G=160,B=122
PHCAL	NULL	99	99.99	0000000	+000000	L	1	18196	L	00000		90062604	042000	000000	000	V
PHCAL	NULL	99	99.99	0000000	+000000	L	1	18205	L	00000		90062704	041000	000000	000	V
PHCAL	NULL	99	99.99	0000000	+000000	L	1	18226	L	00000		90062804	044255	000000	300	V
PHCAL	NULL	99	99.99	0000000	+000000		1	18259		00000		90070202	020000	000000		V NULL IMAGE
PHCAL	NULL	99	99.99	0000000	+000000		2	18474		00000		90070219	192000	000000		V
PHCAL	NULL	99	99.99	0000000	+000000		1	18267		00000		90070302	024800	000000		V
MM152	NULL	99	99.99	0000000	+000000		3	39621		00000		90091215	154500	000000	000	V NULL IMAGE
MM152	NULL	99	99.99	0000000	+000000		1	18776		00000		90091315	153900	000000	000	V PREAD
PHCAL	NULL	99	99.99	0000000	+000000		2	18495		00000		90092416	162826	000000	002	V 4.5 KV
PHCAL	NULL	99	99.99	0000000	+000000		1	18859		00000		90092422	221550	000000	000	V
AGLWS	MKN 335	84	13.8	0003451	+195528	L	3	39439	L			90081022	222700	008000		G
AGLWS	MKN 335	84	13.8	0003452	+195529	L	3	39107	L	47	SO	90061805	054600	008000	3X1	G E=1.5X,G=81,B=23
AGLWS	MKN 335	84	13.8	0003452	+195529	L	1	18125	L	49	SO	90061807	071300	004500	342	G E=172,G=130,B=40
AGLWS	MKN 335	84	13.8	0003452	+195529	L	3	39108	L	49	SO	90061808	080700	003000	340	G E=146,G=44,B=20
AGLWS	MKN 335	84	13.8	0003452	+195529	L	3	39252	L	47	SO	90071903	035800	008000	3X2	G E=1.5X,G=93,B=32
AGLWS	MKN 335	84	13.8	0003452	+195529	L	1	18394	L	46	SO	90071905	052600	004500	402	G G=155,B=38
AGLWS	MKN 335	84	13.8	0003452	+195529	L	3	39253	L	45	SO	90071906	062200	003000	241	G E=142,G=44,B=25
AGLWS	MKN 335	84	13.8	0003452	+195529	L	1	18559	L	39	SO	90081100	001100	004500	341	G E=149,G=98,B=21
AGLWS	MKN 335	84	13.8	0003452	+195529	L	3	39440	L	40	SO	90081101	010900	003000	300	G G=43,B=15
MM004	HD256	31	06.41	0004450	-173953	H	3	39327	L	09447	FO	90072923	230751	008500	501	V
MM004	HD256	31	06.39	0004450	-173953	H	1	18471	L	09579	FO	90073000	004152	004000	503	V
MM004	HD256	31	06.20	0004450	-173953	H	3	39328	L	09579	FO	90073001	012729	008000	500	V
MA130	PG0004+133	16	13.53	0004595	+131916	L	3	39286	L	00068	SO	90072223	234926	001600	400	V TWO SEGMENTS
MA130	PG0004+133	16	13.50	0004595	+131916	L	1	18429	L	00070	SO	90072300	002702	001800	401	V
MH119	HD1337	66	06.32	0015033	+510920	H	3	39329	L	10175	FO	90073019	193204	000500	500	V
MH119	HD1337	66	06.31	0015033	+510920	H	3	39331	L	10256	FO	90073021	214904	000500	500	V
MH119	HD1337	66	06.31	0015033	+510920	H	3	39333	L	10256	FO	90073023	235955	000630	601	V
MH119	HD1337	66	06.29	0015033	+510920	H	3	39335	L	10435	FO	90073102	020837	000600	500	V
MH119	HD1337	66	06.24	0015033	+510920	H	3	39354	L	10853	FO	90073123	235646	000600	550	V
MH119	HD1337	66	06.26	0015033	+510920	H	3	39356	L	10643	FO	90080102	020554	000630	550	V
EBMOS	AO CAS	13	6.1	0015034	+510919	H	3	39337	L	10794	FO	90073104	044400	000600	502	G G=240,B=40
EBMOS	AO CAS	13	6.1	0015034	+510919	H	3	39339	L	11016	FO	90073106	064800	000600	502	G G=250,B=40
EBMOS	AO CAS	13	6.1	0015034	+510919	H	3	39341	L		FO	90073108	085500	000600	503	G G=250,B=41
EBMOS	AO CAS	13	6.1	0015034	+510919	H	3	39343	L	11367	FO	90073111	111600	000600	X02	G G=1.5X,B=40
EBMOS	AO CAS	13	6.1	0015034	+510919	H	3	39345	L	10953	FO	90073113	134200	000600	X53	G E=200,G=1.5X,B=45
EBMOS	AO CAS	13	6.1	0015034	+510919	H	3	39347	L	11498	FO	90073116	160200	000600	X53	G E=210,G=1.5X,B=43
EBMOS	AO CAS	13	6.1	0015034	+510919	H	3	39349	L	10965	FO	90073118	182000	000600	553	G E=200,G=242,B=41
EBMOS	AO CAS	13	6.1	0015034	+510919	H	3	39358	L	10328	FO	90080105	050100	000600	502	G G=230,B=40
EBMOS	AO CAS	13	6.1	0015034	+510919	H	3	39360	L	10265	FO	90080107	073200	000600	502	G G=230,B=40
EBMOS	AO CAS	13	6.1	0015034	+510919	H	3	39362	L		FO	90080109	093500	000600	X03	G G=1.5X,B=41
EBMOS	AO CAS	13	6.1	0015034	+510919	H	3	39364	L	10097	FO	90080111	114300	000600	502	G G=230,B=40
EBMOS	AO CAS	13	6.1	0015034	+510919	H	3	39366	L	10087	FO	90080113	135700	000600	503	G G=245,B=41
EBMOS	AO CAS	13	6.1	0015034	+510919	H	3	39368	L	10220	FO	90080116	160300	000600	503	G G=240,B=41
EBMOS	AO CAS	13	6.1	0015034	+510919	H	3	39369	L	10194	FO	90080116	164600	000600	503	G G=245,B=42
CK73K	BS/471UC	25	10.3	002154	-722100	L	3	39421	L	243	FO	90080806	060700	001000	300	G G=75,B=18
IBMFW	PG 0027+260	66	14.9	0027278	+260048	L	1	18414	L		BO	90072104	044500	007500	303	G G=104,B=41

PRO	Object	CL	MAG	R.A.	DEC	D C	Image	A	FES	MO	Obs.date	Exptim	mmmsstt	ECC	Comment
IBMRW	PG 0027+260	66	14.9	0027280	+260052	L 3	39273	L		BO	90072106	061000	027500	333 G	B=144,G=96,B=50
ME030	NGC152	83	14.00	0030540	-732334	L 1	18373	L	00000	BO	90071421	212316	032300	303 V	
ME030	NGC 152	83	14.00	0030540	-732334	L 1	18378	L	00000	BO	90071520	201154	039600	302 V	
ME030	N 152	83	00.00	0030540	-732334	L 3	39395	L	00000	BO	90080416	161828	028700	111 V	
COMSB	HD 3229	41	5.9	0032582	-004627	L 3	39412	L	10623	FO	90080622	223800	027500	X32 G	B=90,G=7X,B=32
PHCAL	HD 3360	20	3.7	0034103	+533719	H 3	39189	L	880	FU	90070703	033900	000024	502 G	G=190,B=35
PHCAL	HD 3360	20	3.7	0034103	+533719	H 1	18304	L	896	FU	90070703	034400	000021	503 G	G=220,B=41
PHCAL	HD 3360	20	3.7	0034103	+533719	H 1	18340	L	884	FU	90071016	165400	000021	502 G	G=230,B=40
PHCAL	HD 3360	20	3.7	0034103	+533719	H 3	39214	L	881	FU	90071017	170500	000024	502 G	G=195,B=35
PHCAL	HD 3360	20	3.7	0034103	+533719	H 3	39620	L	862	FU	90091214	141700	000024	402 G	G=183,B=34
PHCAL	HD 3360	20	3.7	0034103	+533719	H 1	18797	L	856	FU	90091614	144400	000021	502 G	G=227,B=40
PHCAL	HD 3360	20	3.7	0034103	+533719	H 1	18986	L	866	FU	90101112	123200	000021	502 G	G=218,B=40
PHCAL	HD 3360	20	3.7	0034103	+533719	H 3	39863	L	874	FU	90101907	071200	000024	401 G	G=170,B=30
PHCAL	HD 3360	20	3.7	0034103	+533719	H 1	19031	L	882	FU	90101907	071700	000021	503 G	G=220,B=42
IDMGB	HD 3651	46	5.9	0036454	+205852	H 1	18446	L	10794	FO	90072611	113000	009000	536 G	B=162,G=225,B=72
IDMGB	HD 3651	46	5.9	0036454	+205852	H 1	18447	L	10936	FO	90072613	133700	006000	437 G	B=146,G=195,B=90
FKMCA	NGC 188 I-1	45	11.9	0042274	+845654	L 1	18679	L	206	SO	90083004	045100	038000	307 G	G=150,B=84
FKMCA	NGC 188 I-1	45	11.9	0042380	+845653	L 1	18678	L	213	SO	90083002	023100	010000	302 G	G=80,B=40
IDMGB	HD 4628	46	5.8	0045454	+050125	H 1	18448	L	11785	FO	90072615	154300	006000	434 G	B=134,G=170,B=55
PHCAL	0050-332	37	13.3	0050540	-331600	L 1	18611	L	73	SO	90081823	231800	001500	502 G	G=200,B=34
PHCAL	0050-332	37	13.3	0050540	-331600	L 1	18612	L	72	SO	90081900	001400	001500	X02 G	G=2X,B=38
PHCAL	0050-332	37	13.3	0050540	-331600	L 1	18612	L	71	SO	90081900	001500	001500	X02 G	G=2X,B=38
MA095	AV 176	23	13.80	0054565	-724126	L 1	18333	L	00000	BO	90071002	022404	002800	302 V	PREAD
MA095	AV 176	23	13.80	0054566	-724127	L 3	39211	L	00000	BO	90071000	003458	006000	001 V	WRONG STAR
MA095	AV 196	23	13.90	0056129	-724355	L 3	39210	L	00000	BO	90070922	223627	006000	301 V	
MA095	AV 196	23	13.90	0056129	-724355	L 1	18332	L	00000	BO	90070923	234415	003000	402 V	
PHCAL	FEIGE 11	28	12.1	0101420	+035800	L 1	18543	L	225	SO	90080812	124800	000645	502 G	G=225,B=40
PHCAL	FEIGE 11	28	12.1	0101420	+035800	L 3	39423	L	229	SO	90080813	130200	000520	500 G	G=220,B=20
PHCAL	FEIGE 11	28	12.1	0101420	+035800	L 1	18720	L	231	SO	90090809	093600	000645	402 G	G=175,B=38
PHCAL	FEIGE 11	28	12.1	0101420	+035800	L 3	39599	L	233	SO	90090809	095200	000520	500 G	G=180,B=18
WDMAH	RX AND	54	13.6	0101457	+410156	L 3	39909	S	307	SO	90102201	013800	004500	500 G	G=205,B=18
MA096	HD 7583	32	10.75	0112071	-733601	H 1	18341	L	00203	FO	90071019	193436	043300	303 V	
AGMDC	FAIRALL9	84	14	0121512	-590359	L 3	39456	L	46	SO	90081322	224300	005000	350 G	B=220,G=78,B=20
AGMDC	FAIRALL9	84	14	0121512	-590359	L 1	18578	L	47	SO	90081323	233800	005000	442 G	B=172,G=150,B=38
AGLGR	QSO 0132-412	85	17.5	0132468	-411141	L 3	39062	L			90061106	060900	040000	334 G	B=87,G=105,B=53
PHCAL	HD 10144	21	0.5	0135512	-572925	H 1	18900	L	13474	FU	90093010	105400	000001	402 G	G=183,B=40
PHCAL	HD 10144	21	0.5	0135512	-572925	H 3	39731	L	13320	FU	90093011	110200	000002	402 G	G=180,B=35
CSMRS	HD 10700	44	3.50	0141446	-161159	L 1	18288	L			90070416	164800	000005	G	
CSMRS	HD 10700	44	3.50	0141447	-161200	L 1	18262	L	816	FU	90070208	085000	009000	G	
CSMRS	HD 10700	44	3.50	0141447	-161200	L 1	18288	L	808	FU	90070415	154300	006000	505 G	G=222,B=61
WDMAH	TZ PER	54	14.1	0210179	+580853	L 3	39811	L	40	SO	90101122	220900	004000	200 G	G=35,B=20
WDMAH	TZ PER	54	14.1	0210179	+580853	L 3	39812	S	42	SO	90101123	233000	031800	333 G	B=88,G=90,B=47
IGMIS	HD 13994	45	6.0	0214324	+571710	L 3	39523	L			90082412	125300	003000	G	
IGMMK	HD 14386	66	3.4	0216490	-031213	L 1	18598	L	26250	FO	90081611	111200	000600	352 G	B=206,G=114,B=36
IGMMK	HD 14386	66	3.4	0216490	-031213	L 3	39471	L	26498	FO	90081611	113800	005000	353 G	B=203,G=95,B=42
IGMMK	HD 14386	66	3.4	0216490	-031213	H 1	18599	L	26349	FO	90081612	123600	007000	349 G	B=221,G=175,B=112
MA143	HS0231+050	16	16.00	0231037	+050535	L 3	39304	L	00000	BO	90072620	202258	017000	700 V	
MA143	HS0231+050	16	16.00	0231038	+050536	L 1	18450	L	00000	BO	90072623	232105	018000	601 V	
MA143	HS0231+050	16	16.00	0231038	+050536	L 3	39305	L	00000	BO	90072702	022720	002000	300 V	
MA130	PG0232+095	16	12.89	0232311	+093233	L 3	39287	L	00120	SO	90072301	012840	000600	300 V	

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	EES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
MA130	PG0232+095	16	12.85	0232311	+093233	L	1	18430	L	00125	SO	90072302	020156	000700	301	V PREAD
MA130	PG0232+095	16	12.85	0232311	+093233	L	3	39288	L	00125	SO	90072302	023754	001200	300	V PREAD
SIMPT	PG 0240+043	16	14.1	0240454	+043746	L	3	39307	L	52	SO	90072712	121700	003500	500	G G=190,B=18
SIMPT	PG 0240+043	16	14.1	0240454	+043746	L	1	18452	L	54	FO	90072713	130000	004500	503	G G=224,B=50
IEMRP	RY PER	66	10.7	0242195	+475601	L	3	39943	L	405	FO	90102506	061200	000800	300	G G=92,B=18
IEMRP	RY PER	66	10.7	0242195	+475601	L	3	39944	L	316	FO	90102507	070500	002500	331	G E=115,G=120,B=25
IEMRP	RY PER	66	10.7	0242195	+475601	L	3	39945	L	240	FO	90102508	084200	008000	552	G E=242,G=240,B=33
IEMRP	RY PER	66	10.7	0242195	+475601	L	3	39946	L	247	FO	90102510	104000	005000	551	G E=201,G=190,B=23
IEMRP	RY PER	66	10.7	0242195	+475601	L	3	39947	L	344	FO	90102512	121400	002500	500	G G=220,B=18
MA143	HS0247+053	16	17.00	0247341	+053744	L	3	39303	L	00000	BO	90072520	205408	035300	301	V
PNMWF	IO-1	70	13.6	0255099	-442221	H	3	39146	L		BO	90062506	063400	037500	304	G G=100,B=60
CD79Y	HD 19832	36	5.65	0309151	+270412	L	3	39488	L	13092	FO	90081901	013700	000008	500	G G=187,B=15
CD79Y	HD 19832	36	5.65	0309151	+270412	L	1	18613	L	13234	FO	90081901	015300	000005	X02	G G=1.5X,B=33
CD79Y	HD 19832	36	5.65	0309151	+270412	L	3	39488	S	13251	FO	90081902	022600	000016	400	G G=158,B=15
CD79Y	HD 19832	36	5.65	0309151	+290412	L	1	18614	L	13393	FO	90081902	025500	000004	502	G G=237,B=32
CD79Y	HD 19832	36	5.65	0309151	+290412	H	3	39489	L	13457	FO	90081903	030300	001400	X03	G G=1.5X,B=45
CD79Y	HD 19832	36	5.65	0309151	+290412	L	1	18615	L	13999	FO	90081905	054800	000003		G
CD79Y	HD 19832	36	5.65	0309151	+290412	L	3	39490	L	14196	FO	90081906	062100	000008	500	G G=175,B=17
CD79Y	HD 19832	36	5.65	0309151	+290412	L	3	39490	S	14246	FO	90081906	062600	000016	500	G G=205,B=17
CD79Y	HD 19832	36	5.65	0309151	+290412	L	1	18615	S	13969	FO	90081906	063200	000006	402	G G=179,B=35
CD79Y	HD 19832	36	5.65	0309151	+200412	L	3	39491	L	14281	FO	90081907	073000	000008	500	G G=183,B=13
CD79Y	HD 19832	36	5.65	0309151	+290412	L	3	39491	S	14300	FO	90081907	073600	000024	X00	G G=1.5X,B=17
CD79Y	HD 19832	36	5.65	0309151	+290412	L	1	18616	L	14281	FO	90081907	074100	000004	502	G G=205,B=32
CD79Y	HD 19832	36	5.65	0309151	+290412	L	1	18616	S	14285	FO	90081907	074600	000024	X02	G G=3X,B=31
CD79Y	HD 19832	36	5.65	0309151	+290412	L	3	39492	L	14186	FO	90081908	084200	000008	500	G G=175,B=15
CD79Y	HD 19832	36	5.65	0309151	+290412	L	3	39492	S	14167	FO	90081908	084700	000024	500	G G=220,B=15
CD79Y	HD 19832	36	5.65	0309151	+290412	L	1	18617	L	14098	FO	90081908	085400	000004	502	G G=203,B=37
CD79Y	HD 19832	36	5.65	0309151	+290412	L	1	18617	S	14140	FO	90081908	085900	000024	X01	G G=3X,B=30
AEMIS	AP 93	46	12.0	0315322	+480004	L	1	18648	L	202	SO	90082302	022900	011600	333	G E=105,G=110,B=48
AEMIS	AP 93	46	12.0	0315322	+480004	L	1	18648	L	209	SO	90082302	023000	011600	333	G E=105,G=110,B=48
AEMIS	AP 95	46	12.3	0316235	+494117	L	1	18651	L			90082323	230000	025000		G
IIMIS	HR699	44	11.3	0322478	+491510	H	1	18658	L			90082502	020900	040000		G
RSMEG	HD 21242	46	6.51	0323330	+283232	H	1	18569	L	6791	FO	90081300	003000	001800	342	G E=139,G=75,B=37
RSMEG	HD 21242	46	6.51	0323330	+283232	L	3	39449	L	6797	FO	90081301	010600	002500	230	G E=77,G=28,B=13
RSMEG	HD 21242	46	6.51	0323330	+283232	L	3	39460	L	6909	FO	90081413	131300	003000	330	G E=100,G=50,B=18
RSMEG	HD 21242	46	6.51	0323330	+283232	H	1	18584	L	6834	FO	90081413	134900	002000	343	G E=156,G=80,B=42
RSMEG	HD 21242	46	6.51	0323330	283232	L	3	39470	L	6697	FO	90081609	092800	004000	330	G E=72,G=45,B=18
RSMEG	HD 21242	46	6.51	0323330	+283232	H	1	18607	L	6688	FO	90081713	130300	002200	348	G E=207,G=145,B=95
RSMEG	HD 21242	46	6.51	0323330	+283232	L	3	39476	L	6620	FO	90081713	133100	004000	331	G E=126,G=80,B=30
AGMIW	Y PER	51	8.1	0324180	+440012	L	1	18781	L	819	FO	90091410	100300	006000	09	G B=120
RIASS	HD 21629	55	13	0327470	+434402	L	1	18585	L	85	SO	90081423	234600	008000	343	G E=151,G=100,B=44
AEMIS	AP118	46	12.0	0328556	+490027	L	1	18647	L	206	SO	90082223	230900	015000	433	G E=146,G=162,B=50
RIASS	HD 22468	46	5.7	0334131	+002533	L	3	39386	L			90080302	022300	003000		G
RIASS	HD 22468	46	5.7	0334132	+002533	H	1	18552	L	112	FU	90081013	134500	001300	343	G E=177,G=92,B=48
RSMEG	HD 22468	46	5.71	0334132	+002533	L	3	39459	L	11916	FO	90081411	113300	003200	340	G E=158,G=60,B=18
RSMEG	HD 22468	46	5.71	0334132	+002533	H	1	18583	L	11794	FO	90081412	121300	001300	353	G E=192,G=80,B=41
RSMEG	HD 22468	46	5.71	0334132	+002533	H	1	18596	L	11873	FO	90081607	071200	001300	342	G E=180,G=74,B=36
RSMEG	HD 22468	46	5.71	0334132	+002533	L	3	39469	L	11920	FO	90081607	073300	003200	340	G E=164,G=55,B=18
RSMEG	HD 22468	46	5.71	0334132	+002533	H	1	18606	L	11602	FO	90081711	111500	001300	354	G E=209,G=95,B=54
RSMEG	HD 22468	46	5.71	0334132	+002533	L	3	39475	L	11631	FO	90081711	113800	003200	246	G E=195,G=80,B=75

PRO	Object	CL	MAG	R.A.	DEC	D C	Image	A	FES	MD	Obs.date	Exptim	nnnnsstt	ECC	Comment
SMDW	NGC 1386	84	12.8	0334520	-360954	L	1	18421	L		BO	90072204	040700	013500	334 G	B=84,G=98,B=52
SMDW	NGC 1386	84	12.8	0334520	-360954	L	3	39279	L		BO	90072206	063100	003000	00 G	B=18
SMDW	NGC 1386	84	12.8	0334520	-360954	L	1	18422	L		BO	90072207	070700	022300	305 G	G=108,B=65
SMDW	NGC 1386	84	12.8	0334520	-360954	L	3	39296	L	94	SO	90072403	033900	043000	335 G	B=95,G=87,B=66
MA109	HD23630	26	03.06	0344304	+235707	H	3	39437	L	01677	FU	90081017	173524	000050	500 V	
MA109	HD23630	26	03.08	0344304	+235707	H	3	39438	L	01658	FU	90081018	181442	000050	500 V	
IDMIS	HZ1514	44	10.5	0344414	+241244	H	1	18669	L	175	FO	90082701	015400	041800	306 G	G=120,B=75
CK74K	HZ 1883	46	12.7	0345301	+230856	L	1	18652	L			90082405	051800	016500	G	
MA109	HD23862	26	05.18	0346124	+235907	H	3	39435	L	22956	FO	90081014	145027	001000	600 V	
MA109	HD23862	26	05.21	0346124	+235907	H	1	18553	L	22564	FO	90081015	153025	000415	501 V	
MA109	HD23862	26	05.23	0346124	+235907	L	3	39436	L	22344	FO	90081016	160849	000005	500 V	
MA109	HD23862	26	05.20	0346124	+235907	L	1	18554	L	22658	FO	90081016	164733	000003	601 V	
MA109	HD23862	26	05.19	0346124	+235907	H	1	18944	L	22814	FO	90100519	192116	000415	501 V	
MA109	HD23862	26	05.20	0346124	+235907	H	3	39775	L	22752	FO	90100519	193935	001000	500 V	
MA109	HD23862	26	05.22	0346124	+235907	L	1	18945	L	22456	FO	90100520	203936	000003	500 V	PREAD
MA109	HD23862	26	05.16	0346124	+235907	L	3	39776	L	23195	FO	90100520	205346	000005	400 V	PREAD
COMSB	HD 23838	44	5.66	0346347	+444824	L	3	39550	L	13068	FO	90082913	133300	019200	X51 G	B=211,G=4X,B=29
RIASS	HD 24534	26	6.1	0352151	+305401	H	3	39462	L	5731	FO	90081423	230400	002000	502 G	G=190,B=36
MC063	HD24480	39	05.34	0352514	+605753	H	1	18991	L	20867	FO	90101214	143406	008000	401 V	
MC063	HD24480	39	05.34	0352514	+605753	L	3	39815	L	20880	FO	90101214	140246	000130	300 V	
IGMIS	HD 232862	45	9.5	0353359	+504244	L	3	39522	L			90082411	114700	003000	G	
PHOAL	HD 24760	20	2.9	0354295	+395202	H	1	18899	L	1910	FU	90093009	092100	000007	503 G	G=200,B=41
PHOAL	HD 24760	20	2.9	0354295	+395202	H	3	39730	L	1859	FU	90093009	092800	000012	502 G	G=220,B=35
MSIOO	VESTA	05	07.58	0400059	+112717	L	1	18949	L	03426	FO	90100615	151805	000500	500 V	
MSIOO	VESTA	05	07.63	0400059	+112717	L	1	18950	L	03290	FO	90100616	160133	000500	500 V	
MSIOO	VESTA	05	07.66	0400059	+112717	L	1	18951	L	03205	FO	90100616	164651	000500	500 V	
MSIOO	VESTA	05	07.65	0400059	+112717	L	1	18952	L	03231	FO	90100617	173230	000500	500 V	
MSIOO	VESTA	05	07.58	0400059	+112717	L	1	18954	L	03454	FO	90100618	185923	000530	500 V	
MSIOO	VESTA	05	07.62	0400059	+112717	L	1	18953	L	03321	FO	90100618	181452	000500	500 V	
MSIOO	VESTA	05	07.56	0400059	+112717	L	1	18955	L	03505	FO	90100619	194054	000530	500 V	
MSIOO	VESTA	05	07.55	0400059	+112717	L	1	18956	L	03533	FO	90100620	203240	000500	500 V	
RIASS	HD 25940	26	4.03	0405012	+473451	H	3	39529	L			90082512	125500	000150	G	
RIASS	HD 25940	26	4.04	0405013	+473452	L	3	39544	L	604	FU	90082715	153900	000001	500 G	G=199,B=18
RIASS	HD 25940	26	4.04	0405013	+473452	L	1	18672	L	609	FU	90082715	154400	000001	502 G	G=242,B=33
MC063	HD26673	45	05.03	0411287	+402132	H	1	18644	L	25010	FO	90082216	164839	006000	601 V	
TIMSK	BP TAU	58	12.0	0416085	+285915	L	3	39802	L	178	SO	90100922	222200	048000	354 G	B=217,G=139,B=60
TIMSK	BP TAU	58	12.0	0416085	+285915	L	1	18976	L	195	SO	90101006	062900	006000	3X2 G	B=2X,G=125,B=38
MC132	HD28052	40	04.83	0423295	+153022	H	1	19039	L	00343	FU	90102014	143142	001245	601 V	
MC132	HD28052	40	04.83	0423295	+153022	L	3	39885	L	00343	FU	90102015	150220	001607	700 V	BEYOND 1630
MC132	HD28052	40	04.85	0423295	+153022	H	1	19040	L	00337	FU	90102015	154608	001245	601 V	
MC132	HD28052	40	04.81	0423295	+153022	H	1	19041	L	00350	FU	90102016	165637	001245	601 V	
MC132	HD28052	40	04.83	0423295	+153022	L	3	39886	L	00343	FU	90102016	162148	001300	700 V	BEYOND 1660
MC132	HD28052	40	04.82	0423295	+153022	H	1	19042	L	00346	FU	90102017	175742	001245	601 V	ONE MISSING MINOR FR
MC132	HD28052	40	04.85	0423295	+153022	L	3	39887	L	00338	FU	90102018	182702	001300	700 V	SAT. BEYOND 1660
MC132	HD28052	40	04.83	0423295	+153022	H	1	19043	L	00344	FU	90102019	190214	001245	601 V	
MC132	HD28052	40	04.84	0423295	+153022	H	1	19044	L	00341	FU	90102019	195430	001245	601 V	
RIASS	HD 28307	47	3.84	0425429	+155110	L	3	39503	L	275	FU	90082101	015400	007000	431 G	B=49,G=144,B=25
MM152	HH 29	69	16.00	0428331	+175954	L	3	39622	L	00000	BO	90091216	162254	038400	203 V	
MM152	HH 29	69	16.00	0428332	+175955	L	1	18777	L	00000	BO	90091316	164723	036000	333 V	
CK74K	HD 28783	46	8.94	0429581	+155404	H	1	18653	L			90082413	135600	016500	G	

PRO	Object	CL	MAG	R.A.	DEC	D C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
OK74K	HD 28805	44	8.66	0430078	+154253	H 1	18674	L	975	FO	90082811	113300	018000	335	G E=119,C=111,B=61
MC063	HD29094	45	04.59	0433132	+410950	H 1	18643	L	00427	FU	90082215	151739	004000	501	V
ISMEB	HD 29335	22	5.31	0434388	+005354	H 3	39767	L	19084	FO	90100505	055400	000500	502	G C=210,B=37
IMMCI	HD 283800	24	9.9	0440215	+265603	L 3	39830	L	367	FO	90101411	114300	001500	300	G C=80,B=18
IMMCI	HD 283800	24	9.9	0440215	+265603	L 1	19010	L	354	FO	90101412	123200	000400	302	G C=126,B=32
TIMSK	DR TAU	58	12.0	0444132	+165324	L 1	18977	L	313	SO	90101008	081800	003000	352	G E=191,C=125,B=38
TIMSK	DR TAU	58	12.5	0444132	+165323	L 3	39805	L	388	SO	90101022	221700	039200	334	G E=128,C=154,B=59
IMMCI	HD 283845	21	9.5	0444453	+273924	L 1	19008	L	425	FO	90101409	090600	000500	404	G C=175,B=60
IMMCI	HD 283845	21	9.5	0444453	+273924	L 3	39829	L	421	FO	90101409	092600	003000	406	G C=193,B=75
IMMCI	HD 283845	21	9.5	0444453	+273924	L 1	19009	L	416	FO	90101410	101900	006500	X05	G C=8X,B=65
HAMIS	AB AUR	30	7.2	0452342	+302822	H 1	18728	L	4503	FO	90090822	224500	003500	453	G E=215,C=190,B=42
HAMIS	AB AUR	30	7.2	0452342	+302822	H 3	39603	L	4526	FO	90090823	233100	018000	X04	G C=1.5X,B=58
HAMIS	AB AUR	30	7.2	0452342	+302822	H 1	18729	L	4476	FO	90090900	001000	003500	453	G E=221,C=185,B=42
HAMIS	AB AUR	30	7.2	0452342	+302822	H 1	18730	L	4541	FO	90090901	013400	003500	453	G E=210,C=182,B=43
HAMIS	AB AUR	30	7.2	0452342	+302822	H 1	18731	L	4537	FO	90090902	025900	003500	453	G E=209,C=191,B=42
HAMIS	AB AUR	30	7.2	0452342	+302822	H 1	18732	L	4489	FO	90090904	044100	003500	453	G E=225,C=190,B=42
HAMIS	AB AUR	30	7.2	0452342	+302822	H 1	18733	L	4493	FO	90090906	060500	003500	453	G E=216,C=175,B=50
HAMIS	AB AUR	30	7.2	0452342	+302822	H 1	18734	L	4483	FO	90090907	073200	003500	453	G E=209,C=175,B=45
HAMIS	AB AUR	30	7.2	0452342	+302822	H 3	39604	L	4424	FO	90090908	081500	015000	408	G C=240,B=100
HAMIS	AB AUR	30	7.2	0452342	+302822	H 1	18735	L	4428	FO	90090908	085300	003500	454	G E=227,C=185,B=55
HAMIS	AB AUR	30	7.2	0452342	+302822	H 1	18736	L	4456	FO	90090910	101400	003000	455	G E=221,C=195,B=70
HAMIS	AB AUR	30	7.2	0452342	+302822	H 1	18737	L	4533	FO	90090911	113400	003000	445	G E=220,C=185,B=70
HAMIS	AB AUR	30	7.2	0452342	+302822	H 1	18738	L	4489	FO	90090912	125000	003500	453	G E=220,C=180,B=50
HAMIS	AB AUR	30	7.2	0452342	+302822	H 1	18739	L	4529	FO	90090914	141100	003500	453	G E=216,C=180,B=45
HAMIS	AB AUR	30	7.2	0452342	+302822	1	18741	L	4386	FO	90090916	164900	003500	453	G E=223,C=190,B=42
HAMIS	AB AUR	30	7.2	0452342	+302822	H 1	18742	L	4819	FO	90090922	225300	003500	453	G E=226,C=180,B=42
HAMIS	AB AUR	30	7.2	0452342	+302822	H 3	39606	L	4628	FO	90090923	234700	015000	403	G C=190,B=50
HAMIS	AB AUR	30	7.2	0452342	+302822	H 1	18743	L	4491	FO	90091000	002600	003500	453	G E=227,C=187,B=42
HAMIS	AB AUR	30	7.2	0452342	+302822	H 1	18744	L	4380	FO	90091001	014800	003500	453	G E=232,C=187,B=42
HAMIS	AB AUR	30	7.2	0452342	+302822	H 1	18745	L	4378	FO	90091003	031000	003500	453	G E=218,C=188,B=42
HAMIS	AB AUR	30	7.2	0452342	+302822	H 1	18746	L	4353	FO	90091004	043200	003500	453	G E=230,C=190,B=42
PHCAL	AB AUR	30	7.2	0452342	+302822	H 1	18747	L	4356	FO	90091006	060200	000000	302	G C=78,B=38
HAMIS	AB AUR	30	7.2	0452342	+302822	H 1	18748	L	4333	FO	90091006	065400	003500	453	G E=221,C=180,B=45
HAMIS	AB AUR	30	7.2	0452342	+302822	H 3	39607	L	4348	FO	90091007	073600	003000	408	G C=250,B=100
HAMIS	AB AUR	30	7.2	0452342	+302822	H 1	18749	L	4326	FO	90091008	081400	003500	453	G E=223,C=180,B=50
HAMIS	AB AUR	30	7.2	0452342	+302822	H 1	18750	L	4437	FO	90091009	094000	003000	446	G E=221,C=185,B=75
HAMIS	AB AUR	30	7.2	0452342	+302822	H 1	18751	L	4325	FO	90091011	110000	002500	447	G E=201,C=185,B=85
HAMIS	AB AUR	30	7.2	0452342	+302822	H 1	18752	L	4401	FO	90091012	121100	003500	454	G E=227,C=190,B=60
HAMIS	AB AUR	30	7.2	0452342	+302822	H 1	18753	L	4379	FO	90091013	133300	003500	453	G E=221,C=180,B=45
HAMIS	AB AUR	30	7.2	0452342	+302822	H 1	18755	L	4574	FO	90091107	073900	003000	452	G E=196,C=155,B=40
HAMIS	AB AUR	30	7.2	0452342	+302822	H 3	39610	L	4498	FO	90091108	081600	012500	403	G C=180,B=47
HAMIS	AB AUR	30	7.2	0452342	+302822	H 1	18756	L	4496	FO	90091108	085100	003500	453	G E=193,C=163,B=42
HAMIS	AB AUR	30	7.2	0452342	+302822	H 1	18757	L	4565	FO	90091110	101300	003500	443	G E=194,C=175,B=50
HAMIS	AB AUR	30	7.2	0452342	+302822	H 1	18758	L	4614	FO	90091111	113900	003500	453	G E=207,C=170,B=50
HAMIS	AB AUR	30	7.2	0452342	+302822	H 1	18759	L	4536	FO	90091112	125700	003500	453	G E=200,C=172,B=46
HAMIS	AB AUR	30	7.2	0452342	+302822	H 1	18760	L	4512	FO	90091114	141500	003500	453	G E=202,C=176,B=44
MA001	AB AUR	34	07.26	0452343	+302821	E 9	02349	2	04538	FO	90090815	155000	016000		V FES FOR IMP 18728
MA001	AB AUR	34	07.26	0452343	+302821	H 1	18723	L	04538	FO	90090816	160049	003000	441	V
MA001	AB AUR	34	07.28	0452343	+302821	H 3	39602	L	04487	FO	90090816	163913	015000	501	V SEGMENTED EXPOSURE 5
MA001	AB AUR	34	07.29	0452343	+302821	H 1	18724	L	04437	FO	90090817	171931	003500	451	V

