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August 1991

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### IUE ESA NEWSLETTER

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## OBSERVATORY CONTROLLER'S MESSAGE

As will be clear to you from page 3 of this IUE Newsletter, the extremely wide support expressed by all of you for the continuation of the IUE Project has been accepted by ESA's Science Program Committee. We are pleased therefore to include here the Call for Proposals for the 15th year of IUE Observing. We can all be grateful for the efforts made by the National representatives in the ad-hoc Working Group. With the one year extension it is now possible to maintain the main source of Ultraviolet data for astronomy operational, at least for the duration of the International Space Year, 1992. On the other hand, one should be aware that the basic problems in ESA's Space Sciences budget remain and further continuation of the IUE Project is uncertain to say the least.

It may be worthwhile to point out here that, even though many people perceive IUE as a permanent fixture in the telescopes available to the astrophysicists, this is not the case. It is only through a great effort by a small group of highly dedicated individuals that failures in the IUE Spacecraft are overcome by innovative modes of operation. There is no way that we can ignore the realization that one day a catastrophic failure will hit IUE. Keeping this in mind, the continuation of the IUE Project is a matter which needs to be considered seriously. The importance of the new and unanticipated unique astrophysical studies, which cannot be done with any other facility available to astronomers, should not be considered lightly in the general context of astrophysical progress. Short term, relatively small savings may not justify early termination of this unique facility. You have seen last year that if you speak up in a responsible way, your voice will be heard.

On the Spacecraft side, we have seen the dropout of a winding in one of the two remaining Gyro's, however this does not affect its functionality. Also, a not fully understood background is seen by the Fine-Error-Sensor. This appears to be associated with the entry of IUE in the bi-annual Earth Shadow. The reappearance of this phenomenon in the present shadow suggests that the thermal cycling of the Spacecraft finally has taken its toll, rather than the earlier suggestions that this might have been associated with an explosive gas release from another spacecraft at 900 Km distance from the IUE.



For the IUE Observatory staff, I have to report that the last of the old-timers have left the Project. Jean Clavel has made the jump to the less energetic photons, which we expect that ISO will collect in large quantities. Angelo Cassatella has returned to his native Italy and has taken up his position in Frascati again. I wish both of them the best success in their new positions and I am sure I speak for all of you when I say that their dedication to the service required for optimum scientific use of IUE has been highly appreciated by all users of IUE.

For VILSPA, it remains to be reported that the scientific activities are increasing with the establishment of the Spanish "Laboratorio de Astrofísica Espacial y Física Fundamental" (LAEFF), which has been hosted at VILSPA since its inception in June 1991. I welcome the scientific and technical staff of the LAEFF and hope that fruitful and productive collaborations will develop.

W. Wamsteker

August 1991

August 15, 1991

PROPOSALS FOR OBSERVATIONS WITH IUE IN 1992

Dear Colleague,

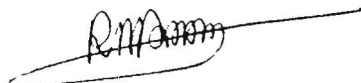
The International Ultraviolet Explorer (IUE) spacecraft is currently operating very successfully and continues to provide valuable UV spectroscopic data in the 1200 to 3000 A wavelength region. Such data are obtained on a routine basis, 8 hours per day at the ESA Villafranca IUE Observatory and 16 hours per day at the NASA IUE Observatory at Goddard in Maryland. The observing programmes carried out have been those recommended by the relevant European and US selection committees.

At its meeting of June 12, 1991, the Science Program Committee of ESA approved the extension of IUE operation from Villafranca through 1992.

The present observing programmes extend to June 1992. Thereafter an additional year of observations may be initiated. In preparation for this, the European Allocation Committee (IUEAC), a single committee which has replaced the separate ESA and SERC Selection Committees, will meet early next year to review those observing proposals which have been received by 15 December 1991. The recommendations of this committee will form the basis for the European observing programme starting June 1992.

We therefore invite European astronomers to submit proposals for IUE observations in accordance with the procedures set out in the attached letter.

Yours sincerely,



Prof. R.M. Bonnet  
Director of Scientific  
Programmes  
European Space Agency



Dr. G.W.D. Findlay  
Space Science Programme  
Board  
British National Space  
Centre

Att. (1)

July 1, 1991

Dear Colleague,

As previous users know, the International Ultraviolet Explorer (IUE) is an astronomical satellite designed to obtain ultraviolet spectra in the region from about 1200 to 3000 Angstroms. Its characteristics and performance have been described by Boggess, et al. in Nature, volume 275, pages 372 and 377, 1978. The satellite was built jointly by NASA, ESA and SERC and is operated 16 hours each day by NASA from a control center at the Goddard Space Flight Center and 8 hours each day for ESA and SERC observers from the ESA control center at Villafranca.

The observing program for IUE is based on unsolicited proposals for use of the satellite. Proposals may be submitted at any time but, as a matter of practice, those in hand by 15 December 1991 will be reviewed in order to establish the year's observing program starting the following June. While proposals of a genuine emergency nature may be dealt with more promptly, other proposals received too late will not be considered. Applications are accepted both from observers proposing new programs and from current IUE observers who wish to apply for more time than they have currently been allotted.

Normally, the observer is expected to be present at either the Goddard or Villafranca control center. Observing procedures are flexible and adaptable to individual needs, the observer being able to direct his own program, monitor it in real time, and alter it if necessary to enhance its scientific value. Responsibility for actual operation of the spacecraft, however, lies with a trained operations staff. Scientists from all countries may apply to use the IUE. Those interested in observing with this facility should send a letter requesting current proposal instructions to the most appropriate one of the following addresses:

IUE Operations Scientist  
Code 684  
Goddard Space Flight Center  
Greenbelt, MD 20771  
U.S.A.

IUE Observatory Manager  
ESA Villafranca Satellite  
Tracking Station  
Apartado 50727  
28080 Madrid  
SPAIN

Note: SERC and ESA have agreed to combine their allocating procedures with the administrative aspects handled by ESA.

Responders will receive additional information regarding the satellite operations and proposal submission procedures for the next observing episode.

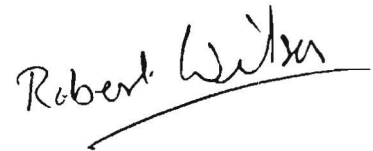
Sincerely,



Yoji Kondo  
NASA/IUE Project  
Scientist



Willem Wamsteker  
ESA/IUE Observatory  
Manager



Robert Wilson  
SERC/IUE Project  
Director

## IUE SPACECRAFT STATUS

JULY 1991

D. Hermoso, VILSPA

### 1. GENERAL

The spacecraft continued to support science operations normally and effectively in its fourteenth year of highly successful in-orbit operations. At the end of June 1991, a total of 21418 images had been collected from 9078 celestial objects (VILSPA only).

On 5 February 1991 several FES images of different stellar fields showed an unusually large background even at large angular distance from the Earth. The strength of this background light was a strong function of the Beta angle increasing towards high Betas.

Various tests have clearly established that the cause of this is external to the FES and no instrumental malfunctioning is present. Various scenarios have been identified as a possible cause, some associated with the spacecraft, others with the spacecraft subsystems and others due to external factors. Careful monitoring has shown that the level is decreasing. A number of tests and monitoring programs are in progress to try and identify the cause of this unexpected scattered sunlight. Security operational science procedures were immediately implemented, but have already been discontinued because of the decrease in intensity.

### 2. POWER SUBSYSTEM.

IUE's 27th Eclipse Season ran from 25th January to 20th February 1991. The maximum depth of discharge for the season were 37.00% for battery 1, and 42.71% for battery 2. The general performance of the batteries was good despite their questionable health. 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.

The projected maximum depths of discharge for shadow season 28 (July 29 through August 20, 1991) are 51.38% for battery 1 and 51.91% for battery 2.

### 3. SOLAR ARRAYS

The average reduction in power between February 1990 and February 1991 at  $\beta = 70^\circ$  was 3.65%. The average degradation for 1990-1991 was 2.83%. Despite their degradation, enough power is supplied by the arrays to keep the spacecraft power positive over the range of beta angles between  $31^\circ$  and  $113^\circ$ . This range is based on a nominal power requirement of approximately 149.5 watts.

### 4. ATTITUDE CONTROL SYSTEM

Gyro degradation continues to be of prime interest to the IUE mission. On February 5 the current reading coming from gyro 5 dropped to 0-0.2 amps and remained there. Although the gyro continued to operate there was a change in its drift rate (a consequence of the drop in its operating temperature). Immediately after the current drop, track was put on a star and a large gyro trim was calculated and uplinked to compensate for the change in drift rate. The drift rate had fallen from a value of approximately -260 counts/sec to a value of -240 counts/sec. After the nightly Earth shadow the Telescope Operator could not identify the shadow target. It was discovered that during shadow the drift rate had dropped again to about -218 counts/sec. Another large trim was uplinked to compensate, with attitude recovery following shortly. Since that time no other anomalous behavior has been seen in gyro 5 and there has been no appreciable loss of maneuvering accuracy.

Each gyro has two motor windings with a current reading coming from only one of the windings. Apparently the winding that we receive data from has failed while the other winding, which is not monitored, continues to operate. The gyro can operate normally with only one winding indefinitely.

A successful spacecraft test on the One-Gyro system was performed on March 18, 1991. The test showed favorable spacecraft control in almost all hold/slew modes.

During the One-Gyro test, the 4k Two-Gyro system was used to control the spacecraft while the 8k One-Gyro system was loaded into the spacecraft. After completion of the One-Gyro test, control was

returned to the 4k system while the 8k Two-Gyro system was reloaded for normal operations. The 4k system performed nominally during these times.

Plans are being made for another spacecraft test on the One-Gyro system to allow for more science-oriented testing under this control mode.

A 13.72 second Delta-V burn was successfully performed on January 12. This adjustment was performed earlier than was expected to avoid conflict with Shadow Season 27 and to allow scheduling of the One-Gyro spacecraft test.

Selecting the most favorable momentum-wheel unload jet firings to counteract the westward drift of the spacecraft continues to extend the duration of the IUE orbital drift period.

## 5. THERMAL

In general the spacecraft temperatures remain stable.

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

The HOT OBC Beta region has changed as follows:

<u>MONTH</u>	<u>LOWER LIMIT</u>	<u>UPPER LIMIT</u>
JANUARY	65°	85°
FEBRUARY	70°	79°
MARCH	--	--
APRIL	--	--
MAY	--	--
JUNE	--	--
JULY	--	--
AUGUST	--	--
SEPTEMBER	--	--
OCTOBER	--	--
NOVEMBER	70°	79°
DECEMBER	65°	85°

## 6. ANOMALIES

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

- One instance of corrupted Fine Sun Sensor data from OBC telemetry.
- One Data Block with 25 commands was uplinked but not executed. Worker 18 (software loader) failed to turn on.
- One data block with 9 commands did not take effect. Worker18 (software loader) failed to turn on.
- The OBC has selected a wrong Head/System combination of the Fine Sun Sensor.



## **Report on the Rosat-IUE All Sky Survey (RIASS) Program**

D. de Martino, W. Wamsteker

*IUE Observatory - VILSPA - ESA*

J.M. Mas Hesse

*Max Planck Institut fur Extraterrestrische Physik - ESA*

J. Bonnell, C. Imhoff

*IUE Observatory - GSFC - NASA/CSC*

### **1 - Introduction.**

The main purpose of the RIASS program (ROSAT - IUE All Sky Survey) was to use the opportunity supplied by the All Sky Survey in the EUV and soft X-rays of the ROSAT satellite to acquire the most extensive simultaneous spectral coverage ever obtained with space telescopes for objects whose theoretical understanding strongly relies on observations in different energy regimes.

A total of 128 objects ranging from planets and cool stars to interacting binaries and active galactic nuclei (AGN) have been observed in this program. RIASS raised such great interest among the astronomical community that it also triggered observations with the hard X-ray satellite GINGA and ground based telescopes. The IUE observations for this program were performed at both VILSPA and GSFC stations from August 1990 through January 1991. In spite of the difficult observational requirements brought on by the broad scope, simultaneity, and multiwavelength nature of this unique observing campaign, all the operational aspects of this program were completed with a high degree of success.

## **2 - Organization and Scheduling of the RIASS Program.**

VILSPA and GSFC took different approaches only at the very beginning of the RIASS organization. At ESA this was submitted as a "large" (or "heroic") proposal for the 13<sup>th</sup> episode of IUE and was run as an observatory program with specific targets suggested by 29 European investigators. At NASA, targets were identified from 18 accepted individual programs whose corresponding shift allocations were devoted either partially or entirely to RIASS. Hence, a composite list for the RIASS program, which identified NASA and ESA PIs for each target, was constructed from these proposals. The observational requirements and data distribution agreements for each target were then coordinated on the basis of this list.

The scheduling constraints for this program were largely driven by the ROSAT survey time line and a major factor contributing to the high degree of operational success enjoyed by this program was the relatively trouble free and timely progression of the ROSAT all sky survey. Due to the special NASA and ESA coordination required by this program various operational aspects could not be handled easily under the normal arrangements for IUE operations. In fact, the total ESA and NASA allocation of 103.5 shifts to be performed within the 6 months of the ROSAT survey required the adoption of an observing strategy aiming to maximize the use of the IUE time within the ROSAT periods of visibility of the program targets with minimal impact to regular G.O. programs. To accomplish this, an integrated scheduling method was adopted which permitted RIASS observations to be scheduled at either station without regard to program code or PI affiliation. The general success of this scheduling method also contributed substantially to the success of the program as a whole. VILSPA took the prime responsibility for the final program and schedule definition adopted by both stations.

Because of the size and complexity of the RIASS program, some impact to the scheduling of normal IUE programs, including the loss of flexibility in scheduling other target of opportunity programs, was inevitable. However, every effort was

made to minimize this impact and the efforts by the scheduling staff at both stations were very commendable. Ultimately, the RIASS program accounted for 34%, 23% and 8% of VILSPA, US1 and US2 shifts respectively during the six month survey period, averaging to 22% for the total program. The actual shifts used were 62.85, 41.75 and 15.5 for VILSPA, US1 and US2 shifts respectively, bringing the total number of shifts to 120. The difference in the allocated and effective shifts used was covered by transferring normal IUE programs to RIASS under specific request of G.O.s and IUE contingency shifts under mutual agreement of the ESA and NASA IUE Project Scientists.

Further details of the RIASS program organization and scheduling have been given in progress reports made to the IUE Three-Agency Coordination Committee in January of 1991.

### **3 - Performance and Efficiency of the RIASS Program.**

The integrated scheduling approach adopted in this program made the normal mode of IUE Guest Observer operations difficult to accommodate and a service observing scheme was employed at both stations. At NASA, the level of effort required for this scheme was far beyond service observing support performed in the past. Special observational requests within the RIASS program, such as variable star monitoring programs and target of opportunity observations, were accommodated in this extended service observing mode. An increase of about 1.5 full-time staff members over the current NASA IUE operations staffing level was required to coordinate and support the total of 57 RIASS shifts in this manner.

The RIASS strategy was revealed to be an efficient one which allowed observations of targets of different nature within one shift. The efforts of observatory staff members at both stations also allowed prompt and extensive RIASS target of opportunity observations of an outburst of the dwarf nova VW Hyi. On the whole, only a very small fraction of the scheduled targets were observed outside the nominal ROSAT visibility period due to satellite constraints and higher priority normal IUE

programs. During the entire program 454 observations (255 SWP and 199 LWP spectra) were made of 128 targets requiring a total of 669 hours of exposure time. Observationally, a 70% efficiency can be claimed based on the exposure times and actual shifts used. Taking into account the different types of objects, cool stars, interacting binaries, and AGN, the highest efficiency was achieved by the latter group ( $\sim 80\%$ ) due to the very long exposures times. The present estimated observing efficiency for regular IUE G.O. programs is  $\sim 60\%$ . Although it appears that the RIASS program has been especially efficient in terms of exposure time on target when compared to regular programs, this is clearly at least partly due to the large number of long exposures employed. Still, it is reassuring to see that the overall efficiency of the program has been high.

#### **4 - Results of the RIASS program.**

Presently, early ROSAT Sky Survey processing has been completed for some 25% of the X-ray and all of the EUV data. These X-ray data and all IUE data have now been delivered to PI's in the RIASS program. Unfortunately, the proprietary period for some of the IUE data collected during the beginning of the survey has expired while the corresponding ROSAT data are not yet available. This negative aspect is due to unforeseen software extraction problems of the X-ray survey procedure.

The first results of this unique effort are now available. These results are representative of some of the research fields which have made up a major part of the RIASS program: stellar activity and AGN studies. For the stars the emphasis was on the study of accretion and coronal phenomena, while the AGN studies were concentrated on variability studies of individual objects and statistical properties.

Figure 1 shows some of the light curves of the six days of RIASS observations of the spotted red dwarf flare star in the binary system BY Draconis. An activity event took place during this period and has been detected in most wavelengths bands. Such observations will allow a detailed study of the relationship between chromosphere, transition region and corona during a flare, as well as the determination of the

emission measure distribution up to  $3 \cdot 10^6$  K and hence the instantaneous modeling of the outer atmosphere.

Figure 2 shows the instantaneous UV/soft X-ray luminosity ratio as a function of the redshift of the source for 8 of the 24 AGN observed and processed so far. It shows an unexpectedly strong relative increase in the intensity of the UV emission with respect the soft X-rays with increasing red-shift. This might be a luminosity effect or a strong wavelength dependence of AGN evolution. The point in the lower right part of the diagram is the only highly polarized QSO in the sample. Its location in the diagram supports the evidence that this class of objects really represents a distinct aspect of the AGN phenomena.

Table 1 lists the log of IUE observations made in support of the RIASS program.

## 5 - Summary.

The operational aspects of the RIASS program have been brought to a successful conclusion. There is every indication that the difficult observational requirements necessary to achieve the diverse scientific goals of the program have been satisfied to a high degree. To achieve this success it was necessary to adopt an integrated scheduling and service observing mode for the IUE observations which proved to be more labor intensive than the normal mode of operations. Considered as an experiment in a new mode of IUE operations, the RIASS program has yielded some useful lessons while demonstrating the feasibility of conducting a large scale campaign involving coordinated observations with IUE and other space telescopes. As a scientific opportunity, RIASS has generated a broad base of participation within the international astronomical community which has already begun to reap the scientific benefits of this program.

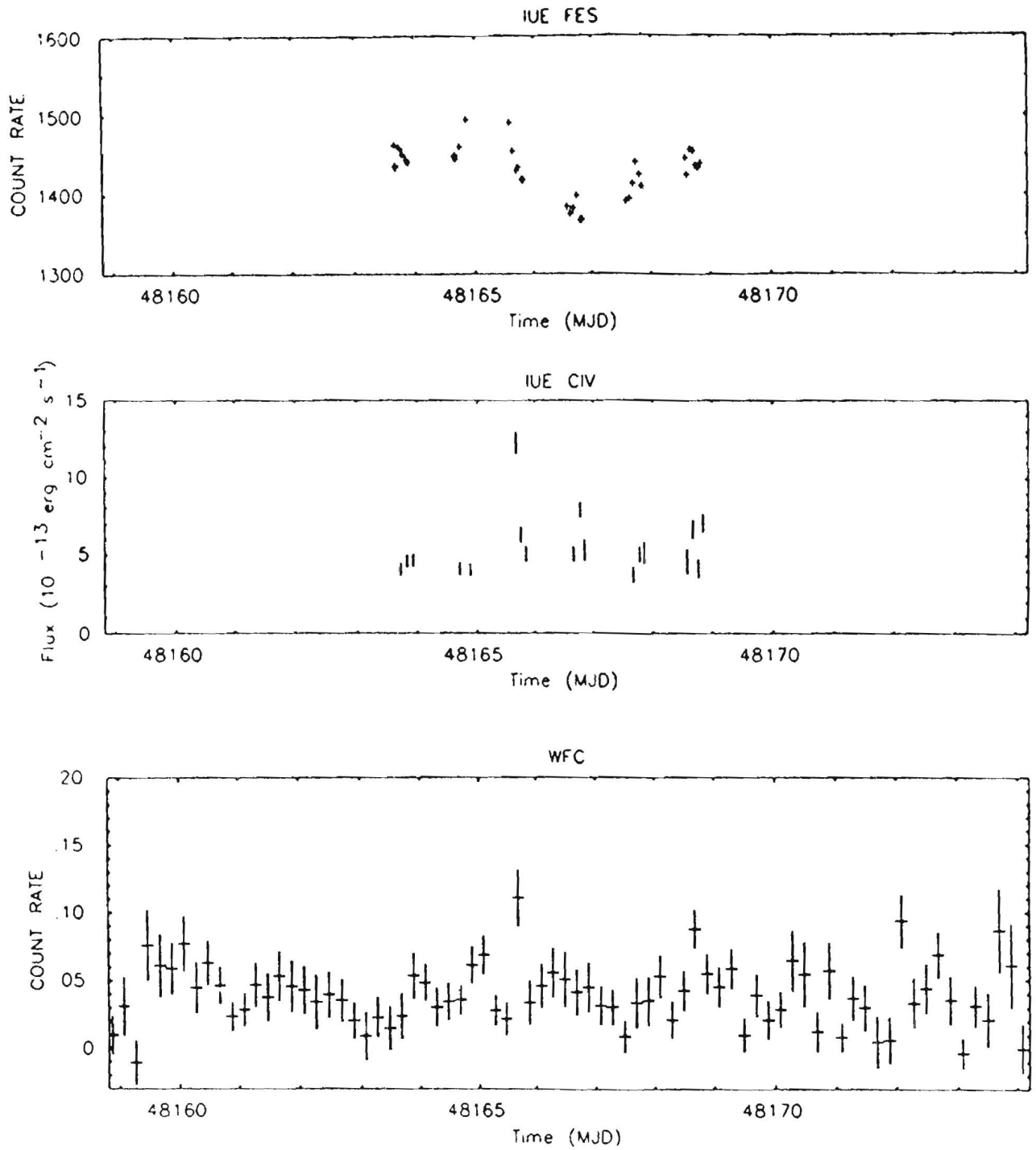


Fig. 1:

These three diagrams show the RIASS observations of the spotted dwarf star BY Dra (P.I.: M.Barstow, University of Leicester). Top: IUE-FES (5400 A); Middle: IUE CIV line emission (1549 A); Bottom: ROSAT-WFC (60-300 A).