PRO	Object	CL	MAG	R.A.	DEC	D C	Image	A	EES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
MA001	AB AUR	34	07.26	0452343	+302821	H 1	18725	L	04553	FO	90090818	184156	003500	451	V
MA001	AB AUR	34	07.23	0452343	+302821	H 1	18726	L	04668	FO	90090820	200101	003500	451	V
MA001	AB AUR	34	07.24	0452343	+302821	H 1	18727	L	04613	FO	90090821	212710	003500	451	V
MA001	AB AUR	34	07.28	0452343	+302821	H 1	18740	L	04452	FO	90090915	153137	003500	451	V
RTASS	HD 31398	47	2.7	0453440	+330520	L 3	39541	L	1681	FU	90082709	092800	012000	342	G B=151,G=100,B=38
RTASS	HD 31398	47	2.7	0453440	+330520	H 1	18670	L	1693	FU	90082711	113700	002000	3X3	G B=1.5X,G=90,B=41
COMAB	HD 31398	47	2.69	0453440	+330520	H 1	18721	L	1680	FU	90090810	104700	001000	343	G B=149,G=82,B=45
MA145	HD31648	34	07.98	0455360	+294606	H 1	18883	L	02414	FO	90092821	215900	004800	452	V
MA095	B33	23	13.90	0456059	-695054	L 3	39209	L	00000	BO	90070920	201641	006000	501	V
MA095	B33	23	13.90	0456059	-695055	L 1	18331	L	00000	BO	90070921	212456	003000	401	V
OBMOG	SK-67 27	25	12.1	0458368	-672912	L 1	18087	L	219	SO	90061117	174400	001912	503	G G=228,B=48
OBMOG	SK-67 27	25	12.1	0458368	-672912	L 3	39065	L	209	SO	90061118	181500	007218	502	G G=230,B=35
RTASS	HD 31910	45	4.0	0458576	+602219	L 3	39569	L	482	FU	90090210	100300	005000	432	G B=103,G=181,B=35
PHCAL	WAVCAL	98	0.0	0459540	-394722	L 1	18691	L			90090108	084400	000025	3?9	G B=10X,G=135,B=105
PHCAL	WAVCAL	98	0.0	0459540	-394722	L 1	18691	S			90090108	084600	000001	3?9	G B=10X,G=135,B=105
PHCAL	WAVCAL	98	0.0	0459540	-394722	H 1	18692	L			90090109	091700	000025	3?9	G B=50X,G=164,B=105
PHCAL	WAVCAL	98	0.0	0459540	-394722	H 1	18692	S			90090109	091900	000016	3?9	G B=50X,G=164,B=105
PHCAL	WAVCAL	98	0.0	0459540	-394722	H 2	18492				90090109	094400	000000	03	G B=45
PHCAL	WAVCAL	98	0.0	0459540	-394722	L 3	39561	L			90090110	101400	000005	2?8	G B=10X,G=120,B=100
PHCAL	WAVCAL	98	0.0	0459540	-394722	L 3	39561	S			90090110	101600	000002	2?8	G B=10X,G=120,B=100
PHCAL	WAVCAL	98	0.0	0459540	-394722	H 3	39562	L			90090110	104000	000005	3?9	G B=60X,G=160,B=122
PHCAL	WAVCAL	98	0.0	0459540	-394722	L 2	18493	L			90090111	111300	000010	3?6	G B=10X,G=140,B=78
PHCAL	WAVCAL	98	0.0	0459540	-394722	L 2	18493	S			90090111	111500	000001	3?6	G B=10X,G=140,B=78
PHCAL	WAVCAL	98	0.0	0459540	-394722	L 2	18493	S			90090111	111500	000001	3?6	G B=10X,G=140,B=78
PHCAL	WAVCAL	98	0.0	0459540	-394722	H 2	18494	L			90090111	114300	000010	3?9	G B=50X,G=160,B=123
PHCAL	WAVCAL	98	0.0	0459540	-394722	H 2	18494	S			90090111	114500	000022	3?9	G B=50X,G=160,B=123
PHCAL	TFLOOD	99	0.0	0459540	-394722	H 3	39563	L			90090112	123900	000005	09	G B=110
MCINE	HV 883	53	11.6	0500178	-683122	L 1	18030	L	225	SO	90060505	055200	024000	304	G G=150,B=57
OBMOG	SK-68 23	23	12.8	0500569	-681126	L 1	18198	L	117	SO	90062610	103800	005048	502	G G=208,B=40
OBMOG	SK-68 23	23	12.8	0500569	-681126	L 3	39155	L	114	SO	90062611	113500	022400	503	G G=208,B=41
PNMMP	242-37.1	70		0501219	-394954	L 3	39560	L		BO	90090105	055800	013000	X51	G B=219,G=2.5X,B=22
PNMMP	242-37.1	70	0.0	0501219	-394954	L 3	39564	L		BO	90090113	135000	004200	530	G B=103,G=170,B=17
PHCAL	TFLOOD	99	0.0	0501219	-394954	H 1	18693	L			90090113	135700	000025	09	G B=105
PNMMP	242-37.1	70	15.6	0501219	-394954	L 1	18703	L		BO	90090507	075400	018000	X08	G G=3X,B=95
PNMMP	242-37.1	70	15.6	0501219	-394954	L 3	39582	L		BO	90090511	110100	004500	402	G G=180,B=40
PNMMP	242-37.1	70	15.6	0501219	-394954	L 1	18704	L		BO	90090511	115200	005000	306	G G=170,B=72
PNMMP	J320	70	0.0	0502482	+103822	L 3	39575	L	154	SO	90090314	143600	001500	330	G B=64,G=68,B=18
PNMMP	J320	70		0502482	+103822	L 3	39583	L		BO	90090513	132500	003000	331	G B=98,G=90,B=22
PNMMP	J320	70		0502482	+103822	L 1	18705	L		BO	90090514	140100	004900	502	G G=211,B=40
PHCAL	HD 32630	21	3.2	0503002	+411008	H 1	18898	L	1310	FU	90093008	080700	000017	502	G G=220,B=40
PHCAL	HD 32630	21	3.2	0503002	+411008	H 3	39729	L	1308	FU	90093008	081200	000024	502	G G=210,B=35
MA095	N1818/D14	23	13.39	0503529	-662901	L 3	39203	L	00077	SO	90070821	210625	004000	501	V
MA095	N1818/D14	23	13.39	0503529	-662901	L 1	18326	L	00077	SO	90070821	215256	002300	501	V
OBMOG	SK-67 39	25	11.8	0504118	-672352	L 3	39428	L	279	SO	90080907	073400	009636	501	G G=205,B=22
OBMOG	SK-67 39	25	11.8	0504118	-672352	L 1	18545	L	254	SO	90080909	091900	002112	502	G G=195,B=35
OBMOG	SK-67239	25	12.1	0504462	-670524	L 3	39429	L	202	SO	90080910	101100	009500	502	G G=210,B=32
OBMOG	SK-67239	25	12.1	0504462	-670524	L 1	18546	L	202	SO	90080911	115300	002412	504	G G=215,B=55
OBMOG	SK-68 39	23	12.0	0504584	-681151	L 3	39132	L	224	SO	90062216	164300	003500	502	G G=195,B=32
OBMOG	SK-68 39	23	12.0	0504584	-681151	L 1	18168	L	222	SO	90062217	172700	001115	502	G G=198,B=40
HEIMS	HR 1679	20	4.27	0505450	-084855	H 3	39883	L	500	FU	90102011	110400	000055	502	G G=250,B=38

PRO	Object	CL	MAG	R.A.	DEC	D C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
RIASS HD	33328	26	4.3	0506449	-084859	H 3	39542	L	514	FU	90082712	125300	000050	502	G G=200,B=38
BEIMS HR	1679	20	4.27	0506450	-084855	H 3	39872	L	511	FU	90102005	053200	000100	X02	G G=1.5X,B=38
BEIMS HR	1679	20	4.27	0506450	-084855	H 3	39873	L	505	FU	90102006	060100	000055	X02	G G=1.2X,B=38
BEIMS HR	1679	20	4.27	0506450	-084855	H 3	39874	L	506	FU	90102006	063100	000055	X02	G G=1.2X,B=40
BEIMS HR	1679	20	4.27	0506450	-084855	H 3	39875	L	504	FU	90102007	070000	000055	502	G G=230,B=38
BEIMS HR	1679	20	4.27	0506450	-084855	H 3	39876	L	521	FU	90102007	072900	000055	X02	G G=1.2X,B=4
BEIMS HR	1679	20	4.27	0506450	-084855	H 3	39877	L	520	FU	90102007	075800	000055	502	G G=240,B=40
BEIMS HR	1679	20	4.27	0506450	-084855	H 3	39879	L	517	FU	90102009	090500	000055	502	G G=246,B=40
BEIMS HR	1679	20	4.27	0506450	-084855	H 3	39880	L	518	FU	90102009	093300	000055	502	G G=248,B=40
BEIMS HR	1679	20	4.27	0506450	084855	H 3	39881	L	507	FU	90102010	100300	000055	502	G G=245,B=38
BEIMS HR	1679	20	4.27	0506450	-084855	H 3	39882	L	499	FU	90102010	103200	000055	502	G G=251,B=38
BEIMS HR	1679	20	4.27	0506450	-084855	H 3	39884	L	508	FU	90102011	113800	000055	502	G G=254,B=40
BEIMS HR	1679	20	4.27	0506450	-084855	H 3	39891	L	515	FU	90102105	053500	000055	502	G G=238,B=35
BEIMS HR	1679	20	4.27	0506450	-084855	H 3	39892	L	522	FU	90102106	060700	000055	502	G G=242,B=39
BEIMS HR	1679	20	4.27	0506450	-084855	H 3	39893	L	514	FU	90102106	063600	000055	502	G G=240,B=39
BEIMS HR	1679	20	4.27	0506450	-084855	H 3	39894	L	520	FU	90102107	070900	000055	502	G G=240,B=38
BEIMS HR	1679	20	4.27	0506450	-084855	H 3	39895	L	523	FU	90102107	074000	000055	502	G G=250,B=40
BEIMS HR	1679	20	4.27	0506450	-084855	H 3	39896	L	517	FU	90102108	080800	000055	502	G G=240,B=40
BEIMS HR	1679	20	4.27	0506450	-084855	H 3	39897	L	521	FU	90102108	083700	000055	503	G G=240,B=42
BEIMS HR	1679	20	4.27	0506450	-084855	H 3	39898	L	525	FU	90102109	090700	000055	502	G G=240,B=40
BEIMS HR	1679	20	4.27	0506450	-084855	H 3	39899	L	531	FU	90102109	093600	000055	502	G G=235,B=40
BEIMS HR	1679	20	4.27	0506450	-084855	H 3	39901	L	525	FU	90102110	103500	000055	502	G G=245,B=40
BEIMS HR	1679	20	4.27	0506450	-084855	H 3	39902	L	520	FU	90102111	110700	000055	502	G G=240,B=40
BEIMS HR	1679	20	4.27	0506450	-084855	H 3	39903	L	514	FU	90102111	113500	000055	502	G G=250,B=40
BEIMS HR	1679	20	4.27	0506450	-084855	H 3	39904	L	511	FU	90102112	120600	000055	502	G G=245,B=40
BEIMS HR	1679	20	4.27	0506450	-084855	H 3	39905	L	514	FU	90102112	123400	000055	502	G G=245,B=40
WDMAH SS CMG		54	12.3	0506450	-084855	L 3	39907	L	202	SO	90102121	214500	002000	350	G E=182,C=64,B=18
BEIMS HR	1679	20	4.3	0506450	-084855	H 3	39911	L	526	FU	90102205	054300	000055	502	G G=220,B=40
BEIMS HR	1679	20	4.3	0506450	-084855	H 3	39912	L	526	FU	90102206	061400	000055	502	G G=225,B=40
BEIMS HR	1679	20	4.3	0506450	-084855	H 3	39913	L	525	FU	90102206	064400	000055	502	G G=230,B=40
BEIMS HR	1679	20	4.3	0506450	-084855	H 3	39914	L	521	FU	90102207	071800	000055	502	G G=230,B=38
BEIMS HR	1679	20	4.3	0506450	-084855	H 3	39915	L	530	FU	90102207	075700	000055	02	G B=40
BEIMS HR	1679	20	4.3	0506450	-084855	H 3	39916	L	526	FU	90102208	082800	000055	502	G G=230,B=38
BEIMS HR	1679	20	4.3	0506450	-084855	H 3	39917	L	527	FU	90102208	085900	000055	502	G G=220,B=40
BEIMS HR	1679	20	4.3	0506450	-084855	H 3	39918	L	526	FU	90102209	093100	000055	502	G G=200,B=37
BEIMS HR	1679	20	4.3	0506450	-084855	H 3	39919	L	522	FU	90102210	100100	000055	502	G G=230,B=40
BEIMS HR	1679	20	4.3	0506450	-084855	H 3	39920	L	519	FU	90102210	103000	000055	502	G G=230,B=40
BEIMS HR	1679	20	4.3	0506450	-084855	H 3	39921	L	513	FU	90102211	110100	000055	502	G G=210,B=40
BEIMS HR	1679	20	4.3	0506450	-084855	H 3	39922	L	515	FU	90102211	113200	000055	502	G G=210,B=40
BEIMS HR	1679	20	4.3	0506450	-084855	H 3	39923	L	516	FU	90102212	120500	000055	502	G G=230,B=40
BEIMS HR	1679	20	4.3	0506450	-084855	H 3	39924	L	515	FU	90102212	123500	000055	502	G G=238,B=40
MCINE HV 2338		53	12.2	0506559	-711916	L 1	18031	L	156	SO	90060510	104200	027000	407	G G=195,B=83
CBMIG SK -7080		23	12.6	0508223	-702950	L 3	39127	L	141	SO	90062119	193100	007800	501	G G=175,B=21
MA054 SKY		07	99.99	0509391	-712906	L 3	39536	L	00000	SO	90082600	002530	001900	111	V
CBMIG SK-68 62		25	11.8	0510330	-682852	L 3	39133	L	289	SO	90062218	181300	005300	501	G G=195,B=21
CBMIG SK-68 62		25	11.8	0510330	-682852	L 1	18169	L	282	SO	90062219	191300	001400	502	G G=200,B=35
CBMIG SK-68 63		23	10.5	0510375	-684959	L 3	39131	L	206	FO	90062215	154300	001130	500	G G=170,B=18
CBMIG SK-68 63		23	10.5	0510375	-684959	L 1	18167	L	208	FO	90062216	160200	000500	502	G G=220,B=40
RIASS HD	34029	45	0.08	0512598	+455641	L 3	39570	L	14375	FU	90090211	112900	000100	530	G E=86,C=237,B=20
MA054 IH39#1		25	10.79	0513527	-693543	L 3	39524	L	00196	FO	90082418	182901	003000	501	V PREAD

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MO	Obs.date	Exptim	mmmsstt	ECC	Comment
MA054	LH39#1	25	10.77	0513527	-693543	L	1	18654	L	00200	FO	90082419	191123	002000	701	V
CEMCG	SK-69 75	25	10.8	0513529	-693545	L	1	18547	L	201	FO	90080913	133000	000430	502	G G=195,B=40
CEMCG	SK-69 77	23	11.9	0513592	-692429	L	3	39037	L	264	SO	90060815	151500	005918	501	G G=205,B=25
CEMCG	SK-69 77	23	11.9	0513592	-692429	L	1	18058	L	273	SO	90060816	162300	001542	403	G G=195,B=46
MM071	SK -69 82	25	11.17	0514456	-691646	H	1	18677	L	00140	FO	90082918	181713	039000	401	V
DEMMP	HD 34333	20	7.5	0514580	+363454	L	1	18801	L	2359	FO	90091707	073400	000100	X02	G G=3X,B=32
DEMMP	HD 34333	20	7.5	0514580	+363454	L	3	39650	L	2344	FO	90091707	073900	000100	00	G B=13
DEMMP	HD 34333	20	7.5	0514580	+363454	H	3	39651	L	2308	FO	90091708	084500	006000	505	G G=222,B=62
DEMMP	HD 34333	20	7.5	0514580	+363454	H	1	18802	L	2242	FO	90091709	095400	002000	405	G G=190,B=68
DEMMP	HD 34333	20	7.5	0514580	+363454	L	1	18803	L	2188	FO	90091710	105700	000020	402	G G=180,B=32
DEMMP	HD 34333	20	7.5	0514580	+363454	L	3	39652	L	2172	FO	90091711	110300	000040	500	G G=200,B=15
DEMMP	HD 34333	20	7.5	0514580	+363454	H	1	18804	L	2180	FO	90091711	114300	003000	404	G G=209,B=60
DEMMP	HD 34333	20	7.5	0514580	+363454	H	3	39653	L	2136	FO	90091712	122400	006000	503	G G=200,B=45
DEMMP	HD 34333	20	7.5	0514580	+363454	L	3	39654	L	2150	FO	90091714	140500	000050	500	G G=238,B=15
DEMMP	HD 34333	20	7.5	0514580	+363454	L	1	18805	L	2157	FO	90091714	141100	000040	X02	G G=2X,B=35
PHCAL	HD 34816	20	4.3	0517162	-131337	H	3	39642	L	541	FU	90091508	080200	000022	402	G G=170,B=32
PHCAL	HD 34816	20	4.3	0517162	-131337	H	1	18789	L	542	FU	90091508	080700	000022	503	G G=200,B=41
PHCAL	HD 34816	20	4.3	0517162	-131337	H	3	39864	L	549	FU	90101908	084300	000022	502	G G=199,B=32
PHCAL	HD 34816	20	4.3	0517162	-131337	H	1	19032	L	543	FU	90101908	084800	000022	503	G G=195,B=42
RTASS	HD 35072	41	5.45	0518084	-503933	L	3	39504	L	15796	FO	90082106	060400	009500	X00	G G=2X,B=20
MA095	S DOR	23	09.74	0518352	-691802	H	1	18317	L	00502	FO	90070722	222358	018000	402	V
PHCAL	HD 35580	22	6.1	0521268	-561051	H	3	39297	L	11055	FO	90072414	144500	001400	503	G G=198,B=43
PHCAL	HD 35580	22	6.1	0521268	-561051	H	1	18437	L	11049	FO	90072415	150700	000800	503	G G=207,B=43
PHCAL	HD 35580	22	6.1	0521268	-561051	H	3	39865	L	10872	FO	90101910	100500	001400	402	G G=178,B=35
PHCAL	HD 35580	22	6.1	0521268	-561051	H	1	19033	L	10760	FO	90101910	104000	000800	503	G G=205,B=45
CEMCG	SK-66 78	23	12.2	0523302	-664450	L	1	18166	L	173	SO	90062213	135800	001130	502	G G=201,B=35
CEMCG	SK-66 78	23	12.2	0523302	-664450	L	3	39130	L	178	SO	90062214	142900	003200	500	G G=237,B=18
MA129	IC 418	70	09.03	0525095	-124415	L	3	40007	L	00943	FO	90103113	133732	000015	330	V
MA129	IC418	70	09.03	0525095	-124415	H	3	40008	L	00945	FO	90103114	141932	005000	351	V
MA129	IC418	70	09.05	0525095	-124415	H	3	40009	L	00929	FO	90103115	154448	001500	330	V
CEMCG	SK-66 88	23	12.7	0525338	-661659	L	1	18165	L	138	SO	90062210	100200	004100	502	G G=200,B=38
CEMCG	SK-66 88	23	12.7	0525338	-661659	L	3	39129	L	134	SO	90062210	105200	017000	502	G G=196,B=32
CEMCG	SK-67110	23	11.6	0526531	-673110	L	1	18088	L	346	SO	90061119	195200	000642	502	G G=242,B=35
CEMCG	SK-67110	23	11.6	0526531	-673110	L	3	39066	L	347	SO	90061120	202400	001612	X00	G G=1.5X,B=18
CEMCG	SK-67110	23	11.6	0526531	-673110	L	3	39415	L	341	SO	90080712	124800	001200	500	G G=220,B=19
CEMCG	SK-67110	23	11.6	0526531	-673110	L	1	18536	L	346	SO	90080713	132400	000600	503	G G=236,B=45
MA054	SK-67 120	13	12.67	0527471	-672941	L	1	18657	L	00146	SO	90082500	003756	001200	501	V PREAD WRONG OBJECT
MA054	SK-67 120	13	12.15	0527471	-672941	L	3	39532	L	00233	SO	90082518	182331	002500	701	V
MA054	SK-67 120	13	12.27	0527471	-672941	L	1	18661	L	00209	SO	90082519	190054	002000	701	V
MA054	SK-67 120	13	12.27	0527471	-672941	L	3	39533	L	00209	SO	90082519	194717	001000	501	V
MA054	W52	13	12.02	0529251	-684731	L	3	39525	L	00260	SO	90082420	202335	003000	701	V PREAD
MA054	W52	13	12.00	0529251	-684731	L	1	18655	L	00267	SO	90082421	210603	001500	601	V
MA054	W52	13	12.02	0529251	-684731	L	3	39526	L	00261	SO	90082421	214652	001200	501	V
WEMPC	ER40	11	14.9	0529500	-685642	L	3	39467	L		BO	90081601	012300	001000	230	G B=85,G=30,B=18
ME028	B9/2004	83	13.50	0529577	-670945	E	9	02342	2	00000	BO	90080315	155000	004000		V FES FOR 39/2004
ME028	B9/2004	83	13.50	0530428	-671900	L	1	18511	L	00000	BO	90080316	162725	002200	400	V
ME028	B9-2004	83	13.50	0530428	-671900	L	3	39389	L	00000	BO	90080316	165808	005500	500	V
MA095	N2004/D16	24	13.60	0530498	-672045	L	3	39197	L	00000	BO	90070801	015841	005000	501	V PREAD
MA095	N2004/D16	23	13.60	0530498	-672045	L	1	18325	L	00000	BO	90070820	200946	002500	502	V
ME028	D17-2004	83	14.08	0530514	-672030	L	1	18512	L	00000	BO	90080318	181940	007300	401	V

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
ME028	D17/2004	83	14.08	0530514	-672030	L	3	39390	L	00000	BO	90080319	193508	012000	400	V BREAD
OEMCG	-67153	25	12.0	0531003	-671823	L	3	39445	L	241	SO	90081212	121500	005654	502	G G=210,B=32
OEMCG	-67153	25	12.0	0531003	-671823	L	1	18566	L	242	SO	90081213	132200	001554	503	G G=205,B=44
MA095	R110	23	10.47	0531123	-690458	L	1	18316	L	00261	FO	90070720	205236	003000	502	V
MA095	R110	23	10.47	0531124	-690459	L	3	39196	L	00261	FO	90070719	195817	007500	501	V
MCMPM	NGC 2011	83	11.4	0531220	-665935	L	3	39224	L	345	SO	90071414	143200	004000	502	G G=205,B=32
MCMPM	NGC 2011	83	11.4	0531220	-665935	L	1	18371	L	350	SO	90071415	152000	003500	X02	G G=2X,B=32
MCMPM	SL 538	83	11.4	0531220	-665935	L	1	18998	L	350	SO	90101303	034200	002000	502	G G=253,B=38
MCMPM	NGC 2006	83	11.5	0531226	-670027	L	3	39223	L	201	SO	90071412	124800	004500	501	G G=215,B=23
MCMPM	NGC 2006	83	11.5	0531226	-670027	L	1	18370	L	199	SO	90071413	133900	004500	X04	G G=1.5X,B=58
MCMPM	N2006	83	11.4	0531226	-670027	L	1	18997	L	200	SO	90101301	015300	002500	302	G G=73,B=35
MA054	SK-67 167	13	12.59	0531598	-674141	L	1	18662	L	00157	SO	90082520	203925	001000	501	V
MA054	SK-67 167	13	12.56	0531598	-674141	L	3	39534	L	00162	SO	90082521	211318	001000	501	V
OEMCG	SK-68114	23	10.5	0532075	-683441	L	1	18057	L	207	FO	90060814	141000	000254	502	G G=203,B=33
OEMCG	SK-66132	23	11.5	0532170	-662614	L	3	39040	L	367	SO	90060820	202600	002300	500	G G=190,B=17
OEMCG	SK-67174	13	11.7	0532194	-674317	L	3	39123	L	345	SO	90062113	135000	001100	500	G G=215,B=17
OEMCG	SK-67174	13	11.7	0532194	-674317	L	1	18159	L	346	SO	90062114	140700	000448	402	G G=162,B=32
MCMPM	NGC 2011A	83	10.6	0532264	673318	L	3	39260	L	133	FO	90072004	043800	004500	X00	G G=1.5X,B=18
MCMPM	NGC 2011A	83	10.6	0532264	-673318	L	1	18402	L	133	FO	90072005	053100	003000	X02	G G=1.5X,B=37
MCMPM	NGC 2011A	83	10.6	0532264	-673318	L	1	18405	L	135	FO	90072010	102200	002000	X02	G G=1.5X,B=37
MCMPM	N2011A	83	10.6	0532264	-673318	L	3	39820	L	129	FO	90101304	042400	002500	500	G G=202,B=18
MCMPM	NGC 2011C	83	11.0	0532272	-673342	L	1	18404	L			90072009	091000	002500	302	G G=130,B=35
MCMPM	NGC 2011C	83	11.0	0532272	-673342	L	3	39263	L			90072009	094400	003000	300	G G=105,B=18
OEMCG	SK-67176	13	11.8	0532282	-674312	L	1	18160	L	321	SO	90062115	152400	000612	502	G G=205,B=38
OEMCG	SK-67176	13	11.8	0532282	-674312	L	3	39124	L	327	SO	90062115	153900	001312	X00	G G=1.5X,B=17
OEMCG	SK-67176	13	11.8	0532282	-674312	L	3	39430	L	320	SO	90080912	123700	000900	500	G G=230,B=20
MCMPM	NGC 2011B	83	13.0	0532438	-673348	L	3	39261	L	245	SO	90072006	061200	009000	X00	G G=1.5X,B=20
MCMPM	NGC 2011B	83	13.0	0532438	-673348	L	1	18403	L	245	SO	90072007	075000	003000	X02	G G=1.5X,B=35
MCMPM	NGC 2011B	83	13.0	0532438	-673348	L	3	39262	L	247	SO	90072008	082900	003000	400	G G=118,B=18
OEMCG	SK-69181	23	11.9	0532441	-691445	L	3	39038	L	261	SO	90060817	170800	004418	504	G G=233,B=52
OEMCG	SK-69181	23	11.9	0532441	-691445	L	1	18059	L	261	SO	90060818	180300	001306	503	G G=240,B=45
MA054	SK-67 181	13	12.31	0532533	-672240	L	1	18656	L	00202	SO	90082422	225534	001500	501	V
MA054	SK-67 181	13	12.32	0532533	-672240	L	3	39527	L	00200	SO	90082423	233156	001500	301	V
OEMCG	SK-69193	23	12.1	0534577	-694841	L	1	18078	L	242	SO	90061014	140900	000900	502	G G=195,B=32
OEMCG	SK-69193	23	12.1	0534577	-694841	L	3	39055	L	238	SO	90061014	142600	002336	500	G G=213,B=18
OEMCG	SK-69194	22	12.0	0535028	-694726	L	3	39835	L	250	SO	90101511	113000	001900	500	G G=218,B=18
OEMCG	SK-67214	25	11.9	0535418	-672209	L	1	18199	L	255	SO	90062615	153700	001512	502	G G=204,B=38
OEMCG	SK-67214	25	11.9	0535418	-672209	L	3	39156	L	251	SO	90062616	160900	005636	501	G G=218,B=25
SUIRK	SN 1987A	56	0.0	0535500	-691758	H	3	39093	L		BO	90061420	201200	096500	329	G E=120,G=150,B=103
SUIRK	SKY	07		0535500	-691758	L	1	18106				90061420	204100	090500	309	G G=166,B=118
SNMGS	SN 1987A	56	15.0	0535500	-691758	L	3	39300	L		BO	90072504	042900	028500	402	G G=186,B=40
SNMGS	SN 1987A	56	15.0	0535500	-691758	H	1	18440	L		BO	90072509	092300	008500	302	G G=135,B=40
SNMGS	SN 1987A	56	16.0	0535500	-691758	L	1	18792	L		BO	90091512	124200	011000	404	G G=170,B=51
SNMGS	SN 1987A	56	16.0	0535500	-691758	H	3	39644	L		BO	90091514	145400	093000	339	G E=132,G=145,B=110
SNMGS	SN 1987A	56	15.0	0535500	-691758	L	3	39757	L		BO	90100322	221700	026500	403	G G=176,B=42
SNMGS	SN 1987A	56	15.0	0535500	-691758	L	1	18933	L		BO	90100402	025100	012000	403	G G=185,B=45
RIASS	SN 1987A	56	16.0	0535500	-691758	L	3	40002	L		BO	90103022	222800	027000		G G=183,43
ME161	SN1987A	56	16.40	0535501	-691758	E	9	02353	2	00000	BO	90091518	181840	004000		V FOR SWP39644,SN IN S
OEMCG	SK-69205	23	12.2	0535512	-694331	L	1	18079	L	224	SO	90061015	151600	000948	502	G G=200,B=35
OEMCG	SK-69205	23	12.2	0535512	-694331	L	3	39056	L	224	SO	90061015	154700	002418	500	G G=229,B=18

PRO	Object	CL	MAG	R.A.	DEC	D C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
CEMIG	SK-67217	23	11.8	0535527	-670525	L	3	39125	L	291	SO	90062117	170000	001845	501 G	G=225,B=22
CEMIG	SK-67217	23	11.8	0535527	-670525	L	1	18161	L	295	SO	90062117	172800	000700	402 G	G=180,B=38
CEMIG	SK-69206	23	12.8	0535567	-690852	L	3	39832	L	122	SO	90101506	062200	017900	502 G	G=190,B=32
CEMIG	SK-67222	25	11.2	0536029	-670547	L	3	39126	L	441	SO	90062118	180200	002645	500 G	G=230,B=17
CEMIG	SK-67222	25	11.2	0536029	-670547	L	1	18162	L	439	SO	90062118	184300	000730	502 G	G=205,B=35
WRMPC	HD 269818	10	14.0	0536050	-691252	L	1	18179	L	76	SO	90062319	194900	006000	302 G	G=136,B=40
WRMPC	HD 269818	10	14.0	0536050	-691252	L	3	39144	L	77	SO	90062418	181900	008000	331 G	E=84,G=75,B=24
MCMPM	N2042A	83	12.0	0536280	-685625	L	3	39641	L	201	SO	90091505	051700	004000	400 G	G=140,B=16
MCMPM	N2042A	83	12.0	0536280	-685625	L	1	18788	L	202	SO	90091506	060700	002500	402 G	G=150,B=38
MCMPM	N2042B	83	12.0	0536287	-685724	L	3	39640	L	219	FO	90091504	040400	002500	201 G	G=48,B=29
MCMPM	N2042B	83	12.0	0536287	-685724	L	1	18787	L	220	FO	90091504	043700	002500	302 G	G=130,B=35
MCMPM	N 2042 B	83	10.5	0536287	-685724	L	3	39819	L	222	FO	90101302	023900	004000	300 G	G=60,B=15
MA095	B230	23	14.60	0536390	-683346	L	3	39204	L	00000	BO	90070822	225626	007000	001 V	WRONG STAR
MA095	B230	23	14.60	0536390	-683346	L	3	39205	L	00000	BO	90070901	012202	006000	401 V	
MA095	B230	23	14.60	0536390	-683346	L	1	18327	L	00000	BO	90070902	022647	002500	301 V	PREAD
WRMPC	HD 38029	10	11.6	0537170	-691350	L	1	18186	L	332	SO	90062415	150700	001500	402 G	G=184,B=40
WRMPC	HD 38030	10	13.3	0537180	-692750	L	1	18187	L	131	SO	90062416	163600	001500	342 G	E=163,G=121,B=40
CEMIG	SK-69227	13	12.2	0537283	-694014	L	3	39039	L	193	SO	90060818	184800	004906	500 G	G=193,B=19
CEMIG	SK-69227	13	12.2	0537283	-694014	L	1	18060	L	191	SO	90060819	194600	001518	502 G	G=230,B=35
CEMIG	ANON	65	12.1	0537438	-664315	L	1	19012	L	275	SO	90101508	081700	000900	04 G	B=58
CEMIG	ANON	65	12.1	0537438	-664315	L	3	39833	L	281	SO	90101508	084900	001900	03 G	B=50
CEMIG	SK-66178	23	12.1	0537438	-664315	L	3	39834	L	236	SO	90101510	100800	001900	500 G	G=250,B=20
CEMIG	SK-66178	23	12.1	0537438	-664315	L	1	19013	L	235	SO	90101510	103900	000900	502 G	G=212,B=37
CEMIG	SK-69238	13	12.2	0538232	-692847	L	1	18081	L	209	SO	90061018	182800	000948	502 G	G=220,B=38
CEMIG	SK-69238	13	12.2	0538232	-692847	L	3	39058	L	215	SO	90061019	190200	002224	501 G	G=223,B=21
CEMIG	SK-69237	23	12.1	0538244	-692349	L	1	18080	L	222	SO	90061017	171100	001054	502 G	G=196,B=40
CEMIG	SK-69237	23	12.1	0538244	-692349	L	3	39057	L	221	SO	90061017	173100	003142	501 G	G=188,B=23
MA054	SK-68 137	13	13.24	0538433	-685407	L	1	18663	L	00088	SO	90082522	223512	002000	501 V	
MA054	SK-68 137	13	13.23	0538433	-685407	L	3	39535	L	00089	SO	90082523	230929	002000	301 V	
PNMSH	MINCK 42	13	12.6	0539027	-690727	L	1	18999	L	572	FO	90101305	054300	003000	X02 G	G=3X,B=39
PNMSH	MINCK 42	13	12.6	0539027	-690727	L	3	39821	L	577	FO	90101306	062200	003000	X01 G	G=2X,B=24
PNMSH	MINCK 42	13	12.6	0539027	-690727	L	1	19000	L	571	FO	90101307	070500	003000	X04 G	G=2X,B=52
PNMSH	MINCK 42	13	12.6	0539027	-690727	L	3	39822	L	586	FO	90101307	074400	002000	502 G	G=210,B=35
CK7/K	R136A	11	9.4	0539030	-690735	L	3	39823	L	573	FO	90101308	084400	000500	501 G	G=210,B=30
CK7/K	R136A	11	9.4	0539030	-690735	L	1	19001	L	571	FO	90101308	085400	000230	503 G	G=230,B=50
CEMIG	SK-69252	23	12.4	0539370	-691812	L	1	18086	L	181	SO	90061115	153500	001542	502 G	G=216,B=40
CEMIG	SK-69252	23	12.4	0539370	-691812	L	3	39064	L	182	SO	90061116	160700	004800	502 G	G=192,B=40
WRMPC	MG 6	10	13.3	0540360	-692532	L	1	18593	L	288	SO	90081523	231900	002500	502 G	G=235,B=35
WRMPC	MG 6	10	13.3	0540360	-692532	L	3	39466	L	283	SO	90081523	234900	004500	501 G	1.5X,G=195,B=22
CEMIG	SK-69261	23	12.2	0540479	-693704	L	1	18085	L	179	SO	90061114	140000	001106	302 G	G=121,B=35
CEMIG	SK-69261	23	12.2	0540479	-693704	L	3	39063	L	179	SO	90061114	142200	003118	300 G	G=86,B=20
CEMIG	SK-69264	25	11.7	0540593	-693349	L	3	39413	L	315	SO	90080706	065100	013430	401 G	G=169,B=23
CEMIG	SK-69264	25	11.7	0540593	-693349	L	1	18534	L	297	SO	90080709	091400	002548	502 G	G=192,B=35
CEMIG	SK-69289	23	11.4	0543144	-693406	L	3	39836	L	379	SO	90101512	123600	001500	400 G	G=154,B=18
CEMIG	SK-69290	23	12.2	0543154	-690106	L	1	18082	L	195	SO	90061019	195700	001312	502 G	G=219,B=35
CEMIG	SK-69290	23	12.2	0543154	-690106	L	3	39059	L	194	SO	90061020	203000	002000	400 G	G=130,B=18
CEMIG	SK-69290	23	12.2	0543154	-690106	L	3	39134	L	189	SO	90062219	195500	003600	500 G	G=183,B=18
CEMIG	SK-69290	23	12.2	0543154	-690106	L	1	18170	L	187	SO	90062220	203800	001312	502 G	G=218,B=35
MC180	LHG83	59	16.20	0543490	-682336	L	3	39995	L	00000	BO	90102913	135933	040700	302 V	
CSMRS	HD 38666	12	5.2	0544083	-321928	L	1	18889	L	250	FU	90092910	102500	000500	503 G	G=215,B=42

PRO	Object	CL	MAG	R.A.	DEC	D C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
CSMRS	HD 39666	12	5.2	0544083	-321928	L 1	18890	L	243	FU	90092911	110900	001000	303 G	G=115,B=41
CSMRS	HD 39666	12	5.2	0544083	-321928	L 1	18891	L	244	FU	90092911	115900	000000	402 G	G=154,B=35
CBMCG	SK-67258	25	12.1	0544584	-672105	L 3	39414	L	216	SO	90080710	103300	007042	501 G	G=217,B=22
CBMCG	SK-67258	25	12.1	0544585	-672105	L 1	18535	L	218	SO	90080711	115200	001854	503 G	G=216,B=43
CD80Y	HD 39060	60	3.85	0546059	-510501	H 3	39866	L	602	FU	90101911	112700	001000	502 G	G=205,B=32
CD80Y	HD 39060	60	3.85	0546059	-510501	H 1	19034	L	610	FU	90101912	120300	000650	502 G	G=205,B=32
CD80Y	HD 39060	60	3.85	0546059	-510501	H 3	39867	L	610	FU	90101912	123400	001000	X03 G	G=2X,B=50
PHCAL	0549+158	37	13.0	0549344	+155245	L 3	39732	S	108	SO	90093013	130000	001000	400 G	G=160,B=18
PHCAL	0549+158	37	13.0	0549345	+155246	L 1	18901	L	107	SO	90093012	122600	001500	X02 G	G=1.5X,B=35
PHCAL	0549+158	37	13.0	0549345	+155246	L 1	18902	L	109	SO	90093013	133900	003000	X02 G	G=2.5X,B=37
PHCAL	TFLOOD	99		0549345	+155246	L 1	18903	L			90093014	144000	000025	09 G	B=105
SPMEG	HD 39587	44	4.4	0551044	+201602	H 1	18978	L	359	FU	90101010	102200	001100	543 G	E=160,G=200,B=41
RIASS	HD 39587	44	4.41	0551045	+201603	H 1	18764	L	363	FU	90091204	044100	002500	X43 G	E=166,G=2.5X,B=45
RIASS	HD 39587	44	4.41	0551045	+201603	L 3	39615	L	360	FU	90091205	051400	007500	X30 G	E=82,G=3X,B=18
SPMEG	HD 39587	44	4.4	0551045	+201603	H 1	18972	L	359	FU	90100908	084600	001300	X05 G	G=1.5X,B=62
SPMEG	HD 39587	44	4.4	0551045	+201603	L 3	39797	L	364	FU	90100909	091300	004500	X26 G	E=94,G=2X,B=80
SPMEG	HD 39587	44	4.4	0551045	+201603	L 3	39803	L	358	FU	90101009	091400	006000	X31 G	E=83,G=2.5X,B=22
CSMRS	HD CT APR 2	49	0.5	0552278	+072358	L 9	02374				90092903	035800	016000	G	
CSMRS	HD 39801	49	0.5	0552278	+072358	L 1	18886	L	12953	FU	90092904	041800	018000	3X4 G	E=1.5X,G=122,B=58
CSMRS	HD 39801	49	0.5	0552278	+072358	L 1	18887	L	13420	FU	90092908	080000	004500	3X6 G	E=1.5X,G=141,B=75
CSMRS	HD 39801	49	0.5	0552278	+072358	L 1	18888	L	13479	FU	90092909	092700	000005	342 G	E=154,G=82,B=33
CSMRS	HD 39801	49	0.50	0552278	+072357	L 1	18892	L	13224	FU	90092912	125200	011000	353 G	E=247,G=95,B=50
LSMAD	HD 39801	49	+0.5	0552280	+072358	H 1	18794	L	13045	FU	90091607	074300	000245	352 G	E=196,G=68,B=32
LSMAD	HD 39801	49	+0.5	0552280	+072358	L 3	39645	L	13037	FU	90091607	075600	005000	4X0 G	E=4X,G=125,B=17
LSMAD	HD 39801	49	+0.5	0552280	+072358	L 1	18795	L		FU	90091608	083200	000005	342 G	E=177,G=67,B=32
LSMAD	HD 39801	49	+0.5	0552280	+072358	H 1	18796	L	13024	FU	90091609	091800	007500	XX9 G	E=1.5X,G=5X,B=162
LSMAD	HD 39801	49	+0.5	0552280	+072358	L 3	39646	L	12874	FU	90091610	104200	001230	341 G	E=174,G=68,B=28
LSMAD	HD 39801	49	0.5	0552280	+072358	H 1	19018	L	13392	FU	90101605	055900	000245	352 G	E=192,G=66,B=32
LSMAD	HD 39801	49	0.5	0552280	+072358	L 3	39839	L	13483	FU	90101606	061100	005000	3X1 G	E=4X,G=120,B=28
LSMAD	HD 39801	49	0.5	0552280	+072358	L 1	19019	L	13215	FU	90101606	064700	000005	341 G	E=155,G=70,B=30
LSMAD	HD 39801	49	0.5	0552280	+072358	H 1	19020	L	13280	FU	90101607	073400	006000	X29 G	E=18X,G=3X,B=225
IBMRP	Z CRI	66	10.7	0553010	+134118	L 3	39622	L	736	SO	90091223	235000	000340	300 G	G=64,B=15
IBMRP	Z CRI	66	10.7	0553010	+134118	L 3	39623	L	656	SO	90091300	002900	001330	400 G	G=153,B=18
IBMRP	Z CRI	66	10.7	0553010	+134118	L 3	39624	L	582	SO	90091301	011500	002030	500 G	G=180,B=18
IBMRP	Z CRI	66	10.7	0553010	+134118	L 3	39625	L	527	SO	90091302	022500	007000	X01 G	G=3X,B=24
IBMRP	Z CRI	66	10.7	0553010	+134118	L 3	39626	L	588	SO	90091304	040800	001800	400 G	G=165,B=18
IBMRP	Z CRI	66	10.7	0553010	+134118	L 3	39627	L	668	SO	90091304	045900	001800	500 G	G=200,B=18
IBMRP	Z CRI	66	10.7	0553010	+134118	L 3	39628	L	778	SO	90091305	054900	001530	500 G	G=200,B=18
IBMRP	Z CRI	66	10.7	0553010	+134118	L 1	18769	L	815	SO	90091306	061400	000800	X02 G	G=1.5X,B=34
MOMAM	NGC 2137	83	10.5	0553230	-693005	L 3	39225	L	239	SO	90071416	162100	003000	300 G	G=50,B=17
MOMAM	NGC 2137	83	10.5	0553230	-693005	L 1	18372	L	231	SO	90071417	170300	003000	302 G	G=102,B=37
MOMAM	NGC 2136	83	10.6	0553364	-692927	L 3	39226	L	55	SO	90071417	174900	006000	200 G	G=38,B=18
MOMAM	NGC 2136	83	12	0553364	-692927	L 3	39871	L	65	SO	90102002	020400	009000	301 G	G=55,B=27
MOMAM	NGC 2136	83	12	0553364	-692927	L 1	19038	L	66	SO	90102003	033900	007100	302 G	G=75,B=40
BOMNE	HD 40457	53	7.8	0557070	+351848	L 1	18872	L	2648	FO	90092710	102400	001300	X04 G	G=2X,B=58
BOMNE	HD 40457	53	8.0	0557070	+351848	L 1	18877	L	2045	FO	90092802	025400	000700	502 G	G=190,B=35
RIASS	IB 1800	63	13.0	0609160	-484342	L 3	39632	L	80	SO	90091402	022200	002500	340 G	E=121,G=40,B=18
RIASS	IB 1800	63	13.0	0609160	-484343	L 1	18779	L	85	SO	90091402	025800	003500	342 G	E=144,G=95,B=38
RIASS	IB 1800	63	13.0	0609160	-484342	L 3	39633	L	85	SO	90091403	034000	004000	350 G	E=173,G=56,B=18
MOMAM	NGC 2214	83	10.9	0613096	-681441	L 3	39779	L	144	SO	90100602	022300	002500	200 G	G=38,B=18

PRO	Object	CL	MAG	R.A.	DEC	D C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
MOMAM	NGC 2214	83	10.9	061309.6	-681441	L 1	18947	L	120	SO	901006	03	0100	002000	00 G B=20
MOMAM	NGC 2214	83	10.9	061309.6	-681441	L 3	39780	L	91	SO	901006	04	1600	003500	300 G G=49,B=18
SAMEG	HD 44594	44	6.6	061847.1	-484250	L 3	39796	L	5835	FO	901008	22	0700	048000	505 G G=220,B=65
SAMEG	HD 44594	44	6.6	061847.1	-484250	H 1	18971	L	5734	FO	901009	06	1700	009000	504 G G=210,B=58
BOMNE	HD 44415	53	8.1	061922.0	+144212	L 1	18876	L	1480	FO	900927	23	4000	000800	302 G G=115,B=34
BOMNE	HD 44415	53	8.1	061922.0	+144212	L 3	39719	L	1487	FO	900927	23	5500	014400	302 G G=64,B=32
PNMMP	IM1-64	70		062101.3	-660628	L 3	39567	L		BO	900902	04	5500	011500	50 G E=188,B=18
PNMMP	IM1-64	70		062101.3	-660628	L 3	39573	L		BO	900903	07	4600	018000	X2 G E=1.5X,B=40
MQ175	HS0624+690	85	14.16	062435.2	+690704	L 3	39906	L	00035	SO	901021	14	2320	023000	362 V
MQ175	HS0624+690	85	14.16	062435.2	+690704	L 1	19046	L	00035	SO	901021	18	1428	011300	402 V
PHCAL	WAVCAL	98		062521.3	+303133	L 1	18908	L			901001	07	0500	000025	?8 G E=10X,B=100
PHCAL	WAVCAL	98		062521.3	+303133	L 1	18908	L			901001	07	0700	000001	?8 G E=10X,B=100
PHCAL	WAVCAL	98		062521.3	+303133	H 1	18909	L			901001	07	3500	000025	?9 G E=50X,B=105
PHCAL	WAVCAL	98		062521.3	+303133	H 1	18909	S			901001	07	3700	000016	?9 G E=50X,B=105
PHCAL	WAVCAL	98		062521.3	+303133	L 3	39735	L			901001	08	2600	000005	?8 G E=10X,B=100
PHCAL	WAVCAL	98		062521.3	+303133	L 3	39735	S			901001	08	2800	000002	?8 G E=10X,B=100
PHCAL	WAVCAL	98		062521.3	+303133	H 3	39736	L			901001	08	8500	000005	?9 G E=60X,B=123
PHCAL	WAVCAL	98		062521.3	+303133	H 3	39736	S			901001	08	8500	000200	?9 G E=60X,B=123
PHCAL	WAVCAL	98		062521.3	+303133	L 2	18500	L			901001	09	0000	000010	?7 G E=10X,B=85
PHCAL	WAVCAL	98		062521.3	+303133	L 2	18500	S			901001	09	0200	000001	?7 G E=10X,B=85
PHCAL	WAVCAL	98		062521.3	+303133	H 2	18501	L			901001	09	3100	000010	?9 G E=50X,B=115
PHCAL	WAVCAL	98		062521.3	+303133	H 2	18501	S			901001	09	3300	000022	?9 G E=50X,B=115
ISMEB	HD 45813	21	4.48	062618.8	-323250	H 3	39769	L	407	FU	901005	07	4800	000300	X03 G G=1.5X,B=50
CD70Y	HR AUR	66	11.4	062759.5	+305828	L 1	18910	L	329	SO	901001	11	1200	008400	333 G E=149,G=95,B=50
PHCAL	TEL00D	99		062759.5	+305828	H 3	39737	L			901001	12	0500	000005	09 G B=105
RTASS	HD 44982	46	9	063036.6	+821846	L 3	39634	L	348	FO	900914	05	1800	010000	00 G B=14
ISMEB	HD 49662	22	5.39	064641.6	-150513	H 3	39768	L	18391	FO	901005	06	5200	000800	X03 G G=1.5X,B=45
ISMEB	HD 49662	22	5.39	064641.6	-150513	H 1	18940	L	18499	FO	901005	07	0900	000600	X03 G G=2X,B=50
CD72Y	MWC 560	57	9.0	072327.9	-073735	L 3	39710	L	463	FO	900926	11	5900	001600	301 G G=61,B=28
CD72Y	MWC 560	57	9.0	072327.9	-073735	L 3	39711	L	451	FO	900926	12	4700	004000	421 G E=11,G=174,B=25
CD72Y	MWC 560	57	9.0	072327.9	-073735	L 1	18867	L	458	FO	900926	13	3300	001500	552 G E=250,G=223,B=35
CD72Y	MWC 560	57	9.0	072327.9	-073735	L 1	18868	L	447	FO	900926	14	3200	001500	552 G E=243,G=253,B=33
RTASS	HD 58978	26	5.5	072452.1	-225902	H 3	39806	L	16157	FO	901011	05	2800	000250	502 G G=200,B=36
RTASS	HD 58978	26	5.5	072452.1	-225902	H 1	18982	L	16185	FO	901011	05	3500	000130	403 G G=190,B=41
MC063	HD59067	39	06.21	072530.6	-112705	L 3	39816	L	11146	FO	901012	17	0214	000020	600 V
MC063	HD59067	39	06.20	072530.6	-112705	H 1	18992	L	11250	FO	901012	17	0915	004000	801 V
PNMSH	NGC 2392	70	10.4	072613.4	+210056	L 3	39824	L	326	FO	901013	10	1500	000200	500 G G=220,B=18
PNMSH	NGC 2392	70	10.4	072613.4	+210056	L 1	19002	L	328	FO	901013	10	2100	000200	X02 G G=1.5X,B=32
PNMSH	NGC 2392	70	10.4	072613.4	+210056	H 3	39825	L	327	FO	901013	10	5400	008000	453 G E=200,G=145,B=45
PNMSH	NGC 2392	70	10.4	072613.4	+210056	L 1	19003	L	323	FO	901013	12	1900	000200	X02 G G=1.5X,B=35
PHCAL	HD60753	21	07.10	073208.0	-502829	L 2	18461	L	05246	FO	900626	02	1415	000011	502 V
PHCAL	HD60753	21	07.11	073208.0	-502829	L 2	18462	L	05178	FO	900626	02	5041	000013	502 V 36 X 0.5 SEC. EXPS
PHCAL	HD60753	21	07.09	073208.1	-502829	L 3	39013	L	05301	FO	900604	21	4953	000010	500 V
PHCAL	HD 60753	21	6.7	073208.1	-502829	L 3	39023	L	7180	FO	900606	19	5800	000010	400 G G=160,B=15
PHCAL	HD60753	21	07.08	073208.1	-502829	L 3	39014	L	05312	FO	900604	22	2856	000013	500 V 26 X 0.5 SEC
PHCAL	HD 60753	21	6.7	073208.1	-502829	L 3	39023	S	7180	FO	900606	20	0400	000030	?00 G G=G=210,B=18
PHCAL	HD60753	21	07.09	073208.1	-502829	L 3	39015	L	05297	FO	900604	23	5050	000010	500 V
PHCAL	HD 60753	21	6.7	073208.1	-502829	L 1	18045	L	7173	FO	900606	20	0900	000006	402 G G=162,B=33
PHCAL	HD60753	21	07.08	073208.1	-502829	L 1	18027	L	05326	FO	900605	00	2014	000007	500 V
PHCAL	HD 60753	21	6.7	073208.1	-502829	L 1	18045	S	7183	FO	900606	20	1400	000018	502 G G=228,B=32

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
PHOTOCAL	HD60753	21	07.07	0732081	-502829	L	1	18028	L	05365	FO	90060501	010138	000010	500	V 20 X 0.5 SEC
PHOTOCAL	HD 60753	21	6.7	0732081	-502829	L	1	18188	L	6539	FO	90062513	135300	000006	502	G G=190,B=33
PHOTOCAL	HD60753	21	07.08	0732081	-502829	L	1	18029	L	05338	FO	90060502	021353	000007	500	V
PHOTOCAL	HD 60753	21	6.7	0732081	-502829	L	1	18188	S	6561	FO	90062513	135800	000018	X01	G G=1.5X,B=30
PHOTOCAL	HD60753	21	07.08	0732081	-502829	L	3	39016	L	05347	FO	90060502	025710	000013	500	V 26 X 0.5 SEC
PHOTOCAL	HD 60753	21	6.7	0732081	-502829	L	3	39147	L	6540	FO	90062514	140400	000010	500	G G=190,B=17
PHOTOCAL	HD60753	21	07.08	0732081	-502829	L	3	39017	L	05345	FO	90060504	042029	000010	500	V
PHOTOCAL	HD 60753	21	6.7	0732081	-502829	L	3	39147	L	6540	FO	90062514	140400	000010	500	G G=190,B=17
PHOTOCAL	HD60753	21	07.03	0732081	-502829	L	1	18036	L	05564	FO	90060601	014504	000007	500	V
PHOTOCAL	HD 60753	21	6.7	0732081	-502829	L	3	39147	S	6539	FO	90062514	140900	000030	500	G G=190,B=17
PHOTOCAL	HD60753	21	07.02	0732081	-502829	L	1	18037	L	05604	FO	90060602	023915	000010	500	V 20 X 0.5 SEC
PHOTOCAL	HD 60753	21	6.7	0732081	-502829	L	1	18189	L	6401	FO	90062515	153700	000026	502	G G=185,B=32
PHOTOCAL	HD60753	21	07.02	0732081	-502829	L	1	18038	L	05604	FO	90060603	035034	000010	500	V 20 X 0.5 SEC
PHOTOCAL	HD 60753	21	6.7	0732081	-502829	L	3	39148	L	6340	FO	90062515	154800	000041	500	G G=198,B=18
PHOTOCAL	HD60753	21	07.04	0732081	-502829	L	1	18123	L	05533	FO	90061801	014134	000007	500	V
PHOTOCAL	HD 60753	21	6.69	0732081	-502829	L	1	18632	L	6541	FO	90082122	224500	000026	502	G G=190,B=34
PHOTOCAL	HD60753	21	07.02	0732081	-502829	L	1	18124	L	05604	FO	90061802	021629	000010	400	V 20 X 0.5 SECS
PHOTOCAL	HD 60753	21	6.69	0732081	-502829	L	1	18633	L	6545	FO	90082123	232800	000010	302	G G=100,B=33
PHOTOCAL	HD60753	21	07.03	0732081	-502829	L	3	39105	L	05581	FO	90061803	031543	000010	400	V
PHOTOCAL	HD 60753	21	6.69	0732081	-502829	L	1	18634	L	6425	FO	90082200	001300	000031	502	G G=190,B=35
PHOTOCAL	HD60753	21	07.02	0732081	-502829	L	3	39106	L	05630	FO	90061803	034347	000014	400	V 28 X 0.5 SECONDS
PHOTOCAL	HD 60753	21	6.69	0732081	-502829	L	1	18635	L	6361	FO	90082201	010200	000041	502	G G=225,B=33
PHOTOCAL	HD60753	21	07.07	0732081	-502828	L	2	18463	L	05387	FO	90062701	013425	000011	501	V
PHOTOCAL	HD 60753	21	6.69	0732081	-502829	L	1	18636	L	6271	FO	90082201	014800	000026	402	G G=176,B=35
PHOTOCAL	HD60753	21	07.08	0732081	-502828	L	2	18464	L	05319	FO	90062702	020934	000018	501	V 36 X 0.5 SEC. EXPS
PHOTOCAL	HD 60753	21	6.69	0732081	-502829	L	1	18637	L	6082	FO	90082202	024000	000030	502	G G=195,B=35
PHOTOCAL	HD60753	21	07.14	0732081	-502829	L	2	18465	L	05054	FO	90062703	035205	000011	502	V
PHOTOCAL	HD 60753	21	6.7	0732081	-502829	L	1	18659	L			90082513	135100	000006		G
PHOTOCAL	HD60753	21	07.13	0732081	-502828	L	2	18466	L	05093	FO	90062802	023829	000011	602	V
PHOTOCAL	HD 60753	21	6.7	0732081	-502829	L	1	18659	L			90082513	135700	000006		G
PHOTOCAL	HD60753	21	07.15	0732081	-502829	L	2	18467	L	05026	FO	90062803	031858	000018	601	V 36*0.5 SEC EXPOSURE
PHOTOCAL	HD 60753	21	6.7	0732081	-502829	L	1	18659	L			90082513	135700	000006		G
PHOTOCAL	HD60753	21	06.88	0732081	-502829	L	2	18496	L	06361	FO	90092417	171000	000008	501	V 4.5 KV
PHOTOCAL	HD 60753	21	6.7	0732081	-502829	L	3	39530	L			90082514	140300	000010		G
PHOTOCAL	HD60753	21	06.86	0732081	-502829	L	2	18497	L	06438	FO	90092417	174946	000015	501	V 4.5KV 30*0.5
PHOTOCAL	HD 60753	21	6.7	0732081	-502829	L	3	39530	L	6214	FO	90082514	140900	000010	500	G G=210,B=15
PHOTOCAL	HD60753	21	06.84	0732081	-502829	L	2	18498	L	06559	FO	90092419	193957	000008	501	V 4.5KV
PHOTOCAL	HD 60753	21	6.7	0732081	-502829	L	3	39530	L			90082514	140900	000010		G
PHOTOCAL	HD60753	21	06.83	0732081	-502829	L	2	18499	L	06604	FO	90092420	201609	000015	501	V 4.5KV 30*0.5 S
PHOTOCAL	HD 60753	21	6.69	0732081	-502829	L	1	18782	L	6421	FO	90091412	121100	000006	502	G G=210,B=32
PHOTOCAL	HD 60753	21	6.69	0732081	-502829	L	1	18782	S	6420	FO	90091412	121600	000018	X02	G G=1.5X,B=32
PHOTOCAL	HD 60753	21	6.69	0732081	-502829	L	3	39635	L	6419	FO	90091412	122200	000010	500	G G=180,B=17
PHOTOCAL	HD 60753	21	6.69	0732081	-502829	L	3	39635	S	6427	FO	90091412	122700	000030	X00	G G=1.5X,B=17
PHOTOCAL	HD 60753	21	6.69	0732081	-502829	L	1	18783	L	6369	FO	90091413	133200	000026	502	G G=190,B=38
PHOTOCAL	HD 60753	21	6.69	0732081	-502829	L	3	39636	L	6334	FO	90091413	135000	000041	500	G G=190,B=19
PHOTOCAL	HD 60753	21	6.7	0732081	-502829	L	3	39808	S	6713	FO	90101109	093800	000030	500	G G=215,B=18
PHOTOCAL	HD 60753	21	6.7	0732081	-502829	L	3	39808	L	6717	FO	90101109	094300	000010	400	G G=150,B=18
PHOTOCAL	HD 60753	21	6.7	0732081	-502829	L	1	18984	S	6758	FO	90101109	094800	000018	X02	G G=1.5X,B=32
PHOTOCAL	HD 60753	21	6.7	0732081	-502829	L	1	18984	L	6755	FO	90101109	095300	000006	402	G G=175,B=32
PHOTOCAL	HD 60753	21	6.7	0732081	-502829	L	3	39809	L	6866	FO	90101110	105500	000041	500	G G=182,B=18

PRO	Object	CL	MAG	R.A.	DEC	D C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
PHOAL	HD 60753	21	6.7	0732081	-502829	L 1	18985	L	6928	FO	90101111	110700	000026	402 G	G=181,B=36
PHOAL	NULL	99		0732081	-502829	2	18502				90102221	214300	000000	03 G	B=50
PHOAL	HD 60753	21	6.7	0732081	-502829	L 2	18503	L	6685	FO	90102222	222600	000043	401 G	G=160,B=22
PHOAL	HD 60753	21	6.7	0732081	-502829	L 2	18504	L	6700	FO	90102223	230500	000017	301 G	G=105,B=24
PHOAL	HD 60753	21	6.7	0732081	-502829	L 2	18505	L	6606	FO	90102300	000200	000051	501 G	G=195,B=25
PHOAL	HD 60753	21	6.7	0732081	-502829	L 2	18506	L	6606	FO	90102300	004500	000109	X01 G	G=1.6X,B=24
PHOAL	HD 60753	21	6.7	0732081	-502829	L 2	18507	L	6593	FO	90102301	012600	000043	401 G	G=170,B=24
PHOAL	NULL	99		0732081	-502829	L 2	18508	L			90102302	020000	000000	01 G	B=22
PHOAL	HD 60753	21	6.7	0732081	-502829	L 2	18509	L	6568	FO	90102302	023300	000054	501 G	G=210,B=24
PHOAL	HD 60753	21	6.7	0732081	-502829	L 2	18510	L	6616	FO	90102303	033400	000026	401 G	G=139,B=24
PHOAL	HD 60753	21	6.7	0732081	-502829	L 2	18511	L	6561	FO	90102304	041200	000043	501 G	G=180,B=28
RIASS	HD 61064	41	5.13	0734475	-035953	L 3	39807	L	20069	FO	90101106	063000	005500	X30 G	E=81,G=4X,B=18
RIASS	HD 61064	41	5.13	0734475	-035953	H 1	18983	L	19850	FO	90101107	073200	007000	X09 G	G=3X,B=125
MC180	HD61421	41	00.42	0736392	+052035	L 3	39799	L	15800	FU	90100913	132443	000400	111 V	NO GUIDING
MC180	HD61421	41	00.60	0736392	+052035	L 3	39801	L	12435	FU	90100916	165311	000400	750 V	
ISMFB	HD 62226	21	5.42	0739302	-382456	H 3	39770	L	18131	FO	90100508	082900	000400	502 G	G=201,B=38
MC180	HD62509	47	01.60	0742136	+280855	L 3	39774	L	06081	FU	90100516	160240	010500	600 V	
MI180	HD64511	59	14.00	0752077	+220758	L 3	39800	L	00000	BO	90100914	144341	007000	111 V	
MI180	HD64511	59	14.00	0752077	+220758	L 1	18974	L	00000	BO	90100915	155821	002700	111 V	
PHOAL	BD +75 0325	16	9.5	0804432	+750648	L 1	18767	S	565	FO	90091211	115200	000100	X02 G	G=1.5X,B=34
PHOAL	BD +75 0325	16	9.5	0804432	+750648	L 1	18767	L	565	FO	90091211	115700	000020	402 G	G=185,B=36
PHOAL	BD +75 0325	16	9.5	0804432	+750648	L 3	39618	S	562	FO	90091212	120300	000042	X00 G	G=1.5X,B=18
PHOAL	BD +75 0325	16	9.5	0804432	+750648	L 3	39618	L	564	FO	90091212	120800	000014	400 G	G=162,B=18
PHOAL	BD +75 0325	16	9.5	0804432	+750648	L 1	18768	L	558	FO	90091213	131300	000140	402 G	G=186,B=38
PHOAL	BD +75 0325	16	9.5	0804432	+750648	L 3	39619	L	557	FO	90091213	132500	000043	400 G	G=142,B=18
PHOAL	BD +75 0325	16	9.5	0804432	+750648	H 3	39649	L	585	FO	90091705	055400	003100	402 G	G=185,B=38
PHOAL	BD +75 0325	16	9.5	0804432	+750648	L 1	19024	L	564	FO	90101710	103900	000020	502 G	G=190,B=32
PHOAL	BD +75 0325	16	9.5	0804432	+750648	L 1	19024	S	562	FO	90101710	104600	000100	502 G	G=190,B=32
PHOAL	BD +75 0325	16	9.5	0804432	+750648	L 3	39843	L	571	FO	90101710	105200	000014	500 G	G=180,B=12
PHOAL	BD +75 0325	16	9.5	0804432	+750648	L 3	39843	S	568	FO	90101710	105900	000042	500 G	G=185,B=12
PHOAL	BD +75 0325	16	9.5	0804432	+750648	L 1	19025	L	563	FO	90101712	120400	000140	502 G	G=205,B=32
PHOAL	BD +75 0325	16	9.5	0804432	+750648	L 3	39844	L	562	FO	90101712	121700	000043	400 G	G=145,B=15
WDMAH	SU UMA	54	14.5	0808048	+624528	L 3	39749	S	40	SO	90100300	003700	025000	354 G	E=215,G=113,B=55
WDMAH	SU UMA	54	14.5	0808048	+624528	L 3	39910	S	33	SO	90102203	034900	006000	00 G	B=20
RIASS	HD 71243	41	4.07	0819511	-764544	L 3	39463	L	507	FU	90081501	015400	005000	240 G	E=136,G=20X,B=20
RIASS	HD 71243	41	4.07	0819511	-764544	L 1	18586	L	507	FU	90081502	024900	000111	?02 G	G=25X,B=40
MC063	HD71129	39	02.18	0821294	-592053	H 1	18993	L	03640	FU	90101219	190628	000200	701 V	
SNMIR	VELA SNR	75		0827349	-444301	L 3	39986	L		BO	90102822	221000	040000	335 G	E=153,G=92,B=65
SNMIR	VELA SNR	75		0827359	-444301	L 3	39996	L		BO	90102921	215700	036000	236 G	E=168,G=78,B=76
SNMIR	VELA SNR	75		0827359	-444301	L 1	19086	L		BO	90103004	040000	029000	336 G	E=102,G=120,B=72
SNMIR	VELA SNR	75		0827372	-444156	L 3	39997	L		BO	90103004	043300	022000	303 G	G=75,B=42
RIASS	HD 72779	45	6.58	0832271	+194548	L 3	39890	L	6248	FO	90102103	031400	009500	431 G	E=72,G=140,B=30
SAMEG	HD 72905	44	5.6	0834466	+651144	H 1	18973	L	12880	FO	90100910	104200	001500	333 G	E=133,G=135,B=44
SAMEG	HD 72905	44	5.6	0834466	+651144	L 3	39798	L	12976	FO	90100911	110600	009000	501 G	G=210,B=26
SAMEG	HD 72905	44	5.6	0834466	+651144	H 1	18989	L	13467	FO	90101209	095000	002000	403 G	E148,G=175,B=50
SAMEG	HD 72905	44	5.6	0834466	+651144	L 3	39813	L	13401	FO	90101210	101800	009000	532 G	E=59,G=214,B=38
MC180	HD77905	44	06.00	0834467	+651145	L 3	39773	L	13123	FO	90100513	134454	006500	500 V	
BNMIB	K 2-15	70	11.7	0846512	-424244	L 3	39087	L	217	SO	90061319	194000	007000	300 G	G=47,B=18
SAMJC	JUPITER	03	-2.0	0853530	+175542	L 3	39931	L			90102405	055600	001500	X40 G	E=144,G=3X,B=20
SAMJC	JUPITER	03	-2.0	0853530	+175542	L 3	39932	L			90102406	064900	001500	X40 G	E=154,G=3X,B=15

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
SAMDC	JUPITER	03	-2.0	0853530	+175542	L	3	39933	L			90102407	074300	001500	X40	G E=144,C=2X,B=17
SAMDC	JUPITER	03	-2.0	0853530	+175542	L	3	39934	L			90102408	083700	001500	X40	G E=131,C=2X,B=18
SAMDC	JUPITER	03	-2.0	0853530	+175542	L	3	39935	L			90102409	093100	001500	X50	G E=173,C=2X,B=18
SAMDC	JUPITER	03	-2.0	0853530	+175542	L	3	39936	L			90102410	102300	001500	X40	G E=166,C=2X,B=18
SAMDC	JUPITER	03	-2.0	0853530	+175542	L	3	39937	L			90102411	111300	001500	X40	G E=155,C=2X,B=18
SAMDC	JUPITER	03	-2.0	0853530	+175542	L	3	39938	L			90102412	120700	001500	X40	G E=148,C=2X,B=18
SAMDC	JUPITER	03		0854455	-175231	H	3	39952	L			90102606	062400	006600	X36	G E=132,C=5X,B=80
SAMDC	JUPITER	03		0854478	-175223	L	3	39953	L			90102608	081300	001500	X40	G E=141,C=3X,B=18
SAMDC	JUPITER	03		0854478	+175224	L	3	39954	L			90102609	090300	001500	X40	G E=142,C=3X,B=18
SAMDC	JUPITER	03		0854478	+175224	L	3	39955	L			90102609	095400	001500	X40	G E=134,C=3X,B=18
SAMDC	JUPITER	03		0854478	+175224	L	3	39956	L			90102610	104500	001500	X40	G E=126,C=3X,B=18
SAMDC	JUPITER	03		0854478	+175224	L	3	39957	L			90102611	113400	001500	X40	G E=149,C=3X,B=18
SJMHM	JUPITER	03		0855114	+175104	L	3	39962	L			90102705	054100	001500	X40	G E=165,C=2X,B=18
SJMHM	JUPITER	03		0855114	+175104	L	3	39963	L			90102706	063100	001500	X50	G E=186,C=2X,B=18
SJMHM	JUPITER	03		0855114	+175104	L	3	39964	L			90102707	071900	001500	X50	G E=173,C=2X,B=17
SJMHM	JUPITER	03		0855114	+175104	L	3	39965	L			90102708	080900	001500	X40	G E=165,C=2X,B=18
SJMHM	JUPITER	03		0855114	+175104	L	3	39966	L			90102709	090400	001500	X40	G E=168,C=2X,B=18
SJMHM	JUPITER	03		0855114	+175104	L	3	39967	L			90102709	095300	001500	X40	G E=141,C=2X,B=18
SJMHM	JUPITER	03		0855114	+175104	L	3	39968	L			90102710	104900	001500	X40	G E=148,C=2X,B=18
SJMHM	JUPITER	03		0855114	+175104	L	3	39969	L			90102711	113600	001500	X40	G E=134,C=2X,B=18
SJMHM	JUPITER	03		0855114	+175104	L	3	39970	L			90102712	122100	001500	X40	G E=129,C=2X,B=18
SJMHM	JUPITER	03		0856002	+174807	L	3	39987	L			90102905	055400	001500	X50	G E=178,C=5X,B=18
SJMHM	JUPITER	03		0856002	+174807	L	3	39988	L			90102906	064400	003000	300	G C=41,B=20
SJMHM	JUPITER	03		0856002	+174807	L	3	39989	L			90102907	074700	001500	X51	G E=180,C=5X,B=22
SJMHM	JUPITER	03		0856002	+174807	L	3	39990	L			90102908	083700	001500	X50	G E=192,C=5X,B=19
SJMHM	JUPITER	03		0856002	+174807	L	3	39991	L			90102909	092500	001500	X50	G E=172,C=5X,B=18
SJMHM	JUPITER	03		0856002	+174807	L	3	39992	L			90102910	101400	001500	X40	G E=167,C=5X,B=18
SJMHM	JUPITER	03		0856002	+174807	L	3	39993	L			90102911	110200	001500	X50	G E=178,C=5X,B=18
SJMHM	JUPITER	03		0856002	+174807	L	3	39994	L			90102911	115400	004500	231	G E=63,C=34,B=22
RIASS	HD 82210	45	4.56	0930059	+700306	L	3	39793	L	312	FU	90100809	095900	006500	444	G E=180,C=160,B=57
RIASS	HD 82210	45	4.56	0930059	+700306	H	1	18970	L	309	FU	90100811	111200	001200	343	G E=167,C=140,B=41
RIASS	HD 82210	45	4.56	0930059	+700306	L	3	39794	L	311	FU	90100811	114200	007000	441	G E=169,C=150,B=26
SOMMA	CT AER 2	06		0939370	+255759	L	9	02376				90093003	030400	000500		G
SOMMA	C/ ENCKE	06	9.5	0939370	+255759	H	1	18897	L		SO	90093003	033600	017000	34	G E=151,B=57
SOMMA	C/ ENCKE	06	9.5	0939370	+255759	L	3	39728	L			90093003	033800	015000	01	G B=28
DOMIT	HD 84810	53	3.7	0943523	-621636	L	1	18150	L			90062012	124500	000020		G
DOMIT	HD 84810	53	3.7	0943523	-621636	L	3	39117	L			90062012	125100	016000		G
DOMIT	HD 84810	53	3.7	0943523	-621636	L	1	18151	L			90062015	153600	000030		G
DOMIT	HD 84810	53	3.95	0943523	-621636	L	1	18290	L	519	FU	90070504	040700	000130	402	G C=140,B=34
DOMIT	HD 84810	53	3.95	0943523	-621636	L	3	39179	L	522	FU	90070504	041600	039000	353	G E=224,C=105,B=48
SOMMA	CT AER 2	06		9	0947200	+250527	L	9	02381			90100103	031600	000500		G
SOMMA	C/ ENCKE	06		9	0947200	+250527	L	1	18907	L	213	SO	90100103	032900	001500	X3	G E=3X,B=45
SOMMA	C/ ENCKE	06		9	0947200	+250527	L	1	18907	S	213	SO	90100103	035100	001500	X3	G E=3X,B=45
IGMIN	HD 86161	11	8.4	0953144	-572925	H	2	18488	L	1596	FO	90071608	085900	008500	402	G C=153,B=40
WRMPC	HD 88500	10	11.1	1008528	-602357	L	1	18185	L	238	FO	90062414	140400	000300	342	G E=167,C=104,B=31
WRMPC	HD 88500	10	11.1	1008528	-602357	L	3	39142	L	237	FO	90062414	141100	000400	340	G E=1.5X,C=79,B=20
IBMKD	HR CAR	23	8.0	1021073	-592217	L	1	18425	L	2553	FO	90072214	145500	000800	X03	G C=2X,B=42
IBMKD	HR CAR	23	8.0	1021073	-592217	L	3	39283	L	2570	FO	90072215	152700	006000	301	G C=116,B=27
IMMDC	HD 91651	12	8.9	1031397	-595205	L	1	18396	L	953	FO	90071909	093600	000112	X02	G C=2X,B=35
IMMDC	HD 91651	12	8.9	1031397	-595205	L	1	18396	S	947	FO	90071909	094400	000002	502	G C=218,B=32

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
IMMC	HD 91651	12	8.9	1031397	-595205	L	3	39255	L	942	FO	90071910	103600	000300	500	G G=198,B=18
LEMD	EIA_CAR	61	7.0	1043069	-592516	L	3	39280	L	15003	FO	90072211	114500	000030	351	G E=187,G=89,B=21
LEMD	EIA_CAR	61	7.0	1043069	-592516	L	3	39280	S	14946	FO	90072211	114900	000100	351	G E=182,G=91,B=21
LEMD	EIA_CAR	61	7.0	1043069	-592516	L	1	18423	L	15001	FO	90072211	115500	000010	X22	G E=2,G=1.5XB=36
LEMD	EIA_CAR	61	7.0	1043069	-592516	L	1	18423	S	15034	FO	90072211	115900	000015	5X2	G E=1.5X,G=200,B=33
LEMD	EIA_CAR	61	7.0	1043069	-592516	L	3	39281	L	15232	FO	90072212	125500	000300	??1	G E=3,G=2,B=26
LEMD	EIA_CAR	61	7.0	1043069	-592516	L	3	39281	S	15168	FO	90072213	130300	000300	5X1	G E=3X,G=192,B=24
LEMD	EIA_CAR	61	7.0	1043069	-592516	L	1	18424	L	15186	FO	90072213	131000	000005	452	G E=250,G=168,B=38
LEMD	EIA_CAR	61	7.0	1043069	-592516	L	1	18424	S	15190	FO	90072213	131500	000045	XX2	G E=4X,G=3X,B=31
LEMD	EIACAROF	61	7.0	1043069	-592516	L	3	39282	S	15173	FO	90072214	141300	000100	351	G E=206,G=102,B=23
LEMD	HE3_519	23	11.0	1051598	-601044	L	1	18426	L	144	FO	90072216	164400	006000	404	G G=200,B=51
IMMC	HD 94663	12	9.4	1052320	-583200	L	1	18381	S	588	FO	90071617	173500	000312	?09	G G=220,B=321
IMMC	HD 94663	12	9.4	1052320	-583200	L	1	18381	L	588	FO	90071617	174400	000436	X02	G G=2X,B=40
IMMC	HD 94663	12	9.4	1052320	-583200	L	3	39232	L	582	FO	90071618	182800	000300	400	G G=155,B=17
LEMEA	HD 94910	27	7.2	1054106	-601111	L	1	18538	L	2236	FO	90080722	222900	000100	X02	G G=1.5X,B=31
LEMEA	HD 94910	27	7.2	1054106	-601111	L	3	39420	L	2560	FO	90080722	224900	000500	X00	G G=2X,B=17
LEMEA	HD 94910	27	7.2	1054106	-601111	L	1	18539	L	2234	FO	90080723	233500	000045	502	G G=227,B=32
LEMEA	HD 94910	73	7.2	1054106	-601111	L	1	18540	L	2243	FO	90080800	001800	010000	403	G G=150,B=44
LEMEA	HD 94910	73	7.2	1054106	-601111	L	1	18541	L	2040	FO	90080802	024200	003000	302	G G=72,B=38
ECMNE	HD 95109	53	6.3	1055456	-592750	L	3	39017	L	6286	FO	90060515	154900	003000	01	G B=22
ECMNE	HD 95109	53	6.3	1055456	-592750	L	1	18032	L	6234	FO	90060516	162700	002400	504	G G=253,B=60
MA035	HENIZE 591	70	08.98	1106335	-602635	L	3	39268	L	00989	FO	90072019	194112	004000	900	V WRONG OBJECT
MA035	HENIZE 591	70	08.96	1106335	-602635	L	1	18409	L	01000	FO	90072020	202803	002000	801	V WRONG OBJECT
MA035	HENIZE 591	70	08.95	1106335	-602635	L	3	39269	L	01009	FO	90072020	205842	000500	800	V WRONG OBJECT
MA035	HENIZE 591	70	08.96	1106335	-602635	L	1	18410	L	01008	FO	90072022	220643	000200	701	V WRONG OBJECT
MA145	HD97048	26	08.77	1106396	-772301	H	1	18869	L	01194	FO	90092617	170042	012000	303	V
IMMC	HD 97848	12	8.7	1112206	-584507	L	1	18380	S	1110	FO	90071615	153500	000100		G G=2X
IMMC	HD 97848	12	8.7	1112206	-584507	L	1	18380	L	76	FO	90071615	154400	000100	502	G G=225,B=34
IMMC	HD 97848	12	8.7	1112206	-584507	L	3	39231	L	1110	FO	90071616	160800	000234	400	G G=160,B=18
IMMC	HD 99205	23	9.6	1121523	-695131	L	1	18399	S	461	FO	90071916	161400	000312	502	G G=200,B=32
IMMC	HD 99205	23	9.6	1121523	-695131	L	1	18399	L	460	FO	90071916	162300	000406	X02	G G=2X,B=40
IMMC	HD 99205	23	9.6	1121523	-695131	L	3	39258	L	449	FO	90071917	173000	000306	500	G G=220,B=18
IMMC	HD 99890	23	8.3	1126462	-562206	L	1	18379	S	1544	FO	90071613	135200	000038	502	G G=220,B=40
IMMC	HD 99890	23	8.3	1126462	-562206	L	1	18379	L	1537	FO	90071614	140000	000234		G G=2X
IMMC	HD 99890	23	8.3	1126462	-562206	L	3	39230	L	1544	FO	90071614	141500	000135	400	G G=140,B=18
IMMC	HD 100276	23	7.2	1129295	-601948	L	1	18397	S	3923	FO	90071911	115400	000019	502	G G=220,B=32
IMMC	HD 100276	23	7.2	1129295	-601948	L	1	18397	L	3938	FO	90071912	120200	000027	?02	G G=21,B=38
IMMC	HD 100276	23	7.2	1129295	-601948	L	3	39256	L	3938	FO	90071912	122800	000022	500	G G=210,B=18
MI020	SYMUS	57	10.74	1129550	-650836	L	3	39041	L	00206	FO	90060901	013520	000500	350	V
MI020	SYMUS	57	10.72	1129550	-650836	L	1	18062	L	00209	FO	90060902	021602	000500	341	V
MI020	SYMUS	57	10.74	1129550	-650836	L	3	39042	L	00206	FO	90060902	025322	008000	560	V
MI020	SYMUS	57	10.74	1129550	-650836	L	1	18063	L	00206	FO	90060904	041938	002746	561	V
MI020	SYMUS	57	10.67	1129550	-650836	L	3	39403	L	00219	FO	90080515	154122	000500	240	V
MI020	SYMUS	57	10.65	1129550	-650836	L	1	18527	L	00222	FO	90080515	151405	000500	331	V
MI020	SYMUS	57	10.66	1129550	-650836	L	3	39404	L	00220	FO	90080516	161808	012000	581	V
MA145	HD100546	26	06.92	1131141	-695507	H	3	39712	L	06127	FO	90092616	160630	003300	402	V
IMMC	-721184	23	10.7	1156286	-730904	L	1	18400	S	176	FO	90071918	182900	000524	502	G G=225,B=32
IMMC	-721184	23	10.7	1156286	-730904	L	1	18400	L	176	FO	90071918	184200	000730	X02	G G=2X,B=37
IMMC	-721184	23	10.7	1156286	-730904	L	3	39264	L	185	FO	90072011	113900	000354	500	G G=248,B=18
HAMAB	HD 104237	31	6.6	1157334	-775451	H	1	18315	L			90070718	181800	001000		G