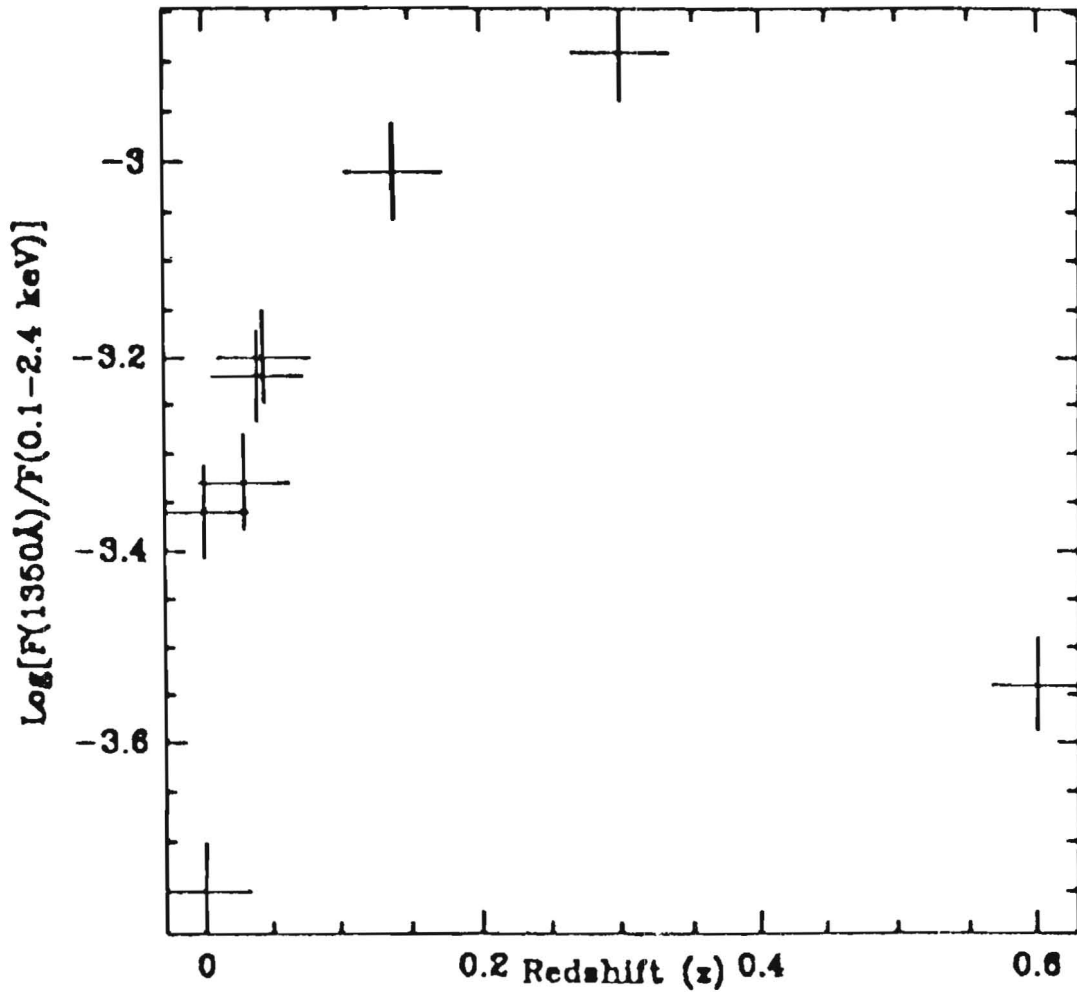


Fig. 2:

UV/X-ray flux ratio versus redshift for a selected sample of AGN in the RIASS program.

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	280 min			SEP-06-1990/US1
	LWP18715	Low	130 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|SWP39558 | Low | 388 min |Wilkes (N) | AGMBW| AUG-31-1990/VIL  
JAN-18:JAN-25|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  
|SWP40691 | Low | 333 min | | | JAN-27-1991/VIL

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 SEP-23:SEP-26	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 OCT-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 OCT-08:OCT-11	SWP39801	Low	4 min	Ayres (N)	CCMTA	OCT-09-1990/VIL
HD 64511 OCT-08:OCT-10	SWP39800	Low	70 min	de Martino (E)	MI180	OCT-09-1990/VIL
	LWP18974	Low	27 min			OCT-09-1990/VIL
HD 58978 OCT-10:OCT-13	SWP39806	High	2m 50s	Henrichs (E)	MI180	OCT-11-1990/US2
	LWP18982	High	1m 30s	Henrichs (E)	MI180	OCT-11-1990/US2
HD 61064 OCT-09:OCT-11	SWP39807	Low	55 min	Ayres (N)	CCMTA	OCT-11-1990/US2
	LWP18983	High	70 min	Ayres (N)	CCMTA	OCT-11-1990/US2
H1821+643 OCT-13:NOV-19	SWP39826	Low	290 min	Halpern (N)	QSMJH	OCT-13-1990/US1
	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 OCT-13:OCT:16	SWP39837	Low	10 min	Nussbaumer (E)	MI180	OCT-15-1990/US1
	LWP19015	Low	8 min	Stencil (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 OCT-16:OCT-20	SWP39842	Low	400 min	Ulrich (E)	MQ180	OCT-16-1990/US1
CK VUL OCT-17:OCT-20	SWP39860	Low	750 min	Krautter (E)	MI180	OCT-18-1990/COL
HD 187399 OCT-19:OCT-23	SWP39888	High	80 min	de Martino (E)	MI180	OCT-20-1990/US1
HD 106677 OCT-21:OCT-26	LWP19045	High	30 min	Linsky (N)	RSMJL	OCT-20-1990/US1
	SWP39889	Low	75 min	Rodono' (E)	MC180	OCT-20-1990/US1
HD 72779 OCT-18:OCT-21	SWP39890	Low	95 min	Ayres (N)	CCMTA	OCT-20-1990/US1
Mrk 509 OCT-23:OCT-25	SWP39925	Low	30 min	Westergaard (E)	MQ180	OCT-23-1990/US2
	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 OCT-22:OCT-25	SWP39927	Low	94 min	de Martino (E)	MI180	OCT-23-1990/VIL
	LWP19052	Low	94 min			OCT-23-1990/VIL
JUPITER OCT-24:OCT-26	SWP39931	Low	15 min	Clarke	SAMJC	Oct-24-1990/US2
	SWP39932	Low	15 min	Clarke	SAMJC	Oct-24-1990/US2
	SWP39933	Low	15 min	Clarke	SAMJC	Oct-24-1990/US2
	SWP39934	Low	15 min	Clarke	SAMJC	Oct-24-1990/US2
	SWP39935	Low	15 min	Clarke	SAMJC	Oct-24-1990/US2
	SWP39936	Low	15 min	Clarke	SAMJC	Oct-24-1990/US2
	SWP39937	Low	15 min	Clarke	SAMJC	Oct-24-1990/US2
	SWP39938	Low	15 min	Clarke	SAMJC	Oct-24-1990/US2
	SWP39952	High	30 min	Clarke	SAMJC	Oct-26-1990/US2

		Low	+ 6 min	Clarke	SAMJC	Oct-26-1990/US2
		High	+30 min	Clarke	SAMJC	Oct-26-1990/US2
	SWP39953	Low	15 min	Clarke	SAMJC	Oct-26-1990/US2
	SWP39954	Low	15 min	Clarke	SAMJC	Oct-26-1990/US2
	SWP39955	Low	15 min	Clarke	SAMJC	Oct-26-1990/US2
	SWP39956	Low	15 min	Clarke	SAMJC	Oct-26-1990/US2
	SWP39957	Low	15 min	Clarke	SAMJC	Oct-26-1990/US2
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 NOV-03:NOV-08	SWP40060	Low	65 min	Ayres (N)	CCMTA	NOV-05-1990/US1
Mrk 279 NOV-05:NOV-10	SWP40074	Low	120 min	Gakell (N)		NOV-07-1990/VIL
	LWP19173	Low	107 min			NOV-07-1990/VIL
H0139-68 NOV-07:NOV-13	SWP40082	Low	227 min	de Martino (E)	MI180	NOV-08-1990/US1
	LWP19175	Low	165 min			NOV-08-1990/US1
HD77137;TYPyx NOV-10:NOV-13	FES 2383	Full-field		Rodono' (E)	MC180	NOV-10-1990/US2
	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 NOV-14:NOV-17	SWP40124   LWP19235	Low   High	100 min   40 min	Rossi (E)   Ayres (N)	MC180 CCMTA	NOV-17-1990/US2 NOV-17-1990/US2
N LMC 88#2 NOV-03:NOV-26	SWP40135   FES 2394	Low   Default	830 min	Krautter (E)	MI180	NOV-18-1990/COL NOV-18-1990/VIL
HD 201091 NOV-18:NOV-22	SWP40140	Low	185 min	Ayres (N)	CCMTA	NOV-19-1990/VIL
HD 85444 NOV-18:NOV-20	LWP19249   SWP40145   LWP19250	High   Low   Low	50 min   90 min   0m 15sec	Haisch (N)	CCMBH	NOV-20-1990/US2 NOV-20-1990/US2 NOV-20-1990/US2
HD 212571 NOV-21:NOV-23	LWP19261   SWP40157	High   High	45 sec   1m 20sec	Henrichs (E)   Peters (N)	MI180 XBMGP	NOV-21-1990/US1 NOV-21-1990/US1
NGC 4051 NOV-21:NOV-24	SWP40161   LWP19265   SWP40162	Low   Low   Low	133 min   133 min   100 min	Green (N)   Walter (E)	MQ180	NOV-22-1990/VIL NOV-22-1990/VIL NOV-22-1990/VIL
Fairall 9 NOV-22:NOV-26	LWP19270   SWP40179   SWP40180	Low   Low   Low	50 min   100 min   20 min	Walter (E)	MQ180	NOV-23-1990/US1 NOV-23-1990/US1 NOV-23-1990/US1
HD 129333 NOV-23:NOV-29	LWP19285   SWP40203	High   Low	90 min   300 min	Guinan (N)	RSMEG	NOV-26-1990/US1 NOV-26-1990/US1
NGC 4151 NOV-26:NOV-29	SWP40207   LWP19289	Low   Low	100 min   50 min	Walter (E)	MQ180	NOV-27-1990/VIL NOV-27-1990/VIL
HD 200120 NOV-24:NOV-29	SWP40208	High	1m 15sec	Peters (N)	XBMGP	NOV-27-1990/VIL
AG DRA NOV-24:DEC-04	SWP40226   LWP19313   SWP40227	Low   Low   High	10+2 min   10+4 min   71 min	Stencel (N)   Nussbaumer (E)   Viotti (E)	ZAMRS MI180 MI180	NOV-29-1990/VIL NOV-29-1990/VIL NOV-29-1990/VIL
MRK 876 NOV-30:DEC-11	SWP40246   LWP19339   SWP40274   LWP19355   SWP40289   LWP19372   SWP40305   LWP19380	Low   Low   Low   Low   Low   Low   Low	240 min   125 min   240 min   109 min   240 min   170 min   240 min   154 min	Ulrich (E)	MQ180	DEC-02-1990/VIL DEC-02-1990/VIL DEC-05-1990/VIL DEC-05-1990/VIL DEC-08-1990/VIL DEC-08-1990/VIL DEC-10-1990/VIL DEC-10-1990/VIL
HD 222800 DEC-02:DEC-05 (JET)	SWP40263   LWP19348   SWP40265   SWP40264	Low   Low   High   Low	30 min   30 min   115 min   180 min	Viotti (E)   Stencel (N)	MI180 ZAMRS	DEC-03-1990/US1 DEC-03-1990/US1 DEC-03-1990/US1 DEC-03-1990/US1
HD 222107 DEC-30:JAN-03	LWP19349   SWP40266   LWP19500   SWP40500   SWP40693   LWP19655	High   Low   High   Low   Low   High	4 min   30 min   4 min   30 min   30 min   4 min	Guinan (N)   Rodono' (E)   Guinan (N)   Rodono' (E)   Guinan (N)   Rodono' (E)	RSMEG MC180 RSMEG MI180 RSMEG MC180	DEC-04-1990/US2 DEC-04-1990/US2 DEC-31-1990/US2 DEC-31-1990/US2 JAN-27-1991/US2 JAN-27-1991/US2
HD 108102 DEC-07:DEC-09	LWP19377   SWP40294   LWP19378	High   Low   Low	210 min   120 min   4m 40sec	Linsky (N)   Rodono' (E)	RSMJL MC180	DEC-09-1990/VIL DEC-09-1990/VIL DEC-09-1990/VIL
HD102870 DEC-10:DEC-12	SWP40307   LWP19389	Low   High	65 min   20 min	Ayres (N)   Ayres (N)	CCMTA CCMTA	DEC-11-1990/VIL DEC-11-1990/US1
PG 1211+143 DEC-10:DEC12	SWP40308   LWP19386	Low   Low	200 min   60 min	Ulrich (E)	MQ180	DEC-11-1990/VIL 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 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	30 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	LWP19465	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	LWP19466	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-05	SWP40507	Low	393 min			DEC-31-1990/US1
	SWP40542	Low	370 min			JAN-06-1991/US1
HD 36705	SWP40491	Low	70 min	Collier (E)	MC180	DEC-30-1990/US2
DEC-12:JAN-16	LWP19493	Low	3 min	Rodono' (E)	MC180	DEC-30-1990/US2
	SWP40492	Low	90 min	Vilhu (E)	MC180	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 4502	LWP19501	High	15 min	Linsky (N)	RSMJL	DEC-31-1990/US2
JAN-02:JAN-04	SWP40501	Low	20 min	Rodono' (E)	MC180	DEC-31-1990/US2
	LWP19502	High	10 min			DEC-31-1990/US2
NGC 5548	SWP40531	Low	50 min	Walter (E)	MQ180	JAN-05-1991/VIL
JAN-17:JAN-18	LWP19508	Low	50 min			JAN-05-1991/VIL
	SWP40532	Low	50 min			JAN-05-1991/VIL
MRK 478	LWP19509	Low	60 min	Gaskell (N)	AGMCG	JAN-05-1991/VIL
JAN-17:JAN-18	SWP40533	Low	50+50 min			JAN-05-1991/VIL
EX HYA	LWP19511	Low	30 min	de Martino (E)	MI180	JAN-06-1991/VIL
JAN-17:JAN-19	SWP40539	Low	40 min			JAN-06-1991/VIL
HD 115659	SWP40538	Low	85 min	Haisch (N)	CCMBH	JAN-06-1991/VIL
JAN-09:JAN-11						
HD 6903	SWP40544	Low	30 min	Ayres (N)	CCMTA	JAN-07-1991/US1
HD 1671	SWP40545	Low	110 min	Ayres (N)	CCMTA	JAN-07-1991/US1
JAN-03:JAN-05						
HD 150708	SWP40549	Low	100 min	Linsky (N)	RSMJL	JAN-08-1991/VIL
JAN-01:JAN-12	LWP19524	High	303 min	Rodono' (E)	MC180	JAN-08-1991/VIL
E1405-451	SWP40570	Low	82 min	de Martino (E)	MI180	JAN-12-1991/VIL
	LWP19555	Low	84 min			JAN-12-1991/VIL



MRK 590	SWP40591	Low	150 min	Peterson (N)	AGMBP	JAN-14-1991/US1
JAN-13:JAN-15	LWP19577	Low	90 min	Walter (E)	MQ180	JAN-14-1991/US1
HD 17206	SWP40592	Low	75 min	Ayres (N)	CCMTA	JAN-14-1991/US1
JAN-14:JAN-16	LWP19578	High	18 min			JAN-14-1991/US1
HD 14386	LWP19583	Low	5 min	Karovska (N)	LGMMK	JAN-15-1991/US1
JAN-13:JAN-16	SWP40597	High	374 min			JAN-15-1991/US1
	LWP19584	Low	3 min			JAN-15-1991/US1
HD 131156	SWP40635	Low	90 min	Jordan (E)	MC180	JAN-20-1991/VIL
JAN-19:JAN-21	LWP19606	High	25 min	Ayres (N)	CCMTA	JAN-20-1991/VIL
HD 124850	SWP40636	Low	35 min	Ayres (N)	CCMTA	JAN-20-1991/VIL
JAN-19:JAN-21						
HD 134083	SWP40637	Low	95 min	Ayres (N)	CCMTA	JAN-20-1991/VIL
JAN-20:JAN-23	LWP19658	High	30 min	Ayres (N)	CCMTA	JAN-27-1991/US2
HD 17925	SWP40670	Low	90 min	Ayres (N)	CCMTA	JAN-24-1991/US1
JAN-21:JAN-23						
EF Eri	LWP19643	Low	60 min	de Martino (E)	MI180	JAN-24-1991/US1
JAN-23:JAN-25	SWP40671	Low	120 min			JAN-24-1991/US1
Mrk 841	SWP40674	Low	160 min	Ulrich (E)	MQ180	JAN-25-1991/VIL
JAN-24:JAN-25	LWP19648	Low	80 min	Walter (E)	MQ180	JAN-25-1991/VIL
HD 112091	SWP40675	High	6 min	de Martino (E)	MI180	JAN-25-1991/VIL
JAN-25						
HD 5394	SWP40692	High	8 sec	Peters (N)	XBMGP	JAN-27-1991/US2
	LWP19654	High	6 sec	de Martino (E)	MI180	JAN-27-1991/US2
HD 33262	SWP40694	Low	40 min	Rossi (E)	MC180	JAN-27-1991/US2
	LWP19656	High	20 min	Ayres (N)	CCMTA	JAN-27-1991/US2
HD 110432	LWP19657	High	3 min	de Martino (E)	MI180	JAN-27-1991/US2
	SWP40695	High	9 min			JAN-27-1991/US2

## FES Photometric Response at the New Reference Point (-144, -176)

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### ABSTRACT

With the implementation of a new FES reference point (-144, -176) in January 1990 at GSFC, and in July at VILSPA it has become necessary to calibrate this new reference point. In this report we present a preliminary FES calibration based on the previous reference point and on a preliminary attempt to derive on "first principles" a new calibration for this reference point. By accurate FES measurements of 17 overlap and 27 underlap UBV standard stars we have determined new zero points for both modes. As an example, for the IUE overlap standard star HD 60753 we achieve a photometry accuracy of 0.006 magnitude with the proper removal of the focus dependency on the counts.

### I. Motivation and Methods

On January 22, 1990 at GSFC and on July 23, 1990 at VILSPA, a new FES reference point (-144, -176) was implemented to replace the fatigued old reference point (-16,-208). Due to the heavy usage of the FES counts to derive light curves and optical fluxes while observing with IUE it has become increasingly important to obtain a calibration for the current reference point. Although the FES data on this new reference point is somewhat limited we present a preliminary photometric calibration. We have attempted this calibration, via comparisons with the photometric efficiency of the old reference point, and via a preliminary calibration based on "first principles." From the experience obtained in the two previous reference points, the parameters that have been known or suspected to impact the counts are: stellar color (B-V) (Wasatonic 1985), focus step (Huber and Pérez 1991), radiation (Imhoff et al. 1986) and, in a lesser degree, the FES temperature.