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
IMMIC	HD 104705	23	7.8	1200491	-622503	L	3	39257	L	2472	FO	90071913	135700	000033	X00	G G=1.5X,B=18
IMMIC	HD 104705	23	7.8	1200491	-622503	L	1	18398	S	2491	FO	90071914	145000	000030	502	G G=220,B=34
IMMIC	HD 104705	23	7.8	1200491	-622503	L	1	18398	L	2477	FO	90071914	145800	000037	X02	G G=3X,B=36
PHCAL	WAVCAL	98	0.0	1208290	-231925	L	3	39169	L			90070114	141800	000005	?8	G E=10X,B=100
PHCAL	WAVCAL	98	0.0	1208290	-231925	H	3	39170	L			90070114	144400	000005	?9	G E=60X,B=110
PHCAL	WAVCAL	98	0.0	1208290	-231925	L	2	18468	L			90070114	145000	000010	?7	G E=10X,B=90
PHCAL	WAVCAL	98	0.0	1208290	-231925	H	2	18469	L			90070115	152000	000010	?9	G E=50X,B=120
PHCAL	TFLOOD	99	0.0	1208290	-231925	H	1	18257	S			90070117	172600	000025		G
PHCAL	WAVCAL	98	0.0	1208291	-231926	L	1	18255	L			90070113	130300	000025	?9	G E=10X,B=105
PHCAL	WAVCAL	98	0.0	1208291	-231926	H	1	18256	L			90070113	133500	000025	?8	G E=50X,B=92
PHCAL	TFLOOD	99	0.0	1208291	-231926	H	3	39171	L			90070117	172300	000005	08	G B=100
RTASS	HD 106677	46	6.14	1213214	+724945	H	1	19045	L	7847	FO	90102023	235600	003000	342	G E=166,G=70,B=35
RTASS	HD 106677	46	6.14	1213214	+724945	L	3	39889	L	7825	FO	90102100	004200	007500	330	G E=89,G=47,B=18
COLIS	HD 107067	41	8.7	1216047	+232356	H	1	18110	L	929	FO	90061605	055300	029000	435	G E=111,G=187,B=66
COLIS	HD 107132	44	8.8	1216305	+250726	H	1	18100	L	901	FO	90061306	060500	028500	436	G E=125,G=182,B=71
MA035	-53 5072	70	09.96	1217333	-533849	L	3	39278	L	00411	FO	90072123	230901	017000	300	V
MA035	-53 5072	70	09.93	1217333	-533849	L	1	18420	L	00424	FO	90072202	020416	004300	501	V
BOME	HD 107447	53	6.5	1218365	-620015	L	1	18576	L	6201	FO	90081313	135500	000324	502	G G=190,B=35
RTASS	MRK 205	84	15.0	1219335	+753516	L	3	39842	L		BO	90101622	220900	040000	3X3	G E=1.5X,G=110,B=45
IQ141	3C273	85	13.19	1226332	+021942	L	3	39067	L	00092	SO	90061122	220540	003000	350	V
IQ141	3C273	85	13.19	1226332	+021942	L	1	18089	L	00092	SO	90061122	224840	003000	501	V
IQ141	3C273	85	13.17	1226332	+021942	L	3	39068	L	00094	SO	90061123	232558	006000	460	V
IQ141	3C273	85	13.24	1226333	+021942	L	3	38946	L	00088	SO	90060100	001819	003000	350	V
IQ141	3C273	85	13.20	1226333	+021942	L	1	18019	L	00091	SO	90060100	005858	004000	350	V
IQ141	3C273	85	13.25	1226333	+021942	L	3	38947	L	00087	SO	90060101	014636	005000	360	V
IQ141	3C273	85	13.18	1226333	+021942	L	1	18090	L	00093	SO	90061200	003507	003000	500	V
CSMRS	HD 108903	49	3.50	1228226	-564959	L	1	18289	L			90070418	181000	003700		G
CSMRS	HD 108903	49	3.50	1228227	-565000	L	1	18289	L	239	FU	90070417	174000	000045	532	G E=116,G=196,B=37
MI180	HD 109387	26	04.07	1231215	+700349	H	3	39973	L	00678	FU	90102718	182541	000125	500	V
MA103	HS1234+481	37	14.45	1234229	+481152	L	3	39160	L	00030	SO	90062822	223726	001500	500	V
MA103	HS1234+481	37	14.45	1234229	+481152	L	3	39160	S	00030	SO	90062823	230100	003000	300	V
MA103	HS1234+481	37	14.45	1234229	+481152	L	1	18237	L	00030	SO	90062900	000233	003000	600	V
MA103	HS1234+481	37	14.45	1234229	+481152	E	9	02335	2	00030	SO	90062901	011309	002000		V FES FOR SWP39161 HIR
WDMIK	HS124811	37	14.4	1234234	+481157	H	3	39161	L		SO	90062901	011300	054200	306	G G=160,B=73
USSBS	HD 109867	23	6.3	1235532	-665505	H	3	39078	L	9210	FO	90061211	114700	003900	X05	G G=3X,B=67
RTASS	HD 109857	26	6.49	1235598	-750542	H	3	39434	L	7498	FO	90081010	104000	010000	X07	G G=3X,B=85
AGMGR	NGC 4594	88	9.5	1237233	-112055	L	1	18374	L	114	FO	90071503	034800	042000	406	G G=190,B=72
MQ023	NGC 4594	88	11.41	1237234	-112055	E	9	02336	2	00453	SO	90063022	225904	016000		V FES FOR SWP39168 LOR
AGMGR	NGC 4594	88	9.5	1237234	-112055	L	3	39168	L	453	SO	90063022	225900	079000	306	G G=128,B=80
AGMGR	NGC 4594	88	9.5	1237255	-111958	L	1	18254	L			90063023	233500	028500	309	G G=142,B=105
SNMRK	SN 1990N	56	14.0	1240257	+133145	L	9	02334				90062618	181400	000500		G
SNMRK	SN 1990N	56	14.0	1240258	+133146	L	1	18200	L	41	SO	90062618	182700	014000	303	G G=79,B=45
SNMRK	SN 1990N	56	14	1240258	+133149	L	1	18253	L	80	SO	90063014	140600	040000	X09	G G=1.5X,B=110
SNMRK	SN 1990N	56	13.5	1240258	+133149	L	1	18266	L		BO	90070216	160700	016000	505	G G=226,B=62
SNMRK	SN 1990N	56	13	1240258	+133149	L	1	18285	L	107	SO	90070407	075000	002000	302	G G=73,B=35
SNMRK	SN 1990N	56	13	1240258	+133149	H	1	18286	L	108	SO	90070408	085100	011000	403	G G=175,B=48
SNMRK	SN 1990N	56	13	1240258	+133149	L	1	18330	L	118	SO	90070916	161900	014500	X06	G G=1.5X,B=72
SNMRK	SN 1990N	56	12.9	1240258	+133149		1	18368	L	111	SO	90071403	033500	002500	302	G G=82,B=37
SNMRK	SN 1990N	56	12.9	1240258	+133149	L	1	18369	L	116	SO	90071405	052900	025000	X05	G G=1.5X,B=63
MA130	PG1246-122	12	14.13	1246448	-121312	L	3	39295	L	00040	SO	90072320	204223	003000	400	V

PRO	Object	CL	MAG	R.A.	DEC	D C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
WDMAH	EX HYA	54	14.0	1249426	-285840	L 3	39120	L	67	SO	90062105	054100	003000	340 G	E=160,C=96,B=20
WDMAH	EX HYA	54	14.0	1249426	-285840	L 1	18158	L	76	SO	90062106	062000	002000	342 G	E=162,C=116,B=35
WDMAH	EX HYA	54	14.0	1249426	-285840	L 3	39121	S	58	SO	90062107	070200	014000	452 G	E=219,C=138,B=33
WDMAH	EX HYA	54	13.2	1249426	-285840	L 3	39165	L		SO	90063005	055300	003000	331 G	E=113,C=77,B=21
WDMAH	EX HYA	54	13.2	1249426	-285840	L 1	18252	L	72	SO	90063006	063700	002000	452 G	E=201,C=156,B=33
WDMAH	EX HYA	54	13.2	1249426	-285840	L 3	39166	S	79	SO	90063007	071300	022500	4X3 G	E=2X,C=187,B=47
ISMDM	HR 4898	20	4.0	1251382	-565424	H 1	18239	L	664	FU	90062914	142700	000027	502 G	C=198,B=40
ISMDM	HR 4898	20	4.0	1251384	-565424	H 1	18238	L			90062913	134900	000025	G	
ISMDM	HR 4898	20	4.0	1251384	-565424	H 1	18240	L	667	FU	90062915	150300	000029	502 G	C=210,B=40
ISMDM	HR 4899	21	5.2	1251394	-565350	H 1	18241	L	21310	FO	90062915	154000	000145	443 G	E=191,C=190,B=41
ISMDM	HR 4899	21	5.2	1251394	-565350	H 1	18242	L	21565	FU	90062916	161800	000158	553 G	E=207,C=207,B=41
ISMDM	HR 4899	21	5.2	1251394	-565350	H 1	18243	L	21583	FU	90062916	165300	000205	553 G	E=204,C=210,B=41
DAMGB	1253+378	37	15.7	1252529	+374843	L 1	18049	L		BO	90060706	062300	012000	503 G	C=202,B=45
DAMGB	1253+378	37	15.7	1252529	+374843	L 3	39025	S		BO	90060708	083100	012000	201 G	C=43,B=26
IGMIS	HD 112989	45	4.90	1257530	+310315	L 1	18112	L	21465	FO	90061616	163100	000400	X02 G	C=1.5X,B=34
IGMIS	HD 112989	45	4.90	1257530	+310315	L 3	39096	L	21316	FO	90061616	164200	023500	X53 G	E=207,C=1.5X,B=42
IGMIS	HD 112989	45	4.90	1257530	+310315	L 1	18113	L	21300	FO	90061617	172600	000130	542 G	E=182,C=218,B=35
MA035	-48 5215	70	11.08	1258249	-483715	L 3	39271	L	00152	FO	90072100	000021	005000	560 V	
MA035	-48 5215	70	11.08	1258249	-483715	L 1	18412	L	00151	FO	90072101	010022	003000	701 V	
HSMKB	HD 113904	10	5.6	1304520	-650221	H 1	18681	L	15652	FO	90083013	132500	000135	502 G	C=200,B=40
HSMKB	HD 113904	10	5.6	1304520	-650221	H 3	39551	L	15881	FO	90083013	133200	000400	552 G	E=196,C=210,B=38
IMMIC	HD 114444	23	10.3	1309133	-750255	L 1	18406	S	255	FO	90072012	125100	000712	X02 G	C=1.5X,B=40
IMMIC	HD 114444	23	10.3	1309133	-750255	L 1	18406	L	261	FO	90072013	130500	001000	?03 G	C=3,B=45
IMMIC	HD 114444	23	10.3	1309133	-750255	L 3	39265	L	251	FO	90072013	133800	000900	X00 G	C=1.5X,B=18
WRMPC	HD 115473	10	10.0	1315188	-575229	L 1	18178	L	638	FO	90062318	184800	000100	352 G	E=184,C=111,B=33
WRMPC	HD 115473	10	10.0	1315188	-575229	L 3	39140	L	642	FO	90062318	185300	000200	351 G	E=187,C=52,B=21
IDMGB	HD 115617	44	4.7	1315471	-180201	H 1	18457	L	25525	FO	90072811	112900	003000	X33 G	E=102,C=1.5X,B=42
IDMGB	HD 115617	44	4.7	1315471	-180201	H 1	18458	L	25964	FO	90072812	123700	002500	532 G	E=98,C=240,B=40
IDMGB	HD 115617	44	4.7	1315471	-180201	H 1	18459	L	25751	FO	90072813	134100	002500	532 G	E=110,C=242,B=40
PHOAL	HD 116658	20	0.97	1322333	-105402	H 3	39254	L	9555	FU	90071907	075700	000002	502 G	C=217,B=38
PHOAL	HD 116658	20	0.97	1322333	-105403	L 1	18395	L	9552	FU	90071908	082300	000000	X02 G	C=3X,B=40
MA035	-55 5588	70	11.23	1326398	-555124	L 3	39270	L	00133	FO	90072022	223541	003000	400 V	
MA035	-55 5588	70	11.23	1326398	-555124	L 1	18411	L	00132	FO	90072023	231334	002000	701 V	
IBMOS	HD 117362	31	6.5	1327141	+012117	H 1	18318	L	6418	FO	90070803	033900	002500	302 G	C=130,B=40
IBMOS	HD 117362	31	6.5	1327141	-112117	H 3	39198	L	6726	FO	90070804	041000	026300	X05 G	C=1.5X,B=65
IBMOS	HD 117362	31	6.5	1327141	+012117	L 3	39199	L	6161	FO	90070809	093700	003000	X00 G	C=4X,B=18
IBMOS	HD 117362	31	6.5	1327141	+012117	H 1	18320	L	5517	FO	90070810	101900	003000	402 G	C=140,B=40
BOMNE	HD 117399	53	6.65	1328130	-611930	L 1	18574	L	5494	FO	90081311	113600	000330	X02 G	C=1.5X,B=32
BOMNE	HD 117399	53	6.46	1328130	-611930	L 3	39458	L	6208	FO	90081410	100800	001000	500 G	C=198,B=18
MC110	HD118100	48	09.88	1332049	-080508	L 3	39222	L	00442	FO	90071319	195327	040000	231 V	2X200 MIN,@REF.PNTS.
WRMPC	HD 119078	10	10.1	1339340	-670857	L 1	18177	L	434	FO	90062317	171700	000100	352 G	E=242,C=132,B=34
WRMPC	HD 119078	10	10.1	1339340	-670857	L 3	39139	L	434	FO	90062317	172700	000200	4X1 G	E=1.5X,C=140,B=23
PHOAL	HD 120315	21	02.10	1345340	+493344	H 2	18470	L	03930	FU	90070120	203723	000007	502 V	
PHOAL	HD 120315	21	02.13	1345340	+493344	H 2	18471	L	03818	FU	90070121	211425	000008	502 V	20X0.5 SEC. EXPS.
PHOAL	HD 120315	21	02.21	1345340	+493344	H 2	18472	L	03556	FU	90070122	222255	000007	502 V	
PHOAL	HD 120315	21	02.15	1345340	+493344	H 2	18484	L	03745	FU	90070323	230401	000008	402 V	20 X 0.5 SEC EXPOSUR
PHOAL	HD120315	21	02.05	1345340	+493344	H 2	18485	L	04077	FU	90070400	001653	000007	V	
PHOAL	TEL00D	99		1345342	+493343	H 3	38952	L			90060119	194500	000005	09 G	B=105
PHOAL	TEL00D	99		1345343	+493344	H 1	18025	L			90060119	194800	000025	08 G	B=98
PHOAL	HD 120315	21	1.8	1345343	+493344	H 3	38953	L	4190	FU	90060120	201800	000006	402 G	C=180,B=34

PRO	Object	CL	MAG	R.A.	DEC	D C	Image	A	EES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
PHOAL	HD 120315	21	1.8	1345343	+493344	H 1	18052	L	4254	FU	90060717	175200	000005	503 G	G=225,B=41
PHOAL	HD 120315	21	1.8	1345343	+493344	H 3	39030	L	4333	FU	90060717	175700	000006	402 G	G=172,B=32
PHOAL	HD 120315	21	1.8	1345343	+493344	H 3	39193	L	4388	FU	90070709	092200	000006	402 G	G=165,B=34
PHOAL	HD 120315	21	1.8	1345343	+493344	H 1	18308	L	4388	FU	90070709	092700	000005	502 G	G=196,B=40
PHOAL	HD 120315	21	1.8	1345343	+493344	L 1	18309	L	4335	FU	90070710	103400	000000	402 G	G=165,B=38
DOME	V381 CEN	53	7.8*	1347220	-572000	L 1	18551	L	2173	FO	90081009	095500	001800	502 G	G=210,B=35
LGMIS	HD 121107	45	5.70	1350495	+181042	L 1	18114	L	12224	FO	90061706	061300	000500	X02 G	G=2X,B=35
LGMIS	HD 121107	45	5.70	1350495	+181042	L 3	39098	L	12225	FO	90061706	063000	014000	431 G	E=51,G=140,B=25
ENMHB	SUMI 2	70	12.0	1352160	-590759	L 3	39086	L	207	SO	90061317	173800	007000	300 G	G=57,B=18
USSBS	HD 122879	23	6.4	1402525	-592839	H 3	39494	L	7999	FO	90081913	131900	004000	X08 G	G=3X,B=95
USSBS	HD 123123	47	3.25	1403312	-262638	H 1	18043	L	974	FU	90060614	142200	003200	502 G	G=192,B=40
SNMRK	SN 1990M	56	12.2	1408524	-044830	L 1	18126	L	157	SO	90061809	094500	025000	305 G	G=148,B=66
SNMRK	SN 1990M	56	12.2	1408524	-044830	L 3	39109	L	159	SO	90061814	141100	015700	02 G	B=40
SNMRK	CT APR 2	56	13.5	1408529	-044829	L 9	02333				90061518	184500	000500	G	
SNMRK	SN 1990M	56	13.5	1408530	-044830	L 1	18108	L	161	SO	90061519	192000	008700	303 G	G=98,B=42
MO063	HD124147	49	05.88	1409536	-532555	L 3	39515	L	14398	FO	90082220	205734	000300	301 V	
MO063	HD124147	49	05.83	1409536	-532555	H 1	18646	L	14926	FO	90082221	210225	002700	302 V	
CSMRS	HD 124897	47	-.04	1413227	+192631	L 1	18260	L	16631	FU	90070204	041900	009000	343 G	E=146,G=132,B=42
CSMRS	HD 124897	47	-.04	1413227	+192631	L 1	18261	L	16814	FU	90070206	062900	004500	552 G	E=230,G=239,B=40
MQIOO	NGC5548	84	13.99	1415432	+252200	L 3	39019	L	00045	SO	90060521	214808	009000	350 V	
MQIOO	NGC5548	84	13.97	1415432	+252200	L 1	18035	L	00046	SO	90060523	233037	006500	351 V	
MQIOO	NGC 5548	84	13.77	1415432	+252159	L 3	39082	L	00055	SO	90061222	221758	007000	340 V	
MQIOO	NGC 5548	84	13.73	1415432	+252159	L 1	18093	L	00057	SO	90061223	233630	005500	341 V	
MQIOO	NGC 5548	84	13.79	1415432	+252200	L 3	39083	L	00054	SO	90061300	004142	004000	330 V	
MQIOO	NGC5548	84	13.87	1415432	+252200	L 3	39113	L	00050	SO	90061922	221834	008000	340 V	
MQIOO	NGC5548	84	13.94	1415432	+252200	L 1	18146	L	00047	SO	90061923	234927	006500	342 V	
CD76Y	NGC 5548	84	13.5	1415434	+252201	L 3	39153	L	54	SO	90062605	053800	008500	330 G	E=79,G=71,B=20
CD76Y	NGC 5548	84	13.5	1415435	+253206	L 1	18197	L	55	SO	90062607	071300	006000	342 G	E=178,G=118,B=40
CD76Y	NGC 5548	84	13.5	1415435	+252201	L 3	39154	L	53	SO	90062608	082100	003000	230 G	E=56,G=36,B=18
CD76Y	NGC 5548	84	13.5	1415435	+252201	L 3	39175	L	54	SO	90070404	040500	010000	340 G	E=150,G=58,B=18
CD76Y	NGC 5548	84	13.5	1415435	+252201	L 1	18284	L	55	SO	90070405	055600	005300	342 G	E=158,G=104,B=39
CD76Y	NGC 5548	84	13.5	1415435	+252201	L 3	39212	L	54	SO	90071004	041100	010000	341 G	E=156,G=63,B=25
CD76Y	NGC 5548	84	13.5	1415435	+252201	L 1	18334	L	55	SO	90071005	055600	005500	342 G	E=183,G=100,B=40
EGLGR	NGC 5548	84	13.5	1415435	+252201	L 3	39319	L	60	SO	90072904	040400	011000	341 G	E=171,G=64,B=27
EGLGR	NGC 5548	84	13.5	1415435	+252201	L 1	18462	L	58	SO	90072906	060200	005000	342 G	E=150,G=102,B=40
PHOAL	HD 125924	28	9.7	1420037	-080116	H 3	39020	L	477	FO	90060606	065400	009400	503 G	G=200,B=41
PHOAL	HD 125924	28	9.7	1420037	-080116	H 1	18040	L	488	FO	90060609	090500	006700	403 G	G=195,B=49
IMMOC	-721542	23	10.2	1430125	-731846	L 3	39266	L	290	FO	90072015	150900	000342	X00 G	G=1.5X,B=18
IMMOC	-721542	23	10.2	1430125	-731846	L 1	18407	L	276	FO	90072015	154100	000542	X02 G	G=2.5X,B=40
IMMOC	-721542	23	10.2	1430125	-731846	L 1	18407	L	279	FO	90072015	155200	000542	502 G	G=237,B=40
LC133	NSV 6708	41	10.40	1431415	-392013	L 1	18157	L	00277	FO	90062102	020130	016600	352 V	
RIASS	HD 128621	46	1.33	1435507	-603729	H 1	18561	L	18199	FU	90081111	113500	000300	X03 G	G=1.5X,B=41
RIASS	HD 128621	46	1.33	1435507	-603729	L 3	39442	L	18493	FU	90081113	132900	004000	G	
RIASS	HD 128620	46	1.33	1435522	-603713	L 3	39441	L	18593	FU	90081112	121400	002300	G	G=10X
RIASS	HD 128620	46	1.33	1435522	-603713	H 1	18562	L	18568	FU	90081112	125400	000200	G	G=3X
PHOAL	HD 128801	28	8.8	1436203	+080739	L 3	39114	L			90062005	055200	000530	G	
PHOAL	HD 128801	28	8.8	1436203	+080739	H 1	18148	L			90062006	060600	011700	G	
PHOAL	HD 128801	28	8.8	1436203	+080739	H 1	18335	L	1021	FO	90071007	073500	013000	404 G	G=195,B=58
MA158	HD128898	36	03.19	1438264	-644532	H 3	39236	L	01485	FU	90071719	195843	000900	500 V	
MA158	HD128898	36	03.19	1438264	-644532	E 9	02338 2		01485	FU	90071719	195843	016000	V	

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	EES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
MA158	HD128898	36	03.20	1438264	-644532	H	3	39237	L	01468	FU	90071720	205333	001300	700	V
MA158	HD128898	36	03.20	1438264	-644532	H	3	39244	L	01480	FU	90071802	023706	001500	500	V
DOME	HD 129708	53	7.5	1442480	-611500	L	3	39452	L	2794	FO	90081309	094100	001600	400	G G=160,B=18
DOME	HD 129708	53	7.5	1442480	-611500	L	1	18573	L	2831	FO	90081310	102000	000236	402	G G=145,B=32
USSBS	BD +26 2606	43	9.00	1446502	+255451	L	3	39077	L	392	FO	90061209	091100	010000	501	G G=193,B=22
MA035	-53 5736	70	11.49	1448509	-540521	L	3	39272	L	00105	FO	90072101	015656	003000	100	V
MA035	-53 5736	70	11.49	1448509	-540521	L	1	18413	L	00105	FO	90072102	023100	001700	301	V
MA130	PG1451+492	38	12.94	1451233	+491146	L	3	39371	L	00115	SO	90080121	211353	004000	500	V
MA035	HD133656	70	08.09	1503594	-480622	L	3	39277	L	02184	FO	90072121	213340	001500	300	V
MA035	HD133656	70	08.07	1503594	-480622	L	1	18419	L	02223	FO	90072122	221012	000400	501	V
SIMPT	PG 1508+443	16	14.8	1508123	+441927	L	1	18454	L	35	SO	90072717	172600	004000	402	G G=170,B=35
SIMPT	PG 1508+443	16	14.8	1508123	+441927	L	3	39310	L	29	SO	90072718	181100	002800	400	G G=150,B=15
USSBS	HD 134505	45	3.4	1508401	-515438	L	3	39115	L			90062008	085000	003500		G
USSBS	HD 134505	45	3.4	1508401	-515438	L	3	39115	L			90062009	093300	001000		G
USSBS	HD 134505	45	3.4	1508402	-515439	H	1	18044	L	855	FU	90060615	155000	001300	502	G G=192,B=40
MA130	PG150+635	38	14.02	1510155	+633302	L	1	18492	L	00044	SO	90080119	195414	003000	301	V
MA130	PG1511+624	28	14.45	1511271	+622114	L	1	18491	L	00030	SO	90080118	181017	003000	400	V
MA130	PG1511+624	28	14.45	1511271	+622114	L	3	39370	L	00030	SO	90080118	184724	002500	400	V
PNMP	ME2-1	70		1519230	-232654	L	3	39574	L	170	SO	90090312	121400	002000	3x0	G E=1.5X,G=45,B=18
WRPC	HD 136488	10	9.4	1519582	-623000	L	1	18176	L	596	FO	90062316	162600	000120	351	G E=216,G=112,B=27
DOME	SAO 242485	53	7.6	1520565	-524039	L	1	18572	L	2384	FO	90081308	084200	002100	402	G G=145,B=37
SIMPT	PG 1524+611	16	11.5	1524274	+610531	L	3	39308	L	129	SO	90072715	150700	000800	400	G G=120,B=15
SIMPT	PG 1524+611	16	11.5	1524274	+610531	L	1	18453	L	124	SO	90072715	152200	002500	X02	G G=1.5X,B=39
SIMPT	PG 1524+611	16	11.5	1524274	+610531	L	3	39309	L	119	SO	90072716	160600	001400	500	G G=200,B=15
WRPC	HD 137603	10	10.1	1525449	-582433	L	1	18175	L	352	FO	90062314	145400	003000	553	G E=236,G=216,B=43
SOMA	CT APR 2	06		1536560	-382228		9	02380				90100100	001300	000000		G
SOMA	COM LEVY	06		1537022	-382217	L	1	18906	L	690	FO	90093023	234200	000800	3X2	G E=3X,G=90,B=40
SOMA	CT APR 2	06		1537022	-382217		9	02379				90093023	234500	004000		G
SOMA	COM LEVY	06		1537022	-382217	L	1	18906	S	685	FO	90093023	235800	000800	3X2	G E=3X,G=90,B=40
SOMA	CT APR 2	06	4	1539316	-381319		9	02375				90093000	000800	004000		G
SOMA	COM LEVY	06	4	1539316	-381319	L	1	18896	L	708	FO	90093000	003300	000000	3X2	G E=1.5X,G=70,B=38
SOMA	CT APR 2	06	9.5	1539316	-381319	L	9	02377				90093003	034200	000000		G
SOMA	CT APR 2	06	9.5	1539316	-381319	L	9	02378				90093004	042700	000500		G
LC133	R CRB	45	06.57	1546306	+281831	L	1	18155	S	08275	FO	90062022	222836	000200	801	V
LC133	R CRB	45	06.57	1546306	+281831	L	1	18155	L	08275	FO	90062022	220742	001000	801	V
LC133	R CRB	45	06.55	1546306	+281831	L	3	39119	L	08431	FO	90062022	223941	003000	301	V
LC133	R CRB	45	06.53	1546307	+281832	H	1	18156	L	08514	FO	90062023	232357	009000	501	V
USSBS	HD 141318	23	5.7	1547129	-545417	H	1	18041	L	13666	FO	90060611	110700	000300	402	G G=170,B=40
USSBS	HD 141318	23	5.7	1547129	-545417	H	3	39021	L	13808	FO	90060611	115000	000620	402	G G=180,B=32
USSBS	HD 141318	23	5.7	1547129	-545417	H	1	18042	L	13973	FO	90060612	123000	000410	503	G G=203,B=42
USSBS	HD 141318	23	5.7	1547129	-545417	H	3	39022	L	13901	FO	90060612	124300	000800	502	G G=210,B=38
DAMGB	1548+405	37	15.9	1548495	+403457	L	3	39033	S		BO	90060806	060300	017000	01	G B=25
DAMGB	1548+405	37	15.9	1548495	+403457	L	3	39034	L		BO	90060809	092400	008500	501	G G=200,B=25
PHCAL	BD +33 2642	20	10.8	1550019	+330528	L	1	18053	L	156	FO	90060719	194800	000310	501	G G=220,B=25
PHCAL	BD +33 2642	20	10.8	1550019	+330528	L	3	39031	L	158	FO	90060719	195700	000400	500	G G=185,B=17
PHCAL	BD +33 2642	20	10.8	1550019	+330528	L	3	39191	L	163	FO	90070706	062200	000400	400	G G=165,B=18
PHCAL	BD +33 2642	20	10.8	1550019	+330528	L	1	18306	L	164	FO	90070706	063100	000310	502	G G=215,B=32
PHCAL	BD +33 2642	20	10.8	1550019	+330528	L	1	18544	L	161	FO	90080902	020900	000310	501	G G=240,B=30
PHCAL	BD +33 2642	20	10.8	1550019	+330528	L	3	39426	L	165	FO	90080902	021700	000400	400	G G=120,B=16
PHCAL	BD +33 2642	20	10.8	1550019	+330528	L	3	39444	L	162	FO	90081201	014300	000400	500	G G=172,B=17

PRO	Object	CL	MAG	R.A.	DEC	D C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
PHCAL	BD +33 2642	20	10.8	1550019	+330528	L 1	18565	L	161	FO	90081202	020500	000310	502 G	G=221,B=32
PHCAL	BD +33 2642	20	10.8	1550019	+330528	L 3	39531	L			90082515	155200	000400	G	
PHCAL	BD +33 2642	20	10.8	1550019	+330528	L 3	39531	L			90082516	160300	000400	G	
PHCAL	BD +33 2642	20	10.8	1550019	+330528	L 3	39531	L	158	FO	90082516	160300	000400	500 G	G=200,B=15
PHCAL	BD +33 2642	20	10.8	1550019	+330528	L 1	18660	L			90082516	161400	000310	G	
PHCAL	BD +33 2642	20	10.8	1550019	+330528	L 1	18660	L			90082516	162300	000310	G	
PHCAL	BD +33 2642	20	10.8	1550019	+330528	L 1	18660	L	153	FO	90082516	162300	000310	502 G	G=238,B=32
MI084	PG 1550+13	17	16.00	1550355	+130337	E 9	02337	2	00000	BO	90071220	202500	016000	V	EES FOR SWP 39218
EBMIM	PG 1550+131	66	16.0	1550355	+130337	L 3	39218	L		BO	90071301	010000	026000	502 G	G=232,B=40
MI084	PG 1550+13	17	16.00	1550355	+130337	L 1	18362	L	00000	BO	90071220	203146	026000	502 V	
EBMIM	PG 1550+131	66	16.0	1550355	+130337	L 1	18363	L		BO	90071305	052900	003000	302 G	G=76,B=35
EBMIM	PG 1550+131	66	16.0	1550355	+130337	L 3	39219	L		BO	90071306	060600	025000	502 G	G=215,B=40
EBMIM	PG 1550+131	66	16.0	1550355	+130337	L 1	18364	L		BO	90071310	102000	003000	302 G	G=74,B=35
HSMKB	HD 142983	26	4.87	1555230	-140812	H 1	18682	L	24458	FO	90083014	145200	000115	402 G	G=155,B=40
HSMKB	HD 142983	26	4.87	1555230	-140812	H 3	39552	L	24447	FO	90083014	145700	000440	502 G	G=250,B=38
RTASS	HD 143454	57	10.0	1557244	+260338	L 3	39385	L	293	FO	90080222	224000	006000	450 G	E=175,G=140,B=18
RTASS	HD 143454	57	10.0	1557245	+260339	L 1	18504	L	292	FO	90080300	003400	003000	5X2 G	E=1.5X,G=190,B=38
PHCAL	NULL	99	0.0	1559230	-623320	2	18486				90071603	032300	000000	01 G	B=26
IGMIN	HD 143414	11	10.2	1559235	-623320	H 2	18487	L	318	FO	90071603	035700	025500	504 G	G=219,B=55
CD75Y	HD 144432	60	8.2	1603535	-273508	L 3	39496	L	1688	FO	90082005	053800	003000	500 G	G=180,B=17
PHCAL	HD 144668	34	7.1	1605128	-385823	H 1	18717	L	5130	FO	90090710	102800	008500	XX9 G	E=1.5X,G=1.5X,B=137
ENMHB	LO 14	70	8.87	1607583	-511011	L 3	39085	L	945	FO	90061315	151100	008000	02 G	B=38
MQ180	E1615+061	84	15.60	1615182	+061112	L 3	39443	L	00000	BO	90081116	163104	042000	352 V	
MQ180	E1615+061	84	15.60	1615182	+061112	L 1	18564	L	00000	BO	90081123	233626	007000	331 V	
USSBS	HD 147165	23	3.1	1618087	-252828	H 1	18618	L	1830	FU	90081912	121800	000040	X04 G	G=2X,B=51
USSBS	HD 147165	23	3.1	1618087	-252828	H 3	39493	L	1837	FU	90081912	122400	000115	X05 G	G=2X,B=62
USSBS	HD 147165	23	3.1	1618087	-252828	H 3	39507	L	1802	FU	90082111	112700	000050	X03 G	G=1.5X,B=46
USSBS	HD 147165	23	3.1	1618087	-252828	H 1	18630	L	1812	FU	90082111	113300	000020	502 G	G=230,B=40
USSBS	HD 147165	23	3.1	1618087	-252828	H 3	39508	L	1853	FU	90082112	124700	000035	502 G	G=235,B=40
USSBS	HD 147165	23	3.1	1618087	-252828	H 1	18631	L	1865	FU	90082112	125800	000018	503 G	G=212,B=41
MSIOO	COMET IEVY	06	09.49	1618128	-353227	L 3	39658	L	00624	FO	90091813	133148	024000	141 V	TEN SEGMENTS
MSIOO	COMET IEVY	06	09.51	1618128	-353227	L 1	18818	L	00616	FO	90091815	153119	000700	351 V	
MSIOO	COMET IEVY	06	09.51	1618128	-353227	E 9	02361	2	00616	FO	90091815	151000	016000	V	COMET AT R.P.
MSIOO	COMET IEVY	06	09.47	1618128	-353227	L 1	18819	L	00638	FO	90091816	162455	003000	471 V	
MSIOO	COMET IEVY	06	09.47	1618128	-353227	E 9	02362	2	00638	FO	90091816	162800	004000	V	COMET IN IWIA
MSIOO	COMET IEVY	06	09.42	1618128	-353227	L 1	18820	L	00666	FO	90091817	173712	000700	351 V	
MSIOO	COMET IEVY	06	09.41	1618128	-353227	L 1	18821	L	00673	FO	90091818	182509	003000	471 V	
MSIOO	COMET IEVY	06	09.41	1618128	-353227	E 9	02363	2	00673	FO	90091818	182700	004000	V	COMET IN IWIA
MSIOO	COMET IEVY	06	09.41	1618128	-353227	L 1	18822	L	00672	FO	90091819	195143	000700	351 V	
MSIOO	COMET IEVY	06	09.42	1618128	-353227	L 1	18823	L	00667	FO	90091820	204009	003000	371 V	
MSIOO	COMET IEVY	06	09.42	1618128	-353227	E 9	02364	2	00667	FO	90091820	204200	004000	V	COMET IN IWIA
MSIOO	COMET IEVY	06	09.45	1618128	-353227	L 1	18824	L	00650	FO	90091821	215714	003000	371 V	
PHCAL	HD 147196	22	7.0	1618189	-233521	H 1	18718	L	4340	FO	90090713	130900	000700	302 G	G=124,B=40
PHCAL	1620-391	37	10.9	1620100	-390649	L 1	18579	L	145	FO	90081402	022200	000800	X02 G	G=2X,B=40
PHCAL	1620-391	37	10.9	1620100	-390649	L 1	18580	L	145	FO	90081403	030500	000400	X02 G	G=1.5X,B=35
PHCAL	1620-391	37	10.9	1620100	-390649	L 1	18581	L	150	FO	90081406	060500	000300	502 G	G=185,B=32
PHCAL	SAO 141195	98	6.4	1626064	-080109	L 1	18608	L			90081722	221600	000001	?4 G	E=10X,B=58
PHCAL	SAO 141195	98	6.4	1626064	-080109	L 3	39478	L			90081722	224500	000002	?0 G	E=10X,B=18
PHCAL	SAO 141195	98	6.4	1626064	-080109	H 3	39479	L			90081723	231000	000005	?2 G	E=30X,B=33
PHCAL	SAO 141195	98	6.4	1626064	-080109	H 3	39480	L			90081723	233400	000005	?2 G	E=30X,B=33

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
PHOTOM	SAO 141195	98	6.4	1626064	-080109	H	3	39481	L			90081723	235800	000005	21	G E=30X,B=30
PHOTOM	SAO 141195	98	6.4	1626064	-080109	H	3	39482	L			90081800	002300	000005	?2	G E=30X,B=35
PHOTOM	SAO 141195	98	6.4	1626064	-080109	H	3	39483				90081800	004700	000005	?2	G E=30X,B=33
IGAMS	HR 6134	49	0.96	1626199	-261910	H	1	18507	L			90080308	083600	000235		G
IGAMS	HR 6134	49	0.96	1626199	-261910	L	1	18508	L			90080309	093700	000002		G
IGAMS	HR 6134	49	0.96	1626200	-261911	L	1	18338	L	9136	FU	90071013	131500	000002	302	G G=132,B=33
IGAMS	HR 6134	49	0.96	1626200	-261911	H	1	18339	L	9216	FU	90071014	145400	000235	502	G G=215,B=40
IGAMS	HR 6134	49	0.96	1626200	-261911	H	1	18588	L	9005	FU	90081510	103500	000235	553	G E=235,G=195,B=42
IGAMS	HR 6134	49	0.96	1626200	-261911	L	1	18589	L	9006	FU	90081511	111700	000002	402	G G=161,B=32
IGAMS	HR 6134	49	0.96	1626200	-261911	H	1	18590	L	9003	FU	90081511	115500	000250	5X3	G E=255,G=220,B=45
IGAMS	HR 6134	49	1.0	1626200	-261911	H	1	18687	L	9206	FU	90083113	134300	000215	503	G G=210,B=41
IGAMS	HR 6134	49	1.0	1626200	-261911	L	1	18688	L	9236	FU	90083114	142000	000002	502	G G=240,B=35
CSMPS	HD 148478	49	0.96	1626202	-261922	L	1	18323	L			90070816	160400	000500		G
USSBS	HD 148605	20	4.9	1627099	-250024	H	3	39506	L	316	FU	90082110	100500	000115	402	G G=172,B=32
USSBS	HD 148605	20	4.9	1627099	-250024	H	1	18629	L	315	FU	90082110	101100	000110	502	G G=210,B=40
SEMSC	EARTH	01		1627496	+175148	H	3	39539	L			90082610	100200	002000		G
PHOTOM	HD 149438	20	2.8	1632459	-280651	H	3	39192	L	2027	FU	90070707	075100	000006	402	G G=175,B=34
PHOTOM	HD 149438	20	2.8	1632459	-280651	H	1	18307	L	2047	FU	90070707	075700	000006	402	G G=185,B=40
PHOTOM	TAU SCO	20	2.84	1632459	-280651	H	3	39427	L	2020	FU	90080906	061600	000006	502	G G=220,B=32
PHOTOM	HD 149438	20	2.8	1632459	-280651	H	1	18595	L	2051	FU	90081605	055500	000006	403	G G=190,B=42
IE168	Q1634+706	85	13.94	1634514	+703738	L	1	18980	L	00046	SO	90101013	134752	009000	461	V
ISMDM	HR 6184	22	5.5	1635001	+530000	H	1	18244	L	15839	FO	90062918	180100	000730	503	G G=225,B=42
ISMDM	HR 6184	22	5.5	1635001	+530000	H	1	18245	L	16110	FO	90062918	184600	000730	503	G G=225,B=41
ISMDM	HR 6184	22	5.5	1635001	+530000	H	1	18246	L	16095	FO	90062919	194200	000730	503	G G=225,B=41
ISMDM	HR 6184	22	5.5	1635001	+530000	H	1	18247	L	16059	FO	90062920	202500	000730	503	G G=225,B=41
SEMSC	EARTH	01		1636236	+185532	L	3	39528	L			90082510	102100	001000		G
PNMPS	DDDM-1	70		1638347	+384805	L	3	39590	L	78	SO	90090611	114800	011200	503	G G=215,B=50
PNMPS	DDDM-1	70		1638347	+384805	L	1	18711	L	56	SO	90090613	134900	006000	452	G E=198,G=160,B=38
MQ180	3C345	85	17.20	1641175	+395410	L	3	39425	L	00000	BO	90080816	163957	048500	332	V TWO SEGMENTS 400+85
MQ180	3C345	85	17.20	1641175	+395410	L	3	39431	L	00000	BO	90080915	155959	032700	331	V
MC089	HD150798	47	02.37	1643210	-685620	H	1	18180	L	03094	FU	90062322	220310	001000	161	V
RIASS	HD 150798	47	1.9	1643210	-685620	H	1	18694	L	3251	FU	90090207	073300	001000		G E=1.5X,G=95,32
MC089	HD150798	47	02.39	1643210	-685620	H	1	18181	L	03029	FU	90062322	224813	003000	371	V
RIASS	HD 150798	47	1.9	1643210	-685620	L	3	39568	L	3246	FU	90090207	075200	007000	4X0	G E=1.5X,G=148,B=18
MC089	HD150798	47	02.38	1643210	-685620	H	1	18182	L	03057	FU	90062323	235525	010000	671	V
MC089	HD150798	47	02.37	1643210	-685620	L	3	39141	L	03084	FU	90062401	014307	007000	462	V
MC089	HD150798	47	02.39	1643210	-685620	H	1	18183	L	03029	FU	90062403	030355	010400	671	V
COMAB	HD 150798	47	1.92	1643211	-685620	H	1	18314	L	3477	FU	90070716	162400	000500	352	G E=209,G=75,B=31
COMAB	HD 150798	47	1.92	1643211	-685620	L	3	39194	L	3435	FU	90070716	163600	004000	3X0	G E=3X,G=59,B=18
SOMMA	CT APR 2	06		1646047	-330751	9	02351					90091308	080700	016000		G
SOMMA	COM IEVY	06		1646047	-330751	L	1	18770	L	575	FO	90091308	083600	000700	242	G E=154,G=58,B=38
SOMMA	COM IEVY	06		1646047	-330751	L	3	39629	L	569	FO	90091308	085200	001500	2X2	G E=7X,G=53,B=37
SOMMA	COM IEVY	06		1646047	-330751	L	1	18771	L	566	FO	90091309	094500	002000	3X5	G E=2X,G=116,B=62
SOMMA	COM IEVY	06		1646047	-330751	L	1	18772	L	572	FO	90091310	104200	000700	344	G E=178,G=80,B=52
SOMMA	COM IEVY	06		1646047	-330751	L	1	18773	L	579	FO	90091311	112600	002000	3X5	G E=2X,G=120,B=68
SOMMA	CT APR	06		1646047	-330751	L	9	02352				90091311	113600	002000		G
SOMMA	COM IEVY	06		1646047	-330751	L	1	18774	L	604	FO	90091312	123200	000700	342	G E=177,G=66,B=38
SOMMA	COM IEVY	06		1646047	-330751	L	1	18775	L	641	FO	90091313	134100	002000	3X2	G E=2X,G=110,B=38
USSBS	HD 151804	13	5.2	1648042	-410848	H	3	39505	L	20102	FO	90082108	083300	000330	502	G G=190,B=31
USSBS	HD 151804	13	5.2	1648042	-410848	H	1	18628	L	20240	FO	90082108	084100	000215	502	G G=207,B=40

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
IMMOC	HD 151805	23	8.9	1648051	-414134	L	1	18408	S	833	FO	90072017	172600	000200	502 G	G=187,B=35
IMMOC	HD 151805	23	8.9	1648051	-414134	L	1	18408	L	825	FO	90072017	173500	000300	X02 G	G=3X,B=40
IMMOC	HD 151805	23	8.9	1648051	-414134	L	3	39267	L	833	FO	90072018	180300	000200	500 G	G=216,B=18
MI066	AS 210	57	12.68	1648156	-255521	L	3	39687	L	00144	SO	90092216	160046	001000	150 V	
MI066	AS210	57	12.60	1648156	-255521	L	3	39688	L	00156	SO	90092216	165714	008000	360 V	
MI066	AS210	57	12.60	1648156	-255521	L	3	39688	S	00156	SO	90092218	182550	000500	111 V	
MI066	AS210	57	12.58	1648156	-255521	L	3	39689	L	00159	SO	90092219	191209	000200	140 V	PREAD
SNMRK	SN 1990W	56	15	1648265	-590756	L	1	18667	L			90082613	131300	020500	G	
MI119	HD151890	66	03.05	1648287	-375749	H	3	39330	L	01680	FU	90073020	204347	000025	701 V	
MI119	HD151890	66	03.04	1648287	-375749	H	3	39332	L	01693	FU	90073022	225932	000020	601 V	
MI119	HD151890	66	03.07	1648287	-375749	H	3	39334	L	01653	FU	90073101	011235	000020	601 V	
MI119	HD151890	66	03.17	1648287	-375749	H	3	39353	L	01516	FU	90073122	225825	000020	550 V	
MI119	HD151890	66	03.22	1648287	-375749	H	3	39355	L	01443	FU	90080101	010542	000020	650 V	
EBMIS	H 151890	20	1.4	1648299	-375742	H	3	39336	L	1588	FU	90073103	033800	000018	502 G	G=232,B=40
EBMIS	H 151890	20	1.4	1648299	-375742	H	3	39338	L	1448	FU	90073105	054800	000018	502 G	G=230,B=38
EBMIS	H 151890	20	1.4	1648299	-375742	H	3	39340	L	1339	FU	90073107	075100	000018	502 G	G=225,B=38
EBMIS	H 151890	20	1.4	1648299	-375742	H	3	39342	L	1529	FU	90073110	100400	000018	X02 G	G=1.2X,B=40
EBMIS	H 151890	20	1.4	1648299	-375742	H	3	39344	L	1658	FU	90073112	122600	000018	X03 G	G=1.5X,B=41
EBMIS	H 151890	20	1.4	1648299	-375742	H	3	39346	L	1684	FU	90073114	145100	000018	X02 G	G=1.5X,B=40
EBMIS	H 151890	20	1.4	1648299	-375742	H	3	39348	L	1708	FU	90073117	171100	000015	552 G	E=240,G=220,B=39
EBMIS	H 151890	20	1.4	1648299	-375742	H	3	39357	L	158	FU	90080103	034100	000018	X02 G	G=1.2X,B=40
EBMIS	H 151890	20	1.4	1648299	-375742	H	3	39359	L	1661	FU	90080106	061400	000015	502 G	G=240,B=38
EBMIS	H 151890	20	1.4	1648299	-375742	H	3	39361	L	1725	FU	90080108	083300	000015	502 G	G=240,B=38
EBMIS	H 151890	20	1.4	1648299	-375742	H	3	39363	L	1726	FU	90080110	104200	000015	503 G	G=217,B=41
EBMIS	H 151890	20	1.4	1648299	-375742	H	3	39365	L	1656	FU	90080112	125000	000015	502 G	G=210,B=37
EBMIS	H 151890	20	1.4	1648299	-375742	H	3	39367	L	1559	FU	90080115	150300	000015	502 G	G=220,B=37
SDMPT	PG 1656+211	16	14.9	1656124	+211505	L	1	18542	L	28	SO	90080807	074500	007500	402 G	G=142,B=40
SDMPT	PG 1656+211	16	14.9	1656124	+211505	L	3	39422	L	27	SO	90080809	090800	006000	300 G	G=68,B=20
MSIOO	COMET LEVY	06	09.49	1656575	-320740	D	9	02350	2	00626	FO	90091115	150000	016000	V	
MSIOO	COMET LEVY	06	09.49	1656575	-320740	L	1	18761	L	00626	FO	90091116	162005	001000	350 V	
MSIOO	COMET LEVY	06	09.49	1656575	-320740	L	3	39611	L	00626	FO	90091116	163846	003000	120 V	
MSIOO	COMET LEVY	06	09.51	1656575	-320740	H	1	18762	L	00616	FO	90091117	172107	023300	261 V	
MSIOO	COMET LEVY	06	09.52	1656575	-320740	L	3	39612	L	00609	FO	90091118	180044	018000	130 V	SERENDIPITY IMP18762
ISMIS	HD 154368	13	6.1	1703085	-352305	H	3	39291	L	9547	FO	90072313	130400	006000	405 G	G=195,B=61
ISMIS	HD 154368	13	6.1	1703085	-352305	H	1	18432	L	9254	FO	90072314	141400	002000	504 G	G=239,B=59
ISMIS	HD 154368	13	6.1	1703085	-352305	L	3	39292	L	9097	FO	90072315	151400	000040	400 G	G=139,B=18
ISMIS	HD 154368	13	6.1	1703085	-352305	H	1	18433	L	9076	FO	90072315	153900	002000	504 G	G=232,B=51
ISMIS	HD 154368	13	6.1	1703085	-352305	L	3	39293	L	9149	FO	90072316	164100	000040	400 G	G=125,B=18
ISMIS	HD 154368	13	6.1	1703085	-352305	H	1	18434	L	9129	FO	90072316	165200	002000	503 G	G=223,B=45
ISMIS	HD 154368	13	6.1	1703085	-352305	L	3	39294	L	9258	FO	90072317	175200	000300	X00 G	G=2.5X,B=17
ISMIS	HD 154368	13	6.1	1703085	-352305	L	1	18435	L	925	FO	90072318	180000	000400	?00 G	G=14X,B=20
RTASS	HD 154905	41	4.92	1704173	+543207	L	3	39387	L			90080305	052600	004000	G	
MA035	-18 4436	70	10.67	1707282	-184520	L	3	39276	L	00219	FO	90072119	193923	003000	300 V	
MA035	-18 4436	70	10.67	1707282	-184520	L	1	18418	L	00218	FO	90072120	201732	001000	301 V	
PHCAL	HD155763	24	03.56	1708380	+654634	L	2	18475	L	01072	FU	90070220	200649	000000	402 V	
PHCAL	HD155763	24	03.48	1708380	+654634	L	2	18476	L	01148	FU	90070220	203946	000000	402 V	
PHCAL	HD155763	24	03.55	1708380	+654634	L	2	18477	L	01080	FU	90070221	211422	000000	402 V	
PHCAL	HD155763	24	03.52	1708380	+654634	L	2	18478	L	01104	FU	90070221	215707	000000	402 V	
PHCAL	HD155763	24	03.51	1708380	+654634	L	2	18479	L	01120	FU	90070222	223208	000000	402 V	
PHCAL	HD155763	24	03.48	1708380	+654634	H	3	39174	L	01148	FU	90070223	230738	000430	800 V	

PRO	Object	CL	MAG	R.A.	DEC	D C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
PHOAL	HD155763	25	03.42	1708381	+654634	L 3	39069	L	01212	FU	90061201	015647	000001	600	V 3 OBC TICKS
PHOAL	HD155763	25	03.48	1708381	+654634	L 3	39070	L	01152	FU	90061202	022735	000001	600	V 3 OBC TICKS
PHOAL	HD155763	25	03.47	1708381	+654634	L 3	39071	L	01163	FU	90061202	025535	000001	600	V 3 OBC TICKS
PHOAL	HD155763	25	03.47	1708381	+654634	L 3	39072	L	01156	FU	90061203	032858	000001	600	V 3 OBC TICKS
PHOAL	HD155763	25	03.48	1708381	+654634	L 3	39073	L	01144	FU	90061203	035707	000001	600	V 3 OBC TICKS
PHOAL	HD155763	25	03.48	1708381	+654634	L 3	39074	L	01160	FU	90061204	042439	000001	600	V 3 OBC TICKS
PHOAL	HD 155763	25	03.44	1708381	+654634	L 1	18094	L	01193	FU	90061302	020257	000001	401	V 1 OBC TICK
PHOAL	HD 155763	25	03.44	1708381	+654634	L 1	18095	L	01192	FU	90061302	023912	000001	400	V 1 OBC TICK
PHOAL	HD 155763	25	03.45	1708381	+654634	L 1	18096	L	01176	FU	90061303	031033	000001	400	V 1 OBC TICK
PHOAL	HD 155763	25	03.46	1708381	+654634	L 1	18097	L	01171	FU	90061303	034144	000001	400	V 1 OBC TICK
PHOAL	HD 155763	25	03.46	1708381	+654634	L 1	18098	L	01173	FU	90061304	041916	000001	400	V 1 OBC TICK
PHOAL	HD 155763	25	03.44	1708381	+654634	L 1	18099	L	01186	FU	90061304	045008	000001	400	V PREAD 1 OBC TICK
MI062	N OPH 88	55	14.00	1708508	-293358	L 3	39509	L	00000	BO	90082114	144026	040300	342	V PREAD
ZELIE	HD 155341	49	6.09	1709595	-564950	L 1	18070	L	10549	FO	90060919	195200	000400	452	G E=227,G=160,B=31
ZELIE	HD 155341	49	6.09	1709595	-564950	L 3	39047	L	10468	FO	90060923	230300	002000	431	G E=103,G=136,B=28
ZAMIE	HD 155341	49	6.09	1709599	-564950	L 1	18594	L	11088	FO	90081602	021500	000500	4X2	G E=1.5X,G=176,B=34
ZAMIE	HD 155341	49	6.09	1709599	-564950	L 3	39468	L	11064	FO	90081602	022700	002000	400	G G=130,B=18
ZAMIE	HD 155341	49	6.1	1709599	-564950	L 1	18698	L	11403	FO	90090411	110400	000500	4X2	G E=1.5X,G=166,B=35
ZAMIE	HD 155341	49	6.1	1709599	-564950	L 3	39577	L	11472	FO	90090411	111700	002000	432	G E=110,G=134,B=32
MI055	PG1711+336	54	13.17	1711057	+333446	L 3	39408	L	00094	SO	90080615	151558	003000	400	V
MI055	PG1711+336	54	13.17	1711057	+333446	L 1	18533	L	00094	SO	90080615	155648	003000	501	V
MI055	PG1711+336	54	13.17	1711057	+333446	L 3	39409	L	00094	SO	90080616	164445	006000	400	V MULT 2X30 MIN
MI055	PG1711+336	54	13.22	1711057	+333446	L 3	39410	L	00090	SO	90080618	183126	006000	400	V MULT 2X30 MIN
MI055	PG1711+336	54	13.24	1711057	+333446	L 3	39411	L	00088	SO	90080620	201700	006000	400	V MULT 2X30 MIN
MI055	PG1711+336	54	13.07	1711057	+333446	L 3	39416	L	00103	SO	90080715	150952	003000	400	V
MI055	PG1711+336	54	13.10	1711057	+333446	L 1	18537	L	00100	SO	90080715	154802	003000	501	V
MI055	PG1711+336	54	13.18	1711057	+333446	L 3	39417	L	00093	SO	90080716	162854	006000	400	V MULT 2X30 MIN
MI055	PG1711+336	54	13.16	1711057	+333446	L 3	39418	L	00095	SO	90080718	181132	006000	400	V MULT 2X30 MIN
MI055	PG1711+336	54	13.19	1711057	+333446	L 3	39419	L	00092	SO	90080719	195032	006000	400	V MULT 2X30 MIN
RTASS	HD 155885	46	4.3	1712148	-263235	L 3	39571	L	407	FU	90090212	123000	014000	342	G E=162,G=114,B=33
CSMRS	HD 156014	49	3.48	1712219	+142645	L 1	18324	L	2374	FU	90070817	174700	004500	332	G E=76,G=72,B=40
CSMRS	HD 156014	49	3.48	1712219	+142645	L 1	18324	L	2333	FU	90070818	183700	000015	332	G E=136,G=62,B=40
LGMMS	HR 6406	49	3.48	1712219	+142649	H 1	18505	L			90080306	065600	000830		G
LGMMS	HR 6406	49	3.48	1712219	+142649	L 1	18506	L			90080307	074500	000035		G
LGMMS	HR 6406	49	3.48	1712220	+142650	H 1	18336	L	2154	FU	90071011	114100	000720	342	G E=163,G=70,B=37
LGMMS	HR 6406	49	3.48	1712220	+142650	L 1	18337	L	2152	FU	90071012	122500	000030	4X2	G E=1.5X,G=174,B=32
LGMMS	HR 6406	49	3.48	1712220	+142650	H 1	18591	L	1886	FU	90081513	131600	001000	353	G E=221,G=88,B=41
LGMMS	HR 6406	49	3.48	1712220	+142650	L 1	18592	L	1908	FU	90081514	140400	000040	502	G G=195,B=36
LGMMS	HR 6406	49	3.5	1712220	+142650	H 1	18689	L	1941	FU	90083115	153800	000930	352	G E=204,G=95,B=35
LGMMS	HR 6406	49	3.5	1712220	+142650	L 1	18690	L	1916	FU	90083116	162700	000043	5X2	G E=1.5X,G=253,B=35
MM004	HD158643	22	04.97	1728220	-235527	H 3	39325	L	25890	FO	90072919	194322	001500	500	V
MM004	HD158643	22	04.93	1728220	-235527	H 3	39326	L	26450	FO	90072920	204605	001500	500	V
MM004	HD158643	22	04.96	1728220	-235527	H 1	18469	L	25943	FO	90072920	201527	000730	503	V
MM004	HD158643	22	04.91	1728220	-235527	H 1	18470	L	26609	FO	90072921	212241	000730	503	V
RTASS	HD 159181	45	2.79	1729180	+522016	H 1	18671	L	1481	FU	90082714	140400	001000	X52	G E=243,G=1.5X,B=33
RTASS	HD 159181	45	2.79	1729180	+522016	L 3	39543	L	1492	FU	90082714	142200	002000	531	G E=100,G=228,B=30
GCMRR	NGC 6388	83	6.7	1732375	-444214	L 1	18451	L	598	FO	90072704	041800	014000	403	G G=154,B=50
GCMRR	NGC 6388	83	6.7	1732375	-444214	L 3	39306	L	602	FO	90072706	064700	024000	302	G G=65,B=32
MI127	X1746-37	59	15.00	1746485	-370218	L 3	39317	L	00000	BO	90072820	200918	018000	100	V
MI127	X1746-37	59	15.00	1746485	-370218	L 3	39318	L	00000	BO	90072823	234959	018000	100	V

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
FKMCA	X 1751+705	46	9.7	1751030	+704617	L	1	18680	L	356	FO	90083012	120100	002500	343	G E=176,G=138,B=48
PNMAF	ABELL 43	70	14.7	1751111	+103753	H	3	38955	L		BO	90060206	062500	038500	06	G B=80
CSMAD	HD 163506	40	5.5	1753240	+260324	L	1	18033	L	14783	FO	90060518	181100	000050	502	G G=200,B=35
CSMAD	HD 163506	40	5.5	1753240	+260324	L	3	39018	L	14893	FO	90060518	182000	002000	302	G G=132,B=35
CSMAD	HD 163506	40	5.5	1753240	+260324	H	1	18034	L	14686	FO	90060518	185800	008000	X06	G G=1.5X,B=75
CSMAD	HD 163506	40	5.46	1753240	+260324	L	1	18091	L	15131	FO	90061218	181400	000050	502	G G=208,B=35
CSMAD	HD 163506	40	5.46	1753240	+260324	L	3	39080	L	15175	FO	90061218	182200	002000	400	G G=129,B=18
CSMAD	HD 163506	40	5.46	1753240	+260324	H	1	18092	L	15114	FO	90061218	185900	007000	502	G G=230,B=40
CSMAD	HD 163506	40	5.46	1753240	+260324	L	3	39081	L	15177	FO	90061219	194700	002000	400	G G=127,B=18
CSMAD	HD 163506	40	5.46	1753240	+260324	L	1	18118	L	15010	FO	90061718	180800	000050	502	G G=208,B=32
CSMAD	HD 163506	40	5.46	1753240	+260324	L	3	39102	L	14940	FO	90061718	182100	002000	401	G G=132,B=26
CSMAD	HD 163506	40	5.46	1753240	+260324	H	1	18119	L	15077	FO	90061719	191400	006500	503	G G=220,B=42
CSMAD	HD 163506	40	5.5	1753240	+260324	L	1	18190	L	15138	FO	90062517	174600	000050	502	G G=220,B=33
CSMAD	HD 163506	40	5.5	1753240	+260324	L	3	39149	L	15162	FO	90062517	175400	002000	501	G G=182,B=22
CSMAD	HD 163506	40	5.5	1753240	+260324	H	1	18191	L	15411	FO	90062518	183400	008000	X04	G G=1.5X,B=53
CSMAD	HD 163506	40	5.5	1753240	+260324	L	3	39150	L	15856	FO	90062519	195900	002000	501	G G=183,B=25
CSMAD	HD 163506	40	5.5	1753240	+260324	L	1	18294	L	15921	FO	90070516	163300	000050	502	G G=240,B=34
CSMAD	HD 163506	40	5.5	1753240	+260324	L	3	39183	L	15905	FO	90070516	164500	002000	500	G G=210,B=15
CSMAD	HD 163506	40	5.5	1753240	+260324	H	1	18295	L	30	FO	90070517	172400	006500	503	G G=225,B=45
MM057	H1-42	70	13.24	1754070	-333229	L	3	39447	L	00088	SO	90081217	175259	021400	301	V
RSMDH	HD 163930	46	7.3	1755512	+150835	L	1	18301	L	1780	FO	90070618	184700	000300	401	G G=143,B=30
RSMDH	HD 163930	46	7.3	1755512	+150835	H	1	18367	L	3366	FO	90071317	175800	005200	332	G E=108,G=123,B=40
RSMDH	HD 163930	46	7.3	1755512	+150835	H	1	18386	L	3258	FO	90071717	175300	005500	302	G G=120,B=40
RSMDH	HD 163930	46	7.3	1755512	+150835	H	1	18417	L	3258	FO	90072117	173600	007000	332	G E=128,G=131,B=40
RSMDH	HD 163930	46	7.3	1755512	+150835	H	1	18443	L	3385	FO	90072517	174700	006000		G
RSMDH	Z HER	46	7.3	1755512	+150835	H	1	18468	L	3333	FO	90072917	175400	005500		G
RTASS	Z HER	46	7.3	1755514	+150831	L	3	39613	L	3458	FO	90091123	234700	012000	521	G E=44,G=243,B=25
RTASS	Z HER	46	7.3	1755514	+150831	H	1	18763	L	3459	FO	90091201	015200	009000	433	G E=119,G=160,B=45
RTASS	HD 164284	26	4.8	1757471	+042211	H	3	39614	L	305	FU	90091203	034300	000210	502	G G=210,B=35
RTASS	HD 164284	26	4.8	1757471	+042211	L	3	39631	L	300	FU	90091401	010400	000001	500	G G=220,B=15
RTASS	HD 164284	26	4.8	1757471	+042211	L	1	18778	L	304	FU	90091401	010900	000001	502	G G=198,B=35
MM057	M3-21	70	12.46	1759088	-363916	L	3	39464	L	00180	SO	90081515	153139	018000	350	V
MM057	M3-21	70	12.46	1759088	-363916	L	3	39465	L	00180	SO	90081519	190623	014100	241	V
IMMEB	W25	22	11.5	1801053	-241554	L	1	18926	L	393	SO	90100307	075900	001200	402	G G=165,B=35
IMMEB	W25	22	11.5	1801053	-241554	L	3	39751	L	394	SO	90100308	083400	004000	502	G G=185,B=32
IMMEB	W25	22	11.5	1801053	-241554	L	1	18927	L	392	SO	90100309	092200	003000	X05	G G=2X,B=62
IMMEB	W49	21	11.1	1801126	-241728	L	1	18928	L	126	FO	90100310	103100	001200	502	G G=235,B=40
IMMEB	W49	21	11.1	1801126	-241728	L	3	39752	L	126	FO	90100310	105000	004000	X00	G G=1.5X,B=18
IMMEB	W49	21	11.1	1801126	-241728	L	1	18929	L	125	FO	90100311	113900	002500	X02	G G=2X,B=38
IMMEB	W55	20	10.1	1801166	-241407	L	1	18921	L	302	FO	90100212	121900	000330	502	G G=237,B=35
IMMEB	W55	20	10.1	1801166	-241407	L	3	39744	L	299	FO	90100212	124300	001000	X00	G G=1.5X,B=18
IMMEB	W55	20	10.1	1801166	-241407	L	1	18925	L	297	FO	90100306	060800	000600	X02	G G=2X,B=35
IMMEB	HD 315033	20	8.9	1801190	-242629	H	3	39759	L	854	FO	90100408	082800	012000	406	G G=200,B=72
IMMEB	W61	20	10.3	1801202	-242112	L	3	39753	L	254	FO	90100312	121300	001200	X00	G G=1.5X,B=18
IMMEB	W61	20	10.3	1801202	-242112	L	1	18934	L	265	FO	90100410	104300	000400	502	G G=236,B=35
IMMEB	W61	20	10.3	1801202	-242112	L	1	18935	L	264	FO	90100411	112700	001000	X02	G G=2.5X,B=35
CK76K	W73	23	8.3	1801228	-242209	H	3	39750	L	1499	FO	90100306	062700	007000	503	G G=205,B=43
IMMEB	W76	20	9.6	1801249	-241938	H	3	39765	L	486	FO	90100422	223100	018000	404	G G=188,B=55
IMMEB	W83	20	10.5	1801289	-241857	L	3	39742	L	224	FO	90100207	075800	001700	X00	G G=1.5X,B=18
IMMEB	W83	20	10.5	1801289	-241857	L	1	18917	L	221	FO	90100208	083700	000400	402	G G=180,B=37

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	EES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
IMMEB	W83	20	10.5	1801289	-241857	L	1	18918	L	223	FO	90100209	092300	001100	X03	G G=2X,B=50
IMMEB	W80	20	9.40	1801289	-242321	H	3	39766	L	584	FO	90100502	023200	013500	403	G G=175,B=47
IMMEB	W86	20	9.75	1801300	-242213	L	3	39760	L	418	FO	90100412	120700	000700	X00	G G=1.2X,B=18
IMMEB	W97	21	11.3	1801349	-241939	L	1	18915	L	431	SO	90100206	060800	001000	402	G G=146,B=35
IMMEB	W97	21	11.3	1801349	-241939	L	3	39741	L	428	SO	90100206	062600	004000	500	G G=190,B=17
IMMEB	W97	21	11.3	1801349	-241939	L	1	18916	L	432	SO	90100207	071500	003500	X03	G G=2X,B=45
IMMEB	HD 164947	20	8.9	1801376	-242150	H	3	39758	L	878	FO	90100405	054800	012000	403	G G=170,B=45
IMMEB	W105	22	10.5	1801388	-241847	L	1	18919	L	206	FO	90100210	101300	000500	402	G G=163,B=40
IMMEB	W105	22	10.5	1801388	-241847	L	3	39743	L	209	FO	90100210	104000	002000	500	G G=200,B=18
IMMEB	W105	22	10.5	1801388	-241847	L	1	18920	L	205	FO	90100211	111900	001200	X02	G G=1.5X,B=38
RIASS	HD 165341	46	4.03	1802556	+022951	L	3	39630	L	501	FU	90091323	234100	004500	340	G E=140,G=80,B=18
PNMP	M2-29	70		1803325	-265519	L	3	39589	L	114	SO	90090608	085600	002000	00	G B=18
PNMP	M2-29	70		1803325	-265519	L	1	18710	L	119	SO	90090609	094500	004300	304	G G=94,B=60
MM058	M2-29	70	14.20	1803331	-265518	L	3	39477	L	00000	BO	90081716	160932	032000	301	V
MM058	M2-29	70	14.20	1803331	-265518	L	3	39487	L	00000	BO	90081815	152348	036600	202	V
MQ180	KAZ102	85	15.60	1803373	+673753	L	3	39664	L	00000	BO	90091915	154628	042000	361	V
MQ180	KAZ 102	85	15.60	1803373	+673753	L	3	39788	L	00000	BO	90100714	142821	037900	361	V
MQ180	KAZ102	85	15.60	1803374	+673754	L	3	39545	L	00000	BO	90082717	173153	043500	362	V
RIASS	KAZ 102	85	16.0	1803374	+673754	L	1	19011	L		BO	90101421	213100	039000	437	G E=140,G=235,B=90
MQ180	KAZ 102	85	15.60	1803374	+673754	L	3	39558	L	00000	BO	90083117	173901	038803	361	V
MQ180	KAZ 102	85	15.60	1803374	+673754	L	3	39608	L	00000	BO	90091015	153816	042800	361	V
MQ180	KAZ102	85	15.60	1803374	+673754	L	3	39718	L	00000	BO	90092715	154345	042300	362	V
MQ180	KAZ 102	85	15.60	1803374	+673754	L	3	39831	L	00000	BO	90101414	140141	040500	362	V
MQ180	3C371	86	14.20	1807186	+694857	L	3	39472	L	00000	BO	90081616	165205	031400	301	V
RIASS	3C 371	86	14.2	1807186	+694856	L	3	39609	L	40	SO	90091101	015700	029000	302	G G=75,B=40
MQ180	3C371	86	14.20	1807186	+694857	L	1	18601	L	00000	BO	90081622	221240	015700	301	V
MQ180	3C371	86	14.20	1807186	+694857	L	3	39502	L	00000	BO	90082015	150859	038000	312	V
MQ180	3C371	86	14.20	1807186	+694857	L	1	18627	L	00000	BO	90082020	204009	018000	313	V
MQ180	3C371	86	15.00	1807186	+694857	L	3	39540	L	00000	BO	90082618	182102	025500	310	V
MQ180	3C371	86	15.00	1807186	+694857	L	1	18668	L	00000	BO	90082622	224111	012600	311	V
MQ180	3C371	86	15.00	1807186	+694856	L	1	18784	L	00000	BO	90091416	160635	012500	302	V
MQ180	3C371	86	15.00	1807186	+694856	L	3	39637	L	00000	BO	90091418	182047	026600	201	V
MQ180	3C 371	86	14.20	1807187	+694857	L	1	18806	L	00000	BO	90091715	154022	014000	301	V
RIASS	3C371	86	14.2	1807187	+694857	L	1	18684	L	38	SO	90083101	013900	014000	303	G G=110,B=48
MQ180	3C371	86	14.20	1807187	+694857	L	3	39655	L	00000	BO	90091718	180546	028200	331	V
RIASS	3C371	86	14.2	1807187	+694857	L	3	39555	L	38	SO	90083104	040700	028500	3X3	G E=2X,G=90,B=50
RIASS	3C371	86	14.2	1807187	+694857	L	3	39594	L		BO	90090623	234900	028000	333	G E=78,G=85,B=42
RIASS	3C371	86	14.2	1807187	+694857	L	1	18715	L		BO	90090704	043900	013000	303	G G=97,B=43
RIASS	3C 371	86	14.2	1807187	+694857	L	1	18754	L	39	SO	90091023	233100	014000	303	G G=110,B=48
MM057	M1-42	70	13.08	1807542	-285939	L	3	39461	L	00102	SO	90081416	164313	028500	201	V
BOMNE	HD 166767	53	7.25	1810002	-230752	L	1	18575	L	3112	FO	90081312	125300	000730	402	G G=180,B=37
MM057	H1-63	70	14.40	1813069	-300839	L	3	39454	L	00000	BO	90081317	174725	007500	300	V
BOMNE	HD 167660	53	8.0	1814030	-190541	L	3	39715	L	2144	FO	90092708	082200	006500	206	G G=90,B=75
MI180	AM HER	59	14.24	1814587	+495055	L	3	39670	L	00036	SO	90092116	162537	003500	310	V
MI180	AM HER	59	14.27	1814587	+495055	L	1	18842	L	00035	SO	90092117	170709	002500	312	V
MI180	AM HER	59	14.00	1814587	+495055	L	3	39671	L	00000	BO	90092117	174329	007000	310	V
MI180	AM HER	59	14.00	1814587	+495055	L	1	18843	L	00000	BO	90092119	190026	005000	330	V 2 SEGMENTS
MI180	AM HER	59	14.00	1814587	+495055	L	3	39672	L	00000	BO	90092119	193648	006000	310	V
MI180	AM HER	59	14.00	1814587	+495055	L	3	39673	L	00000	BO	90092121	211049	009600	110	V
MQ045	Q1821+643	85	14.15	1821416	+641900	L	3	39299	L	00039	SO	90072420	203021	030000	461	V

PRO	Object	CL	MAG	R.A.	DEC	D C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	EEC	Comment
MQ045	Q1821+643	85	14.15	1821416	+641900	L 1	18439	L	00039	SO	90072501	013647	007000	401	V
MQ180	H1821+643	85	14.20	1821416	+641900	L 1	19085	L	00000	BO	90102814	140119	012000	501	V
MQ180	H1821+643	85	14.20	1821416	+641900	L 3	39985	L	00000	BO	90102816	160813	027900	461	V
MQ180	H1821+643	85	13.83	1821417	+641901	L 3	39868	L	00052	SO	90101914	142739	027000	361	V
RIASS X	1821+643	85	14.3	1821417	+641901	L 3	39826	L	49	SO	90101321	214900	029000	444	G E=204,C=185,B=55
MQ180	H1821+643	85	13.83	1821417	+641901	L 1	19035	L	00052	SO	90101919	190409	010800	343	V PREAD
RIASS X	1821+643	85	14.3	1821417	+641901	L 1	19005	L	49	SO	90101402	024700	012300	433	G E=123,C=185,B=45
RIASS X	1821+643	85	14.3	1821417	+641901	L 3	39930	L	47	SO	90102321	215200	029000	4X4	G E=1.5X,C=175,B=58
RIASS X	1821+643	85	14.3	1821417	+641901	L 1	19054	L	48	SO	90102402	025000	012000	433	G E=114,C=195,B=45
SUMRW	URANUS	03	6.0	1822075	-234014	L 3	39588	L	12117	FO	90090600	000900	006000	5X2	G E=1.5X,C=248,B=37
SUMRW	URANUS	03	6.0	1822075	-234015	L 1	18709	L	12312	FO	90090605	050800	003500	?04	G C=50X,B=52
SSMHM	URANUS	03	5.7	1822572	-233926	L 3	39789	L	11380	FO	90100721	215100	018000	501	G C=190,B=30
SSMHM	URANUS	03	5.7	1822672	-233926	L 3	39790	L	11332	FO	90100801	012400	019500	502	G C=197,B=33
MC076	HD169689	39	06.07	1823144	+080009	H 3	39668	L	12247	FO	90092015	155058	019500	501	V
MC076	HD169689	39	05.97	1823144	+080009	H 3	39669	L	13460	FO	90092019	193458	019500	501	V
MC076	HD169689	39	06.04	1823144	+080009	H 3	39699	L	12737	FO	90092316	160206	019500	601	V
MC076	HD169689	39	06.04	1823144	+080009	H 3	39700	L	12743	FO	90092319	194751	018000	601	V
MC076	HD169689	39	06.04	1823144	+080009	H 3	39713	L	12742	FO	90092619	195003	017700	603	V
MC076	HD169689	39	06.00	1823144	+080009	H 3	39721	L	13156	FO	90092816	160844	017000	601	V
MC076	HD169689	39	06.28	1823144	+080009	L 3	39795	L	10491	FO	90100813	135657	041000	442	V
USSBS	HD 169467	21	3.5	1823159	-455953	H 3	39861	L	1005	FU	90101904	043200	000033	502	G C=200,B=35
MM057	CNL-5	70	12.44	1825572	-313159	L 3	39446	L	00183	SO	90081215	155147	003000	330	V
MM057	CNL-5	70	12.44	1825572	-313159	L 1	18567	L	00183	SO	90081216	162940	004000	331	V
MM057	CNL-5	70	12.62	1825572	-313159	L 1	18577	L	00157	SO	90081319	194916	003000	331	V
MM057	CNL-5	70	12.62	1825572	-313159	L 3	39455	L	00157	SO	90081320	202727	006000	530	V
MIC031	V3890 SGR	55	15.00	1827400	-240316	L 3	39647	L	00000	BO	90091618	183137	025600	100	V
MC180	BY DRA	46	08.52	1832446	+514100	H 1	18911	L	01490	FO	90100114	140029	007500	251	V
MC180	BY DRA	46	08.54	1832446	+514100	L 3	39738	L	01454	FO	90100115	152421	007500	250	V
MC180	BY DRA	46	08.56	1832446	+514100	H 1	18912	L	01430	FO	90100116	164947	004000	151	V
MC180	BY DRA	46	08.56	1832446	+514100	L 3	39739	L	01434	FO	90100117	173719	007500	230	V
MC180	BY DRA	46	08.57	1832446	+514100	H 1	18913	L	01418	FO	90100118	185946	004000	141	V
MC180	BY DRA	46	08.57	1832446	+514100	L 3	39740	L	01418	FO	90100119	194620	006000	130	V
MC180	BY DRA	46	08.60	1832446	+514100	H 1	18922	L	01384	FO	90100213	135706	007500	151	V
MC180	BY DRA	46	08.61	1832446	+514100	L 3	39745	L	01375	FO	90100215	151809	007500	130	V
MC180	BY DRA	46	08.60	1832446	+514100	H 1	18923	L	01382	FO	90100216	163952	007500	141	V
MC180	BY DRA	46	08.59	1832446	+514100	L 3	39746	L	01398	FO	90100218	180200	007500	140	V
MC180	BY DRA	46	08.61	1832446	+514100	H 1	18924	L	01367	FO	90100219	192324	004000	131	V
MC180	BY DRA	46	08.61	1832446	+514100	L 3	39747	L	01368	FO	90100220	200921	003900	130	V
MC180	BY DRA	46	08.54	1832447	+514101	L 1	18893	L	01462	FO	90092915	155244	001600	351	V DOUBLE EXPOSURE
MC180	BY DRA	46	08.56	1832447	+514101	L 3	39725	L	01434	FO	90092916	162303	009000	230	V REF. PNT. (-126,-180
MC180	BY DRA	46	08.54	1832447	+514101	L 1	18894	L	01458	FO	90092918	180029	001600	351	V DOUBLE EXPOSURE
MC180	BY DRA	46	08.55	1832447	+514101	L 3	39726	L	01450	FO	90092918	185137	009000	230	V
MC180	BY DRA	46	08.55	1832447	+514101	L 1	18895	L	01443	FO	90092920	202844	001600	351	V DOUBLE EXPOSURE
MC180	BY DRA	46	08.56	1832447	+514101	L 3	39727	L	01440	FO	90092921	211018	009700	230	V
MC180	BY DRA	46	08.55	1832447	+514101	L 1	18904	L	01447	FO	90093015	153758	001600	351	V DOUBLE EXPOSURE
MC180	BY DRA	46	08.55	1832447	+514101	L 3	39733	L	01444	FO	90093016	161857	009000	230	V
MC180	BY DRA	46	08.54	1832447	+514101	H 1	18905	L	01460	FO	90093017	175655	015000	263	V
MC180	BY DRA	46	08.51	1832447	+514101	L 3	39734	L	01494	FO	90093020	203433	009300	230	V
MC180	BY DRA	46	08.59	1832447	+514101	H 1	18930	L	01391	FO	90100313	135244	007500	054	V
MC180	BY DRA	46	08.59	1832447	+514101	L 3	39754	L	01394	FO	90100315	151557	007500	031	V