**1. Comparison with old Ref. Point.** The reference point at (-16, -208) has been extensively studied and there are many published preliminary attempts describing the time dependence, color, dead-time, and zero point corrections. By considering the FES counts as recorded on the observing scripts at both reference points for six IUE standard stars (three overlap, i.e., HD 60753, HD 93521 and BD +33° 2642 and three underlap, i.e.,  $\zeta$  Cas,  $\lambda$  Lep and  $\tau$  Sco) it has been derived that the efficiency of the new reference point is 28.7% for overlap stars, and 14% for underlap stars for data taken until mid-1990 (Huber and Pérez 1991). An approximate method to convert FES counts to magnitudes, via the previous reference point, would be to 'degrade' the counts in the percentages indicated above and use the time correction (equation (1) below from Fireman and Imhoff 1989) for the observing epoch and the color and magnitude equations given in Imhoff and Wasatonic (1986, equations 2 and 3). For example, for overlap stars the time correction term is,

$$CTS(corr) = \frac{CTS(obs)}{(1 - 0.0413 \times (T - 1981.65))} \quad (1)$$

We have applied this method to the raw FES counts of the most observed IUE standard star HD 60753 displayed in Figure 1. The results in magnitudes are seen in Figure 2. We note the apparent

degradation with time seen in Figure 1 as detected by the least square fit of the counts. The mean error between the catalog magnitude and the predicted magnitudes, via the old reference point, is only 0.042 mag (dashed line) for all the 76 FES points considered. It is interesting to point out that since this method has a time correction incorporated and no apparent degradation has yet been detected at the new reference point, it will overcorrect the estimated magnitudes for observing dates after 1990.0. Hence, this method is of some potential use for obtaining FES magnitudes while the new reference point is being fully calibrated, especially for data taken during 1990. The value of T in equation (1) should be 1990.0 for all cases.

**2. Preliminary Calibration.** We have performed on a limited star sample some accurate FES measurements of UBV standards in order to re-derive the photometric calibration of the new reference point.

**2.1. Zero Point.** We have started a calibration effort to convert FES counts into magnitudes at the current reference point by accurately measuring the mean FES counts of UBV standard stars in selected star fields. Up to now, we have measured 17 fast and slow track/overlap stars in the Praesepe cluster (Johnson 1954) and in the Harvard E-2 region (Graham 1982). Likewise, in more sparse fields 27 bright stars were measured to determine the underlap zero point. The initial equation of interest is,

$$m_V = -2.5 * \log\left[\frac{CTS}{1 - 1.2 \times 10^{-4} * CTS^{0.781}}\right] + K + Color, \quad (2)$$

where CTS are the observed FES counts. Equation (2) includes the photomultiplier dead-time and the color corrections as given by Imhoff and Wasatonic (1986). By using equation (2) we determined K to be  $16.3350 \pm 0.063$  valid for overlap stars and  $10.995 \pm 0.078$  for underlap stars. These zero points include substantial color corrections for the stars measured in both modes. This correction was taken from the previous reference point (Imhoff and Wasatonic 1986) and has the following form,

$$Color = -0.271087 \times (B - V) - 0.063880 \times (B - V)^2 + 0.137764 \times (B - V)^3. \quad (3)$$

**2.2. Focus Dependency.** A more detailed analysis of the observed FES counts taken at the new reference point of the IUE standard stars revealed a strong dependency of the counts against focus values. To illustrate this correlation we have plotted in Figure 4 the raw FES counts of the standard HD 60753 ( $V=6.69$ ,  $B-V= -0.09$ , Sp. Type= B3 IV) against the focus step ( $-6.89 \leq focus\ step \leq +0.26$ ) showing a least square fit to these counts. We note that the correlation factor is  $r=0.88$  and that the fit parameters are; A= y-intercept and B= slope. By similar tests done with guide stars in different areas on the FES we have found an analogous dependency of the counts with focus step. For the counts at the FES position of  $X=-90$  and  $Y=796$  (FES fine units) displayed in Figure 5, the normalized slope of the linear fit is 0.0228 (2.3%), whereas for HD 60753 in Figure 4, such a slope is 0.0223 (2.2%). Due to the lack of known optimal FES focussing conditions against focus step, the correction for the focus dependency is not trivial. We have estimated the mean focus steps from the 59 single measurements of the 17 stars used for the zero point determination and used it as a "focus zero point." This mean focus step was of -2.653. Therefore, each observed FES count for HD 60753 was corrected according to its associated focus step value by,

$$\Delta CTS = 144.933 \times (-2.653 - focus\ step). \quad (4)$$

Equation (4) can be generalized for any star in the following way,

$$CTS(corr) = CTS(obs)[1 + 0.022 \times (-2.653 - focus\ step)]. \quad (5)$$

The result of this correction is shown in Figure 6 along with the linear fit parameters. We note that after including this correction the difference between maximum and minimum counts is  $\Delta CTS = 516$ , in contrast to  $\Delta CTS = 1096$  for the observed counts.

**2.3. Radiation Dependency.** Having corrected for the largest source of scattering in the observed FES counts, we have plotted the corrected FES counts against the background radiation (FPM in volts) in Figure 8. We have detected a weak correlation ( $r=0.04$ ) between counts and the measured radiation levels ( $0.08 \leq FPM \leq 1.98$ ). Since the slope obtained from the fit follows the same trend described in Imhoff et al. (1986) for larger values of FPM, we have applied this small correction to the data.

**2.4. Degradation.** After correcting the data for focus and radiation dependency effects we have fitted the corrected counts versus time (Figure 9) in order to detect any degradation effects which may have occurred during this first year. Since the slope and correlation parameters are within the incidental errors we have concluded that no detectable degradation effects are yet seen at least for overlap stars.

**2.5. Final Results.** We have then used equation (2) to transform the corrected counts obtained from equation (5) into magnitudes obtaining the results shown in Figure 10. The catalog magnitude of HD 60753 ( $V = 6.69$ ) is also displayed as a solid line, whereas a dashed line indicates the least square fit of the predicted magnitudes. The mean error obtained, via this preliminary calibration, is about 0.006 or 6 milli-magnitudes.

**2.6. Case Study.** On October 6-7, 1990, IUE for 16 hours observed the largest of the minor planets, VESTA with the goal of obtaining a UV light curve as it rotates. A secondary result obtained from these observations was the optical light curve by using the FES as a photometer. Unfortunately the FES data were hampered with large changes of the focus step (Figure 11 and 12) throughout these shifts (low  $\beta$  attitude). After devising a correction scheme for the focus changes analogous to equation (5), the correction slope was determined to be 0.024 (2.4% per focus step) from recent measurements described in Pérez, Huber and Esper (1991). The need of obtaining accurate FES counts was motivated because the observed counts as seen in Figure 12, actually suggested a secondary period unknown to previous observers. After proper correction of such focus variations the known period of 5.321 hours was successfully recovered for the three periods observed (crosses, triangles and squares in Figure 13). Furthermore, from these observations a smaller amplitude in the light curve and a central dip at its maximum were also found. The FES photometric and spectral results of VESTA observations are being published by Festou, Stern and Tozzi (1990) in Icarus.

### III. Conclusions and Future Work

Use of the FES for photometry must be done cautiously because of the various effects on its performance. From the previous analysis it has been shown that the FES counts obtained at the

new reference point can be successfully converted into magnitudes either via the old reference point, preferably without considering the time correction, or more accurately, through the preliminary calibration scheme described here. We note that the typical FES photometric accuracy can be greatly improved by removing the focus dependency on the counts. This last effect has become more noticeable with the increasing power constraints on IUE as the spacecraft ages. We report that no degradation with time of the measured counts was detected for the first 11 months of usage of the current reference point. We point out that for even more accurate FES photometric measurements it is always advisable to opt for differential photometry by using one or several nearby comparison stars of known magnitudes (Guinan 1990).

Future work will include a new derivation of the color and dead-time corrections. We warn that the present calibration is *not* valid for FES data taken during the 'FES anomaly' experienced after January 22, 1991, where additional background scattered light was detected in the FES mainly at high beta attitudes. At the time of this writing this background has been reported to decrease substantially since its initial detection.

#### IV. References

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Figure 1

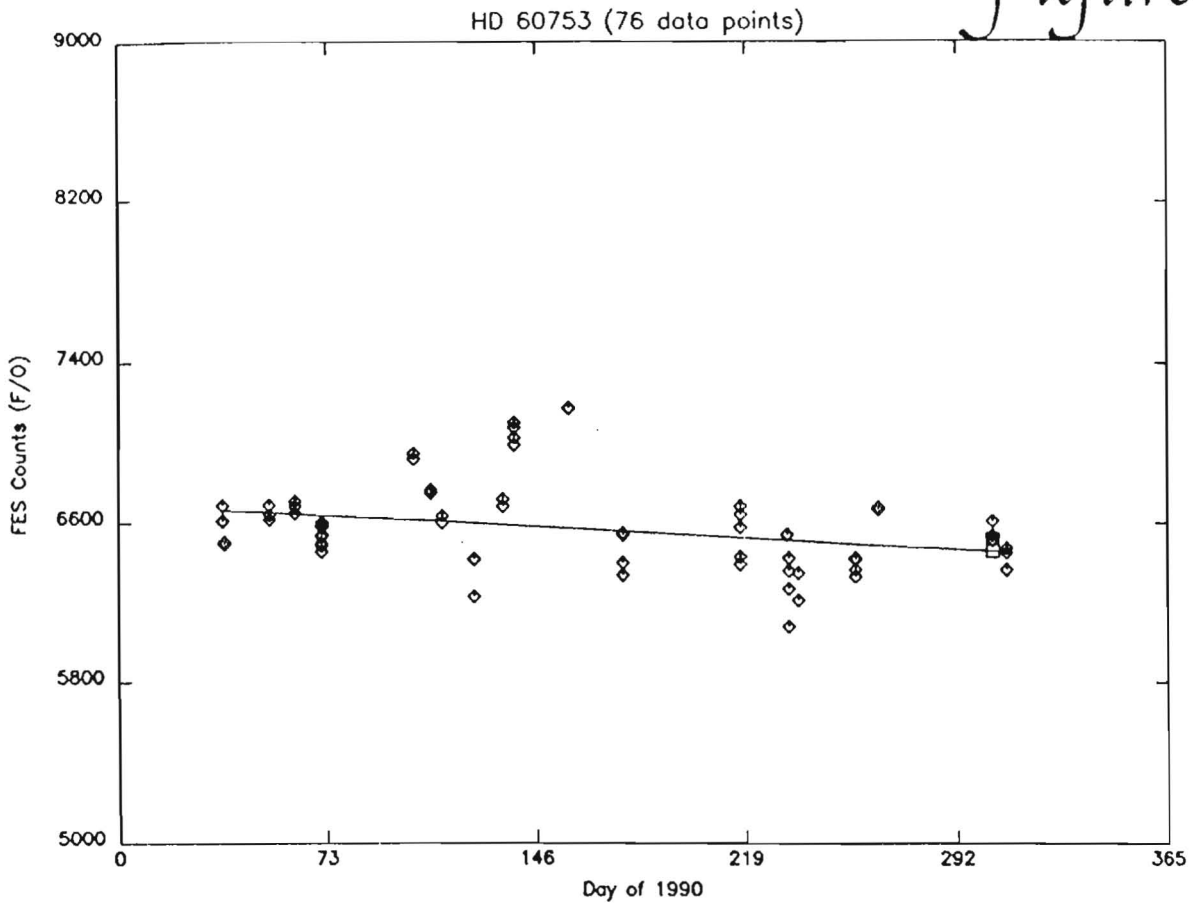


Figure 2

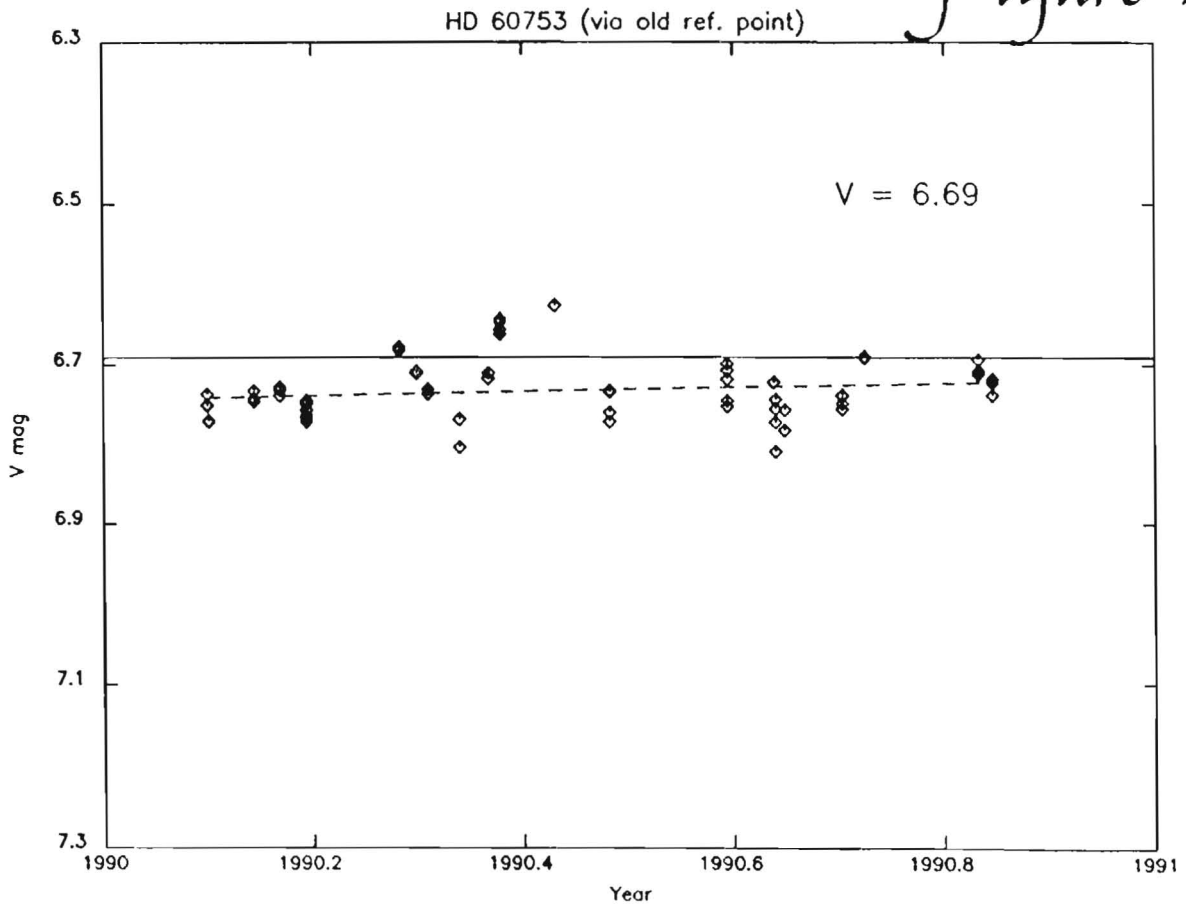


Figure 3

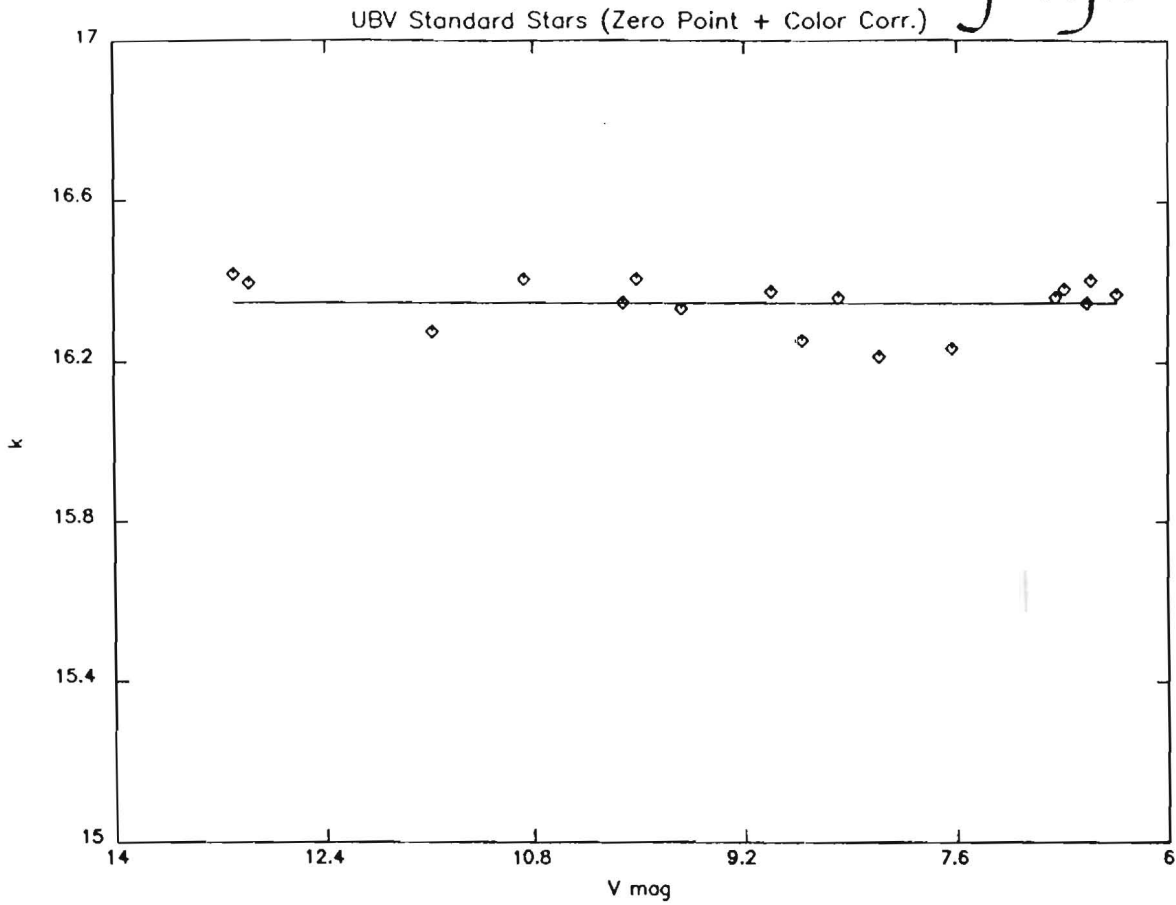


Figure 4

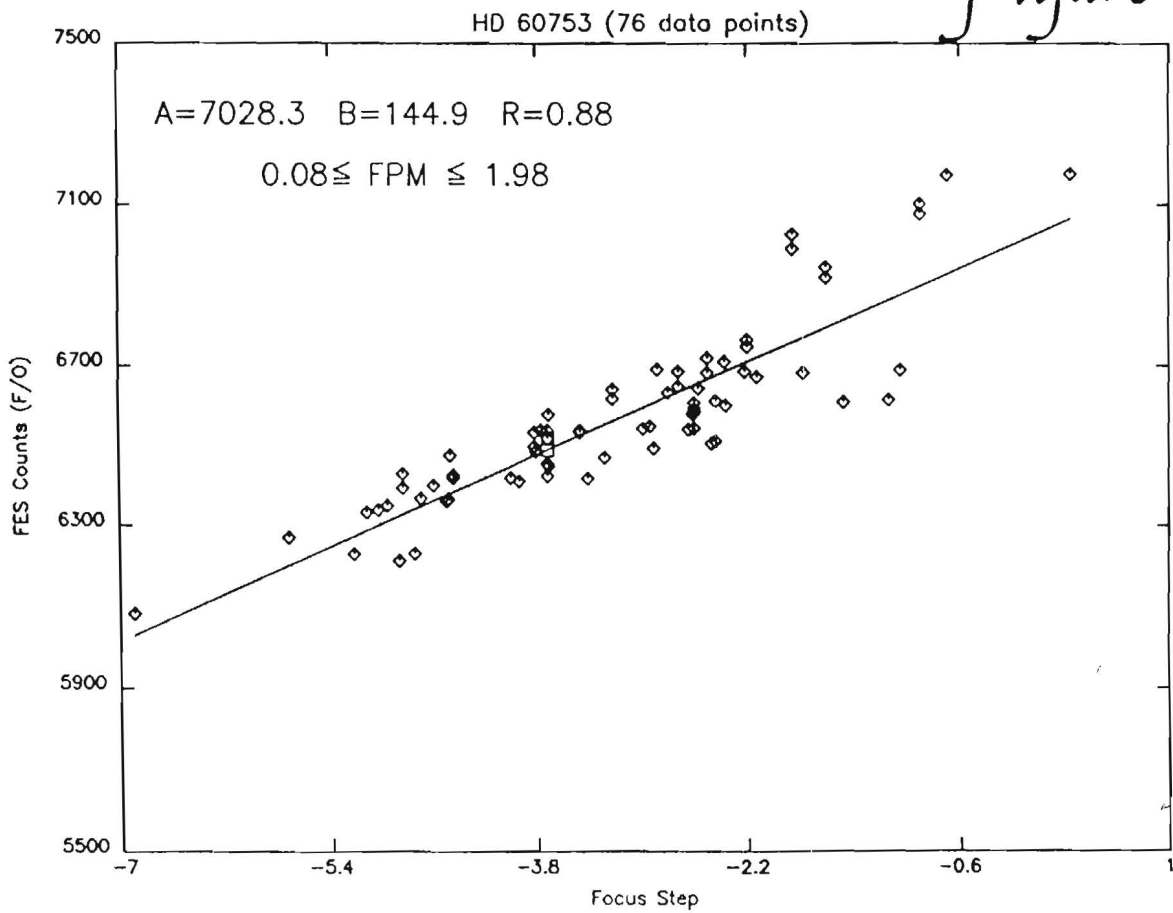


Figure 5

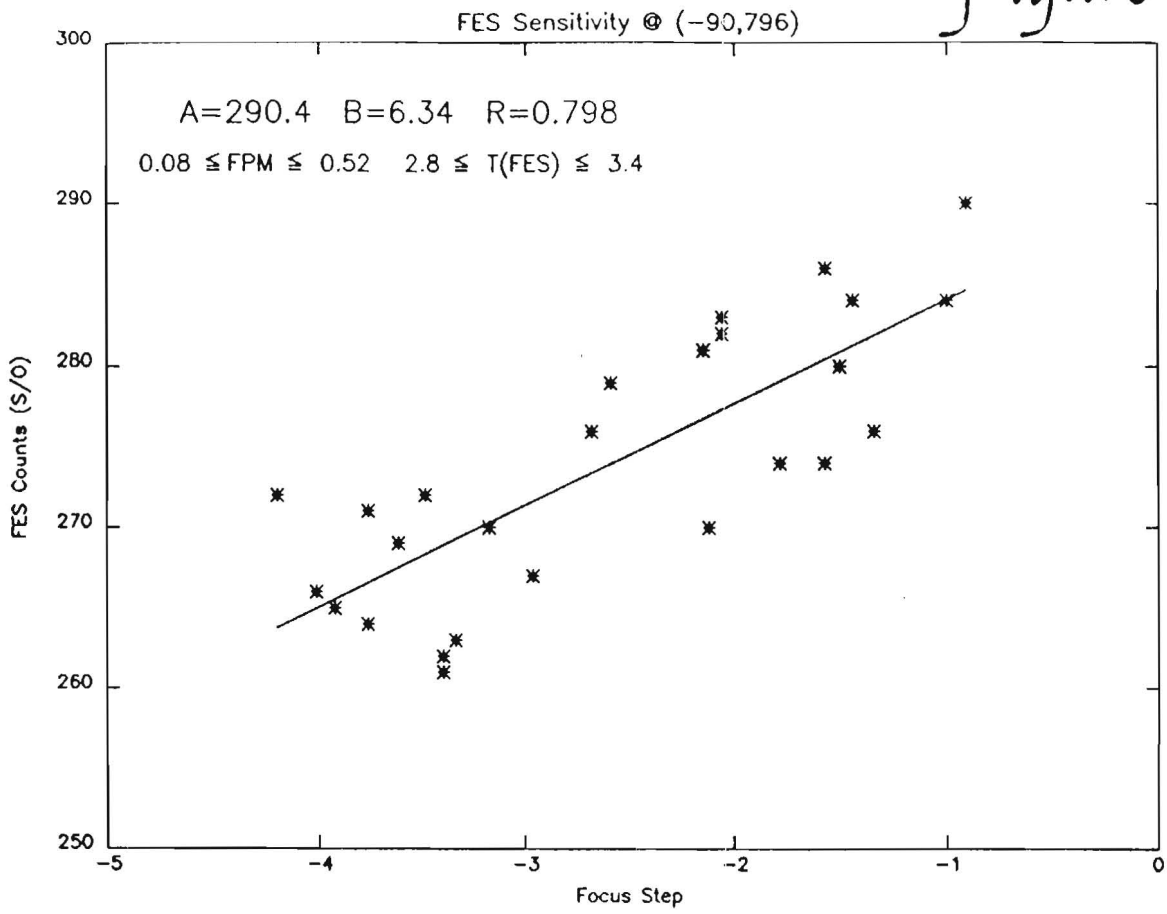


Figure 6

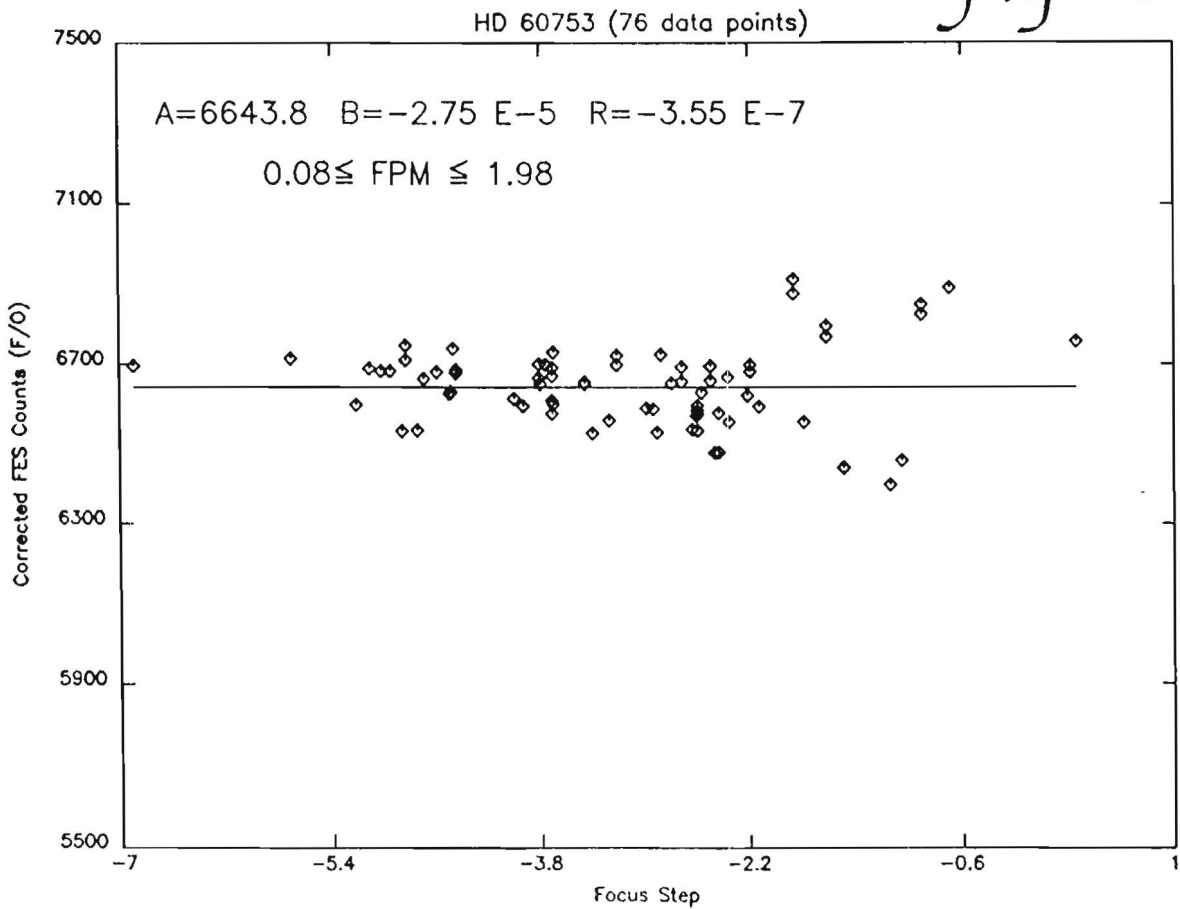




Figure 7

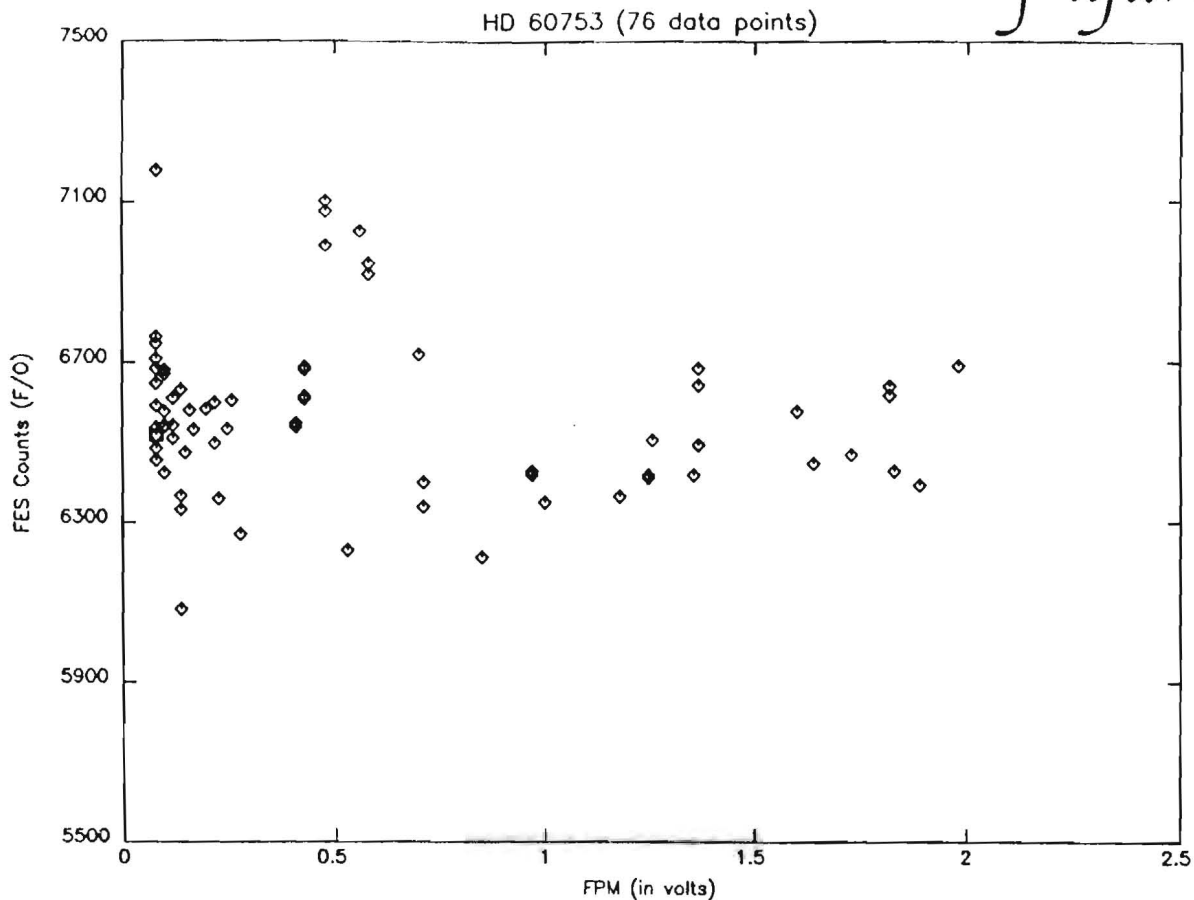


Figure 8

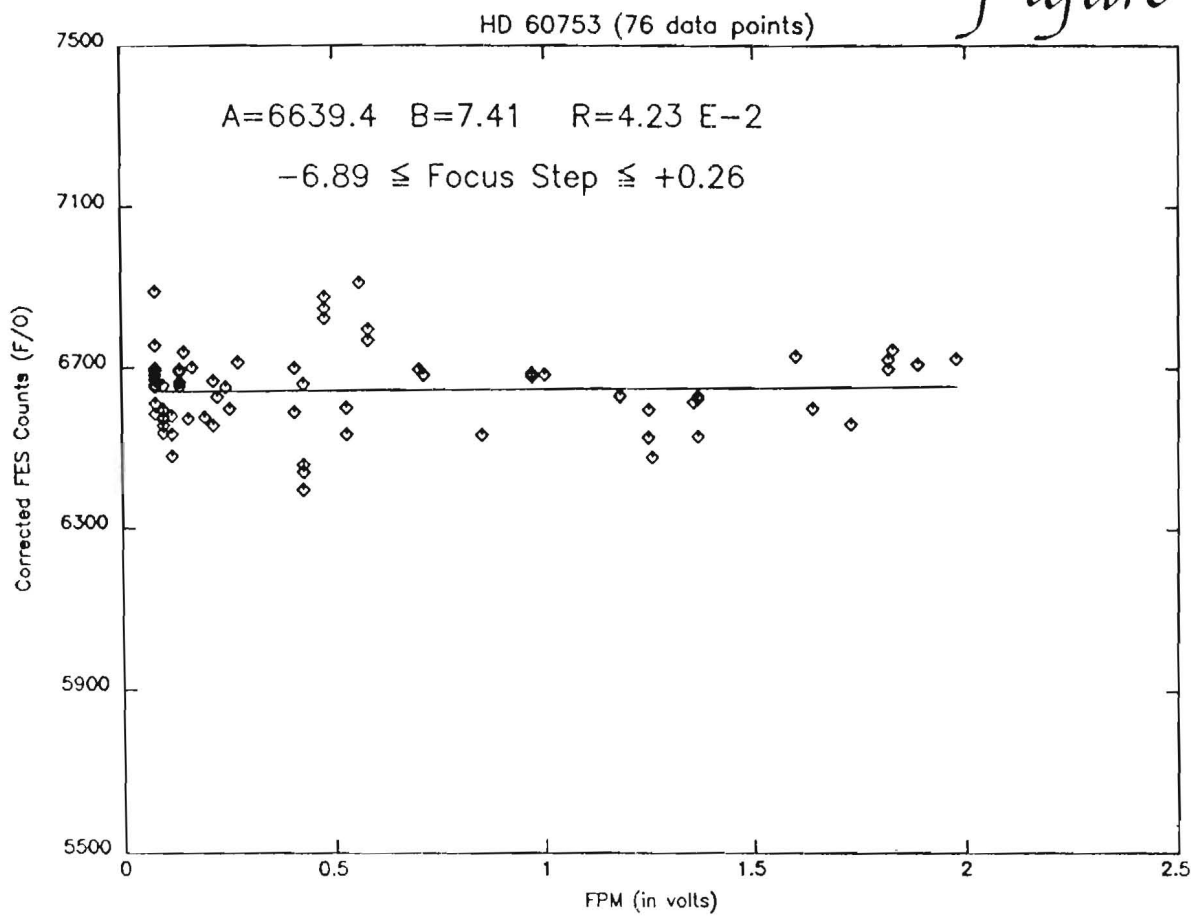


Figure 9

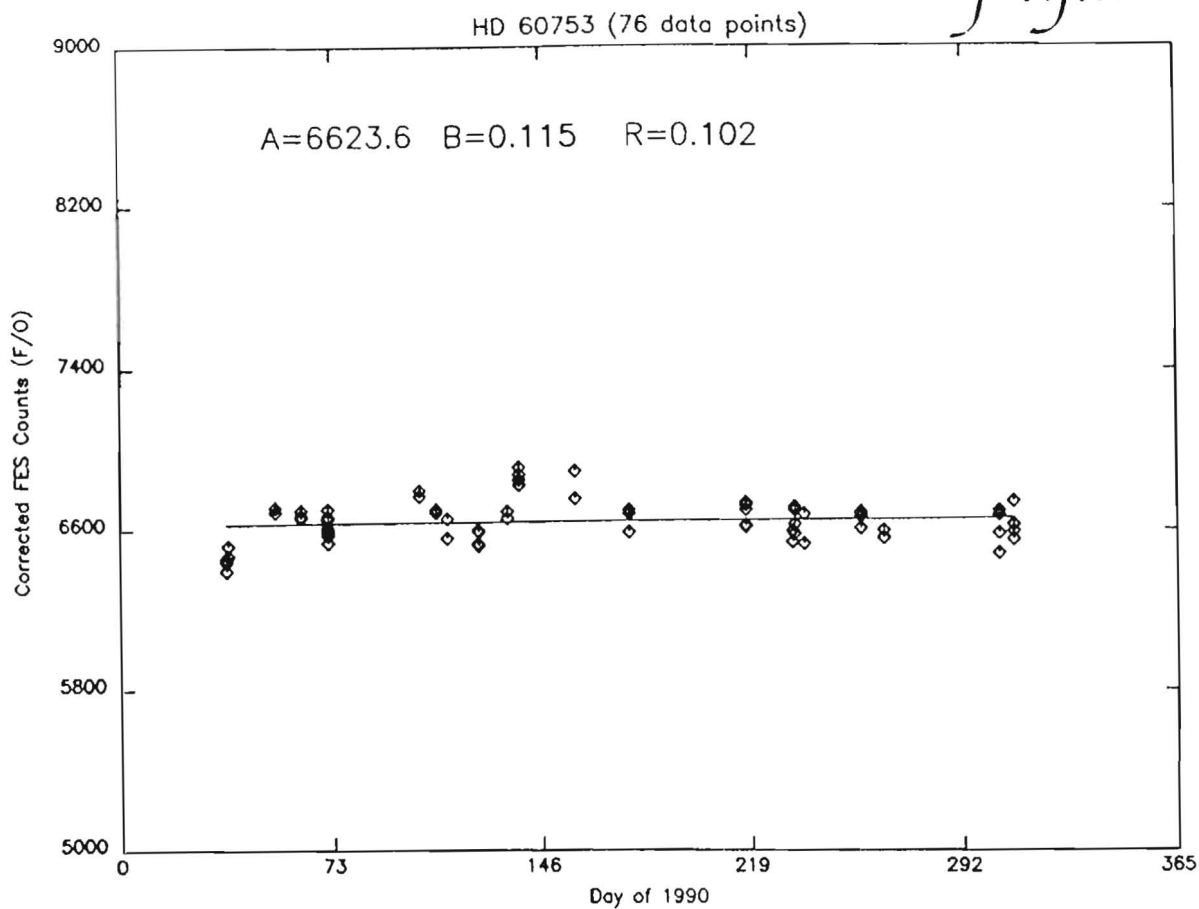


Figure 10

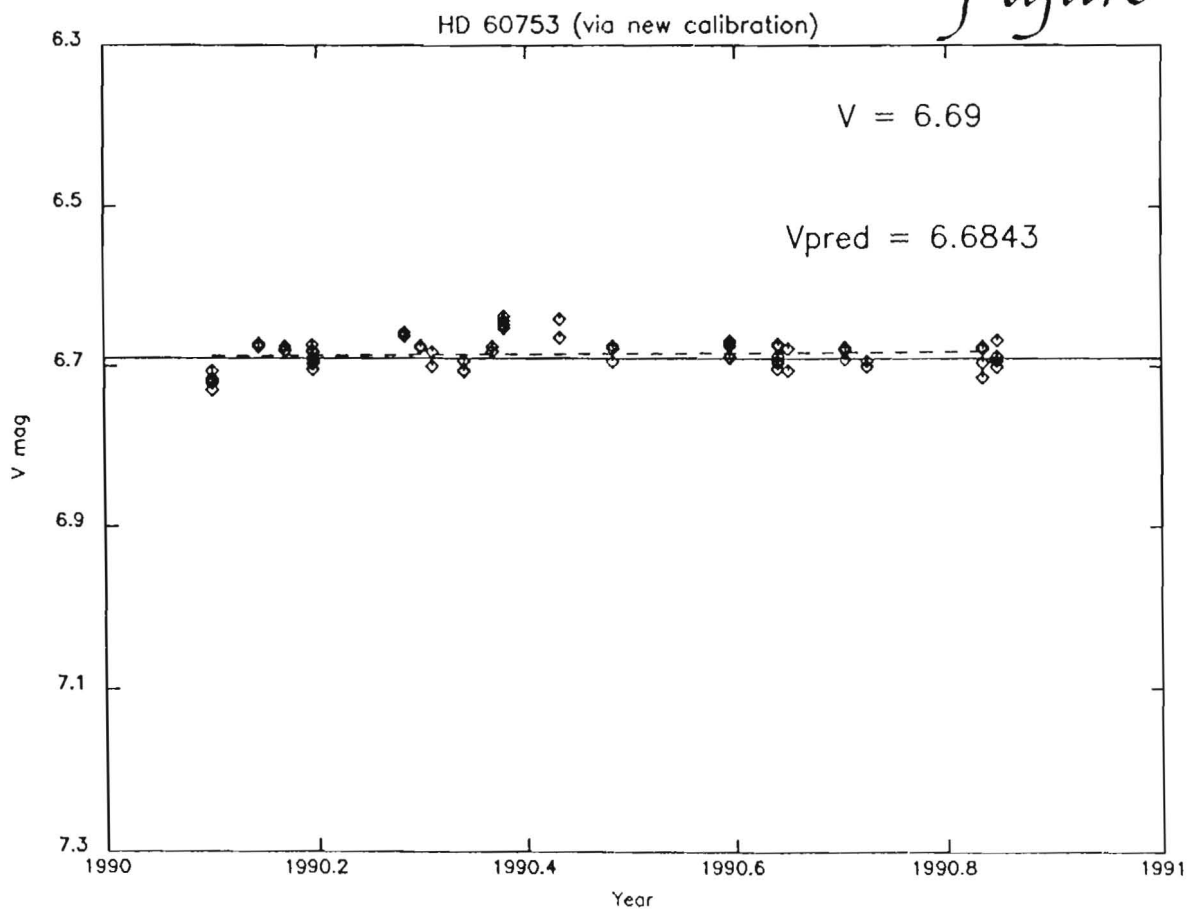


Figure 11

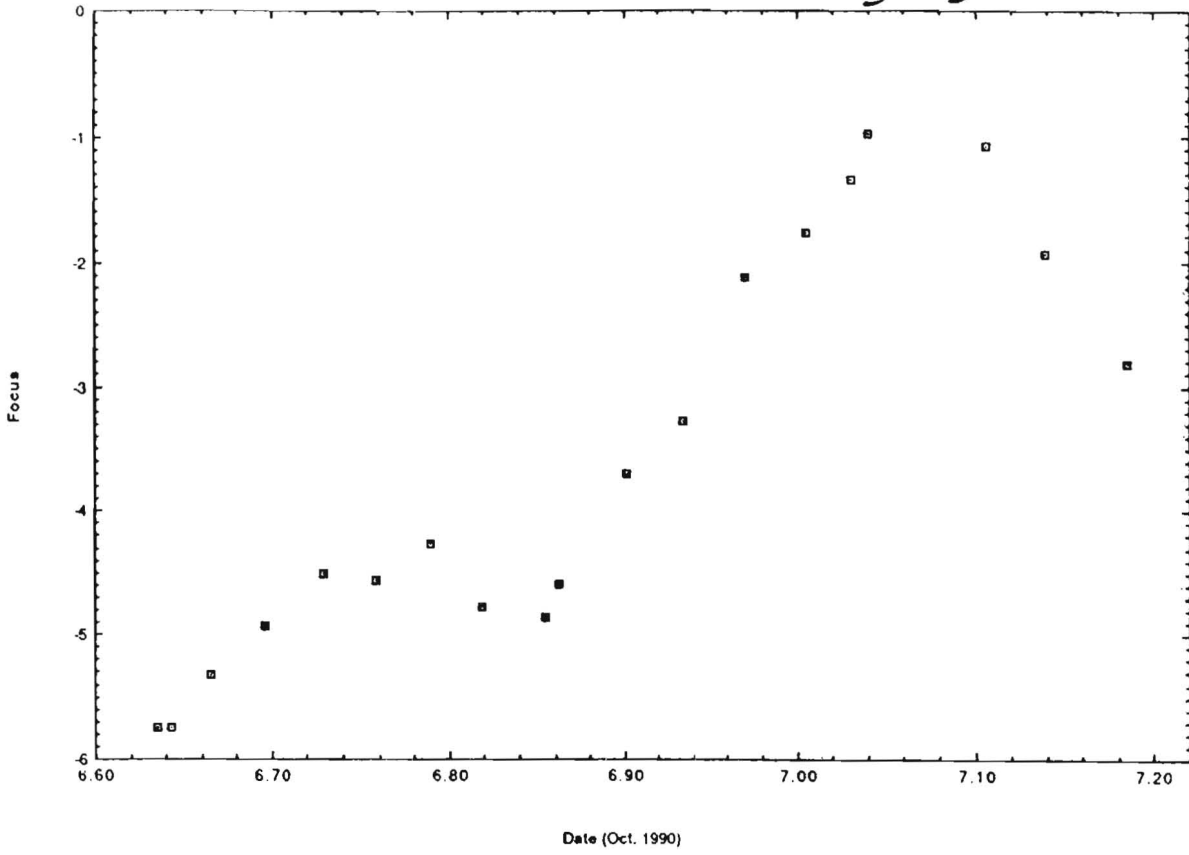


Figure 12

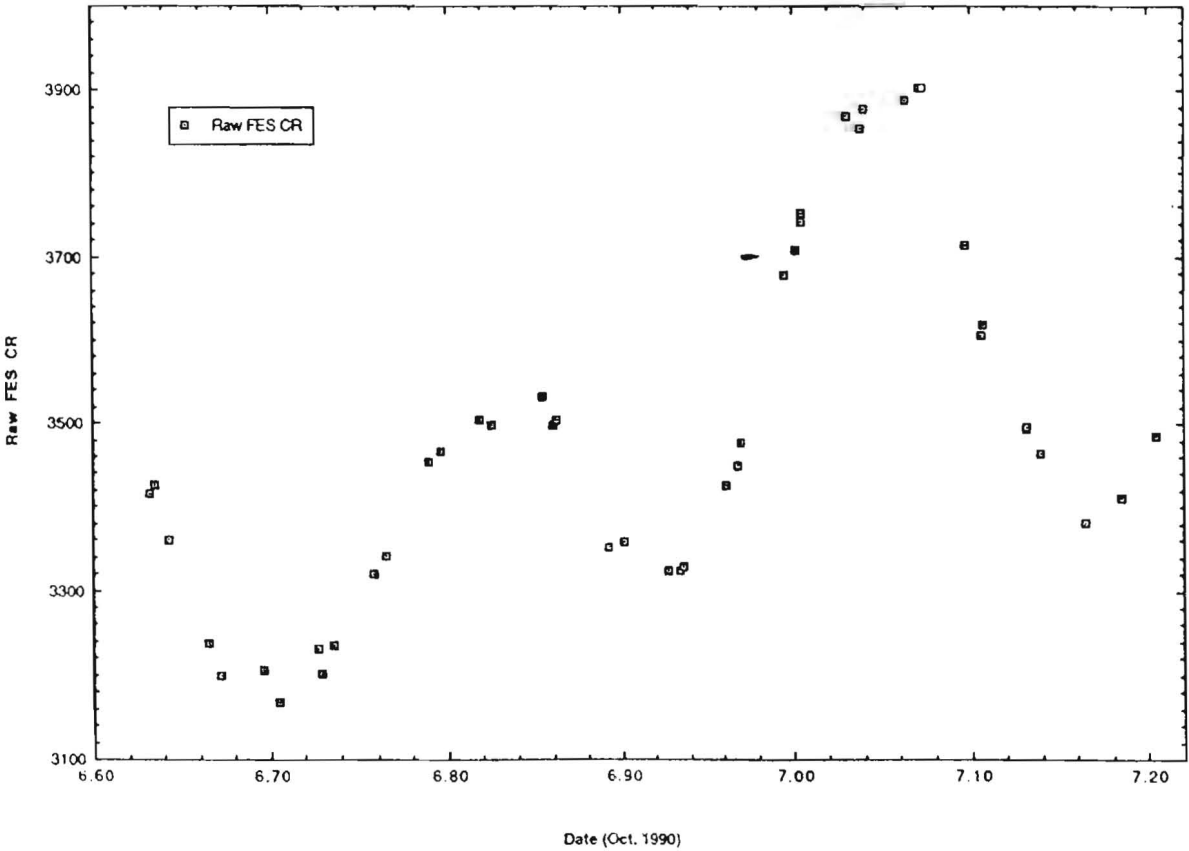
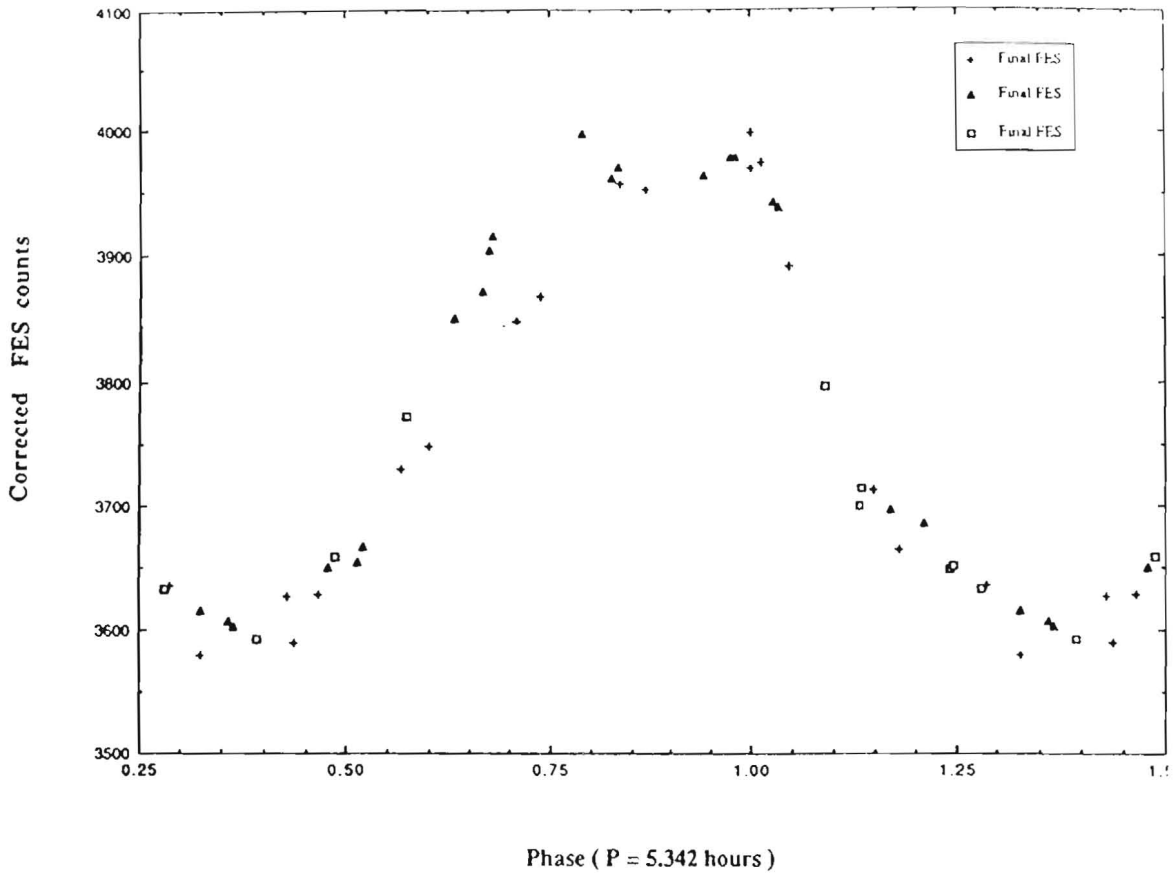


Figure 13



## The IUE Final Archive - II

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In the previous ESA IUE Newsletter (No. 36) we started a series of articles describing the IUE Final Archive. In the first one we gave a description of the different files which will be produced by the new processing system. In this one we shall describe a very important aspect of the Final Archive: the Core Data Items.

The Three Agencies decided at their meeting in November 1989 that a set of parameters characterizing the IUE images should be defined. These parameters will be verified at the stations reprocessing the IUE data for the Final Archive in order that all information of relevance for the creation and future use of the Archive be as accurate as possible.

These parameters are the Core Data Items (CDI's).

Two sets of core data items have been defined:

- The Core Data Items for Image Processing are all those containing information which is necessary for the new image processing system (NEWSIPS) throughout its different steps.
- The Core Data Items for Science Analysis are only relevant for the scientific interpretation of the data. Some of these items are obtained as results from NEWSIPS and therefore they are referred to as Output CDI's.

All CDI's related to an image are included in the FITS header, associated with each output file in the Final Archive, as special keywords defined by the project. The CDI's will be the basis for the future Final Catalog of IUE observations, the equivalent of the current Merged Log. We give in tables 1 and 2 the list of the CDI's and a short description of them. Table 1 contains the Image Processing items while Table 2 includes the Science Analysis and Output CDI's.

At VILSPA the CDI's are collected from different sources, including the current Database, the image headers and other special files. For most CDI's there are two values: the Primary - more reliable value - and the Secondary; both parameters will be verified interactively and compared with the hand-written observing log to correct possible errors or discrepancies in the data. The verification will be done both at VILSPA and at GSFC, each observatory verifying its own data.

The CDI's are important for the overall quality of the Archive in terms of data accuracy, reliability and homogeneity. This is the reason for the major effort that both observatories are making in the definition and also in the verification of this tremendous amount of information.

<b>Table 1: Core Data Items (Image Processing)</b>	
<b>Core Item</b>	<b>Description</b>
CAMERA	LWP, LWR, SWP, SWR
IMAGE	Image number
DISPERSN	Dispersion (High, Low, Both)
APERTURE	Aperture (Small, Large, Both)
DATE-OBS	Date of observation
TIME-OBS	Starting time
MJD-OBS	Modified Julian Date of observation (JD - 2400000.5)
EXPTRAIL	Trailed spectrum technique
EXPMULT	Multiple spectra in the large aperture
EXPSEGM	Segmented exposure
ABNNOSTD	Abnormality flag: non-standard image
ABNBADSC	Abnormality flag: camera bad scan
ABNHTRWU	Abnormality flag: heater warm-up
ABNREAD	Abnormality flag: non-standard read
ABNUVC	Abnormality flag: non-standard UVC voltage
ABNHIST	Abnormality flag: history replay
ABNOTHER	Abnormality flag: other abnormalities
READMODE	Image read fully or partially
READGAIN	Camera gain for reading
EXPOGAIN	Camera gain during exposure
EXPOTIME	Total exposure time
THDASTRT	Starting temperature of camera head amplifier
THDAEND	Final temperature of camera head amplifier
THDAREAD	Temperature of camera head amplifier at read time
RA	Right Ascension of target (homogeneous coordinates)
DEC	Declination of target (homogeneous coordinates)
EPOCH	Epoch for coordinates (default = 1950)
STATION	Observing station: VILSPA, GSFC
UVC-VOLT	UVC voltage
ORBEPOCH	IUE Orbital Elements: epoch
ORB-A	IUE Orbital Elements: semimajor axis
ORBECCEN	IUE Orbital Elements: eccentricity
ORBINCLI	IUE Orbital Elements: inclination
ORBASCEN	IUE Orbital Elements: r.a. of ascending node
ORBPERIG	IUE Orbital Elements: argument of perigee