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
MC180	BY DRA	46	08.58	1832447	+514101	H	1	18931	L	01413	FO	90100316	163813	006000	044	V
MC180	BY DRA	46	08.56	1832447	+514101	L	3	39755	L	01440	FO	90100317	174431	007500	031	V
MC180	BY DRA	46	08.57	1832447	+514101	H	1	18932	L	01424	FO	90100319	190629	005000	044	V
MC180	BY DRA	46	08.58	1832447	+514101	L	3	39756	L	01410	FO	90100320	200135	004500	031	V
MC180	BY DRA	46	08.55	1832447	+514101	L	3	39761	L	01445	FO	90100413	134102	003000	021	V
MC180	BY DRA	46	08.57	1832447	+514101	H	1	18936	L	01424	FO	90100414	142033	007500	044	V
MC180	BY DRA	46	08.54	1832447	+514101	L	3	39762	L	01456	FO	90100415	155623	005000	131	V
MC180	BY DRA	46	08.54	1832447	+514101	H	1	18937	L	01454	FO	90100417	170217	005000	044	V
MC180	BY DRA	46	08.56	1832447	+514101	H	1	18938	L	01433	FO	90100418	185956	005000	044	V
MC180	BY DRA	46	08.56	1832447	+514101	L	3	39763	L	01436	FO	90100418	180115	005000	131	V
MC180	BY DRA	46	08.56	1832447	+514101	L	3	39764	L	01438	FO	90100419	195647	005000	131	V
MQ180	3C382	86	14.24	1833120	+323917	L	3	39709	L	00036	SO	90092516	162727	038000	352	V
PHOAL	HD 172883	36	6.00	1838437	+520853	H	3	39510	L			90082207	072200	002200		G
PHOAL	HD 172883	36	6.0	1838438	+520854	H	3	39213	L	11277	FO	90071010	102100	002200	502	G G=227,B=40
PHOAL	HD 172883	36	6.00	1838438	+520854	H	1	18639	L	24	FO	90082207	075300	001000	503	G G=205,B=42
PHOAL	HD 172883	36	6.00	1838438	+520854	L	3	39511	L	11632	FO	90082209	090100	000017	500	G G=170,B=15
PHOAL	HD 172883	36	6.00	1838438	+520854	L	1	18640	L	11617	FO	90082209	090600	000011	X02	G G=1.5X,B=32
MC100	HD 172748	53	04.95	1839321	-090607	H	1	18563	L	26106	FO	90081115	150719	001200	501	V
MC100	D.SCUTI	53	05.03	1839321	-090607	H	1	18600	L	25032	FO	90081615	153731	001200	600	V
MC063	HD173764	45	04.60	1844312	-044811	H	1	18645	L	00422	FU	90082219	191203	004500	502	V EFFECTIVE EXPO TIME
MC063	HD173764	39	04.62	1844312	-044811	H	1	18994	L	00415	FU	90101220	200423	004300	501	V
IBMRP	DH HER	66	11.5	1845290	+224754	L	3	39313	L	395	SO	90072803	035800	001500	300	G G=109,B=18
IBMRP	DH HER	66	12.0	1845290	+224754	L	3	39314	L	290	SO	90072804	045700	003000	300	G G=101,B=18
IBMRP	DH HER	66	12.2	1845290	+224754	L	3	39315	L	183	SO	90072806	064100	012000	400	G G=135,B=20
IBMRP	DH HER	66	11.7	1845290	+224754	L	3	39316	L	271	SO	90072809	091900	005000	500	G G=238,B=18
MQ049	3C 390.3	84	14.40	1845376	+794307	L	3	39215	L	00000	BO	90071119	194541	042100	351	V
MQ180	3C 390.3	86	14.40	1845378	+794305	L	3	39554	L	00000	BO	90083017	175354	041400	351	V
MQ049	3C390.3	86	15.00	1845379	+794306	L	1	18382	L	00000	BO	90071620	205300	035400	343	V
MQ180	3C 390.3	86	14.40	1845379	+794306	L	3	39565	L	00000	BO	90090116	160611	040000	352	V
CD75Y	AS 325	57	9.5	1846570	-262746	L	1	18638	L	222	FO	90082206	060800	001300	502	G G=222,B=37
MI062	NOVA SCU 1	55	13.63	1846582	-061446	L	3	39495	L	00062	SO	90081915	150522	030000	122	V
MI062	NOVA SCU 1	55	13.63	1846582	-061446	L	1	18619	L	00062	SO	90081920	201120	007300	122	V
SUMRW	NEPTUNE	03	7.9	1848592	-220640	L	3	39576	L	1804	FO	90090316	165100	077000	407	G G=205,B=90
MS146	NEPTUNE	03	08.30	1849001	-220639	E	9	02347	2	01804	FO	90090316	160000	004000		V FOR SWP39576
SUMRW	NEPTUNE	03	7.9	1849020	-220635	L	3	39572	L	1836	FO	90090216	160500	081000	408	G G=210,B=100
MS146	NEPTUNE	03	08.29	1849031	-220633	E	9	02346	2	01836	FO	90090216	160000	004000		V SWP39572
MI177	HR LYR	55	16.00	1851276	+290949	L	1	18163	L	00000	BO	90062123	231307	033400	302	V
MI177	HR LYR	55	16.00	1851276	+290949	L	3	39145	L	00000	BO	90062422	220616	040100	301	V
BNMHB	AP 2-1	70	14.7	1855386	+013250	L	3	39079	L		BO	90061213	133700	019000	03	G B=47
MA145	HD176386	30	07.54	1858165	-365745	H	3	39722	L	03558	FO	90092819	195343	005800	402	V
MA129	PK36-11	70	13.50	1859289	+020450	L	3	40001	L	00000	BO	90103016	165225	006000	110	V
MA129	PK36-11	70	13.50	1859289	+020450	L	1	19089	L	00000	BO	90103017	175836	016900	333	V
MM057	HB8	70	13.67	1902201	-331613	L	3	39453	L	00059	SO	90081315	152651	007000	330	V
RCMBW	RY SGR	52	10	1913169	-333641	L	1	18064	L	248	FO	90060906	064100	006000	X3	G E=1.5X,B=41
RCMBW	RY SGR	52	10	1913169	-333641	L	1	18065	L	265	FO	90060909	091300	022500	XX4	G E=5X,G=1.5X,B=59
RCMD	RY SGR	52	8.4	1913169	-333641	L	1	18620	L	1371	FO	90081922	223200	003000	503	G G=220,B=41
RCMD	RY SGR	52	8.4	1913169	-333641	L	1	18620	S	1375	FO	90081923	231700	003000	302	G G=93,B=37
RCMD	RY SGR	52	8.4	1913169	-333641	L	1	18621	L	1461	FO	90082000	002800	015600		G
RCMBW	RY SGR	52	7.8	1913169	-333641	L	1	18799	L	1932	FO	90091623	232800	015000	X44	G E=182,G=2X,B=58
RCMBW	RY SGR	52	7.8	1913169	-333641	L	1	18799	S	1918	FO	90091702	020600	004500	304	G G=150,B=52

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
ROMBW	RY SGR	52	7.9	1913169	-333641	L	1	19059	L	2543	FO	90102421	215100	009000	X03	G G=2X,B=50
ROMBW	RY SGR	52	7.9	1913169	-333641	L	3	39942	L	2604	FO	90102423	233000	012500	301	G G=62,B=25
ROMBW	RY SGR	52	7.9	1913169	-333641	L	1	19060	S	2539	FO	90102501	014300	004500	X03	G G=1.5X,B=50
ROMBW	RY SGR	52	7.9	1913169	-333641	L	1	19060	L	2530	FO	90102502	023700	013200	X04	G G=4X,B=55
EGLGR	E141-G55	84	14.1	1916569	-584551	L	3	39128	L	41	SO	90062206	062000	006000	331	G E=118,G=75,B=22
EGLGR	E141-G55	84	14.1	1916569	-584551	L	1	18164	L	41	SO	90062207	072900	007500	452	G E=244,G=180,B=40
AGMDC	ESO141-6	84	14	1916570	-584552	L	3	39457	L	45	SO	90081401	010500	004000	330	G E=90,G=60,B=20
SMMDS	MOON	02	-8.7	1919150	-212956	H	1	19065	L		BO	90102523	234100	003000	302	G G=82,B=40
SMMDS	MOON	02	-8.7	1919150	-212956	H	1	19065	L		BO	90102601	010100	002000	302	G G=82,B=40
SSMHM	SKYBKGND	07		1920443	-221206	L	3	39856	L			90101808	085100	001500	34	G E=146,B=60
SSMJC	SATURN	03	0.3	1920542	-220737	H	3	39546				90082802	020400	024000	X05	G G=3X,B=63
SDLTS	HD 182180	21	6.0	1921232	-275751	H	3	39549	L	12098	FO	90082912	121500	000700	503	G G=200,B=41
SDLTS	HD 182180	21	6.0	1921232	-275751	H	3	39596	L	11910	FO	90090709	092100	000745	502	G G=218,B=40
IDMGB	HD 182488	44	6.4	1921407	+330718	H	1	18449	L	6689	FO	90072617	173900	007000	433	G E=86,G=162,B=45
IDMGB	HD 182488	44	6.4	1921407	+330718	H	1	18460	L	7172	FO	90072815	151400	009000	433	G E=98,G=190,B=45
IDMGB	HD 182488	44	6.4	1921407	+330718	H	1	18461	L	6980	FO	90072817	171900	009000	433	G E=95,G=185,B=42
SSMCJ	SATURN	03	+0.3	1921477	-220532	H	3	39519	L			90082313	130100	005000	2X1	G E=1.5X,G=2,B=22
SSMCJ	SATURN	03	+0.3	1921478	-220533	L	3	39516	L			90082308	083900	006000	X51	G E=190,G=2.4X,B=22
SSMCJ	SATURN	03	+0.3	1921478	-220533	L	3	39517	L			90082310	101100	006000	?51	G E=231,G=2.4,B=22
SSMCJ	SATURN	03	+0.3	1921478	-220533	L	3	39518	L			90082311	114000	005000	2X2	G E=1.5X,G=2.4,B=38
MI031	BF CYG	57	10.08	1921549	+293433	L	1	18302	L	00370	FO	90070620	201152	000500	602	V
MI031	BF CYG	57	10.10	1921549	+293433	L	3	39188	L	00363	FO	90070620	202523	002500	502	V
MI031	BF CYG	57	10.09	1921549	+293433	H	1	18303	L	366	FO	90070621	211445	033300	403	V
MI021	BF CYGNI	57	10.06	1921552	+293434	L	3	39162	L	00378	FO	90063000	003222	002000	450	V
MI021	BF CYGNI	57	10.06	1921552	+293434	L	1	18249	L	00378	FO	90063001	011458	002000	800	V
MI021	BF CYGNI	57	10.03	1921552	+293434	L	3	39163	L	00388	FO	90063001	015630	006000	570	V
MI021	BF CYGNI	57	10.04	1921552	+293434	L	1	18250	L	00382	FO	90063003	030513	001000	800	V
MI021	BF CYGNI	57	10.02	1921552	+293434	L	3	39164	L	00391	FO	90063003	034313	002500	550	V
MI021	BF CYGNI	57	10.06	1921552	+293434	L	1	18251	L	00376	FO	90063004	042633	000500	551	V
SSMHM	SATURN	03	0.5	1922474	-220850	H	3	39978	L			90102804	041900	001500	530	G E=52,G=229,B=18
SSMHM	SATURN	03	0.5	1922474	-220850	H	1	19079	L			90102804	045300	000005	502	G G=230,B=35
SSMHM	SATURN	03	0.5	1922474	-220850	H	3	39979	L			90102805	052700	001500	530	G E=57,G=240,B=18
SSMHM	SATURN	03	0.5	1922475	-220850	L	1	19074	L			90102722	225700	000003	02	G B=36
SSMHM	SATURN	03	0.5	1922475	-220850	L	3	39975	L			90102723	230500	003000	X31	G E=78,G=2X,B=26
SSMHM	SATURN	03	0.5	1922475	-220850	L	1	19075	L			90102800	000500	000003	402	G G=155,B=34
SSMHM	SATURN	03	0.5	1922475	-220850	H	1	19076	L			90102801	012700	000004	402	G G=185,B=35
SSMHM	SATURN	03	0.5	1922475	-220850	H	3	39976	L			90102802	020300	001500	500	G G=226,B=18
SSMHM	SATURN	03	0.5	1922475	-220850	H	1	19077	L			90102802	023800	000004	502	G G=190,B=35
SSMHM	SATURN	03	0.5	1922475	-220850	H	3	39977	L			90102803	031200	001500	500	G G=225,B=18
SSMHM	SATURN	03	0.5	1922475	-220850	H	1	19078	L			90102803	034600	000005	502	G G=220,B=34
SSMHM	SATURN	03	0.5	1922475	-220850	H	1	19080	L			90102806	061000	000005	502	G G=220,B=35
SSMHM	SATURN	03	0.5	1922475	-220850	H	3	39980	L			90102806	064400	001500	530	G E=74,G=240,B=18
SSMHM	SATURN	03	0.5	1922475	-220850	H	1	19081	L			90102807	073100	000005	502	G G=230,B=35
SSMHM	SATURN	03	0.5	1922475	-220850	H	3	39981	L			90102808	085100	001500	550	G E=171,G=240,B=18
SSMHM	SATURN	03	0.5	1922475	-220850	H	1	19082	L			90102809	092600	000005	501	G G=230,B=30
SSMHM	SATURN	03	0.5	1922475	-220850	H	3	39982	L			90102809	095700	001400	540	G E=118,G=210,B=18
SSMHM	SATURN	03	0.5	1922475	-220850	H	1	19083	L			90102810	103200	000004	501	G G=215,B=30
SSMHM	SATURN	03	0.5	1922475	-220850	H	3	39983	L			90102811	111400	001400	530	G E=76,G=220,B=18
SSMHM	SATURN	03	0.5	1922475	-220850	H	1	19084	L			90102811	115100	000005	502	G G=230,B=35
SSMHM	SATURN	03	0.5	1922475	-220850	L	3	39984	L			90102812	122300	001400	530	G E=60,G=230,B=18

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
CD81Y	CH CYG	57	7.9	1923130	+500828	L	3	39601	L	2946	FO	90090811	115400	004500	350	G E=234,C=90,B=18
CD81Y	CH CYG	57	7.90	1923130	+500828	L	1	18790	L	3052	FO	90091509	093300	000500	4X2	G E=3X,C=142,B=38
CD81Y	CH CYG	57	9.0	1923140	+500829	L	3	39600	L	3092	FO	90090811	115400	004500	XX2	G E=3X,C=3X,B=32
MTIOO	CH CYG	57	07.73	1923142	+500831	L	1	18489	L	02998	FO	90073119	195537	002000	772	V
MTIOO	CH CYG	57	07.70	1923142	+500831	L	3	39350	L	03078	FO	90073119	192247	002500	560	V
MTIOO	CH CYG	57	07.72	1923142	+500831	L	3	39351	L	03036	FO	90073120	202925	002000	550	V
MTIOO	CH CYG	57	07.76	1923142	+500831	L	1	18490	L	02931	FO	90073121	210850	001000	772	V
MTIOO	CH CYG	57	07.76	1923142	+500831	L	3	39352	L	02930	FO	90073121	214736	001500	450	V
MT021	HD182917	57	07.83	1923142	+500831	L	3	39520	L	02759	FO	90082318	180508	001500	441	V
MT021	HD182917	57	07.81	1923142	+500831	L	1	18650	L	02785	FO	90082318	183256	000400	561	V
MT021	HD182917	57	07.79	1923142	+500831	H	3	39521	L	02828	FO	90082319	190422	010000	132	V
MT180	CH CYG	57	07.83	1923142	+500831	H	1	19071	L	02759	FO	90102713	135305	005000	341	V
MT180	CH CYG	57	07.80	1923142	+500831	H	3	39971	L	02815	FO	90102714	145206	010000	240	V
MT180	CH CYG	57	07.82	1923142	+500831	L	1	19072	L	02763	FO	90102716	164023	001000	660	V
MT180	CH CYGNI	57	07.81	1923142	+500831	L	3	39972	L	02793	FO	90102717	172408	001500	350	V
RRMIT	RR LYRAE	53	7.6	1923521	+424112	L	1	18129	L	1792	FO	90061905	052700	000730	X02	G C=2X,B=35
RRMIT	RR LYRAE	53	7.6	1923521	+424112	L	1	18130	L	1935	FO	90061906	061100	000300	502	G C=235,B=33
RRMIT	RR LYRAE	53	7.6	1923521	+424112	L	1	18131	L	2921	FO	90061906	065100	000150	X02	G C=1.5X,B=33
RRMIT	RR LYRAE	53	7.6	1923521	+424112	L	1	18131	L	2921	FO	90061907	070200	000140	X02	G C=1.5X,B=33
RRMIT	RR LYRAE	53	7.6	1923521	+424112	L	1	18132	L	3978	FO	90061907	074800	000125	502	G C=235,B=32
RRMIT	RR LYRAE	53	7.6	1923521	+424112	L	1	18132	L	3978	FO	90061908	080400	000125	502	G C=235,B=32
RRMIT	RR LYRAE	53	7.6	1923521	+424112	L	1	18133	L	3282	FO	90061908	084500	000135	502	G C=200,B=32
RRMIT	RR LYRAE	53	7.6	1923521	+424112	L	1	18133	L	3282	FO	90061909	090400	000145	502	G C=200,B=32
RRMIT	RR LYRAE	53	7.6	1923521	+424112	L	1	18134	L	2846	FO	90061909	094400	000200	502	G C=208,B=32
RRMIT	RR LYRAE	53	7.6	1923521	+424112	L	1	18134	L	2846	FO	90061910	100200	000215	502	G C=208,B=32
RRMIT	RR LYRAE	53	7.6	1923521	+424112	L	1	18135	L	2560	FO	90061910	104200	000230	502	G C=210,B=32
RRMIT	RR LYRAE	53	7.6	1923521	+424112	L	1	18135	L	2560	FO	90061910	105700	000235	502	G C=210,B=32
RRMIT	RR LYRAE	53	7.6	1923521	+424112	L	1	18136	L	2360	FO	90061911	113800	000245	502	G C=214,B=32
RRMIT	RR LYRAE	53	7.6	1923521	+424112	L	1	18136	L	2360	FO	90061911	115000	000250	502	G C=214,B=32
RRMIT	RR LYRAE	53	7.6	1923521	+424112	L	1	18138	L	1991	FO	90061913	132800	000315	502	G C=204,B=34
RRMIT	RR LYRAE	53	7.6	1923521	+424112	L	1	18138	L	1991	FO	90061913	133800	000320	502	G C=204,B=34
RRMIT	RR LYRAE	53	7.6	1923521	+424112	L	1	18139	L	1834	FO	90061914	141900	000330	502	G C=240,B=34
RRMIT	RR LYRAE	53	7.6	1923521	+424112	L	1	18139	L	1834	FO	90061914	143000	000330	502	G C=240,B=34
RRMIT	RR LYRAE	53	7.6	1923521	+424112	L	1	18140	L	1786	FO	90061915	151000	000340	502	G C=230,B=34
RRMIT	RR LYRAE	53	7.6	1923521	+424112	L	1	18140	L	1786	FO	90061915	152100	000340	502	G C=230,B=34
RRMIT	RR LYRAE	53	7.6	1923521	+424112	L	1	18142	L	1761	FO	90061917	170100	000340	503	G C=245,B=41
RRMIT	RR LYRAE	53	7.6	1923521	+424112	L	1	18142	L	1761	FO	90061917	171300	000340	503	G C=245,B=41
RRMIT	RR LYRAE	53	7.6	1923521	+424112	L	1	18143	L	1780	FO	90061918	180800	000320	502	G C=238,B=38
RRMIT	RR LYRAE	53	7.6	1923521	+424112	L	1	18143	L	1780	FO	90061918	181900	000320	502	G C=238,B=38
RRMIT	RR LYRAE	53	7.6	1923521	+424112	L	1	18144	L			90061918	185800	000300		G
RRMIT	RR LYRAE	53	7.6	1923521	+424112	L	1	18144	L			90061919	190800	000300		G
RRMIT	RR LYRAE	53	7.6	1923521	+424112	L	1	18145	L			90061919	194900	000240		G
RRMIT	RR LYRAE	53	7.6	1923521	+424112	L	1	18145	L			90061920	202600	000125		G
RRMIT	HD 182693	53	7.6	1923521	+424112	L	1	18152	L			90062017	170100	000330		G
RRMIT	RR LYR	53	7.6	1923521	+424112	L	1	18207	L	3130	FO	90062706	065400	000150	502	G C=195,B=32
RRMIT	RR LYR	53	7.6	1923521	+424112	L	1	18207	L			90062707	071000	000150		G
RRMIT	RR LYR	53	7.6	1923521	+424112	L	1	18208	L	2769	FO	90062707	075300	000220	502	G C=219,B=32
RRMIT	RR LYR	53	7.6	1923521	+424112	L	1	18209	L	2495	FO	90062708	084800	000240	502	G C=239,B=32
RRMIT	RR LYR	53	7.6	1923521	+424112	L	1	18209	L			90062709	090300	000240		G
RRMIT	RR LYR	53	7.6	1923521	+424112	L	1	18210	L	2274	FO	90062709	094500	000250	502	G C=242,B=36

PRO	Object	CL	MAG	R.A.	DEC	D C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment	
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18210	L			90062710	100400	000255	G		
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18211	L	2142	FO	90062710	104400	000300	502 G	G=235,B=31	
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18212	L	2040	FO	90062711	114400	000310	502 G	G=236,B=37	
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18212	L			90062711	115700	000310	G		
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18213	L	1974	FO	90062712	124000	000310	502 G	G=230,B=33	
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18213	L			90062712	125400	000310	G		
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18214	L	1954	FO	90062713	133500	000310	502 G	G=234,B=32	
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18215	L	1965	FO	90062714	142800	000300	502 G	G=238,B=32	
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18215	L			90062714	143900	000300	G		
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18216	L	1933	FO	90062715	152000	000250	502 G	G=235,B=35	
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18216	L			90062715	153100	000250	G		
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18217	L			90062716	161200	000250	G		
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18218	L		FO	90062717	170600	000250	502 G	G=224,B=35	
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18219	L	2357	FO	90062718	182800	000230	X02 G	G=1.5X,B=35	
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18219	L			90062718	183900	000200	G		
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18220	L	3193	FO	90062719	192000	000100	502 G	G=192,B=32	
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18220	L			90062719	192900	000100	G		
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18221	L	3042	FO	90062720	200600	000120	502 G	G=219,B=32	
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18221	L			90062720	202800	000130	G		
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18268	L	2138	FO	90070304	040100	000300	502 G	G=230,B=33	
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18268	L	2128	FO	90070304	041400	000300	502 G	G=235,B=40	
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18269	L	2068	FO	90070304	045600	000245	502 G	G=213,B=32	
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18269	L	2062	FO	90070305	051000	000245	502 G	G=214,B=39	
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18270	L	2029	FO	90070305	055200	000245	502 G	G=212,B=35	
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18270	L	2044	FO	90070306	060700	000245	502 G	G=221,B=38	
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18271	L	2017	FO	90070306	064800	000245	502 G	G=207,B=35	
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18271	L	2020	FO	90070307	070000	000245	502 G	G=206,B=39	
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18272	L	1957	FO	90070307	074100	000255	502 G	G=191,B=35	
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18272	L	1934	FO	90070307	075500	000245	502 G	G=217,B=40	
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18274	L	1776	FO	90070309	093800	000315	502 G	G=207,B=39	
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18274	L	1856	FO	90070310	100200	000220	402 G	G=174,B=35	
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18276	L	2898	FO	90070311	115100	000140	502 G	G=198,B=39	
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18276	L			90070312	120300	000140	G		
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18277	L	2942	FO	90070312	124300	000140	502 G	G=197,B=37	
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18277	L	2975	FO	90070312	125400	000140	502 G	G=191,B=38	
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18278	L	2882	FO	90070313	133600	000200	502 G	G=225,B=40	
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18278	L	2812	FO	90070313	135600	000210	502 G	G=225,B=38	
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18279	L	2629	FO	90070314	143900	000220	502 G	G=235,B=40	
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18279	L	2565	FO	90070314	145400	000230	504 G	G=240,B=52	
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18280	L	2421	FO	90070315	154000	000230	502 G	G=240,B=39	
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18280	L	2364	FO	90070316	160100	000240	502 G	G=240,B=37	
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18281	L	2281	FO	90070316	164300	000240	502 G	G=239,B=32	
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18281	L			90070317	170600	000240	G		
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18282	L	2176	FO	90070317	174800	000240	502 G	G=222,B=31	
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18283	L	2117	FO	90070318	182900	000240	502 G	G=223,B=37	
RRMIT	RR LYR	53	7.6	1923521	+424112	L 1	18283	L			90070318	184100	000240	G		
RRMIT	HD 182693	53	7.6	1923521	+424112	L 1	18342	L			90071104	040000	000250	G		
RRMIT	HD 182693	53	7.6	1923521	+424112	L 1	18342	L	1862	FO	90071104	041400	000250	502 G	G=193,B=38	
RRMIT	HD 182693	53	7.6	1923521	+424112	L 1	18343	L			90071104	045700	000300	G		
RRMIT	HD 182693	53	7.6	1923521	+424112	L 1	18343	L		FO	90071105	051200	000300	502 G	G=194,B=35	1826

PRO	Object	CL	MAG	R.A.	DEC	D C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
RRMIT	HD 182693	53	7.6	192521	+424112	L 1	18344	L			90071105	055400	000315		G
RRMIT	HD 182693	53	7.6	192521	+424112	L 1	18344	L	1789	FO	90071106	060900	000315	502	G G=197,B=38
RRMIT	HD 182693	53	7.6	192521	+424112	L 1	18345	L			90071106	065200	000305		G
RRMIT	HD 182693	53	7.6	192521	+424112	L 1	18345	L	1825	FO	90071107	070500	000305	502	G G=191,B=38
RRMIT	HD 182693	53	7.6	192521	+424112	L 1	18346	L			90071107	074700	000320		G
RRMIT	HD 182693	53	7.6	192521	+424112	L 1	18346	L			90071108	080500	000320		G
RRMIT	HD 182693	53	7.6	192521	+424112	L 1	18347	L	1746	FO	90071108	084800	000320	503	G G=219,B=41
RRMIT	HD 182693	53	7.6	192521	+424112	L 1	18347	L			90071109	091000	000240		G
RRMIT	HD 182693	53	7.6	192521	+424112	L 1	18348	L	2275	FO	90071109	094900	000150	502	G G=219,B=38
RRMIT	HD 182693	53	7.6	192521	+424112	L 1	18348	L			90071110	100700	000120		G
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18349	L	3530	FO	90071110	104700	000100	402	G G=186,B=38
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18349	L			90071110	105900	000100		G
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18350	L	3438	FO	90071111	114400	000110	402	G G=172,B=40
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18350	L	3362	FO	90071111	115600	000110	402	G G=165,B=35
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18351	L			90071112	124400	000150		G
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18351	L	2971	FO	90071112	125500	000150	502	G G=201,B=37
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18352	L			90071113	133700	000210		G
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18352	L	2645	FO	90071113	135700	000210	502	G G=196,B=38
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18353	L			90071114	143800	000220		G
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18353	L	2434	FO	90071114	145300	000225	503	G G=211,B=42
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18354	L			90071115	153900	000230		G
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18354	L	2136	FO	90071115	155800	000230	502	G G=204,B=40
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18355	L			90071116	164100	000245		G
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18355	L	1965	FO	90071117	170000	000245	502	G G=224,B=38
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18356	L			90071117	174100	000245		G
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18356	L	1860	FO	90071117	175400	000245	502	G G=212,B=37
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18357	L			90071118	183700	000250		G
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18472	L	3662	FO	90073003	034600	000100	302	G G=137,B=40
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18472	L	3560	FO	90073003	035600	000100	302	G G=136,B=38
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18473	L	3156	FO	90073004	043900	000145	403	G G=171,B=45
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18473	L	3036	FO	90073004	045300	000145	402	G G=169,B=35
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18474	L	2762	FO	90073005	053300	000205	403	G G=184,B=41
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18474	L	2698	FO	90073005	054600	000205	402	G G=175,B=38
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18475	L	2482	FO	90073006	062600	000240	502	G G=200,B=40
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18475	L	2444	FO	90073006	064000	000240	502	G G=209,B=38
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18476	L	2271	FO	90073007	072000	000255	502	G G=221,B=40
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18476	L	2225	FO	90073007	073700	000255	502	G G=202,B=35
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18477	L	2131	FO	90073008	081800	000305	502	G G=196,B=40
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18477	L	2099	FO	90073008	083000	000305	502	G G=202,B=35
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18478	L	2012	FO	90073009	091000	000315	503	G G=206,B=42
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18478	L	1976	FO	90073009	092700	000315	502	G G=189,B=38
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18479	L	1924	FO	90073010	101100	000330	503	G G=208,B=43
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18479	L	1926	FO	90073010	102300	000330	502	G G=191,B=35
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18480	L	1913	FO	90073011	110500	000330	503	G G=196,B=41
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18480	L	1925	FO	90073011	112000	000330	502	G G=197,B=35
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18481	L	1939	FO	90073012	120400	000330	503	G G=213,B=48
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18481	L	1933	FO	90073012	121900	000330	503	G G=205,B=41
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18482	L	1910	FO	90073013	130800	000330	503	G G=216,B=50
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18482	L	1904	FO	90073013	132200	000330	503	G G=227,B=45
RRMIT	RR LYR	53	7.6	192521	+424112	L 1	18483	L	1838	FO	90073014	140600	000320	504	G G=231,B=52

PRO	Object	CL	MAG	R.A.	DEC	D C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
RRMT	RR LYR	53	7.6	1923521	+424112	L 1	18483	L	1813	FO	90073014	142300	000320	503 G	G=225,B=45
RRMT	RR LYR	53	7.6	1923521	+424112	L 1	18484	L	1898	FO	90073015	150900	000300	503 G	G=231,B=43
RRMT	RR LYR	53	7.6	1923521	+424112	L 1	18484	L	2061	FO	90073015	152100	000230	503 G	G=223,B=45
RRMT	RR LYR	53	7.6	1923521	+424112	L 1	18485	L	3273	FO	90073016	160400	000100	402 G	G=185,B=39
RRMT	RR LYR	53	7.6	1923521	+424112	L 1	18485	L	3530	FO	90073016	161400	000040	402 G	G=150,B=38
RRMT	RR LYR	53	7.6	1923521	+424112	L 1	18486	L	3743	FO	90073016	165100	000100	403 G	G=179,B=41
RRMT	RR LYR	53	7.6	1923521	+424112	L 1	18486	L	3684	FO	90073017	170000	000100	402 G	G=174,B=35
RRMT	RR LYR	53	7.6	1923521	+424112	L 1	18487	L	3254	FO	90073017	174100	000150	502 G	G=221,B=40
RRMT	RR LYR	53	7.6	1923521	+424112	L 1	18487	L	3184	FO	90073017	175200	000200	502 G	G=217,B=38
RRMT	RR LYR	53	7.6	1923521	+424112	L 1	18488	L	2877	FO	90073018	183200	000210	502 G	G=212,B=40
RRMT	RR LYR	53	7.6	1923521	+424112	L 1	18488	L	2789	FO	90073018	184300	000210	502 G	G=217,B=40
IMMW	CED167	73	0.0	1924038	+223942	L 1	18184	L			90062406	061400	039500	306 G	G=125,B=80
IE168	HII1924-42	72	13.85	1924292	-414038	L 1	18981	L	00051	SO	90101016	165934	024000	302 V	
IE168	HII1924-42	72	13.50	1924292	-414038	L 3	39810	L	00067	SO	90101114	142643	038500	562 V	PREAD
SMMS	MOON	02	-8.7	1926240	-255037	H 1	19064	L		BO	90102522	221600	001000	301 G	G=65,B=30
SMMS	MOON	02	-8.7	1926240	-255037	H 3	39951	L		BO	90102522	221700	003000	202 G	G=50,B=38
SMMS	MOON	02	-8.7	1926240	-255037	H 3	39951	L		BO	90102523	234300	003000	202 G	G=50,B=38
AGMW	V374 AQL	51	10	1927400	-005606	L 1	18697	L	821	FO	90090408	084800	009000	04 G	B=59
MI077	V822 AQL	66	07.39	1928396	-021258	H 3	39845	L	04045	FO	90101713	133419	003000	300 V	
MI077	V822 AQL	66	07.41	1928396	-021258	H 1	19026	L	03995	FO	90101714	141207	003000	501 V	
MI077	V822 AQL	66	07.41	1928396	-021258	H 3	39846	L	03970	FO	90101714	145111	005000	500 V	
MI077	V822 AQL	66	07.43	1928396	-021258	H 1	19027	L	03928	FO	90101715	154912	003000	501 V	
MI077	V822AQL	66	07.43	1928396	-021258	H 3	39847	L	03926	FO	90101716	162933	005000	400 V	
MI077	V822AQL	66	07.41	1928396	-021258	H 1	19028	L	03968	FO	90101717	172740	003000	500 V	
MI077	V822 AQL	66	07.41	1928396	-021258	H 3	39848	L	03983	FO	90101718	180416	005000	400 V	
MI077	V822 AQL	66	07.39	1928396	-021258	H 3	39849	L	04069	FO	90101719	193933	006000	500 V	
MI077	V822 AQL	66	07.39	1928396	-021258	H 1	19029	L	04045	FO	90101719	190056	003000	500 V	
AGMW	V450 AQL	53	6.5	1931180	+052124	L 1	18696	L	13079	FO	90090407	073400	002000	342 G	E=154,G=62,B=35
AGMW	V450 AQL	51	6.4	1931180	+052124	L 1	18780	L	11385	FO	90091407	075300	003000	352 G	E=220,G=77,B=38
AGMW	V450 AQL	51	6.4	1931180	+052124	L 1	18864	L	11513	FO	90092607	074200	003000	343 G	E=181,G=82,B=42
AGMW	V450 AQL	51	5.93	1931180	+052124	L 1	18988	L	13481	FO	90101208	080900	003000	356 G	E=231,G=130,B=73
AGMW	V450 AQL	51	6.4	1931180	+052124	L 1	19051	L	14229	FO	90102312	122000	002500	352 G	E=214,G=80,B=36
BOME	HD 185059	53	7.0	1934265	+201312	L 1	18879	L	3907	FO	90092805	052900	001900	402 G	G=148,B=35
SDLIS	HD 185510	28	8.5	1936584	-061045	L 1	18673	L	1176	FO	90082809	092200	001500	452 G	E=219,G=179,B=35
SDLIS	HD 185510	28	8.5	1936584	-061045	L 3	39547	L	1180	FO	90082809	095400	002000	500 G	G=170,B=17
SDLIS	HD 185510	28	8.5	1936584	-061045	L 1	18675	L	1170	FO	90082816	161600	001500	451 G	E=229,G=153,B=27
SDLIS	HD 185510	28	8.5	1936584	-061045	H 3	39548	L	1169	FO	90082906	063200	020700	3X9 G	E=1.5X,G=200,B=105
SDLIS	HD 185510	28	8.5	1936584	-061045	H 1	18676	L	1298	FO	90082910	100800	009000	303 G	G=100,B=50
SDLIS	HD 185510	28	8.5	1936584	-061045	L 3	39595	L	1464	FO	90090707	074900	002000	400 G	G=165,B=18
SDLIS	HD 185510	28	8.5	1936584	-061045	L 1	18716	L	1464	FO	90090708	082200	001500	402 G	G=170,B=35
SDLIS	HD CT AER 2	28	8.50	1936584	-061045	H 9	02348				90090714	140900	016000	G	
SDLIS	HD 185510	28	8.5	1936584	-061045	H 3	39597	L	1360	FO	90090714	142000	097000	309 G	G=180,B=115
MC088	HD185958	44	05.03	1938481	+172133	L 3	39259	L	25014	FO	90071920	201733	034300	341 V	
LGMIS	HD 185958	45	4.37	1938481	+172132	L 3	39084	L	350	FU	90061311	114700	006300	300 G	G=58,B=18
MC088	HD185958	44	04.87	1938481	+172133	H 1	18401	L	27165	FO	90072002	020730	004000	330 V	
IMMC	HD 332407	23	8.5	1939198	+290136	L 1	18375	S	1169	FO	90071512	121300	000142	502 G	G=195,B=34
IMMC	HD 332407	23	8.5	1939198	+290136	L 1	18375	L	1163	FO	90071512	121900	000300	X02 G	G=3X,B=40
IMMC	HD 332407	23	8.5	1939198	+290136	L 3	39227	L	1172	FO	90071512	125200	000148	400 G	G=150,B=18
RIASS	HMSGC	57	11.5	1939411	+163733	L 1	19016	L	384	SO	90101523	233000	008000	323 G	E=10,G=120,B=42
RIASS	HMSGC	57	11.5	1939414	+163733	L 3	39837	L	373	SO	90101521	214800	001000	251 G	E=200,G=30,B=22