ORBANOMA	IUE Orbital Elements: mean anomaly

Table 2: Core Data Items (Science Analysis)	
Core Item	Description
LAPSTAT	Large aperture status: open, closed
LAMP	Calibration lamp
FES-MODE	Tracking mode of the Fine Error Sensor
FESCOUNT	FES counts of target
POSANGLE	Position Angle of the large aperture
TARGET	Identification of the target
TARG-RA	Right Ascension as provided by the Guest Observer
TARG-DEC	Declination as provided by the Guest Observer
OBJECT	Homogeneous target id. (i.e. HD number, etc)
PGM-ID	Program code identification
IUE-CLAS	IUE object class
TRAIL-RT	Trail rate for trailed spectra
TRAIL-NR	Number of passes for trailed spectra
FOCUS	Instrument focus value
FPM	Flux particle monitor value
GSTAR-X	X-position of the guide star in the FES
GSTAR-Y	Y-position of the guide star in the FES
GSTAR-CN	FES counts of the guide star
GSTAR-MD	FES tracking mode for the guide star
DB COMMENT	Original comments
RA <sub>n</sub> COMMENT	Comments from CDI verification ( $n = 0, \dots, 9$ )
ABNMINFR	Abnormality flag: missing minor frames
ABNMICRO	Abnormality flag: microphonic noise
DATABKG	Mean DN value in the background
DATAcnt	Mean DN value in the spectrum
CC-PERCENT	Cross-correlation percent success
CC-WINDOW	Cross-correlation window size
EXTR-MODE	Extraction mode: point, extended
CENTERAPER	Predicted center line of aperture
EXTR-PROFILE	Extraction profile used in optimal extraction
EXTR-ASSYM	Assymmetric profile used in optimal extraction
EXTR-CENTR	Center line of optimally extracted spectrum
FLUX-AVER	Average flux along dispersion
SIGMA	Excessive sigma (noise) flag
SERE-APER	Serendipitous second aperture data
RADVEL	Radial velocity correction

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Short period oscillations in dwarf M stars	Doyle Andrews	Armagh Armagh	NC 001 NC 001
The nature of M dwarfs with a zero H-alpha flux	Doyle Mathioudakis Byrne	Armagh Armagh Armagh	NC 002 NC 002 NC 002
Interstellar gas in the fields of 4LAC and M22	Bates Gilheany Wood, K.D.	Belfast Belfast Belfast	NM 003 NM 003 NM 003
Spectrophotometry of Magellanic Cloud B main sequence stars	Howarth Dufton Fitzsimmons	UCL London Belfast Belfast	NA 004 NA 004 NA 004
Transition region densities in Active Late_Type stars	Byrne	Armagh	NC 006 NC 006
Deviation from the Wilson-Bappu relationship in faint red dwarf stars	Elgaroy Engvold Carlsson Freire F.	Oslo Oslo Oslo Verrieres	NC 007 NC 007 NC 007 NC 007
Multiwavelength observations of stellar flares	Doyle Mathioudakis Seiradakis Fuerst	Armagh Armagh Greece MPI Germany	NC 008 NC 008 NC 008 NC 008
UV study of the closest central star of a planetary nebula (S216)	Schonberner Jordan Nipiwotzki Weidemann	Kiel Kiel Kiel Kiel	NA 009 NA 009 NA 009 NA 009
Mass loss of Alpha Her A from CS lines in the spectrum of Alpha Her B	Reimers Thiering	Hamburg Hamburg	NC 011 NC 011 NC 011
Observation of the Cool Corona of HR 2554 with High Resolution	Schroder Reimers	Hamburg Hamburg	NC 012 NC 012
Physical Parameters of subdwarfs of type sdOB and sdO	de Boer Moehler Heber	Bonn Bonn Kiel	NA 013 NA 013 NA 013



Monitoring of the symbiotic star SY Muscae in low and high resolution	Glz-Riestra Fdz-Castro Cassatella	VILSPA Madrid VILSPA	NI 014 NI 014 NI 014
BF Cygni in outburst	Glz-Riestra Fdz-Castro Cassatella	VILSPA Madrid VILSPA	NI 015 NI 015 NI 015
How common are UV modulations in CVs	Naylor Glz-Riestra Hassall Charles	Cambridge VILSPA Cambri RGO La Palma	NI 016 NI 016 NI 016 NI 016
The disk and wind structure of U Gem in outburst	Naylor	Cambridge	NI 017 NI 017
Study of the UV orbital variability in the intermediate Polar 3A0729+103 = BG CMi	de Martino Mouchet Mukai	VILSPA Meudon Bekerle	NI 018 NI 018 NI 018
Orbital phase resolved IUE observations of E2003+225 coordinated with pointed mode ROSAT observations	de Martino Mouchet Beuermann Belloni Bonnet-B.	VILSPA Meudon MPI Munich MPI Munich Saclay	NI 019 NI 019 NI 019 NI 019 NI 019
The far-UV Continuum and extended emission lines as diagnostics of the cluster environment around quasars	Fabian Johnstone George Crawford	Cambridge Cambridge Cambridge Oxford	NQ 020 NQ 020 NQ 020 NQ 020
Physical state of the LMC high velocity gas near SNR 0525-66.0	Bomans de Boer	Bonn Bonn	NM 021 NM 021
International AGN watch: mapping the broad-line region in NGC 3783	Clavel Alloin Netzer Wamsteker + 39 participants	VILSPA Meudon Tel Aviv VILSPA	NQ 022 NQ 022 NQ 022 NQ 022 NQ 022
High resolution spectroscopy of Magellanic Cloud WR stars	Willis Smith Crowther	UCL London UCL London UCL	NA 023 NA 023 NA 023
Multi-wavelength studies of HD 50896 (WN5+?) - origin of its stellar wind variability	Willis Howarth Smith St. Louis Conti Garmany	UCL London UCL London UCL London UCL Montreal Colorado Colorado	NA 024 NA 024 NA 024 NA 024 NA 024 NA 024

Probing the atmospheric structure of 52 Her through a complete phase coverage in the ultraviolet	Monier Fernley	VILSPA VILSPA	NA 026 NA 026 NA 026
Atmospheric structure and abundances of white dwarfs in binary systems	Bues Loos Rupprecht	Bamberg ESO Garching ESO	NC 027 NC 027 NC 027
Stellar wind variability in Mid-B Supergiants	Prinja Howarth Fullerton Owocki	UCL London UCL London Delaware Delaware	NA 030 NA 030 NA 030 NA 030
CNO abundances in symbiotic stars	Schmid Nussbaumer	Zurich Zurich	NI 031 NI 031
UV spectroscopy of selected white dwarfs	Weidemann Jordan	Kiel Kiel	NA 032 NA 032
UV spectroscopy of the central galaxy of the cooling-flow cluster 2A 0335+096	Anton Heidt	Heidelberg Heidelberg	NE 033 NE 033 NE 033
Radii and bolometric luminosities of Pleiades main sequence stars	Fernley Skillen Jameson	VILSPA Cambridge Leicester	NA 035 NA 035 NA 035
Circumstellar material in the RS CVn system SZ Psc	Mathioudakis Doyle	Armagh Armagh	NC 036 NC 036
The physical structure of the complex Herbig-Haro Object HH 2	Solf Bohm	Heidelberg Washington	NM 037 NM 037
Study of the spectroscopic magnetic binary Alpha Dra	Seggewiss Scholz	Daun Postdam	NA 038 NA 038
Chemical abundances from B stars in the Magellanic Clouds	Wolf Baschek Scholz Juttner Stahl Szeifert Bessell	Heidelberg Heidelberg Heidelberg Heidelberg Heidelberg Heidelberg Australia	NA 040 NA 040 NA 040 NA 040 NA 040 NA 040 NA 040
B[e] supergiants of the Magellanic Clouds	Wolf Stahl Klare Zickgraf Humphreys Davidson	Heidelberg Heidelberg Heidelberg Minnesota Minnesota Minnesota	NA 041 NA 041 NA 041 NA 041 NA 041 NA 041

Multiwavelength observations of rapid variable Be-shell stars	Henrichs	Muenchen	NA 044
	Kaper	Amsterdam	NA 044
	Peters	Los Angeles	NA 044
	Percy	Toronto	NA 044
	Gies	Atlanta	NA 044
	McDavid	Texas	NA 044
Late stages in the outburst of classical novae	Krautter	Heidelberg	NA 048
	Ogelman	MPE Garching	NA 048
	Wehrse	Heidelberg	NA 048
	Starrfield	ASU Tempe	NA 048
	Williams	CTIO Chile	NA 048
Ultraviolet observations of RCB stars	Evans	Keele	NC 049
	Shenton	Keele	NC 049
	Albinson	Keele	NC 049
Ultraviolet observations of PMS stars in the Orion region	Evans	Keele	NA 050
	Albinson	Keele	NA 050
	Davies	Edinburgh	NA 050
Evolutionary state of helium transfer cataclysmics	Vauclair	Toulouse	NI 052
	Solheim	Tromso	NI 052
	Sion	USA	NA 052
A search for a line from the radiative decay of dark matter Tau Neutrinos	Buson	Padova	NQ 055
	Sciama	Trieste	NQ 055
	Burstein	Arizona	NQ 055
	Sarazin	Virginia	NQ 055
	Rephaeli	California	NQ 055
UV detection of ongoing star formation in elliptical galaxies	Bertola	Padova	NE 057
	Buson	Padova	NE 057
	Amico	Padova	NE 057
	Burstein	Arizona	NE 057
IO's atmosphere and Torus: east-west asymmetries in their UV emissions	Ballester	Oxford	NS 058
	Cremonense	Padova	NS 058
	Bertaux	Paris	NS 058
	Prange	Paris	NS 058
Jupiter's Aurora: correlative studies of the UV H2 emissions and the H3 and hydrocarbon emissions	Ballester	Oxford	NS 059
	Prange	Paris	NS 059
			NS 059
Auroral and Planetary emissions of Saturn. Origin and variability	Prange	IAS	NS 060
	Ballester	Oxford	NS 060
	Jaffer	USA	NS 060
Observations of SN 1987A	Panagia	Baltimore	NE 062

Big blue bump in Seyfert I galaxies: simultaneous IUE/ROSAT observations	Brunner	Tubingen	NQ 063
	Courvoisier	Geneve	NQ 063
	Staubert	Tubingen	NQ 063
	Snijders		NQ 063
UV spectrophotometry of peculiar hot stars discovered by the Hamburg Schmidt survey	Heber	Kiel	NA 064
	Jordan	Kiel	NA 064
	Rauch	Kiel	NA 064
	Werner	Kiel	NA 064
UV spectroscopy of knots in Three Ring Galaxies	Fricke	Gottingen	NE 066
	Schultz	STScI	NE 066
Are the starburst and Seyfert Phenomena related? A case of study: NGC 1808	Wamsteker	VILSPA	NE 070
	Danks	GSFC	NE 070
	Perez	GSFC	NE 070
A study of the stellar population in selected SO galaxies	Wamsteker	VILSPA	NE 071
	Danks	GSFC	NE 071
	Perez	GSFC	NE 071
Variability probing of the inner parts of the BLR in various Seyfert I Nuclei	Wamsteker	VILSPA	NQ 072
			NQ 072
			NQ 072
Winds in central stars of Planetary Nebulae	Patriarchi	Firenze	NM 073
	Perinotto	Firenze	NM 073
Observations of faint Classical Novae	Cassatella	VILSPA	NI 074
	Glz-Riestra	VILSPA	NI 074
The UV luminosity and mass accretion rate of Old Novae	Cassatella	VILSPA	NI 075
	Selvelli	Trieste	NI 075
	Gilmozzi	Baltimore	NI 075
	Bianchini	Padova	NI 075
	Friedjung	Paris	NI 075
The stellar content of the populous clusters of the Magellanic Clouds	Cassatella	VILSPA	NE 076
	Geyer	Bonn	NE 076
	Barbero	Madrid	NE 076
	Brocato	ESO Garching	NE 076
The carbon abundance in SBS 0335- 052 and the time evolution of C/O	E. Terlevich	RGO	NE 077
	R. Terlevich	RGO	NE 077
Fifth epoch doppler imaging obser- vations of AR Lac	Rodono	Catania	NC 078
	Pagano	Catania	NC 078
	Neff	NASA/GSFC	NC 078
	Walter	Stony Brook	NC 078

The Dynamics of the Supershell	Bomans	Bonn	NM 079
LMC 4	de Boer	Bonn	NM 079
Massive binaries II	Stickland	RAL	NI 080
	Pike	RAL	NI 080
	Lloyd	RAL	NI 080
	Howarth	UCL	NI 080
	Koch	USA	NI 080
UV-bright stars in M3	Cacciari	Bologna	NA 081
	Buzzoni	Merate	NA 081
	Fusi Pecci	Bologna	NA 081
	Buonanno	Roma	NA 081
UV monitoring of post-AGB stars with variable extinction	Waelkens	Leuven	NC 083 NC 083
Multi-frequency observations of symbiotic stars	Evans	Keele	NI 085
	Bode	Lancashire	NI 085
	Iverson		NI 085
	Roberts	Lancashire	NI 085
IUE observations of DAB white dwarfs	Barstow	Leicester	NA 087
	Tweedy	Leicester	NA 087
	Holberg	Arizona	NA 087
	Wesemael	Montreal	NA 087
Time resolved high spectral resolution observations of a very rare DA + dM binary system which also a bright EUV source	Barstow	Leicester	NA 088
	Kent	RAL	NA 088
	Charles	RGO	NA 088
	Vauclair	Toulouse	NA 088
	Holberg	Arizona	NA 088
	Sion	Villanova	NA 088
The interactive binary white dwarfs system GP Com	Ulla	Tromso	NI 090 NI 090
Exploring the onset of cool winds in K-type giants of luminosity class III	Hunsch	Hamburg	NC 091
	Reimers	Hamburg	NC 091 NC 091
The long term variability of the Lyman alpha emission from Jupiter, Saturn and Uranus	Fricke	Bonn	NS 092
	Zahn	Bonn	NS 092 NS 092
IUE observations of new proto- planetary nebulae from IRAS Survey	Pottasch	Groningen	NA 094
	Sahu	Groningen	NA 094 NA 094

Planetary perturbations in the disc of Beta Pictoris	Beust	Paris	NM 095
	Deleuil	Marseille	NM 095
	Ferlet	IAP Paris	NM 095
	Gry		NM 095
	Vidal-Madjar	IAP Paris	NM 095
Ionization near Beta Pictoris	Vidal-Madjar	IAP Paris	NM 096
	Beust	IAP Paris	NM 096
	Deleuil	Marseille	NM 096
	Ferlet	IAP Paris	NM 096
	Gry	Marseille	NM 096
	Lagrange-H.	Grenoble	NM 096
	Feldman	USA	NM 096
	Livengood	USA	NM 096
	Moos	USA	NM 096
	Ziskin	USA	NM 096
The chemical composition of the Lambda Boo stars.	Faraggiana	Trieste	NA 098
	Gerbaldi	IAP Paris	NA 098
	Castelli	Trieste	NA 098
Massive stars in the young SMC cluster NGC 330	Castellani	Pisa	NE 099
	Brocato	ESO Garching	NE 099
	Caloi	Frascati	NE 099
	Cassatella	VILSPA	NE 099
Evolution of the envelopes of Herbig Ae/Be stars	Tjin A Djie	Amsterdam	NA 101
	Blondel		NA 101
Two phase ultraviolet spectrometry of pulsating White Dwarf Stars	Solheim	Tromso	NA 106
	Emanuelson	Tromso	NA 106
	Winget	Texas	NA 106
The creation of a Helium disk in V803 Cen	Solheim	Tromso	NI 107
	Kepler	Brasil	NI 107
IUE observations of Post AGB stars which show spectrum variation	Pottasch	Groningen	NA 108
	Parthasarathy	Bangalore	NA 108
Chromospheric modelling of the Barium star Cap (G4Ib)	Fernandez	Oxford	NC 111
	Jordan	Oxford	NC 111
Mg II h and k lines as an indicator of magnetic activity	Rowe	Oxford	NC 112
	Montesinos	Oxford	NC 112
UV variability of the quasar 3C 273	Courvoisier	Geneve	NQ 113
	Ulrich	ESO Garching	NQ 113
	Wamsteker	VILSPA	NQ 113
A magnitude-limited survey of single, non-variable G supergiants	Jordan	Oxford	NC 114
	Fernandez	Oxford	NC 114
	Brown	USA	NC 114

Active regions, or changes in the chromospheric structure of "Hybrid" bright giants?	Harper	Oxford	NC 115
	Jordan	Oxford	NC 115
			NC 115
Empirical velocity laws for cool giants	Vogel	Zurich	NC 117
	Nussbaumer	Zurich	NC 117
Atmospheres of the hot components in symbiotic systems	Vogel	Zurich	NA 118
	Nussbaumer	Zurich	NA 118
The symbiotic nova HM Sge	Vogel	Zurich	NI 119
	Nussbaumer	Zurich	NI 119
Structure of winds from cataclysmic variable accretion disks	Verbunt	Utrecht	NI 120
	Woods	Sussex	NI 120
	Drew	Oxford	NI 120
	Marsch	Oxford	NI 120
Co-ordinated UV, XUV and X-ray observations of the dMe flare star UV Ceti	Pye	Leicester	NC 121
	Bromage	RAL	NC 121
	Schmitt	MPI Garching	NC 121
	Petterson	Oslo	NC 121
Observations of six high-ionization symbiotic stars	Munari	Asiago	NI 122
	Buson	Padova	NI 122
Nearby molecular clouds with IUE	Vladilo	Trieste	NM 124
	Centurion	Canarias	NM 124
	Monai	Trieste	NM 124
An observational test of evolutionary models for polar ring galaxies	Capaccioli	Padova	NE 126
	Arnaboldi	Trieste	NE 126
	Longo	Naples	NE 126
The (UV-V, Mg2) correlation for early type galaxies	Capaccioli	Padova	NE 127
	Busarello	Naples	NE 127
	Longo	Naples	NE 127
High resolution UV spectroscopy of 3 metal weak lined sdO stars	Heber	Kiel	NA 128
	Dreizler	Kiel	NA 128
Effective temperatures and gravities for DA white dwarfs	Barstow	Leicester	NA 130
	Cropper	MSSL	NA 130
	Goodall	Birmingham	NA 130
	Quenby	UK	NA 130
	Kent	RAL	NA 130
	Holberg	Arizona	NA 130
A scan across the planetary nebula NGC 4361	Tweedy	Leicester	NA 132
	Barstow	Leice	NA 132

Determination of the nature of the bright EUV source KW Aurigae	Pye	Leicester	NC 134
	Barstow	Leice	NC 134
Heating of the white dwarf in AM Herculis	Beuermann	Berlin	NI 136
	de Martino	VILSPA	NI 136
	Schwoppe	Berlin	NI 136
	Thomas	MPI Garching	NI 136
	Verbunt	Utrecht	NI 136
Flux-flux and flux-rotation relations in G-type stars	Montesinos	Oxford	NC 137
	Jordan	Oxford	NC 137
IUE monitoring of the post-asymptotic giant branch star FG Sge	Montesinos	Oxford	NC 138
	Cassatella	VILSPA	NC 138
	Gonzalez	VILSPA	NC 138
	Fernandez	Madrid	NC 138
Planetary nebulae and chemical evolution in the magellanic clouds	Dennefeld	IAP Paris	NM 139
	Leisy	IAP Paris	NM 139
	Stasinska	Meudon	NM 139
Rapid flux and velocity variations in Alpha Ori	Joras	Oslo	NC 140
	Engvold	Oslo	NC 140
	Elgaroy	Oslo	NC 140
The colliding winds and shocked gas in Gamma velorum (WC8+091)	Willis	UCL London	NA 141
	St Louis	Montreal	NA 141
	Stevens	Cambr	NA 141
	Pollock	Sheffield	NA 141
The ultraviolet spectrum of Ultra-soft X-ray AGN	Mason	MSSL	NQ 142
	Puchnarewicz	MSSL	NQ 142
	Cordova	USA	NQ 142
Observations of the Seyfert 1 nucleus of NGC 4151	Ulrich	ESO Garching	NQ 148
	Altamore	Rome	NQ 148
	Perola	Rome	NQ 148
	Bromage	RAL	NQ 148
	Clavel	VILSPA	NQ 148
	Boksenberg	RGO	NQ 148
	Snijders	RGO	NQ 148
	Penston	RGO	NQ 148
Elvius	Stockholm	NQ 148	
IUE observations of quasars simultaneous with ROSAT pointed observations	Ulrich	ESO Garching	NQ 149
	Fink	MPE Garching	NQ 149
	Zimmermann	MPE Garching	NQ 149
	Maraschi	Milano	NQ 149
	Molendi	Milano	NQ 149



Study of the UV spectrum of the VV Cep binary KQ Puppis	Viotti	Frascati	NC 151
	Rossi	Roma	NC 151
	Altamore	Roma	NC 151
	Baratta	Roma	NC 151
Very strong soft X-ray emission from the Seyfert 1 galaxy E1615+061 and its relationship with the UV emission	Piro	Frascati	NQ 152
	Fiore	Rome	NQ 152
	Perola	Rome	NQ 152
	Fink	MPE Garching	NQ 152
	Balucinska	Birmingham	NQ 152
New X-ray sources in the LMC discovered by ROSAT	Bianchi	Torino	NI 153
	Pakull	Heidelberg	NI 153
	Hasinger	Munich	NI 153
	Beuermann	Berlin	NI 153
Continuum and UV extinction of OB stars in M33 and M31	Bianchi	Torino	NA 154
	Hutchings	USA	NA 154
	Massey	USA	NA 154
Study of planetary nebulae and their central stars with IUE	Bianchi	Torino	NA 155
	de Francesco	Torino	NA 155
	Grewing	Tubingen	NA 155
	Baessgen	Tubingen	NA 155
	Jurcsik	Konkoly	NA 155
IUE survey of X-ray selected late-type m.s. and evolved stars	Bianchi	Torino	NC 156
	Maggio	Palermo	NC 156
	Favata	ESTEC	NC 156
	Vaiana	Palermo	NC 156
Observations of novae and related objects with IUE, ROSAT and optical telescopes	Bianchi	Torino	NA 157
	Orio	Torino	NA 157
	di Martino	Torino	NA 157
	de Francesco	Torino	NA 157
Intensive multifrequency-monitoring of PKS 2155-304	Maraschi	Milan	NE 158
	Fink	MPE Garching	NE 158
	Warwick	Leicester	NE 158
	Edelson	Colorado	NE 158
	Krolik	John Hopkins	NE 158
	Madejski	NASA/GSFC	NE 158
	Urry	STScI	NE 158
Carbon abundances in Galactic Bulge Planetary Nebulae	Barlow	UCL London	NM 159
	Clegg	RGO	NM 159
	Walton	UCL London	NM 159
MWC 560 - a symbiotic nova?	Andreae	Bamberg	NI 164
	Drechsel	Bamberg	NI 164

The new Be phase of Pleione	Doazan	Paris	NA 165
	Cramer	Geneve	NA 165
	Sedmak	Trieste	NA 165
	Barylak	VILSPA	NA 165
	Arsenijevic	Belgrade	NA 165
Observation of Old Nova at similar time as with the HST	Friedjung	Paris	NI 167
	Cassatella	VILSPA	NI 167
	Bianchini	Padova	NI 167
	Selvelli	Trieste	NI 167
Al velorum, a new Zeta Aurigae-type binary	Stickland	RAL	NC 168
	Lloyd	RAL	NC 168
Ultraviolet observations of magnetic cataclysmic candidates	Mouchet	Meudon	NI 169
	Bonnet-B.	Saclay	NI 169
	Buckley	South Africa	NI 169
Colliding winds and dust formation in the variable WC7 stars HD 192641 HD 193793 a continuation proposal	van der Hucht	Utrecht	NA 170
	Williams	Edinburgh	NA 170
	Wamsteker	VILSPA	NA 170
	Pollock	Sheffield	NA 170
The imminent outburst of the recurrent Nova T Pyx	Selvelli	Trieste	NI 172
	Cassatella	VILSPA	NI 172
	Gilmozzi	Baltimore	NI 172
UV monitoring of the symbiotic star Z Andromadae	Cassatella	VILSPA	NI 173
	Gzl-Riestra	VILSPA	NI 173
	Fdz-Castro	Madrid	NI 173
	Viotti	Frascati	NI 173
	Taylor	Toronto	NI 173
Verification of the IUE flux scale through observations of two hot DA white dwarfs	Cassatella	VILSPA	NA 175
	Glz-Riestra	VILSPA	NA 175
	Fernley	VILSPA	NA 175
	Monier	VILSPA	NA 175
	Wamsteker	VILSPA	NA 175
	Finley	USA	NA 175
	Koester	USA	NA 175
	Husfeld	Germany	NA 175
	Weidemann	Germany	NA 175
Oliversen	GSFC	NA 175	
Search for hot component companions to late type supergiants	Cassatella	VILSPA	NC 176
	Smolinski	Torun	NC 176
Simultaneous ultraviolet and optical monitoring of 3C446	Gondhalekar	RAL	NQ 177
	O'Brien	UCL	NQ 177
	Penston	RGO	NQ 177
	Goad	UCL	NQ 177
	Perez	IAC	NQ 177

MgII emission from shock waves in Carbon Miras	Querci, M. Querci, F.	Midi-Pyrenes Midi-Pyrenes	NC 182 NC 182
Carbon star shell extension and past mass-loss deduced from the 2200 A feature	Querci, F. Querci, M.	Midi-Pyrenes Midi-Pyrenes	NC 184 NC 184 NC 184
Stellar winds and mass loss in A-type supergiants	Talavera Gmz de Castro	VILSPA VILSPA	NA 186 NA 186
Multifrequency observations of the outburst phase of the LMC - LBV R 127	Stahl Wolf Cassatella Wamsteker Viotti	Heidelberg Heidelberg VILSPA VILSPA Frascati	NA 187 NA 187 NA 187 NA 187 NA 187
Cyclic activity in PMS Herbig Ae stars	Catala Talavera	Meudon VILSPA	NA 188 NA 188
The binary nucleus of the Planetary Nebula Abell 35	Jasniewicz Acker Freire-F. Kopen	Strasbourg Strasbourg Strasbourg Heidelberg	NI 189 NI 189 NI 189 NI 189
Search for delimitation of the Lyman-alpha and chromospheric emission between A and F stars	Catalano Freire-F. Gouttebroze Marilli Talavera	Catania Strasbourg Verrieres Catania VILSPA	NC 190 NC 190 NC 190 NC 190 NC 190
UV spectra of bright new QSO of the Hamburg survey	Reimers Engels Groote Hagen Wisotzki Clavel Wamsteker	Hamburg Hamburg Hamburg Hamburg Hamburg VILSPA VILSPA	NQ 191 NQ 191 NQ 191 NQ 191 NQ 191 NQ 191 NQ 191
Ultraviolet spectrum of extremely metal poor post AGB star HD 52961	Parthasarathy	Bangalore	NA 192 NA 192
Sorting out binarity in Hot Subdwarf Stars	de Boer Theissen Moehler	Bonn Bonn Bonn	NA 193 NA 193 NA 193
Coordinated IUE/ROSAT and rotational mapping of a short-period RS-CVn binary	Bromage Kuerster Pye Rodono	RAL MPE Leicester Catania	NC 195 NC 195 NC 195 NC 195

Time-resolved coronal, transition-region, chromospheric and magnetic field study of stellar flares	Bromage	RAL	NC 196
	Phillips	RAL	NC 196
	Dulk		
Spatially-resolved IUE/ROSAT observations of the close double flare star	Bromage	RAL	NC 198
	Pye	Leicester	NC 198
	Petterson	Oslo	NC 198
	Schmitt	MPE Garching	NC 198
Relationships between magnetic fields and non-thermal emission on the lower main sequence	Bromage	RAL	NC 199
	Bookbinder	USA	NC 199
	Golub	USA	NC 199
	Giampapa	NOAO/NSP	NC 199
Test for multi-waveband correlation and origin of radio emission in Ae Aquarii	Bromage	RAL	NI 200
	Kellett	RAL	NI 200
	Bastian	NRAO	NI 200
	Bookbinder	CFA	NI 200
UV spectra of the cyclic variable shell star HD 183656	Koubisky	Ondrejov	NA 201
	Horn	Ondrejov	NA 201
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Rotational and short time scale variations of the magnetic pulsating Ap star Alpha Cir	Megessier	Meudon	NA 202
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			NA 202
Time dependent spectroscopy of MWC560: the structure of the cone outflow	Hassall	RGO	NI 203
	Fabrika	RGO	NI 203
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IUE observations of the X-Ray Nova Muscae GRS 1121-68	Krautter	Heidelberg	NI 205
	Gonzalez	VILSPA	NI 205
	Lund	SRI	NI 205
	Cassatella	VILSPA	NI 205

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PUBLISHED 1 NOVEMBER 1990-30 APRIL 1991

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 to 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 the Villafranca Satellite Tracking Station of the European Space Agency. (In the case of one's own observations).