PRO	Object	CL	MAG	R.A.	DEC	D C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
RIASS	HM SGC	57	11.5	1939414	+163733	L	1	19015	L	374	SO	90101522	220700	000800	252 G	E=224,G=43,B=35
RIASS	HM SGE	57	11.5	1939414	+163733	L	3	39838	L	380	SO	90101522	224200	008000	371 G	E=8,G=54,B=25
RIASS	HM SGE	57	11.5	1939414	+163733	H	1	19017	L	384	SO	90101601	015100	017700	304 G	G=95,B=55
DOME	SU CYG	53	6.9	1942485	+290834	H	1	18550	L	4943	FO	90081006	063300	014500	403 G	G=190,B=50
DOME	HD 186688	53	6.9	1942485	+290834	H	1	18560	L	4002	FO	90081107	073300	015000	403 G	G=170,B=50
DOME	HD 186688	53	7.0	1942485	+290834	H	1	18582	L	5020	FO	90081407	070800	012000	403 G	G=170,B=50
DOME	HD 186688	53	7.1	1942485	+290834	H	1	18587	L	3784	FO	90081507	070100	016500	404 G	G=200,B=59
MI037	AS 360	57	12.64	1943357	+182925	E	9	02331	2	00150	SO	90061323	230000	004000	V	
MI037	AS360	57	12.64	1943358	+182926	L	3	39088	L	00150	SO	90061323	231514	015000	330 V	
COMAB	HD 186791	47	2.72	1943529	+102924	H	1	18311	L	1673	FU	90070713	130500	001000	341 G	E=164,G=69,B=28
ZELIE	HD 187076	49	3.82	1945093	+182434	H	1	18066	L	758	FU	90060914	143100	002000	5X3 G	E=1.5X,G=200,B=41
ZAMIE	HD 187076	49	3.82	1945093	+182434	H	1	18509	L			90080311	110200	000730	G	
ZAMIE	HD 187076	49	3.82	1945093	+182434	H	3	39388	L			90080311	111900	004500	G	
ZELIE	HD 187076	49	3.82	1945094	+182435	H	3	39043	L	762	FU	90060913	133900	004500	503 G	G=212,B=42
ZELIE	HD 187076	49	3.82	1945094	+182435	H	3	39044	L	762	FU	90060915	151400	002000	302 G	G=130,B=31
ZELIE	HD 187076	49	3.82	1945094	+182435	H	1	18067	L	762	FU	90060915	154700	000730	342 G	E=185,G=112,B=37
ZAMIE	HD 187076	49	3.82	1945094	+182435	H	1	18263	L	754	FU	90070211	115700	000730	443 G	E=192,G=148,B=43
ZAMIE	HD 187076	49	3.82	1945094	+182435	H	3	39172	L	759	FU	90070212	121400	004500	502 G	G=220,B=40
ZAMIE	HD 187076	49	3.82	1945094	+182435	H	1	18264	L	750	FU	90070213	131100	002000	4X3 G	E=2X,G=186,B=42
ZAMIE	HD 187076	49	3.8	1945094	+182435	H	3	39578	L	2305	FU	90090412	123400	004500	553 G	E=238,G=210,B=47
ZAMIE	HD 187076	49	3.8	1945094	+182435	H	1	18699	L	780	FU	90090413	133300	002000	5X3 G	E=2.5X,G=218,B=45
ZAMIE	HD 187076	49	3.8	1945094	+182435	H	1	18700	L	786	FU	90090414	143400	000730	452 G	E=230,G=143,B=40
ZAMIE	HD 187076	49	3.8	1945094	+182435	H	1	18874	L	765	FU	90092713	131100	000730	353 G	E=193,G=130,B=41
ZAMIE	HD 187076	49	3.8	1945094	+182435	H	3	39717	L	762	FU	90092713	132700	004500	503 G	G=210,B=41
ZAMIE	HD 187076	49	3.8	1945094	+182435	H	1	18875	L	766	FU	90092714	142000	002000	5X3 G	E=2X,G=230,B=41
MI180	CK VUL	55	21.00	1945350	+271111	D	9	02382	2	00000	BO	90101819	194000	004000	V	FOR SWP 39860
RIASS	HD 187399	26	7.01	1946416	+291634	H	3	39888	L	4890	FO	90102021	214600	008000	402 G	G=180,B=40
BOME	HD 187820	53	7.8	1949350	-112948	L	1	18871	L	2167	FO	90092707	073800	001200	502 G	G=246,B=35
HSMKB	HD 188001	13	6.2	1950078	+183231	H	3	39553	L	8910	FO	90083015	154700	000800	G	
HSMKB	HD 188001	13	6.2	1950078	+183231	H	1	18683	L	8988	FO	90083016	162600	000400	503 G	G=200,B=42
USSBS	HD 188001	13	6.3	1950079	+183232	H	3	39076	L	9411	FO	90061207	074000	002400	X04 G	G=3X,B=60
PHCAL	V1016CYG	57	10.6	1955199	+394139	L	3	39484	S	155	FO	90081807	071600	000200	30 G	E=118,B=20
PHCAL	V1016CYG	57	10.6	1955199	+394139	L	3	39484	L	155	FO	90081807	072300	000100	40 G	E=136,B=20
PHCAL	V1016CYG	57	10.6	1955199	+394139	L	3	39485	S	157	FO	90081807	075500	000300	40 G	E=121,B=20
PHCAL	V1016CYG	57	10.6	1955199	+394139	L	3	39485	L	156	FO	90081808	080500	000130	50 G	E=175,B=20
PHCAL	V1016CYG	57	10.6	1955199	+394139	L	3	39486	S		FO	90081808	085300	002230	X1 G	E=4X,B=22
PHCAL	V1016CYG	57	10.6	1955199	+394139	L	1	18609	S	157	FO	90081809	094300	000600	252 G	E=236,G=50,B=36
PHCAL	V1016CYG	57	10.6	1955199	+394139	L	1	18609	L	157	FO	90081809	095400	000300	3X2 G	E=1.5X,G=65,B=36
PHCAL	V1016CYG	57	10.6	1955199	+394139	L	1	18610	S	160	FO	90081810	105300	000500	2X3 G	E=1.5X,G=62,B=42
PHCAL	V1016CYG	57	10.6	1955199	+394139	L	1	18610	L	160	FO	90081811	110500	000200	353 G	E=219,G=65,B=42
PHCAL	RRIEL	57	11.18	2000200	-555204	L	3	39703	L	00139	FO	90092422	223644	000200	000 V	
OBLIH	HD 190429A	13	6.6	2001372	+355258	H	3	38981	L	6514	FO	90060314	144500	002500	543 G	E=160,G=212,B=47
OBLIH	HD 190429A	13	6.6	2001372	+355258	H	3	38986	L	6128	FO	90060319	190200	002500	544 G	E=180,G=220,B=60
LI086	HD190429A	13	07.11	2001373	+355259	H	3	38965	L	05170	FO	90060222	222515	002500	500 V	
OBLIH	HD 190429A	13	6.6	2001373	+355259	H	3	38958	L	6686	FO	90060215	154200	002500	543 G	E=167,G=210,B=50
LI086	HD190429A	13	07.07	2001373	+355259	H	3	38970	L	05393	FO	90060304	041150	002500	500 V	
OBLIH	HD 190429A	13	6.6	2001373	+355259	H	3	38973	L	6539	FO	90060307	072000	002500	542 G	E=154,G=210,B=40
LI086	HD190429A	13	07.08	2001373	+355259	H	3	38989	L	05303	FO	90060321	215955	002500	500 V	
OBLIH	HD 190429A	13	6.6	2001373	+355259	H	3	38978	L	6540	FO	90060312	120700	002500	543 G	E=161,G=208,B=42
LI086	HD190429A	13	07.09	2001373	+355259	H	3	38994	L	05284	FO	90060403	032557	002500	500 V	

PRO	Object	CL	MAG	R.A.	DEC	D C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
OBLIH	HD 190429A	13	6.6	2001373	+355259	H 3	38998	L	6513	FO	90060407	071800	002500	542 G	E=160,G=205,B=40
OBLIH	HD 190429A	13	6.6	2001373	+355259	H 3	39003	L	6440	FO	90060412	121700	002500	532 G	E=122,G=192,B=40
OBLIH	HD 190429A	13	6.6	2001373	+355259	H 3	39006	L	6380	FO	90060415	150600	002500	543 G	E=157,G=200,B=42
OBLIH	HD 190429A	13	6.6	2001373	+355259	H 3	39011	L	6043	FO	90060419	195000	002500	542 G	E=151,G=195,B=40
MI180	QQ VUL	59	15.00	2003320	+223119	L 3	39927	L	00000	BO	90102313	134838	009400	342 V	
MI180	QQ VUL	59	15.00	2003320	+223119	L 1	19052	L	00000	BO	90102315	152953	009400	452 V	
LQ006	PKS2005-48	87	14.15	2005465	-485843	L 1	18026	L	00039	SO	90060122	224252	006000	301 V	
LQ029	PKS2005-48	87	14.00	2005465	-485843	L 1	18046	L	00000	BO	90060622	221623	006000	301 V	42 FES CIS
MO029	FG SGE	41	09.73	2009430	+201054	L 1	18061	L	00503	FO	90060822	223238	011000	601 V	
MO029	FG SGE	41	09.89	2009430	+201054	L 1	18248	L	00438	FO	90062921	215419	011500	502 V	
MO029	FG SGE	41	09.90	2009430	+201054	L 1	18392	L	00434	FO	90071821	213906	011000	402 V	
MO029	FG SGE	41	09.69	2009430	+201054	L 1	18528	L	00524	FO	90080519	193517	011000	501 V	
MO029	FG SGE	41	09.59	2009430	+201054	L 1	18649	L	00572	FO	90082315	154203	011000	501 V	
MO029	FG SGE	41	09.46	2009430	+201054	L 1	18798	L	00642	FO	90091615	154710	011000	601 V	
MO029	FG SGE	41	09.40	2009430	+201054	L 1	18975	L	00677	FO	90100918	184840	011000	562 V	
LGMIS	HD 192078	45	7.60	2009490	+384346	L 3	39118	L			90062018	180200	004500	G	
LGMIS	HD 192078	45	7.60	2009490	+384346	H 1	18153	L			90062018	185500	004500	G	
LGMIS	HD 192078	45	7.60	2009490	+384346	H 1	18154	L			90062020	202000	002500	G	
LGMIS	HD 192078	45	7.60	2009491	+384347	L 1	18127	L	2627	FO	90061817	175200	000500	302 G	G=110,B=35
LGMIS	HD 192078	45	7.60	2009491	+384347	L 3	39110	L	2609	FO	90061818	180400	016500	X02 G	G=3X,B=40
WRMFC	HD 192103	10	8.5	2010008	+360249	L 1	18174	L	1938	FO	90062313	133800	000020	352 G	E=205,G=119,B=32
ZAMIE	HD 192577	47	3.73	2012033	+463520	H 3	39173	L	663	FU	90070214	141700	001200	502 G	G=226,B=40
ZAMIE	HD 192577	47	3.73	2012033	+463520	H 1	18265	L	666	FU	90070214	145100	000500	502 G	G=211,B=40
ZAMIE	HD 192577	47	3.7	2012033	+463520	H 1	18873	L	650	FU	90092711	113600	001000	XX3 G	E=2X,G=2X,B=50
ZAMIE	HD 192577	47	3.7	2012033	+463520	H 3	39716	L	645	FU	90092712	120300	001200	503 G	G=230,B=42
ZBLIE	HD 192577	47	3.73	20123.	+463520	H 3	39045	L	683	FU	90060916	163600	000800	502 G	G=190,B=36
ZBLIE	HD 192577	47	3.73	20123.	+463520	H 1	18068	L	676	FU	90060917	171400	000500	553 G	E=195,G=194,B=41
ZBLIE	HD 192577	47	3.73	20123.	+463520	H 3	39046	L	687	FU	90060917	174900	001200	X03 G	G=1.5X,B=43
ZBLIE	HD 192577	47	3.73	20123.	+463520	H 1	18069	L	703	FU	90060918	182700	001000	XX3 G	E=1.9X,G=1.9X,B=50
MA064	HD192641	10	08.36	2012394	+363028	L 1	18083	L	01718	FO	90061022	222204	000040	550 V	
MA064	HD192641	10	08.36	2012394	+363028	H 3	39060	L	01718	FO	90061022	223038	020000	451 V	
MA064	HD192641	10	08.17	2012394	+363028	H 3	39312	L	02034	FO	90072722	223744	020000	501 V	
MA064	HD192641	10	08.17	2012394	+363028	L 1	18456	L	02028	FO	90072723	232753	000040	500 V	
OBMIS	HD 193237	23	4.8	2015565	+375236	H 1	18431	L	24905	FO	90072311	113100	000300	402 G	G=181,B=40
OBMIS	HD 193237	23	4.8	2015565	+375236	H 3	39290	L	25046	FO	90072311	114000	002000	502 G	G=212,B=36
WRMFC	HD 192103	10	8.5	2018008	+360249	L 3	39138	L	1920	FO	90062313	134200	000030	350 G	E=187,G=89,B=19
MA064	HD193793	10	07.31	2018467	+434143	L 1	18084	L	04348	FO	90061102	024627	000022	551 V	
MA064	HD193793	10	07.27	2018467	+434143	H 3	39061	L	04526	FO	90061102	025251	011700	450 V	
MA064	HD193793	10	07.13	2018467	+434143	H 3	39311	L	05080	FO	90072719	194247	012000	501 V	
MA064	HD193793	10	07.12	2018467	+434143	L 1	18455	L	05136	FO	90072721	214820	000022	500 V	
MI037	HE 2-467	57	13.87	2033426	+200102	L 3	39089	L	00050	SO	90061402	025020	011700	351 V	
MI037	HE2 -467	57	13.87	2033426	+200102	E 9	02332	2	00050	SO	90061402	023000	016000	V	
HOMU	V778 CYG	64	10.0	2035040	+595456	L 1	18444	L	362	FO	90072604	042700	018000	G	
USSBS	HD 196524	41	3.78	2035143	+142524	H 3	39075	L	748	FU	90061205	052700	006300	5X2 G	E=1.5X,G=230,B=40
PHCAL	HD 196519	22	5.1	2037234	-665621	H 1	18149	L			90062010	103600	000440	G	
PHCAL	HD 196519	22	5.1	2037234	-665621	H 3	39116	L			90062011	111900	001430	G	
PHCAL	HD 197637	21	6.8	2038018	+791515	L 1	18463	L	5653	FO	90072907	074400	000007	502 G	G=200,B=32
PHCAL	HD 197637	21	6.8	2038018	+791515	H 3	39320	L	5665	FO	90072907	075200	001300	502 G	G=200,B=38
PHCAL	HD 197637	21	6.8	2038018	+791515	H 1	18464	L	5736	FO	90072908	083400	000800	402 G	G=190,B=40
PHCAL	HD 197637	21	6.8	2038018	+791515	L 3	39321	L	5747	FO	90072909	090400	000008	500 G	G=179,B=18

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	EES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
AGLTC	MRK 509	84	13.0	2041260	-105418	L	1	19036	L	74	SO	90101922	224600	003500	452	G E=219,C=157,B=40
AGLTC	MARK 509	84	13.0	2041262	-105418	L	3	39638	L	72	SO	90091500	000600	004000	341	G E=165,C=84,B=25
AGLTC	MARK 509	84	13.0	2041262	-105418	L	1	18785	L	70	SO	90091500	005500	003000	452	G E=209,C=160,B=37
AGLTC	MARK 509	84	13.0	2041262	-105418	L	3	39639	L	67	SO	90091501	013400	004000	351	G E=188,C=86,B=23
AGLTC	MARK 509	84	13.0	2041262	-105418	L	1	18786	L	71	SO	90091502	022000	003000	452	G E=200,C=151,B=37
AGLTC	MRK 509	84	13.0	2041262	-105418	L	3	39723	L	70	SO	90092900	001100	004500	351	G E=178,C=79,B=22
AGLTC	MRK 509	84	13.0	2041262	-105418	L	1	18884	L	71	SO	90092901	010600	003000	353	G E=201,C=140,B=41
AGLTC	MRK 509	84	13.0	2041262	-105410	L	3	39724	L	72	SO	90092901	014400	004500	351	G E=190,C=75,B=25
AGLTC	MRK 509	84	13.0	2041262	-105418	L	1	18885	L	73	SO	90092902	023700	001500	341	G E=126,C=91,B=26
AGLTC	MRK 509	84	13.0	2041262	-105418	L	3	39777	L	69	SO	90100522	221800	004500	350	G E=183,C=50,B=20
AGLTC	MRK 509	84	13.0	2041262	-105418	L	1	18946	L	68	SO	90100523	231200	003000	452	G E=211,C=155,B=40
AGLTC	MRK 509	84	13.0	2041262	-105418	L	3	39778	L	69	SO	90100523	235800	005000	350	G E=216,C=60,B=20
AGLTC	MRK 509	84	13.0	2041262	-105418	L	3	39817	L	69	SO	90101221	213800	004500	351	G E=201,C=90,B=23
AGLTC	MRK 509	84	13.0	2041262	-105418	L	1	18995	L	70	SO	90101222	223400	003500	453	G E=207,C=150,B=41
AGLTC	MRK 509	84	13.0	2041262	-105418	L	3	39818	L	69	SO	90101223	232100	004500	351	G E=192,C=86,B=22
AGLTC	MRK 509	84	13.0	2041262	-105418	L	1	18996	L	73	SO	90101300	001300	003700	452	G E=211,C=147,B=39
AGLTC	MRK 509	84	13.0	2041262	-105418	L	3	39869	L	74	SO	90101921	215200	004500	350	G E=178,C=69,B=20
AGLTC	MRK 509	84	13.0	2041262	-105418	L	3	39870	L	72	SO	90101923	233200	005000	351	G E=195,C=82,B=23
AGLTC	MRK 509	84	13.0	2041262	-105418	L	1	19037	L	72	SO	90102000	002700	003200	452	G E=207,C=144,B=38
AGLTC	MRK 509	84	13.0	2041262	-105418	L	3	39958	L	78	SO	90102621	214100	004500	341	G E=166,C=75,B=24
AGLTC	MRK 509	84	13.0	2041262	-105418	L	1	19067	L	77	SO	90102622	223100	003500	352	G E=221,C=120,B=37
AGLTC	MRK 509	84	13.0	2041262	-105418	L	3	39959	L	78	SO	90102623	231100	006000	351	G E=214,C=95,B=23
AGLTC	MRK 509	84	13.0	2041262	-105418	L	1	19068	L	77	SO	90102700	001600	003500	451	G E=211,C=140,B=28
MQ180	MRN509	84	13.40	2041263	-105445	L	3	39928	L	00071	SO	90102318	180520	003000	241	V
RTASS	MRK 509	84	13.0	2041263	-105418	L	3	39925	L	76	SO	90102306	061800	003000	340	G E=120,C=53,B=18
MQ180	MRN 509	84	13.40	2041263	-105445	L	1	19053	L	00071	SO	90102318	184401	003000	452	V
RTASS	MRK 509	84	13.0	2041263	-105418	L	1	19048	L	77	SO	90102306	065900	003000	353	G E=209,C=140,B=45
MQ180	MRN 509	84	13.40	2041263	-105445	L	3	39929	L	00071	SO	90102319	192302	008000	351	V 2X40MIN, 2 RPS
RTASS	MRK 509	84	13.0	2041263	-105418	L	3	39926	L	78	SO	90102307	073700	000000	344	G E=203,C=110,B=60
RTASS	MRK 509	84	13.0	2041263	-105418	L	1	19049	L	82	SO	90102308	083000	002000	344	G E=172,C=125,B=60
DAMGB	2046+396	37	14.4	2046159	+394030	L	3	39026	S		BO	90060711	112700	005000	500	G C=200,B=20
DAMGB	2046+396	37	14.4	2046159	+394030	L	3	39026	S		BO	90060711	112700	005000	500	G C=200,B=20
DAMGB	2046+396	37	14.4	2046159	+394030	L	3	39026	L		BO	90060712	122300	002000	500	G C=229,B=18
DAMGB	2046+396	37	14.4	2046159	+394030	L	1	18056	L		BO	90060811	113600	004000	502	G C=215,B=38
DAMGB	2046+396	37	14.4	2046159	+394030	L	3	39035	S		BO	90060812	122000	003000	400	G C=130,B=18
SNWB	CYGLOOPN	75		2049185	+321305	L	3	39233	L		BO	90071703	035500	041500	03	G B=46
SNWB	SKY BKGD	07		2049185	+321305	L	1	18383	L			90071704	041900	036000	06	G B=72
BOME	HD 198726	53	5.8	2049208	+280344	L	1	18878	L	13370	FO	90092804	041600	000110	X02	G C=1.5X,B=35
BOME	HD 198726	53	5.8	2049208	+280344	L	3	39720	L	13324	FO	90092804	042400	004000	X00	G C=2X,B=18
BOME	HD 198726	53	5.8	2049208	+280344	L	1	18880	L	14663	FO	90092806	063300	000036	402	G C=179,B=32
SNWB	CYGLPN2	75		2051596	+315946	L	3	39245	L			90071804	044200	036800		G
SNWB	CYGLPN2	75		2052040	+315919	L	1	18387				90071804	044400	033800		G
SNWB	CYGLPN2	75		2052043	+315919	L	1	18387	L			90071804	044400	033800	04	G B=56
MA129	PK80-61	70	12.63	2100198	+362952	L	3	40000	L	00150	SO	90103013	134426	004500	110	V
MA129	PK80-61	70	12.63	2100198	+362952	L	1	19088	L	00150	SO	90103014	143451	006000	212	V
PNMP	PN6-41.1	70		2102445	-372039	L	3	39559	L		BO	90090101	012300	020000	452	G E=210,C=140,B=32
PNMP	PN6-41.1	70		2102445	-372039	L	3	39566	L		BO	90090200	000600	024000	402	G C=165,B=38
PHCAL	HD 201908	22	5.9	2106320	+775527	H	3	39322	L	13273	FO	90072909	095100	001600	502	G C=200,B=38
PHCAL	HD 201908	22	5.9	2106320	+775527	H	1	18465	L	13049	FO	90072910	102400	000800	403	G C=190,B=42
PHCAL	HD 201908	22	5.9	2106320	+775527	L	3	39424	L	12085	FO	90080814	140000	000013	500	G C=200,B=18

PRO	Object	CL	MAG	R.A.	DEC	D C	Image	A	EES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
PHOAL	HD 201908	22	5.92	2106320	+775527	H 3	39433	L	12129	FO	90081002	020300	001600	502	G G=210,B=40
PHOAL	HD 201908	22	5.92	2106320	+775527	L 1	18549	L	12274	FO	90081002	024700	000007	502	G G=247,B=32
PHOAL	2111+498	37	13.1	2111031	+495353	L 1	18602	L	91	SO	90081701	014900	001500	X02	G G=1.5X,B=35
PHOAL	2111+498	37	13.1	2111031	+495353	L 1	18603	L	91	SO	90081702	023700	003000	X02	G G=2.5X,B=38
PHOAL	2111+498	37	13.1	2111031	+495353	L 1	18604	L	93	SO	90081705	055600	001200	402	G G=182,B=32
MC180	HD203387	45	04.41	2119280	-170255	H 1	19073	L	00500	FU	90102719	193111	003000	452	V TWO SEGMENTS
MC180	HD203387	45	03.87	2119280	-170255	L 3	39974	L	00812	FU	90102720	201600	001500	300	V
OELIH	HD 204172	23	05.9	2123442	+362701	H 3	38979	L	12776	FO	90060313	131100	000800	X53	G E=223,G=1.5X,B=43
OELIH	HD 204172	23	5.9	2123442	+362701	H 3	38982	L	12461	FO	90060315	154400	000800	X53	G E=230,G=1.5X,B=48
OELIH	HD 204172	23	5.9	2123442	+362701	H 3	38984	L	11703	FO	90060317	172300	000700	X54	G E=210,G=1.5X,B=51
OELIH	HD 204172	23	5.9	2123442	+362701	H 3	38987	L	12006	FO	90060320	201200	000800	X53	G E=231,G=1.5X,B=47
LI086	HD204172	23	06.29	2123443	+362702	H 3	38966	L	10444	FO	90060223	234139	000800	700	V
OELIH	HD 204172	23	5.9	2123443	+362702	H 3	38957	L	12997	FO	90060214	144600	000800	X53	G E=219,G=1.5X,B=45
LI086	HD204172	23	06.27	2123443	+362702	H 3	38968	L	10551	FO	90060302	020445	000800	700	V
OELIH	HD 204172	23	5.9	2123443	+362702	H 3	38960	L	12498	FO	90060217	173700	000800	X54	G E=236,G=1.5X,B=52
LI086	HD204172	23	06.24	2123443	+362702	H 3	38990	L	10874	FO	90060323	231651	000800	700	V
OELIH	HD 204172	23	5.9	2123443	+362702	H 3	38963	L	13082	FO	90060220	202700	000800	X53	G E=230,G=1.5X,B=45
LI086	HD204172	23	06.34	2123443	+362702	H 3	38992	L	10040	FO	90060401	012034	000800	700	V
OELIH	HD 204172	23	5.9	2123443	+362702	H 3	38971	L	12535	FO	90060305	053200	000800	X53	G E=226,G=1.5X,B=43
LI086	HD 204172	23	06.32	2123443	+362702	H 3	38995	L	10129	FO	90060404	043907	000800	700	V
OELIH	HD 204172	23	5.9	2123443	+362702	H 3	38974	L	12237	FO	90060308	082800	000800	X53	G E=225,G=1.5X,B=44
OELIH	HD 204172	23	5.9	2123443	+362702	H 3	38976	L	12164	FO	90060310	101400	000800	X53	G E=230,G=1.5X,B=44
OELIH	HD 204172	23	5.9	2123443	+362702	H 3	38996	L	12328	FO	90060405	053300	000800	X53	G E=230,G=1.5X,B=45
OELIH	HD 204172	23	5.9	2123443	+362702	H 3	38999	L	12375	FO	90060408	082800	000800	X53	G E=232,G=1.5X,B=43
OELIH	HD 204172	23	5.9	2123443	+362702	H 3	39001	L	12196	FO	90060410	101400	000800	X53	G E=234,G=1.5X,B=42
OELIH	HD 204172	23	5.9	2123443	+362702	H 3	39004	L	12598	FO	90060413	132200	000800	542	G E=154,G=192,B=40
OELIH	HD 204172	23	5.9	2123443	+362702	H 3	39007	L	12359	FO	90060416	161200	000800	X43	G E=162,G=1.5X,B=46
OELIH	HD 204172	23	5.9	2123443	+362702	H 3	39009	L	11969	FO	90060417	175400	000800	X43	G E=193,G=1.5X,B=50
IGMIS	HD 206121	45	7.0	2136408	+493410	L 3	39095	L	3952	FO	90061611	111800	025500	303	G G=83,B=46
IGMIS	HD 206121	45	7.0	2136408	+493410	L 1	18111	L	3905	FO	90061612	120800	000500	X02	G G=1.5X,B=32
IMLIS	HD 206267	12	5.6	2137244	+571545	H 3	39772	L	13660	FO	90100512	121500	001600	502	G G=220,B=40
MI066	S190	57	10.85	2139130	+023010	L 3	39690	L	00186	FO	90092220	201940	001500	450	V
MI066	S190	57	10.83	2139130	+023010	L 1	18852	L	00189	FO	90092220	205728	002000	571	V
MI066	S190	57	10.94	2139130	+023010	H 3	39691	L	00172	FO	90092221	214502	006500	360	V
AGMIW	V460 CYG	51	5.6	2139543	+351653	L 1	18865	L	13363	FO	90092609	090700	002000	204	G G=74,B=55
AGMIW	V460 CYG	51	5.6	2139543	+351653	L 1	18866	L	13719	FO	90092610	100700	004200	309	G G=130,B=105
AGMIW	V460 CYG	51	6.04	2139543	+351653	L 1	18987	L	12390	FO	90101205	054100	010000	334	G E=116,G=84,B=53
AGMIW	V460 CYG	51	5.6	2139543	+351653	L 1	19050	L	12401	FO	90102309	094900	010000	334	G E=110,G=83,B=60
YBMP	HD 206821	39	8.2	2140300	+692748	L 1	18622	L	2385	FO	90082007	075100	000500	X02	G G=2X,B=37
YBMP	HD 206821	39	8.2	2140300	+692748	L 3	39497	L	2338	FO	90082008	080600	001000	X00	G G=2X,B=17
YBMP	HD 206821	39	8.2	2140300	+692748	L 1	18623	L	2250	FO	90082009	091200	000230	X02	G G=1.5X,B=32
YBMP	HD 206821	39	8.2	2140300	+692748	L 3	39498	L	2192	FO	90082009	092400	000500	500	G G=230,B=14
YBMP	HD 206821	39	8.2	2140300	+692748	L 1	18624	L	1418	FO	90082010	103000	000230	502	G G=220,B=34
YBMP	HD 206821	39	8.2	2140300	+692748	L 3	39499	L	1313	FO	90082010	104100	000500	400	G G=140,B=18
YBMP	HD 206821	39	8.2	2140300	+692748	L 1	18625	L	896	FO	90082012	120600	000500	X04	G G=1.5X,B=60
YBMP	HD 206821	39	8.2	2140300	+692748	L 3	39500	L	1072	FO	90082012	122100	001000	X02	G G=1.5X,B=32
YBMP	HD 206821	39	8.2	2140300	+692748	L 1	18626	L	1877	FO	90082013	132500	000200	X02	G G=1.5X,B=40
YBMP	HD 206821	39	8.2	2140300	+692748	L 3	39501	L	1953	FO	90082013	133200	000300	500	G G=173,B=18
YBMP	HD 206821	39	8.2	2140300	+692748	L 1	18641	L	2204	FO	90082210	105600	000100	502	G G=197,B=31
YBMP	HD 206821	39	8.2	2140300	+692748	L 3	39512	L	2212	FO	90082211	110200	000200	00	G C130,B=16

PRO	Object	CL	MAG	R.A.	DEC	D C	Image	A	FES	MD	Obs.date	Exptim	nnnnsstt	ECC	Comment
YBMMP	HD 206821	39	8.2	2140300	+692748	H 1	18642	L	2168	FO	90082211	114900	006000	X09 G	G=1.5X,B=165
YBMMP	HD 206821	39	8.2	2140300	+692748	H 1	18642	L	2174	FO	90082211	115000	001000	X09 G	G=1.5X,B=165
YBMMP	HD 206821	39	8.2	2140300	+692748	L 3	39513	L	2175	FO	90082212	124600	000300	500 G	G=180,B=19
YBMMP	HD 206821	39	8.2	2140300	+692748	H 3	39514	L	2154	FO	90082213	134100	003000	301 G	G=67,B=27
LI158	SS CYG	54	12.44	2140445	+432121	L 1	18071	L	00180	SO	90060922	223643	001300	361 V	
DNLRP	SS CYG	54	12.0	2140445	+432123	L 3	39027	L	272	SO	90060713	133000	004000	3X1 G	E=1.5X,G=109,B=21
LI158	SS CYG	54	12.41	2140445	+432121	L 3	39048	L	00185	SO	90060923	230345	003500	360 V	
DNLRP	SS CYG	54	12.0	2140445	+432123	L 1	18050	L	261	SO	90060714	141900	001400	4X2 G	E=1.5X,G=141,B=32
LI158	SS CYG	54	12.19	2140445	+432121	L 1	18072	L	00225	SO	90060923	234911	000700	351 V	
DNLRP	SS CYG	54	12.0	2140445	+432123	L 3	39028	L	270	SO	90060714	145600	001800	350 G	E=186,G=67,B=20
LI158	SS CYG	54	12.32	2140445	+432121	L 3	39049	L	00201	SO	90061000	003624	002000	350 V	
DNMRP	SS CYG	54	10.9	2140445	+432123	L 3	39827	L	716	SO	90101405	052400	001000	X00 G	G=3X,B=18
LI158	SS CYG	54	12.36	2140445	+432121	L 1	18073	L	00194	SO	90061001	011835	001200	361 V	
DNMRP	SS CYG	54	10.9	2140445	+432123	L 1	19006	L	722	SO	90101406	061300	000700	X02 G	G=3X,B=35
LI158	SS CYG	54	12.39	2140445	+432121	L 3	39050	L	00189	SO	90061001	015315	003000	350 V	
DNMRP	SS CYG	54	10.9	2140445	+432123	L 3	39828	L	717	SO	90101406	065000	000330	500 G	G=193,B=18
LI158	SS CYG	54	12.36	2140445	+432121	L 1	18074	L	00194	SO	90061002	023454	001100	351 V	
DNMRP	SS CYG	54	10.9	2140445	+432123	L 1	19007	L	730	SO	90101407	073400	000200	402 G	G=154,B=35
LI158	SS CYG	54	12.20	2140445	+432121	L 3	39051	L	00223	SO	90061003	031108	001700	350 V	
DNMRP	SS CYG	54	12.0	2140445	+432123	L 3	39840	L	394	SO	90101609	095200	001600	451 G	E=252,G=171,B=30
LI158	SS CYG	54	12.36	2140445	+432121	L 1	18075	L	00193	SO	90061003	035402	001100	351 V	
DNMRP	SS CYG	54	12.0	2140445	+432123	L 1	19021	L	376	SO	90101610	103500	000500	302 G	G=130,B=32
LI158	SS CYG	54	12.33	2140445	+432121	L 3	39052	L	00193	SO	90061004	043119	001900	350 V	
DNMRP	SS CYG	54	12.0	2140445	+432123	L 3	39841	L	357	SO	90101611	112300	002230	5X4 G	E=2X,G=208,B=51
DNMRP	SS CYG	54	12.0	2140445	+432123	L 1	19022	L	373	SO	90101612	120600	001200	5X2 G	E=2X,G=238,B=32
DNMRP	SS CYG	54	12.0	2140445	+432123	L 3	39960	L	201	SO	90102701	014300	002000	340 G	E=155,G=70,B=18
DNMRP	SS CYG	54	12.0	2140445	+432123	L 1	19069	L	235	SO	90102702	021700	000730	352 G	E=193,G=90,B=34
DNMRP	SS CYG	54	12.0	2140445	+432123	L 3	39961	L	185	SO	90102702	025600	006000	5X0 G	E=2.5X,G=175,B=18
DNMRP	SS CYG	54	12.0	2140445	+432123	L 1	19070	L	176	SO	90102704	040900	001700	352 G	E=239,G=120,B=35
WDMAH	SS CYG	54	12.3	2140449	+432123	L 1	18077	L	226	SO	90061011	111300	001500	3X3 G	E=1.5X,G=115,B=41
WDMAH	SS CYG	54	12.3	2140449	+432123	L 3	39054	S	212	SO	90061011	114000	007000	352 G	E=209,G=100,B=33
WDMAH	SS CYG	54	12.3	2140449	+432123	L 3	39908	S	206	SO	90102122	224400	012000	4X3 G	E=2X,G=145,B=42
DNLRP	SS CYG	54	12.0	2140450	+432122	L 1	18051	L	276	SO	90060716	160200	000500	342 G	E=163,G=86,B=34
DNLRP	SS CYG	54	12.0	2140450	+432122	L 3	39029	L	285	SO	90060716	161500	004500	3X1 G	E=2X,G=108,B=25
IMMAW	NGC 7129	73		2141520	+655238	L 1	18173	L		BO	90062305	054800	042000	306 G	G=139,B=80
IMMAW	NGC 7129	73		2141521	+655239	L 3	39137	L		BO	90062305	055600	038500	304 G	G=80,B=52
IBMBB	HD 207739	39	8.6	2147597	+434353	H 1	18287	L			90070413	133900	007000	G	
IBMBB	HD 207739	39	8.6	2147598	+434354	L 3	39176	L	1068	FO	90070411	112900	001400	400 G	G=134,B=17
IBMBB	HD 207739	39	8.6	2147598	434354	H 1	18287	L	1049	FO	90070412	121200	006000	344 G	E=203,G=155,B=57
IBMBB	HD 207739	39	8.6	2147598	+434354	L 3	39177	L	1075	FO	90070413	132000	001400	400 G	G=141,B=15
IBMBB	HD 207739	39	8.6	2147598	+434354	H 1	18388	L			90071811	113100	005000	G	
IBMBB	HD 207739	39	8.6	2147598	+434354	L 3	39246	L			90071812	122900	001400	G	
IBMBB	HD 207739	39	8.6	2147598	+434354	H 1	18388	L			90071812	125100	007000	G	
IBMBB	HD 207739	39	8.6	2147598	+434354	L 3	39247	L			90071814	140900	001400	G	
IBMBB	HD 207739	39	8.6	2147598	+434354	L 1	18389	L			90071814	144500	000420	G	
IBMBB	HD 207739	39	8.6	2147598	+434354	L 3	39473	L	1134	FO	90081706	064300	001400	500 G	G=231,B=15
IBMBB	HD 207739	39	8.6	2147598	+434354	H 1	18605	L	1122	FO	90081707	072500	013000	444 G	E=200,G=160,B=60
IBMBB	HD 207739	39	8.6	2147598	+434354	L 3	39474	L	1097	FO	90081709	090100	001400	500 G	G=226,B=18
IBMBB	HD 207739	39	8.6	2147598	+434354	L 1	18685	L	1017	FO	90083109	093800	000420	5X2 G	E=1.5X,G=200,B=35
IBMBB	HD 207739	39	8.6	2147598	+434354	L 3	39556	L	1012	FO	90083109	095100	001400	440 G	E=168,G=161,B=19

PRO	Object	CL	MAG	R.A.	DEC	D C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
IBMBB	HD 207739	39	8.6	2147598	+434354	H 1	18686	L	1003	FO	90083110	102900	009000	339 G	E=211,C=195,B=122
IBMBB	HD 207739	39	8.6	2147598	+434354	L 3	39557	L	1509	FO	90083112	120800	001700	552 G	E=204,C=186,B=35
IBMBB	HD 207739	39	8.6	2147598	+434354	L 1	18765	L	1047	FO	90091207	072700	000420	502 G	C=210,B=35
IBMBB	HD 207739	39	8.6	2147598	+434354	L 3	39616	L	1049	FO	90091207	075100	001400	440 G	E=147,C=140,B=18
IBMBB	HD 207739	39	8.6	2147598	+434354	H 1	18766	L	1062	FO	90091208	083100	012000	348 G	E=216,C=175,B=100
IBMBB	HD 207739	39	8.6	2147598	+434354	L 3	39617	L	1056	FO	90091210	100700	001400	440 G	E=134,C=138,B=18
IBMBB	HD 207739	39	8.6	2147598	+434354	H 1	18968	L	1208	FO	90100805	055400	012000	349 G	E=240,C=180,B=105
IBMBB	HD 207739	39	8.6	2147598	+434354	L 3	39791	L	1196	FO	90100806	064200	001400	440 G	E=127,C=139,B=18
IBMBB	HD 207739	39	8.6	2147598	+434354	L 3	39792	L	1231	FO	90100808	083200	001400	441 G	E=145,C=140,B=22
IBMBB	HD 207739	39	8.6	2147598	+434354	L 1	18969	L	1252	FO	90100809	090700	000420	453 G	E=232,C=190,B=42
IBMBB	HD 207739	39	8.6	2147598	+434354	L 3	39998	L	1052	FO	90103010	101400	001400	440 G	E=155,C=148,B=18
IBMBB	HD 207739	39	8.6	2147598	+434354	H 1	19087	L	1060	FO	90103010	103900	010000	343 G	E=153,C=130,B=45
IBMBB	HD 207739	39	8.6	2147598	+434354	L 3	39999	L	1048	FO	90103011	113300	001400	440 G	E=140,C=149,B=18
PHCAL	BD+28 4211	16	10.83	2148559	+283734	L 1	18192	L	00189	FO	90062521	214255	000050	502 V	
PHCAL	BD+28 4211	16	10.83	2148559	+283734	L 1	18193	L	00189	FO	90062522	221614	000050	502 V	
PHCAL	BD+28 4211	16	10.71	2148559	+283734	L 1	18194	L	00211	FO	90062522	225845	000230	702 V	
PHCAL	BD+28 4211	16	10.85	2148559	+283734	L 1	18195	L	00186	FO	90062523	233626	000230	702 V	
PHCAL	BD+28 4211	16	10.83	2148559	+283734	L 3	39151	L	00189	FO	90062600	001802	000026	500 V	
PHCAL	BD+28 4211	16	10.83	2148559	+283734	L 3	39152	L	00189	FO	90062600	004514	000026	500 V	
PHCAL	BD+28 4211	16	10.86	2148559	+283734	L 1	18201	L	00185	FO	90062621	215212	000050	502 V	
PHCAL	BD+28 4211	16	10.84	2148559	+283734	L 1	18202	L	00188	FO	90062622	222702	000050	502 V	
PHCAL	BD+28 4211	16	10.85	2148559	+283734	L 1	18203	L	00186	FO	90062622	225948	000230	703 V	
PHCAL	BD+28 4211	16	10.83	2148559	+283734	L 1	18204	L	00190	FO	90062623	233444	000230	703 V	
PHCAL	BD+28 4211	16	10.82	2148559	+283734	L 3	39157	L	00191	FO	90062623	235800	000026	500 V	
PHCAL	BD+28 4211	16	10.81	2148559	+283734	L 3	39158	L	00193	FO	90062700	002513	000026	500 V	
PHCAL	BD284211	16	10.83	2148559	+283733	L 1	18222	L	00189	FO	90062721	214727	000050	501 V	
PHCAL	BD+284211	16	10.84	2148559	+283733	L 1	18223	L	00187	FO	90062722	222411	000050	500 V	
PHCAL	BD+284211	16	10.84	2148559	+283733	L 1	18224	L	00187	FO	90062723	230445	000230	700 V	
PHCAL	BD+28 4211	16	10.83	2148559	+283733	L 1	18225	L	00189	FO	90062723	235203	000230	700 V	
PHCAL	BD+284211	16	10.84	2148559	+283733	L 3	39159	L	00187	FO	90062800	003220	000026	500 V	
PHCAL	BD+284211	16	10.80	2148560	+283734	L 1	18020	L	00194	FO	90060104	043513	000050	500 V	
PHCAL	BD+284211	16	10.65	2148560	+283734	H 3	38948	L	00222	FO	90060104	044218	004500	500 V	
PHCAL	BD+284211	16	10.76	2148560	+283734	H 1	18021	L	00202	FO	90060105	053932	001800	301 V	
PHCAL	BD+28 4211	16	10.83	2148560	+283734	L 1	18120	L	00190	FO	90061721	214404	000230	700 V	
PHCAL	BD+28 4211	16	10.80	2148560	+283734	H 3	39103	L	00195	FO	90061721	215427	004500	500 V	
PHCAL	BD+28 4211	16	10.81	2148560	+283734	H 1	18121	L	00192	FO	90061722	224655	001800	300 V	
PHCAL	BD+28 4211	16	10.83	2148560	+283734	L 1	18122	L	00190	FO	90061723	235824	000050	400 V	PREAD
PHCAL	BD+28 4211	16	10.77	2148560	+283734	L 3	39104	L	00199	FO	90061800	000318	000026	400 V	PREAD
PHCAL	BD+284211	16	10.86	2148560	+283735	H 2	18473	L	00184	FO	90070123	232638	009000	502 V	
PHCAL	BD +284211	16	10.93	2148560	+283735	H 2	18483	L	00173	FO	90070320	201936	009000	402 V	
PHCAL	BD+284211	16	10.81	2148560	+283734	L 3	39238	L	00192	FO	90071722	224731	000026	500 V	
PHCAL	BD+284211	16	10.85	2148560	+283734	L 3	39239	L	00186	FO	90071723	232228	000026	500 V	
PHCAL	BD+284211	16	10.85	2148560	+283734	L 3	39240	L	00186	FO	90071723	235406	000026	500 V	
PHCAL	BD+284211	16	10.86	2148560	+283734	L 3	39241	L	00185	FO	90071800	002502	000026	500 V	
PHCAL	BD+284211	16	10.87	2148560	+283734	L 3	39242	L	00182	FO	90071800	005346	000026	500 V	
PHCAL	BD+284211	16	10.84	2148560	+283734	L 3	39243	L	00188	FO	90071801	012232	000026	500 V	
PHCAL	BD+284211	16	10.49	2148560	+283734	L 3	39372	L	00257	FO	90080122	224931	000026	500 V	
PHCAL	BD+284211	16	10.55	2148560	+283734	L 3	39373	L	00244	FO	90080123	231749	000026	500 V	
PHCAL	BD+284211	16	10.60	2148560	+283734	L 3	39374	L	00233	FO	90080123	234509	000026	500 V	
PHCAL	BD+284211	16	10.63	2148560	+283734	L 3	39375	L	00227	FO	90080200	001228	000026	500 V	PREAD

PRO	Object	CL	MAG	R.A.	DEC	D C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
PHOAL	BD+284211	16	10.61	2148560	+283734	L	3 39379	L	00231	FO	90080215	150005	000026	500	V
PHOAL	BD+284211	16	10.47	2148560	+283734	L	3 39380	L	00261	FO	90080215	153219	000026	500	V
PHOAL	BD+284211	16	10.68	2148560	+283734	L	3 39381	L	00217	FO	90080216	161151	000026	500	V
PHOAL	BD+248211	16	10.68	2148560	+283734	L	3 39382	L	00216	FO	90080216	164206	000026	500	V
PHOAL	BD+284211	16	10.47	2148560	+283734	L	3 39383	L	00262	FO	90080217	171345	000026	500	V
PHOAL	BD+284211	16	10.59	2148560	+283734	L	3 39384	L	00234	FO	90080217	174901	000026	500	V
PHOAL	BD+284211	16	10.66	2148560	+283734	L	1 18498	L	00221	FO	90080218	183127	000050	500	V
PHOAL	BD+284211	16	10.59	2148560	+283734	L	1 18499	L	00234	FO	90080219	191118	000050	500	V
PHOAL	BD+284211	16	10.47	2148560	+283734	L	1 18500	L	00260	FO	90080219	194716	000050	500	V
PHOAL	BD+284211	16	10.65	2148560	+283734	L	1 18501	L	00223	FO	90080220	202256	000050	500	V
PHOAL	BD+284211	16	10.60	2148560	+283734	L	1 18502	L	00232	FO	90080220	205746	000050	500	V
PHOAL	BD+284211	16	10.77	2148560	+283734	L	1 18503	L	00200	FO	90080221	212916	000050	500	V PREAD
PHOAL	BD+284211	16	10.66	2148560	+283734	L	1 18555	L	00220	FO	90081019	193125	000050	601	V
PHOAL	BD+284211	16	10.65	2148560	+283734	L	1 18556	L	00222	FO	90081020	201127	000050	601	V
PHOAL	BD+284211	16	10.52	2148560	+283734	L	1 18557	L	00250	FO	90081020	204422	000050	601	V
PHOAL	BD+284211	16	10.82	2148560	+283734	L	1 18558	L	00191	FO	90081021	211648	000050	601	V
PHOAL	BD +28 4211	16	10.5	2148574	+283734	L	3 39190	L	231	FO	90070705	050700	000026	500	G G=195,B=17
PHOAL	BD +28 4211	16	10.5	2148574	+283734	L	1 18305	L	233	FO	90070705	051100	000050	502	G G=195,B=32
PHOAL	BD +28 4211	16	10.5	2148574	+283734	H	3 39298	L	233	FO	90072417	172400	004000	502	G G=190,B=35
PHOAL	BD +28 4211	16	10.5	2148574	+283734	L	1 18719	L	231	FO	90090807	073200	000050	402	G G=175,B=36
PHOAL	BD +28 4211	16	10.5	2148574	+283734	L	3 39598	L	233	FO	90090807	074000	000026	500	G G=170,B=18
PHOAL	BD +28 4211	16	10.5	2148574	+283734	L	1 18791	L	238	FO	90091510	104700	000050	402	G G=180,B=35
PHOAL	BD +28 4211	16	10.5	2148574	+283734	L	3 39643	L	238	FO	90091510	105300	000026	500	G G=175,B=15
PHOAL	BD +28 4211	16	10.5	2148574	+283734	L	3 39648	L	234	FO	90091703	034700	000026	500	G G=190,B=18
PHOAL	BD +28 4211	16	10.5	2148574	+283734	H	1 18800	L	231	FO	90091703	035600	006800	403	G G=200,B=50
PHOAL	BD +28 4211	16	10.5	2148574	+283734	L	1 19030	L	234	FO	90101905	053200	000050	502	G G=205,B=35
PHOAL	BD +28 4211	16	10.5	2148574	+283734	L	3 39862	L	230	FO	90101905	053700	000026	500	G G=195,B=15
CAMPS	S193	63	13.0	2149331	+135246	L	3 39781	L	274	SO	90100606	063500	005600	501	G G=204,B=28
CAMPS	S193	63	13.0	2149331	+135246	L	1 18948	L	219	SO	90100608	081500	001400	403	G G=160,B=44
CAMPS	S193	63	13.0	2149331	+135246	L	3 39782	L	229	SO	90100609	090500	005400	503	G G=220,B=45
CAMPS	S193	63	13.0	2149331	+135246	L	3 39783	L	248	SO	90100611	113500	002118	400	G G=160,B=18
CAMPS	S193	63	13.0	2149331	+135246	L	3 39785	L	259	SO	90100706	063100	005600	401	G G=168,B=22
CAMPS	S193	63	13.0	2149331	+135246	L	1 18966	L	250	SO	90100708	082000	001600	403	G G=161,B=50
CAMPS	S193	63	13.0	2149331	+135246	L	1 18967	L	282	SO	90100709	092200	002000	403	G G=178,B=42
CAMPS	S193	63	13.0	2149331	+135246	L	3 39786	L	252	SO	90100710	101300	003000	500	G G=175,B=20
CAMPS	S193	63	13.0	2149331	+135246	L	3 39787	L	220	SO	90100711	112100	005600	401	G G=170,B=21
LC079	W CEP	39	05.10	2155144	+632313	H	3 39135	L	00271	FU	90062222	220502	014000	561	V 50 + 90 MIN EXPOSURE
LC079	W CEP	39	05.00	2155144	+632313	L	1 18171	L	25428	FO	90062223	230443	000033	401	V
LC079	W CEP	39	05.02	2155145	+632313	L	3 39136	L	00290	FU	90062301	010811	000205	401	V
XGMCU	PKS 2155-304	87	14.0	2155580	-302754	L	3 39099	L	116	SO	90061709	095800	009000	501	G G=195,B=22
XGMCU	PKS 2155-304	87	14.0	2155581	-302754	L	1 18115	L	113	SO	90061711	113500	004500	502	G G=230,B=40
XGMCU	PKS 2155-304	87	14.0	2155581	-312754	L	3 39100	L	113	SO	90061712	122700	009000	501	G G=204,B=25
XGMCU	PKS 2155-304	87	14.0	2155581	-302754	L	1 18116	L	109	SO	90061714	140900	004500	503	G G=242,B=41
XGMCU	PKS 2155-304	87	14.0	2155581	-302754	L	3 39101	L	114	SO	90061715	150400	006000	401	G G=150,B=25
XGMCU	PKS 2155-304	87	14.0	2155581	-302754	L	1 18117	L	110	SO	90061716	161900	003000	403	G G=190,B=44
LQ029	PKS2155-30	87	13.00	2155582	-302752	L	1 18054	L	00000	BO	90060722	225356	005000	601	V 100 FES CTS
LQ029	PKS2155-30	87	13.00	2155582	-302752	L	3 39032	L	00000	BO	90060723	235336	010000	600	V 109 FES CTS
LQ029	PKS2155-30	87	13.00	2155585	-302752	L	3 39024	L	00000	BO	90060700	002424	010000	500	V 101 FES CTS
LQ029	PKS2155-30	87	13.00	2155585	-302752	L	1 18047	L	00000	BO	90060702	021225	005000	601	V 104 FES CTS
OBLIH	HD 209481	12	05.6	2200234	+574530	H	3 38980	L	16621	FO	90060313	135500	001000	X43	G B=196,G=1.5X,B=50

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
CELIH	HD 209481	23	5.6	2200234	+574530	H	3	38983	L	15810	FO	90060316	162700	001000	X44	G E=203,C=1.5X,B=58
CELIH	HD 209481	12	5.6	2200234	+574530	H	3	38985	L	15421	FO	90060318	180800	001000	X44	G E=194,C=2X,B=60
LI086	HD209481	12	06.07	2200235	+574531	H	3	38964	L	12396	FO	90060221	211828	001000	700	V
CELIH	HD 209481	12	5.6	2200235	+574531	H	3	38956	L	15846	FO	90060213	135200	001000	X03	G C=1.5X,B=50
LI086	HD209481	12	05.93	2200235	+574531	H	3	38967	L	13841	FO	90060300	005318	001000	700	V
CELIH	HD 209481	12	5.6	2200235	+574531	H	3	38959	L	15379	FO	90060216	164600	001000	X04	G C=1.5X,B=58
LI086	HD209481	12	05.94	2200235	+574531	H	3	38969	L	13728	FO	90060303	030620	001000	700	V
CELIH	HD 209481	12	5.6	2200235	+574531	H	3	38961	L	15394	FO	90060218	182400	001000	X04	G C=1.5X,B=60
LI086	HD209481	12	06.03	2200235	+574531	H	3	38988	L	12835	FO	90060321	210251	001000	700	V
CELIH	HD 209481	12	5.6	2200235	+574531	H	3	38972	L	16280	FO	90060306	062300	001000	X03	G C=2X,B=47
LI086	HD209481	12	05.97	2200235	+574531	H	3	38991	L	13394	FO	90060400	001743	001000	700	V
CELIH	HD 209481	12	5.6	2200235	+574531	H	3	38975	L	16212	FO	90060309	092200	001000	X03	G C=1.5X,B=47
LI086	HD209481	12	06.03	2200235	+574531	H	3	38993	L	12838	FO	90060402	022242	001000	700	V
CELIH	HD 209481	12	5.6	2200235	+574531	H	3	38977	L	16245	FO	90060311	110900	001000	X03	G C=1.5X,B=50
CELIH	HD 209481	12	5.6	2200235	+574531	H	3	38997	L	15369	FO	90060406	062300	001000	X43	G E=189,C=1.5X,B=45
CELIH	HD 209481	12	5.6	2200235	+574531	H	3	39000	L	15586	FO	90060409	092000	001000	X53	G E=198,C=1.5X,B=45
CELIH	HD 209481	12	5.6	2200235	+574531	H	3	39002	L	15542	FO	90060411	111300	001000	X53	G E=206,C=1.5X,B=48
CELIH	HD 209481	12	5.6	2200235	+574531	H	3	39005	L	16231	FO	90060414	141400	001000	X43	G E=163,C=1.5X,B=47
CELIH	HD 209481	12	5.6	2200235	+574531	H	3	39008	L	15866	FO	90060417	170100	001000	X44	G E=180,C=1.5X,B=57
CELIH	HD 209481	12	5.6	2200235	+574531	H	3	39010	L	15594	FO	90060418	184500	001000	X44	G E=170,C=1.5X,B=55
AGMDW	BL LAC	87	14.5	2200394	+420209	L	1	18863	L		BO	90092523	234400	042600	307	G C=138,B=82
AGMDW	BL LAC	88	15.0	2200394	+420208	L	1	18914	L		BO	90100121	214300	042500	307	G C=141,B=82
IMMDW	HD 209409	22	4.69	2200437	-022351	H	3	39200	L	319	FU	90070812	122400	000400	502	G C=202,B=38
IMMDW	HD 209409	22	4.69	2200437	-022351	H	1	18321	L	319	FU	90070812	123200	000200	502	G C=218,B=40
IMMDW	HD 209409	22	4.69	2200437	-022351	L	3	39201	L	319	FU	90070813	133500	000006	X00	G C=2X,B=18
IMMDW	HD 209409	22	4.69	2200437	-022351	L	1	18322	L	318	FU	90070813	134000	000004	X02	G C=2X,B=33
IMMDW	HD 209409	22	4.69	2200437	-022351	H	3	39202	L	345	FU	90070814	144300	000800	X04	G C=2X,B=53
COMAB	HD 209750	45	2.96	2203129	-003349	H	1	18313	L	1313	FU	90070715	151700	001000	542	G E=179,C=208,B=36
IMLIH	HD 210121	21	7.5	2205361	-034636	H	3	38949	L	2551	FO	90060106	065300	037000	X08	G C=1.5X,B=97
IMLIH	HD 210121	21	7.5	2205361	-034636	H	1	18022	L	2601	FO	90060113	131200	006000	504	G C=222,B=51
PHCAL	WAVCAL	98		2205361	-034636		1	18023	S			90060114	145800	000001	?9	G E=10X,B=108
PHCAL	WAAVCAL	98		2205361	-034636	H	1	18024	S			90060115	153000	000016	?9	G E=50X,B=108
PHCAL	NULL	99		2205361	-034636	L	2	18457	S			90060115	155100	000000	00	G B=17
PHCAL	WAVCAL	98		2205361	-034636	L	3	38950	C			90060116	162400	000002	?9	G E=10X,B=105
PHCAL	WAVCAL	98		2205361	-034636	H	3	38951	S			90060116	165200	000200	?9	G E=60X,B=124
PHCAL	WAVCAL	98		2205361	-034636	L	2	18458	S			90060116	165800	000001		G
PHCAL	TFLOOD	98		2205361	-034636	H	2	18459	S			90060117	172900	000022		G
IMMDW	HD 210121	21	7.5	2205361	-034636	L	1	18291	L	2485	FO	90070511	114300	000130	X01	G C=2X,B=30
IMMDW	HD 210121	21	7.5	2205361	-034636	L	3	39180	L	2512	FO	90070512	122200	000500	500	G C=206,B=16
IMMDW	HD 210121	21	7.5	2205361	-034636	L	1	18292	L	2523		90070512	123100	000050	502	G C=229,B=34
IMMDW	HD 210121	21	7.5	2205361	-034636	L	3	39181	L	2559	FO	90070513	130700	001500	X00	G C=3X,B=17
IMMDW	HD 210121	21	7.5	2205361	-034636	L	1	18293	L	2525	FO	90070513	134100	000500	X00	G C=5X,B=18
IMMDW	HD 210121	21	7.5	2205361	-034636	L	3	39182	L	2513	FO	90070514	142200	002500	X00	G C=5X,B=18
MI009	4U2206+543	59	10.41	2206074	+541623	L	3	39111	L	00276	FO	90061822	221321	001000	440	V
MI009	4U2206+543	59	10.41	2206074	+541623	L	1	18128	L	00276	FO	90061822	220208	000400	552	V
MI009	4U2206+543	59	10.38	2206074	+541623	H	3	39112	L	00284	FO	90061823	232108	032600	333	V
RSMDH	HD 210334	46	6.1	2206393	+452947	L	3	39187	L	9069	FO	90070615	153900	006000	350	G E=190,C=65,B=20
RSMDH	HD 210334	46	6.1	2206393	+452947	H	1	18300	L	9045	FO	90070616	164300	006000	453	G E=198,C=190,B=45
RSMDH	HD 210334	46	6.1	2206393	+452947	L	3	39221	L	9351	FO	90071315	150500	006000	343	G E=159,C=120,B=45
RSMDH	HD 210334	46	6.1	2206393	+452947	H	1	18366	L	9064	FO	90071316	161300	006000	444	G E=197,C=170,B=55

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	rmmsstt	EEC	Comment
RSMDH	HD 210334	46	6.1	2206393	+452947	L	3	39235	L	9074	FO	90071714	145500	006000	343 G	E=171,C=120,B=45
RSMDH	HD 210334	46	6.1	2206393	+452947	H	1	18385	L	8844	FO	90071716	160300	006000	443 G	E=195,C=170,B=50
RSMDH	HD 210334	46	6.1	2206393	+452947	L	3	39275	L	9156	FO	90072114	144500	006000	334 G	E=112,C=122,B=53
RSMDH	HD 210334	46	6.1	2206393	+452947	H	1	18416	L	8786	FO	90072115	155100	006000	G	
RSMDH	HD 210334	46	6.1	2206393	+452947	L	3	39302	L	9219	FO	90072514	145700	006000	333 G	E=122,C=126,B=50
RSMDH	HD 210334	46	6.1	2206393	+452947	H	1	18442	L	8835	FO	90072516	160500	006000	G	
RSMDH	AR LAC	46	6.1	2206393	+452947	H	1	18467	L	8817	FO	90072916	160800	006000	443 G	E=174,C=170,B=45
BCMNE	HD 235739	53	9.2	2207080	+504800	L	1	18870	L	465	FO	90092623	234300	004000	502 G	C=190,B=39
BCMNE	HD 235739	53	9.2	2207080	+504800	L	3	39714	L	470	FO	90092700	003600	037500	304 G	C=130,B=55
USSBS	HD 210745	47	3.36	2209069	+575715	H	1	18258	L	928	FU	90070118	181800	002400	352 G	E=221,C=80,B=35
IMLTS	HD 210839	15	5.1	2209486	+591003	L	1	18941	L	21361	FO	90100509	095400	000003	X02 G	C=1.2X,B=32
IMLTS	HD 210839	15	5.1	2209486	+591003	L	3	39771	L	21184	FO	90100509	095900	000006	540 G	E=168,C=172,B=18
IMLTS	HD 210839	15	5.1	2209486	+591003	H	1	18942	L	21413	FO	90100510	104000	000600	X03 G	C=1.5X,B=50
IMLTS	HD 210839	15	5.1	2209486	+591003	H	1	18943	L	21520	FO	90100511	112800	000400	503 G	C=245,B=42
WDMAH	FU PEG	54	13.2	2211353	+122715	L	3	39053	L			90061006	065200	002000	222 G	E=51,C=41,B=34
WDMAH	FU PEG	54	13.2	2211354	+122716	L	1	18076	L	146	SO	90061006	062200	001500	232 G	E=91,C=58,B=38
WDMAH	FU PEG	54	13.2	2211354	+122716	L	3	39053	S			90061008	081700	009000	222 G	E=44,C=41,B=33
WDMAH	FU PEG	54	13.2	2211356	+122714	L	3	39122	S		BO	90062111	114300	007000	200 G	C=37,B=20
WDMAH	FU PEG	54	13.2	2211356	+122714	L	3	39167	S		BO	90063012	121400	003600	00 G	B=15
IMMDC	BD +532820	20	9.9	2211577	+540940	L	1	18377	S	314	FO	90071516	163900	000600	402 G	C=180,B=37
IMMDC	BD +532820	20	9.9	2211577	+540940	L	1	18377	L	314	FO	90071516	165200	000600	G	
IMMDC	BD +532820	20	9.9	2211577	+540940	L	3	39229	L	316	FO	90071517	173000	000400	400 G	C=155,B=17
IMMDC	HD 235783	23	8.7	2215140	+541527	L	3	39228	L	1021	FO	90071514	143400	000212	400 G	C=150,B=18
IMMDC	HD 235783	23	8.7	2215140	+541527	L	1	18376	S	998	FO	90071514	145700	000154	503 G	C=215,B=42
IMMDC	HD 235783	23	8.7	2215140	+541527	L	1	18376	L	1009	FO	90071515	150400	000300	X03 G	C=3X,B=45
MI040	H2215-086	59	14.00	2215171	-083607	L	1	19055	L	00043	SO	90102414	143336	004200	451 V	
MI040	H2215-086	59	14.00	2215171	-083607	L	3	39939	L	00043	SO	90102415	152124	006300	340 V	
MI040	H2215-086	59	14.00	2215171	-083607	L	1	19056	L	00043	SO	90102416	163052	004200	451 V	
MI040	H2215-086	59	14.00	2215171	-083607	L	3	39940	L	00043	SO	90102417	171913	006300	340 V	
MI040	H2215-086	59	14.00	2215171	-083607	L	1	19057	L	00043	SO	90102418	182831	004200	350 V	
MI040	H2215-086	59	14.00	2215171	-083607	L	3	39941	L	00043	SO	90102419	191727	006300	340 V	
MI040	H2215-086	59	14.00	2215171	-083607	L	1	19058	L	00043	SO	90102420	202543	002100	330 V	
MI040	H2215-086	59	14.00	2215171	-083607	L	3	39948	L	00043	SO	90102514	144637	006300	340 V	
MI040	H2215-086	59	13.58	2215171	-083607	L	1	19061	L	00065	SO	90102515	155635	004200	341 V	
MI040	H2215-086	59	13.58	2215171	-083607	L	3	39949	L	00065	SO	90102516	165047	006300	340 V	
MI040	H2215-086	59	13.58	2215171	-083607	L	1	19062	L	00065	SO	90102518	180034	002100	330 V	
MI040	H2215-086	59	13.58	2215171	-083607	L	3	39950	L	00065	SO	90102518	183256	006300	350 V	
MI040	H2215-086	59	13.58	2215171	-083607	L	1	19063	L	00065	SO	90102519	194425	006300	560 V	
MA012	HD211853	11	09.58	2216545	+555230	H	1	18147	L	00579	FO	90062001	015420	017300	402 V	
MA012	HD 211853	11	09.51	2216545	+555230	H	1	18172	L	00614	FO	90062301	013642	019000	501 V	
SDMPT	PG 2219+092	16	11.9	2219300	+092221	L	1	18328	L	245	SO	90070903	035500	000700	402 G	C=165,B=36
SDMPT	PG 2219+092	16	11.9	2219300	+092221	L	3	39206	L	244	SO	90070904	041900	000400	300 G	C=65,B=17
SDMPT	PG 2219+092	16	11.9	2219300	+092221	L	3	39207	L	248	SO	90070904	045800	048000	308 G	C=190,B=98
LQ170	3C 446	85	17.20	2223110	-051216	L	1	19014	L	00000	BO	90101514	142350	038300	233 V	
LQ170	3C 446	85	17.20	2223110	-051216	L	1	19023	L	00000	BO	90101614	140146	040600	233 V	
LQ170	3C446	85	17.20	2223111	-051216	L	1	19004	L	00000	BO	90101314	144212	035500	124 V	
LQ170	3C446	85	16.00	2223111	-051216	L	1	19047	L	00000	BO	90102214	142428	038200	235 V	
LQ170	3C446	85	16.00	2223111	-051216	L	1	19066	L	00000	BO	90102614	140400	040500	233 V	
DOMIT	HD 213306	53	3.72	2227185	+580932	L	1	18571	L	576	FU	90081307	071400	000008	402 G	C=145,B=32
DOMIT	HD 213306	53	3.72	2227185	+580932	L	3	39451	L	578	FU	90081307	072300	000618	400 G	C=128,B=18

PRO	Object	CL	MAG	R.A.	DEC	D C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
MQ005	NGC7319	84	13.50	2233460	+334259	L 1	18109	L	00000	BO	90061522	221854	039000	203	V
MQ005	NGC7319	84	13.50	2233460	+334259	L 3	39097	L	00000	BO	90061621	215425	041300	101	V
PHCAL	HD214680	13	05.17	2237010	+384722	L 2	18480	L	23100	FO	90070300	001124	000000	402	V
PHCAL	HD214690	13	05.19	2237010	+384722	L 2	18481	L	22905	FO	90070300	005419	000000	402	V
PHCAL	HD214680	13	05.16	2237010	+384722	L 2	18482	L	23300	FO	90070301	012713	000000	402	V
MA130	PG2337+070	16	13.90	2237318	+070034	L 1	18428	L	00049	SO	90072222	224600	003000	501	V TWO SEGMENTS
MI177	HR8752	45	05.66	2257582	+564037	H 3	39178	L	16851	FO	90070420	204221	036500	431	V
MI177	HR8752	45	05.72	2257582	+564037	H 1	18296	L	16132	FO	90070519	195114	041600	704	V
LGMIS	HD 218153	45	7.90	2303031	+254421	L 1	18107	L	2374	FO	90061514	140000	000700	342	G E=1.5X,C=99,B=35
LGMIS	HD 218153	45	7.90	2303031	+254421	L 3	39094	L	2385	FO	90061514	141500	018000	232	G E=99,C=57,B=40
RSMDH	AR LAC	46	6.1	2306393	+452947	L 3	39324	L	8903	FO	90072915	150300	006000	331	G E=123,C=118,B=28
OBLIH	HD 218915	13	7.2	2308523	+524712	H 3	38962	L	3859	FO	90060219	192200	002000	543	G E=187,C=215,B=48
RSMDH	HD 219913	46	7.4	2310508	+022409	H 1	18441	L			90072513	132300	006000		G
RSMDH	HD 219913	46	7.4	2310509	+022410	L 3	39186	L	2844	FO	90070612	123500	009000	350	G E=172,C=79,B=17
RSMDH	HD 219913	46	7.4	2310509	+022410	H 1	18299	L	2950	FO	90070614	141000	006000	333	G E=126,C=110,B=50
RSMDH	HD 219913	46	7.4	2310509	+022410	L 3	39220	L	3389	FO	90071311	115300	009000	332	G E=89,C=129,B=35
RSMDH	HD 219913	46	7.4	2310509	+022410	H 1	18365	L	3348	FO	90071313	133400	006000	334	G E=145,C=118,B=58
RSMDH	HD 219913	46	7.4	2310509	+022410	L 3	39234	L	3379	FO	90071711	114000	009000	431	G E=69,C=130,B=26
RSMDH	HD 219913	46	7.4	2310509	+022410	H 1	18384	L	3224	FO	90071713	131800	006000	335	G E=142,C=120,B=65
RSMDH	HD 219913	46	7.4	2310509	+022410	H 1	18415	L	3183	FO	90072111	112700	006000	333	G E=135,C=94,B=45
RSMDH	HD 219913	46	7.4	2310509	022410	L 3	39274	L	3202	FO	90072112	123100	009000	304	G C=150,B=53
RSMDH	HD 219913	46	7.4	2310509	+022410	L 3	39301	L	3248	FO	90072511	114600	009000	433	G E=76,C=148,B=46
RSMDH	SZ PSC	46	7.4	2310509	+022410	L 3	39323	L	3271	FO	90072911	114500	009000	432	G E=123,C=147,B=40
RSMDH	SZ PSC	46	7.4	2310509	+022410	H 1	18466	L	3166	FO	90072913	132400	006000	338	G E=175,C=130,B=92
LQ006	PKS 2316	86	15.00	2316210	-422314	L 3	38954	L	00000	BO	90060200	002858	025700	221	V
LQ029	PKS2316	87	14.00	2316210	-422314	L 1	18048	L	00000	BO	90060704	042444	002500	101	V PREAD
LQ029	PKS2316	87	14.00	2316210	-422314	L 1	18055	L	00000	BO	90060802	022605	014000	301	V PREAD
EGMAS	AGP 150B	82	14.7	2316595	+091347	L 3	39289	L		BO	90072304	041300	039500	05	G B=62
MA130	PG2317+046	16	13.25	2317224	+043608	L 3	39284	L	00087	SO	90072220	202037	000700	500	V
MA130	PG2317+046	16	13.25	2317225	+043609	L 1	18427	L	00087	SO	90072220	203828	001000	501	V
HOMMU	EU AND	64	11.0	2317373	+465802	L 1	18445	L	236	FO	90072608	082500	001000	03	G B=50
PHCAL	WAVCAL	98	0.0	2319304	-262008	L 1	18495	L			90080209	090400	000025	?8	G E=10X,B=99
PHCAL	WAVCAL	98	0.0	2319304	-262008	H 1	18496	L			90080209	093800	000025	?9	G E=50X,B=105
PHCAL	WAVCAL	98	0.0	2319304	-262008	L 3	39376				90080210	103700	000005	?8	G E=10X,B=100
PHCAL	WAVCAL	98	0.0	2319304	-262008	H 3	39377	S			90080211	110300	000005	?9	G E=60X,B=115
PHCAL	WAVCAL	98	0.0	2319304	-262008	L 2	18490				90080211	113600	000010	?7	G E=10,B=85
PHCAL	WAVCAL	98	0.0	2319304	-262008	H 2	18491	S			90080212	120700	001000	?9	G E=50X,B=138
PHCAL	TFLOOD	99	0.0	2319304	+262008	H 1	18497	S			90080213	131800	000025	08	G B=97
PHCAL	TFLOOD	99	0.0	2319304	+262008	H 3	39378	L			90080213	132000	000005	09	G B=110
MA129	PK107-13.1	70	14.40	2320361	+463731	L 1	19095	L	00000	BO	90103117	170320	005000	503	V
MA129	PK107-13.1	70	14.40	2320361	+463731	L 3	40010	L	00000	BO	90103118	180121	004000	440	V
MA129	PK107-13.1	70	14.40	2320361	+463731	L 1	19096	L	00000	BO	90103118	184646	002500	302	V
MA129	PK107-13.1	70	14.40	2320361	+463731	L 3	40011	L	00000	BO	90103119	191859	005000	550	V
SDMPT	PG 2321+214	16	13.3	2321575	+212222	L 1	18329	L	5	SO	90070914	140600	002400	403	G C=190,B=45
SDMPT	PG 2321+214	16	13.3	2321576	+212223	L 3	39208	L	61	SO	90070914	143600	001700	400	G C=120,B=18
SOMPF	COM LEVY	06	10.8	2323579	+273619	L 9	02341				90080207	073000	002000		G
SOMPF	COM LEVY	06	10.8	2323579	+273619	L 1	18494	L	179	FO	90080207	073800	001500	342	G E=153,C=57,B=35
MI032	Z AND	57	10.91	2331150	+483232	L 3	39249	L	00176	FO	90071900	002140	005000	360	V
MI032	Z AND	57	10.89	2331150	+483232	L 3	39250	L	00179	FO	90071901	015022	000800	240	V
MI032	Z AND	57	10.88	2331150	+483232	L 1	18393	L	00181	FO	90071901	011616	002000	350	V

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	EOC	Comment
MI032	Z AND	57	10.90	2331150	+483232	H	3	39251	L	00178	FO	90071902	022718	002000	030	V
RSMEG	HD 222107	44	3.9	2335065	+461114	L	3	39804	L	536	FU	90101011	112200	004000	351	G B=230,G=63,B=22
RSMEG	HD 222107	44	3.9	2335065	+461114	H	1	18979	L	555	FU	90101012	121100	000500	352	G B=236,G=70,B=35
RSMEG	HD 222107	44	3.9	2335065	+461114	H	1	18990	L	521	FU	90101212	122700	000400	342	G B=174,G=70,B=35
RSMEG	HD 222107	44	3.9	2335065	+461114	L	3	39814	L	531	FU	90101212	123600	001500	331	G B=111,G=48,B=25
MA130	PG2337+070	16	13.92	2337318	+070034	L	3	39285	L	00048	SO	90072222	220206	002300	400	V
WRMPC	MR122	11	11.5	2341063	+613909	L	3	39432	L	407	SO	90080922	222500	013500	331	G B=107,G=86,B=21
WRMPC	MR122	11	11.5	2341063	+613909	L	1	18548	L	405	SO	90081000	004600	004500	402	G G=180,B=38
RSMEG	HD 224085	46	7.37	2352290	+282118	H	1	18570	L	2516	FO	90081302	021700	004000	342	G B=154,G=78,B=39
RSMEG	HD 224085	46	7.37	2352290	+282118	L	3	39450	L	2660	FO	90081305	055000	002500	200	G G=30,B=18
MC098	HD224085	46	07.76	2352291	+282118	H	1	18701	L	02927	FO	90090416	163054	014000	361	V
MC098	HD224085	46	07.77	2352291	+282118	L	3	39579	L	02898	FO	90090419	190300	006000	130	V MULT EXPOSURES
MC098	HD224085	46	07.78	2352291	+282118	H	1	18702	L	02865	FO	90090420	203336	003000	130	V
MC098	HD224085	46	07.73	2352291	+282118	L	3	39580	L	03001	FO	90090421	211627	006000	120	V
MC098	HD 224085	46	07.82	2352291	+282118	L	3	39584	L	02779	FO	90090516	160209	006000	130	V DOUBLE EXPOSURE
MC098	HD 224085	46	07.80	2352291	+282118	H	1	18706	L	02822	FO	90090517	172325	003000	142	V
MC098	HD 224085	46	07.79	2352291	+282118	L	3	39585	L	02858	FO	90090518	180335	006000	130	V DOUBLE EXPOSURE
MC098	HD 224085	46	07.75	2352291	+282118	H	1	18707	L	02950	FO	90090519	193252	003000	141	V
MC098	HD 224085	46	07.74	2352291	+282118	L	3	39586	L	02972	FO	90090520	201740	006000	130	V DOUBLE EXPOSURE
MC098	HD 224085	46	07.73	2352291	+282118	H	1	18708	L	03015	FO	90090521	215339	003000	141	V
MC098	HD 224085	46	07.72	2352291	+282118	L	3	39587	L	03037	FO	90090522	223147	002000	130	V BREAD
MC098	HD 224085	46	07.87	2352291	+282118	L	3	39591	L	02662	FO	90090616	160125	008000	130	V DOUBLE EXPOSURE
MC098	HD 224085	46	07.88	2352291	+282118	H	1	18712	L	02631	FO	90090617	174275	003000	131	V
MC098	HD 224085	46	07.87	2352291	+282118	L	3	39592	L	02660	FO	90090618	182210	008000	250	V DOUBLE EXPOSURE
MC098	HD 224085	46	07.86	2352291	+282118	H	1	18713	L	02685	FO	90090619	195637	003000	131	V
MC098	HD 224085	46	07.85	2352291	+282118	L	3	39593	L	02700	FO	90090620	203652	006000	130	V DOUBLE EXPOSURE
MC098	HD 224085	46	07.83	2352291	+282118	H	1	18714	L	02744	FO	90090621	215646	004000	141	V