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MERGED LOG OF IUE OBSERVATIONS

1 NOVEMBER 1990 - 30 APRIL 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 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

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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

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- 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	mmmsst	ECC	Comment
EGGR NGC	4151	84	11.5	+39410	+394102	L 3	40335 L	237	SO	90121419	191500	003000	351	G B=178,G=61,B=22
EGGR NGC	4151	84	11.5	+39410	+394102	L 3	40336 L	235	SO	90121420	203200	001500	330	G B=104,G=64,B=18
PHCAL NULL		99	99.99	0000000	+000000	H 3	40183	00000		90112413	131500	000000		V HIGH GAIN READ
PHCAL 60% CALV		99	99.99	0000000	+000000	H 3	40184	00000		90112413	134004	000149		V FINAL UMF=36
PHCAL 20% CALV		99	99.99	0000000	+000000	H 3	40185	00000		90112414	142326	000036		V FINAL UMF=33
PHCAL 120% CALV		99	99.99	0000000	+000000	H 3	40186	00000		90112414	145159	000338		V FINAL UMF=40
PHCAL 60% CALV		99	99.99	0000000	+000000	H 3	40187	00000		90112415	152212	000149		V FINAL UMF=36
PHCAL 100% TELCO		99	99.99	0000000	+000000	H 3	40188	00000		90112417	170945	000016		V READ ONLY
PHCAL 160% CALV		99	99.99	0000000	+000000	H 3	40189	00000		90112417	174306	000451		V
PHCAL NULL		99	99.99	0000000	+000000	H 3	40190	00000		90112418	180100	000000		V SECOND READ
PHCAL NULL		99	99.99	0000000	+000000	H 3	40191	00000		90112418	183300	000000		V HIGH GAIN READ
M154 NULL IMAGE		99	99.99	0000000	+000000	L 1	19537 L	00000		91011014	141100	000000	000	V
M154 NULL IMAGE		99	99.99	0000000	+000000	2	18524 L	00000		91010907	074300	000000	000	V IAR: -4.5 KV
M154 NULL IMAGE		99	99.99	0000000	+000000	L 1	19531 L	00000		91010914	141430	000000		V CAMERA NOT SEREP
M152 NULL		99	99.99	0000000	+000000	1	19741	00000		91021205	000000	000000	001	V
M152 NULL		99	99.99	0000000	+000000	3	40855	00000		91021104	000000	000000	111	V
PHCAL NULL		99	99.99	0000000	+000000	2	18537	00000		91021805	000000	000000		V
PHCAL NULL		99	99.99	0000000	-000000	L 1	19790	00000		91021810	103200	000000		V
PHCAL SKY		07	99.99	0000000	+000000	L 1	19973 L	00000		91032404	042643	003000	00X	V BACKGROUND SATURATED
PHCAL SKY		07	99.99	0000000	+000000	L 1	19974 L	00000		91032406	065358	001500	009	V
OD77Y MN 335		84	13.8	0003451	+195528	L 3	40022 L			90110223	235900	008000		G
OD77Y MN 335		84	13.8	0003451	+195528	L 1	19123 L			90110301	012900	004500		G
OD77Y MN 335		84	13.8	0003451	+195528	L 3	40023 L			90110302	022300	003000		G
MQ180 MK335		85	13.79	0003452	+195529	L 1	19466 L	00054	SO	90122311	115711	009400	561	V
AGWS MN 335		84	13.8	0003452	+195529	L 3	40220 L	54	SO	90112901	014800	006000	351	G B=229,G=76,B=22
MQ180 MK 335		85	99.99	0003452	+195529	L 3	40445 L	00000	SO	90122313	133455	019300	560	V
AGWS MN 335		84	13.8	0003452	+195529	L 1	19449 L	52	SO	90121922	221400	004500	452	G B=192,G=140,B=40
AGWS MN 335		84	13.8	0003452	+195529	L 3	40394 L	54	SO	90121923	230800	008000	351	G B=194,G=105,B=30
USBS HD	358	30	2.1	0005477	+284851	H 3	40448 L			90122408	083700	000014		G
M1176 FG0009+036		28	13.01	0009538	+033750	L 3	40520 L	00108	SO	91010308	083558	002000	300	V
M1176 FG0009+036		28	13.04	0009538	+033750	H 1	19503 L	00105	SO	91010309	090436	034300	304	V
M1176 FG0009+036		28	13.08	0009539	+033750	L 1	19505 L	00102	SO	91010408	081327	002000	402	V
M1176 FG0009+036		28	13.05	0009539	+033750	H 3	40525 L	00104	SO	91010408	084159	036500	303	V
SCMF COM P/ME		06	9.0	0014020	-054347	L 9	02405			91010902	021900	002000		G
SCMF C/MEICAF		06	9.0	0014020	-054346	L 1	19534 L	179	SO	91011002	023800	003600	233	G B=112,G=62,B=42
SCMF C/MEICAF		06	9.0	0014020	-054346	L 1	19535 L	178	SO	91011004	040800	011000	354	G B=215,G=85,B=58
RIASS HD	1581	41	4.23	0017287	-651007	L 3	40060 L	413	FU	90110601	015600	006500	X01	G G=5X,B=23
PHCAL CT AFR 2		07		0018090	-470505	L 9	02440			91022022	225700	016000		G
RIASS HD	1671	41	5.2	0018291	+374130	L 3	40545 L	19431	FO	91010716	165300	011000	?41	G B=134,G=10X,B=25
SMEG HD	2151	44	2.8	0023090	-773200	H 1	20134 L	1505	FU	91041317	174200	001200	X43	G B=168,G=3X,B=50
SMEG HD	2151	44	2.8	0023091	-773209	L 3	41375 L	1490	FU	91041318	180100	001300	500	G G=230,B=18
HSMB HD	2905	23	4.15	0030083	+623922	H 1	19417 L	500	FU	90121601	012500	000052	502	G G=195,B=40
HSMB HD	2905	23	4.15	0030083	+623922	H 3	40359 L	504	FU	90121601	015100	000315	542	G B=157,G=230,B=35
PHCAL ZETA CAS		21	3.68	0034102	+533718	H 3	40435 L			90122207	071900	000024		G
PHCAL ZETA CAS		21	3.68	0034102	+533718	H 1	19457 L			90122207	072400	000021		G
PHCAL HD	3360	20	3.7	0034103	+533719	H 3	40087 L	876	FU	90110909	091400	000024	302	G G=90,B=32
PHCAL HD	3360	20	3.7	0034103	+533719	H 1	19180 L	873	FU	90110909	091900	000021	503	G G=228,B=42
PHCAL NULL		99		0034103	+533719	L 2	18516 L			90122401	014500	000000	02	G B=35
PHCAL ZETA CAS		21	3.68	0034103	+533719	H 2	18517 L	881	FU	90122402	022500	000028	501	G G=190,B=30
PHCAL HD	3360	20	3.7	0034103	+533719	H 1	19627 L	860	FU	91012206	062800	000021	503	G G=222,B=41

PRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	numscst	EC	Comment
PHCAL HD	3360	20	3.7	0034103	+533719	H 3	40656 L		FU	91012206	063300	000024	502	G=190,B=35
PHCAL HD	3360	20	3.7	0034103	+533719	H 3	40654 L	940	FU	91021100	004500	000025	502	G=210,B=35
PHCAL HD	3360	20	3.7	0034103	+533719	H 1	19735 L	931	FU	91021100	005000	000021	503	G=220,B=42
OD5Y SIPAR 229	33		12.0	0034298	+845252	L 1	20081 L	245	SO	91040418	183600	013400	X04	G=1.5X,B=58
DMGB 00374312	37		14.6	0037114	+311602	L 3	40249 L		FO	90120300	002300	002500	400	G=165,B=18
RIASS HD	4128	47	2.04	0041050	-181539	L 3	40363 L	2868	FU	90121605	054000	003500	550	G=200,G=195,B=20
RIASS HD	4128	47	2.04	0041050	-181539	H 1	19419 L	2814	FU	90121606	062300	001000	Xx2	G=1.5X,G=1.5X,B=40
MA090 EG AND	57		07.37	0041526	+402421	L 1	19254 L	04149	FO	90112017	175718	002000	502	V
MA090 EG AND	57		07.38	0041526	+402421	L 3	40150 L	04094	FO	90112018	182401	002000	361	V
METOO EG AND	57		07.46	0041530	+402423	L 3	40478 L	03819	FO	90122812	121030	002000	360	V
METOO EG AND	57		07.40	0041530	+402422	L 3	40540 S	04009	FO	91010612	125034	001000	160	V
METOO EG AND	57		07.40	0041530	+402422	L 3	40540 L	04009	FO	91010612	122213	002000	160	V
METOO EG AND	57		07.42	0041530	+402422	L 1	19512 S	03948	FO	91010613	135534	002000	331	V
METOO EG AND	57		07.42	0041530	+402422	L 1	19512 L	03948	FO	91010613	130901	003000	351	V
METOO EG AND	57		07.43	0041530	+402422	L 3	40541 L	03931	FO	91010614	142212	002500	160	V
METOO EG AND	57		07.36	0041530	+402422	L 1	19641 S	04157	FO	91012411	113145	002000	330	V
METOO EG AND	57		07.36	0041530	+402422	L 1	19641 L	04157	FO	91012410	104811	003000	350	V
METOO EG AND	57		07.39	0041530	+402422	L 3	40668 S	04046	FO	91012412	122925	000700	050	V
METOO EG AND	57		07.39	0041530	+402422	L 3	40668 L	04046	FO	91012411	115841	001500	060	V
METOO EG AND	57		07.35	0041530	+402423	L 3	40707 L	04200	FO	91013010	105231	002000	060	V
PHCAL NEC	246	70	12.0	0044327	-120842	L 3	40457 L			90122602	020100	000115		G
PHCAL NEC	246	70	12.0	0044327	-120842	L 1	19474 L			90122602	023400	000300		G
PHCAL NEC	246	70	12.0	0044327	-120842	L 3	40458 L			90122602	024600	000230		G
PHCAL NEC	246	70	12.0	0044327	-120842	L 1	19475 L			90122603	032600	000600		G
XSMH NEC	246	70	12.0	0044353	-120903	L 3	40077 S	304	SO	90110805	055600	000230	400	G=125,B=18
RIASS HD	4502	47	4.1	0044410	+235944	H 1	19501 L	451	FU	90123103	031200	001500	3x2	G=1.5X,G=95,B=34
RIASS HD	4502	47	4.1	0044410	+235944	L 3	40501 L	449	FU	90123103	034800	002000	331	G=97,G=50,B=22
RIASS HD	4502	47	4.1	0044410	+235944	H 1	19502 L	452	FU	90123104	042700	001000	352	G=208,G=80,B=36
ISMFM AV 161	30		11.8	0053140	-722549	L 1	19245 L	272	SO	90111908	085600	004000	X02	G=1.5X,B=35
ISMFM AV 161	30		11.8	0053140	-722549	L 1	19245 S	280	SO	90111909	094300	001800	302	G=96,B=35
ISMFM AV 161	30		11.8	0053140	-722549	L 3	40139 L	279	SO	90111910	100500	004500	301	G=100,B=24
RIASS HD	5394	26	2.7	0053403	+612647	H 3	40692 L	3338	FU	91012720	201300	000008	502	G=210,B=40
RIASS HD	5394	26	2.7	0053403	+602647	H 1	19654 L	3344	FU	91012720	201800	000006	503	G=235,B=41
ISMFM AV 211	32		11.5	0057010	-724223	L 1	19243 L	335	SO	90111903	031900	006000	X03	G=2X,B=50
ISMFM AV 211	32		11.5	0057010	-724223	L 3	40136 L	341	SO	90111903	035300	009000	401	G=160,B=25
ISMFM AV 211	32		11.5	0057013	-724223	L 1	19240 L	319	SO	90111803	034600	004500		G=2X
ISMFM AV 211	32		11.5	0057013	-724223	L 1	19240 S	471	SO	90111804	044000	003600	503	G=198,B=45
ISMFM AV 211	32		11.5	0057013	-724223	L 3	40133 L	39	SO	90111805	052200	005800	303	G=142,B=48
DMSS GL 509.1	48		9.7	0059270	+624030	L 1	19383 L	311	FO	90121103	035000	004000	X03	G=3X,B=45
DMSS GL 49	48		9.6	0059310	+620434	L 1	19385 L	463	FO	90121108	080500	004000		G
ISMFM AV 270	32		11.4	0059390	-723334	L 1	19241 L	97	FO	90111806	064400	001800	506	G=225,B=72
ISMFM AV 270	32		11.4	0059390	-723334	L 1	19241 S	392	SO	90111807	071700	001400	306	G=150,B=72
ISMFM AV 270	32		11.4	0059390	-723334	L 3	40134 L	397	SO	90111807	073900	002200	301	G=90,B=25
ISMFM AV 270	32		11.4	0059390	-723334	L 3	40137 L	386		90111906	061500	003000	302	G=125,B=35MD SO
ISMFM AV 270	32		11.4	0059390	-723334	L 1	19244 L	389	SO	90111906	065000	003500	X05	G=2X,B=68
RIASS HD	6903	45	5.6	0107085	+192332	L 3	40544 L	13604	FO	91010715	153300	003000	331	G=49,G=110,B=22
ISMFM AV 504	25		11.9	0120290	-730132	L 1	19242 S	1679	SO	90111808	085800	005000	402	G=185,B=40
ISMFM AV 504	25		11.9	0120290	-730132	L 1	19242 L	1527	SO	90111809	094900	000500		G=2X
ISMFM AV 504	25		11.9	0120290	-730132	L 3	40138 L	260	SO	90111907	074000	005500	401	G=155,B=22
MQ049 F-9	84		13.42	0121512	-580359	L 3	40569 L	00075	SO	91011209	090831	005000	350	V



FRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exp	lim	num	msst	ETC	Comment
RIASS FAIRFALL9		84	13.3	0121512	-590359	L 3	40179 L	56	SO	90112319	194800	010000				3x2 G B=2X, G=108, B=35
MQ049 F-9		84	13.38	0121512	-590359	L 1	19554 L	00078	SO	91011210	100534	005500				451 V
RIASS FAIRFALL9		84	13.3	0121512	-590359	L 1	19270 L	57	SO	90112321	213600	005000				442 G B=172, G=141, B=40
RIASS FAIRFALL9		84	13.3	0121512	-590339	L 3	40180 L	56	SO	90112322	223100	002000				341 G B=130, G=51, B=24
AGMC FAIRFALL9		84	14.0	0121512	-590359	L 3	41103 L	89	SO	91031416	162600	004500				350 G B=210, G=60, B=20
AGMC FAIRFALL9		84	14.0	0121512	-590359	L 1	19915 L	89	SO	91031417	172000	005500				452 G B=204, G=160, B=38
IEMFP IZ FER		66	9.1	0128565	+534543	L 3	40296 L	1392	FO	90120902	020900	000700				X00 G G=2X, B=18
IEMFP IZ FER		66	9.1	0128565	+534543	L 3	40297 L	1249	FO	90121002	025100	000400				500 G G=180, B=18
IEMFP IZ FER		66	9.1	0128565	+534543	L 3	40298 L	1112	FO	90121003	033300	000515				500 G G=190, B=18
IEMFP IZ FER		66	9.1	0128565	+534543	L 3	40299 L	969	FO	90121004	041600	000715				500 G G=200, B=18
IEMFP IZ FER		66	9.1	0128565	+534543	L 3	40300 L	799	FO	90121005	050400	000915				500 G G=185, B=18
IEMFP IZ FER		66	9.1	0128565	+534543	L 3	40301 L	664	FO	90121005	055800	001030				400 G G=165, B=18
IEMFP IZ FER		66	9.1	0128565	+534543	L 3	40302 L	699	FO	90121006	065200	001030				500 G G=200, B=18
IEMFP IZ FER		66	9.1	0128565	+534543	L 3	40303 L	850	FO	90121007	074200	000730				500 G G=205, B=18
IEMFP IZ FER		66	9.1	0128565	+534543	L 3	40304 L	998	FO	90121008	082700	000515				500 G G=185, B=18
MI141 AX FER		57	11.93	0133057	+540007	L 3	40238 L	00283	SO	90113014	143604	004000				260 V
MI141 AX FER		57	11.95	0133057	+540007	L 1	19327 L	00279	SO	90113014	142333	002500				351 V
MI141 AX FER		57	99.99	0133057	+540007	H 3	40239 L	00000		90113015	155409	013300				161 V
MI141 AX FER		57	11.83	0133060	+540018	H 1	19332 L	00310	SO	90120113	134045	018700				352 V
PHCAL GCL965		45	5.74	0134503	+574325	9	02420			91020800	005600	016000				G
PHCAL SKY BKGD		07		0137200	+160918	L 1	19720 L		EO	91020813	132400	037000				307 G G=140, B=90
PHCAL SKY BKGD		07		0137200	+160918	L 1	19720 S		EO	91020819	194500	010500				307 G G=140, B=90
RIASS EL HYI		59	15.0	0139366	-680836	L 3	40082 L		EO	90110820	200500	022700				3x2 G B=2X, G=84, B=38
RIASS EL HYI		59	15.0	0139366	-680836	L 1	19175 L		EO	90110900	000300	016500				4x3 G B=2X, G=155, B=50
MI141 V741 FER		57	13.28	0155329	+523915	L 3	40237 L	00085	SO	90113011	115833	006000				260 V
MI141 V741 FER		57	13.24	0155329	+523915	L 1	19326 L	00088	SO	90113013	130635	006000				332 V
MI066 V741 FER		57	12.80	0155329	+523915	L 3	40941 L	00130	SO	91022706	061627	002000				040 V
MI066 V741 FER		57	99.99	0155329	+523915	L 1	19841 L	00000		91022706	064228	002500				031 V
MI066 V741 FER		57	99.99	0155329	+523915	L 3	40942 L	00000		91022707	071700	010100				060 V
ISMFB HD 13294		22	5.6	0207502	+384816	H 3	40511 L	10900	FO	91010106	064500	000500				301 G G=75, B=26
MI128 WK HYI		54	14.00	0208285	-633247	L 3	40610 L	00000	EO	91011609	091333	001046				200 V
NOMSB WK HYI		54	14.7	0208285	-633247	L 3	40598 L	50	SO	91011523	234300	001046				20 G B=34, B=18
MI128 WK HYI		54	14.00	0208285	-633247	L 3	40611 L	00000	EO	91011610	100857	001046				200 V
NOMSB WK HYI		54	14.7	0208285	-633247	L 3	40599 L	47	SO	91011600	002700	001046				20 G B=27, B=15
MI128 WK HYI		54	14.00	0208285	-633247	L 3	40612 L	00000	EO	91011610	105128	001046				200 V
NOMSB WK HYI		54	14.7	0208285	-633247	L 3	40600 L	50	SO	91011601	011100	001046				320 G B=39, G=40, B=19
MI128 WK HYI		54	14.00	0208285	-633247	L 3	40613 L	00000	EO	91011611	113433	001046				200 V
NOMSB WK HYI		54	14.7	0208285	-633247	L 3	40601 L	45	SO	91011602	020200	001046				20 G B=36, B=18
MI128 WK HYI		54	14.00	0208285	-633247	L 3	40614 L	00000	EO	91011612	122757	001046				200 V
NOMSB WK HYI		54	14.7	0208285	-633247	L 3	40602 L	41	SO	91011602	024500	001046				20 G B=30, B=18
MI128 WK HYI		54	14.00	0208285	-633247	L 3	40615 L	00000	EO	91011613	131057	001046				200 V
NOMSB WK HYI		54	14.7	0208285	-633247	L 3	40603 L	49	SO	91011603	034000	001046				20 G B=30, B=15
MI128 WK HYI		54	14.00	0208285	-633247	L 3	40616 L	00000	EO	91011613	135400	001046				200 V
NOMSB WK HYI		54	14.7	0208285	-633247	L 3	40604 L	42	SO	91011604	042300	001046				20 G B=32, B=18
MI128 WK HYI		54	14.00	0208285	-633247	L 3	40617 L	00000	EO	91011614	143751	001046				200 V
NOMSB WK HYI		54	14.7	0208285	-633247	L 3	40605 L	43	SO	91011605	051900	001046				20 G B=30, B=18
MI128 WK HYI		54	14.00	0208285	-633247	L 3	40607 L	00000	EO	91011606	065528	001046				200 V
NOMSB WK HYI		54	14.7	0208285	-633247	L 3	40606 L	45	SO	91011606	060500	001046				320 G B=29, G=40, B=18
MI128 WK HYI		54	14.00	0208285	-633247	L 3	40608 L	00000	EO	91011607	074752	001046				200 V
MI128 WK HYI		54	14.00	0208285	-633247	L 3	40609 L	00000	EO	91011608	083006	001046				200 V

FRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mmmsstt	BCC	Comment
RIASS	MRK 590	84	14.0	0212005	-005957	L 3	40591 L	63	SO	91011416	160400	015000	3X1	G E=1.5X, O=119, B=30
RIASS	MRK 590	84	14.0	0212005	-005957	L 1	19577 L	62	SO	91011418	184200	009000	4X2	G E=1.5X, O=178, B=40
ISMCS	HD 13841	23	7.4	0213157	+564753	L 1	19322 L	3475	FO	90113006	065300	000127	502	G O=190, B=38
ISMCS	HD 13841	23	7.4	0213157	+564753	L 3	40235 L	3436	FO	90113007	070500	000200	500	G O=220, B=18
ISMCS	HD 13841	23	7.4	0213157	+564753	L 1	19323 L	3501	FO	90113007	074300	000230	300	G O=100, B=18
OK78K	0214+568	37	13.7	0213599	+565259	L 3	40080 L	60	SO	90110809	095000	001730	400	G G=162, B=20
OK78K	0214+568	37	13.7	0213599	+565259	L 3	40080 S	61	SO	90110810	101600	003400	300	G G=105, B=20
AEMER	HD 14252	30	5.2	0216030	+282500	H 1	19538 L	18617	FO	91011023	235200	000830	502	G G=205, B=40
AEMER	HD 14252	30	5.2	0216030	+282500	H 3	40555 L	18718	FO	91011100	001100	002400	502	G G=202, B=35
AEMER	HD 14252	30	5.2	0216030	+282500	L 3	40574 L	19081	FO	91011223	235300	000101	400	G G=162, B=20
AEMER	HD 14252	30	5.2	0216030	+282500	L 1	19559 L	19038	FO	91011300	000500	000027	402	G G=180, B=35
RIASS	HD 14386	66	5.5	0216490	-031213	L 1	19583 L	23538	FO	91011516	160800	000500	3X2	G E=1.5X, G=102, B=32
RIASS	HD 14386	66	5.5	0216490	-031213	H 3	40597 L	23819	FO	91011516	162100	037400	35	G E=116, B=65
RIASS	HD 14386	66	5.5	0216490	-031213	L 1	19584 L	23328	FO	91011521	210600	000300	3X2	G E=1.5X, G=84, B=32
IGMK	HD 14386	66	7.1	0216490	-031213	L 1	19672 L	18685	FO	91012920	204900	000200	3X2	G E=1.5X, G=86, B=34
IGMK	HD 14386	66	7.1	0216490	-031213	L 3	40698 L	18700	FO	91012920	205900	005000	341	G E=148, G=57, B=22
IGMK	HD 14386	66	7.1	0216490	-031213	L 1	19673 L	18673	FO	91012921	213700	000110	352	G E=204, G=69, B=34
IGMK	HD 14386	66	7.1	0216490	-031213	H 1	19674 L	18620	FO	91012922	222400	007000	3X3	G E=2.5X, G=90, B=48
IGMK	HD 14386	66	7.1	0216490	-031213	L 3	40699 L	18579	FO	91012923	234400	007000	351	G E=211, G=96, B=24
IGMK	HD 14386	66	7.1	0216490	-031213	L 1	19675 L	18651	FO	91013001	012100	000150	352	G E=191, G=68, B=38
IGMK	HD 14386	66	7.1	0216490	-031213	L 1	19675 L	18662	FO	91013001	012900	000150	352	G E=191, G=68, B=38
IGMK	HD 14386	66	7.1	0216490	-031213	H 1	19676 L	18874	FO	91013002	021000	002500	3X3	G E=1.5X, G=86, B=45
IGMK	HD 14386	66	7.5	0216490	-031213	L 1	19713 L	15770	FO	91020720	202200	000245	352	G E=195, G=59, B=35
IGMK	HD 14386	66	7.5	0216490	-031213	L 3	40839 L	16219	FO	91020720	204400	007000	351	G E=193, G=85, B=24
IGMK	HD 14386	66	7.5	0216490	-031213	H 1	19714 L	16060	FO	91020721	212400	002200	3X2	G E=1.5X, G=70, B=38
IGMK	HD 14386	66	7.5	0216490	-031213	L 1	19715 L	16379	FO	91020722	223700	000055	252	G E=206, G=55, B=35
IGMK	HD 14386	66	7.5	0216490	-031213	H 1	19716 L	16662	FO	91020723	231400	001800	352	G E=244, G=64, B=36
MC082	GL 96	48	09.68	0218574	+473907	H 1	19848 L	00528	FO	91022806	061236	010500	031	V
ISMCS	ED +56 589	23	9.5	0219160	+571704	L 3	40232 L	487	FO	90113000	004600	002000	500	G G=170, B=18
ISMCS	ED +56 589	23	9.5	0219160	+571704	L 1	19318 L	490	FO	90113001	012700	000400	502	G G=200, B=32
ISMCS	ED +56 589	23	9.5	0219160	+571704	L 1	19319 L	490	FO	90113002	024700	002500	X01	G G=6X, B=22
ISMCS	HD 14542	25	7.0	0219266	+570936	L 1	19314 L	396	FO	90112919	194200	000130	X02	G G=1.5X, B=32
ISMCS	HD 14542	25	7.0	0219266	+570936	L 3	40228 L	3968	FO	90112919	195200	000800	400	G G=115, B=15
ISMCS	HD 14542	25	7.0	0219266	+570936	L 1	19315 L	4049	FO	90112920	203000	002000	?02	G G=12X, B=40
ISMCS	HD 14542	25	7.0	0219266	+570936	L 3	40229 L	4100	FO	90112921	210400	003000	X00	G G=2X, B=20
ISMCS	ED +58 461	23	9.76	0220500	+590010	L 1	19324 L	379	FO	90113009	090900	000600	502	G G=200, B=35
ISMCS	ED +58 461	23	9.76	0220500	+590010	L 3	40236 L	376	FO	90113009	092600	003500	500	G G=230, B=18
ISMCS	ED +58 461	23	9.76	0220500	+590010	L 1	19325 L	368	FO	90113010	101000	002500	X01	G G=4X, B=22
ISMCS	HD 14956	23	7.2	0223096	+572717	L 1	19316 L	3494	FO	90112922	221600	000100	401	G G=180, B=30
ISMCS	HD 14956	23	7.2	0223096	+572717	L 3	40230 L	3498	FO	90112922	222300	000600	300	G G=80, B=15
ISMCS	HD 14956	23	7.2	0223096	+572717	L 3	40231 L	3508	FO	90112923	231000	003000	X00	G G=2X, B=20
ISMCS	HD 14956	23	7.2	0223096	+572717	L 1	19317 L	3517	FO	90112923	235400	001800	?01	G G=15X, B=22
ISMCS	HD 15690	23	8.1	0229546	+571903	L 3	40234 L	1746	FO	90113004	045000	003500	501	G G=210, B=21
ISMCS	HD 15690	23	8.1	0229547	+571904	L 3	40233 L	1724	FO	90113003	034100	001500	300	G G=100, B=18
ISMCS	HD 15690	23	8.1	0229547	+571904	L 1	19320 L	1737	FO	90113004	043900	000200	402	G G=180, B=32
ISMCS	HD 15690	23	8.1	0229547	+571904	L 1	19321 L	1747	FO	90113005	053300	002500	?01	G G=10X, B=30
RIASS	HD 16157	48	8.7	0232284	-440039	H 1	19479 L	926	FO	90122617	173200	001500	32	G E=75, B=35
RIASS	HD 16157	48	8.7	0232284	-440039	L 3	40462 L	934	FO	90122617	175700	009000	51	G E=225, B=25
RIASS	HD 16157	48	8.7	0232284	-440039	L 1	19480 L	932	FO	90122619	193400	000500	42	G E=153, B=32
RIASS	HD 17206	41	4.47	0242461	-184703	L 3	40592 L	339	FU	91011420	203300	007500	?30	G E=96, G=10X, B=18

PRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mmmsst	ECC	Comment
RIASS HD	17206	41	4.47	0242461	-184703	H 1	19578 L	338	FU	91011421	215700	001800	X43 G	B=142, G=2X, B=42
ISMFB HD	17573	22	3.6	0247020	+270320	H 3	40510 L	834	FU	91010103	032400	000200	X03 G	G=1.5X, B=42
SCMF COM LEVY	06		7.5	0254167	-393002	L 1	19527 L	103	FO	91010900	001200	001500	340 G	B=1.5X, G=60, B=04
EBMIA HD	18925	39	2.9	0301096	+531844	H 3	40382 L	1348	FU	90121817	174300	002000	X03 G	G=1.5X, B=45
EBMIA HD	18925	39	2.9	0301096	+531844	H 1	19442 L	1338	FU	90121818	181500	000500	502 G	G=220, B=40
EBMIA HD	18925	39	2.9	0301096	+531844	H 3	41138 L	1315	FU	91031912	120000	002000	X03 G	G=1.5X, B=42
EBMIA HD	18925	39	2.9	0301096	+531844	H 1	19949 L	1351	FU	91031912	122900	000500	X03 G	G=1.5X, B=41
PHCAL CT AFR 2	40		5.16	0302259	-595552	L 9	02439			91022022	222400	016000	G	
MCL57 HD	19745	87	09.52	0306163	-653824	L 1	19651 L	00611	FO	91012609	093045	012000	572 V	FFRFD
EGMAS AFR 147A	82		14.8	0308439	+010734	L 3	40446 L			90122317	174500	042500	G	
RIASS EF ERI	59		14.2	0311599	-224647	L 1	19643 L		FO	91012417	174800	006000	303 G	G=84, B=42
RIASS EF ERI	59		14.2	0311599	-224647	L 3	40671 L		FO	91012418	182500	012000	242 G	B=178, G=50, B=35
PHCAL GC 3953	47		5.62	0315487	-010640	9	02419			91020900	002100	016000	G	
CSMIA HD	22049	46	3.8	0330344	-093735	L 3	40384 L	650	FU	90121901	014700	004000	341 G	B=2X, G=70, B=28
CSMIA HD	22049	46	3.8	0330344	-093735	L 3	40688 L	638	FU	91012623	233800	004000	341 G	B=149, G=61, B=24
PHCAL T-FLOOD	98			0334005	-173752	H 3	40242			90120105	052300	000005	79 G	B=60X, B=115
PHCAL WAVCAL	98			0334006	-173753	L 1	19329 L			90120103	032100	000025	76 G	B=10X, B=80
PHCAL T-FLOOD	98			0334006	-173753	H 1	19330 L			90120103	035600	000025	78 G	B=50X, B=100
PHCAL WAVCAL	98			0334006	-173753	H 1	19330 L			90120103	035800	000016	78 G	B=50X, B=100
PHCAL NULL	99			0334006	-173753	H 2	18512			90120104	043000	000000	00 G	B=18
PHCAL T-FLOOD	98			0334006	-173753	L 3	40241			90120104	045400	000005	79 G	B=10X, B=105
PHCAL WAVCAL	98			0334006	-173753	L 3	40241			90120104	045600	000002	79 G	B=10X, B=105
PHCAL WAVCAL	98			0334006	-173753	H 3	40242			90120105	052500	000200	79 G	B=60X, B=115
PHCAL T-FLOOD	98			0334006	-173753	L 2	18513			90120105	054500	000010	77 G	B=10X, B=82
PHCAL WAVCAL	98			0334006	-173753	L 2	18513			90120105	054700	000001	77 G	B=10X, B=82
PHCAL T-FLOOD	98			0334006	-173753	H 2	18514			90120106	061600	000010	79 G	B=50X, B=122
PHCAL WAVCAL	98			0334006	-173753	H 2	18514			90120106	061800	000022	79 G	B=50X, B=122
PHCAL WAVCAL	98			0334006	-173752	L 2	18515 S			90120106	064800	000002	71 G	B=20X, B=25
PHCAL WAVCAL	98			0334006	-173752	L 2	18515 L			90120106	065100	000000	71 G	B=20X, B=25
PHCAL TFLOOD	99			0334006	-173753	L 1	19331 L			90120108	084200	000025	08 G	B=100
CSMIA HD	22468	46	6.1	0334132	+002533	L 3	40687 L	10800	FO	91012622	222400	003000	331 G	B=121, G=64, B=24
ISMFB HD	23016	22	5.7	0339256	+193229	H 3	40509 L	14260	FO	91010102	022900	001900	503 G	G=210, B=42
ISMFB HD	23227	21	5.0	0340154	-320549	H 3	40256 L	25929	FO	90120308	081500	000400	503 G	G=236, B=45
ISMFB HD	23227	21	5.0	0340154	-320549	H 1	19342 L	26020	FO	90120308	084200	000300	503 G	G=245, B=46
ISMFB HD	23338	22	4.3	0342135	+241842	H 3	40508 L	445	FU	91010101	012100	000300	503 G	G=230, B=41
MA047 SA0076145	30		08.36	0342276	+235247	E 9	02430 2	01711	FO	91021305	050000	016000	V FES	FCR IWP 19746
MA047 SA0 076145	30		08.35	0342277	+235248	L 3	40862 L	01727	FO	91021305	055022	000500	300 V	
MA047 SA0 076145	30		08.36	0342277	+235248	L 1	19746 L	01711	FO	91021305	054312	000115	400 V	
MA047 SA0 076173	30		07.66	0343285	+240604	L 1	19747 L	03192	FO	91021307	070847	000050	500 V	
MA047 SA0 076173	30		07.68	0343285	+240604	L 3	40863 L	03130	FO	91021307	071336	000320	500 V	
MA047 SA0 076183	30		07.09	0344003	+242200	L 1	19748 L	05282	FO	91021308	082756	000025	500 V	
MA047 SA0 076183	30		07.07	0344003	+242200	L 3	40864 L	05381	FO	91021308	083407	000140	600 V	
MA047 SA0 076185	30		08.70	0344057	+235030	L 1	19749 L	01271	FO	91021309	095151	000200	400 V	
MA047 SA0 076185	30		08.70	0344057	+235030	L 3	40865 L	01268	FO	91021309	095855	000800	300 V	
MA109 HD23630	25		03.08	0344304	+235708	H 1	19591 L	01642	FU	91011710	100304	000030	502 V	
MA109 HD23630	25		03.08	0344304	+235708	H 3	40622 L	01638	FU	91011710	101423	000050	502 V	
MA109 HD23630	23		03.14	0344304	+235708	H 3	40958 L	01559	FU	91030106	065109	000050	501 V	
MA109 HD23630	23		03.12	0344304	+235708	H 1	19856 L	01576	FU	91030107	072942	000030	501 V	
MA109 HD23862	23		05.19	0346123	+235906	H 3	40956 L	22884	FO	91030104	043240	001000	702 V	
MA109 HD23862	23		05.22	0346123	+235906	H 1	19854 L	22458	FO	91030104	044823	000415	602 V	



PRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exp.time	numres	stt	ECC	Comment
MA109	HD23862	23	05.18	0346123	+235906	L 3	40957 L	23056	FO	91030106	060258	000005		501	V
MA109	HD23862	23	05.18	0346124	+235907	H 1	19590 L	22980	FO	91011708	081606	000415		502	V
MA109	HD23862	23	05.18	0346124	+235907	H 3	40621 L	23009	FO	91011708	083007	001000		602	V
MA109	HD23862	23	05.17	0346124	+235907	L 1	19855 L	23167	FO	91030106	062941	000003		501	V
ISMFB	HD 24072	22	4.9	0346450	-374619	H 3	40455 L			90122507	071700	000800			G
MA047	SAO 076249	30	07.81	0346574	+241154	L 1	19750 L	02799	FO	91021311	110624	000040		400	V
MA047	SAO 076249	30	07.77	0346574	+241154	L 3	40866 L	02891	FO	91021311	111042	000240		500	V
MIL70	V 471 TPU	37	09.83	0347337	+170546	L 3	40824 L	00462	FO	91020505	054904	001500		500	V NO GUIDESTAR
MIL70	V 471 TPU	37	09.83	0347337	+170546	E 9	02412 2	00462	FO	91020506	062500	016000			V FES FIELD
ISMFB	HD 24388	22	5.48	0350132	-053033	H 3	40456 L			90122508	081600	001000			G
MA138	HD24912	13	04.18	0355430	+353856	H 3	40734 L	00615	FU	91020107	074848	000110		500	V
MA138	HD24912	13	04.17	0355430	+353856	H 3	40779 L	00618	FU	91020306	065339	000110		500	V
MA138	HD24912	13	04.18	0355430	+353856	H 3	40782 L	00616	FU	91020309	091713	000110		500	V
MA138	HD24912	13	04.18	0355430	+353856	H 3	40755 L	00613	FU	91020206	062236	000110		500	V
MA138	HD24912	13	04.16	0355430	+353856	H 3	40758 L	00626	FU	91020209	091137	000110		500	V
MA138	HD 24912	13	04.18	0355430	+353856	H 3	40802 L	00616	FU	91020405	051046	000110		500	V
MA138	HD 24912	13	04.17	0355430	+353856	H 3	40805 L	00618	FU	91020407	073812	000110		500	V
RGWK	3C 98	86	14.4	0356105	+101733	L 3	40451 L			90122418	181600	002500			G
RGWK	3C 98	86	14.4	0356105	+101733	L 3	40451 L			90122419	190200	035000			G
USSES	HD 26015	41	6.0	0404520	+150150	L 3	40466 L	9922	FO	90122704	042100	000730		500	G G=197,B=18
PHCAL	SAO CT AER 2	21	5.5	0407015	-163059	H 9	02428			91021301	014100	002000			G
PHCAL	SAO CT AER 2	21	5.5	0407015	-163059	H 9	02429			91021302	020100	002000			G
MIL80	VW HYI	54	13.56	0409323	-712529	L 3	40073 L	00066	SO	90110712	122751	003000		330	V FREAD
MIL80	VW HYI	54	99.99	0409323	-712529	L 1	19172 L	00000	BO	90110713	131623	002000		341	V
RIASS	VW HYI	54	9.5	0409329	-712527	L 3	40033 L			90110320	202800	000200			G
RIASS	VW HYI	54	9.5	0409329	-712527	L 1	19133 L			90110321	210600	000130			G
RIASS	VW HYI	54	9.5	0409329	-712527	L 3	40034 L			90110321	213900	000400			G
RIASS	VW HYI	54	9.5	0409329	-712527	L 1	19134 L			90110322	221800	000130			G
RIASS	VW HYI	54	9.5	0409329	-712527	L 3	40035 L			90110322	225000	000430			G
RIASS	VW HYI	54	9.5	0409329	-712527	L 1	19135 L			90110323	232900	000145			G
RIASS	VW HYI	54	9.5	0409329	-712527	L 3	40036 L			90110400	000100	000430			G
RIASS	VW HYI	54	9.5	0409329	-712527	L 3	40037 L			90110401	011200	000430			G
RIASS	VW HYI	54	9.5	0409329	-712527	L 1	19136 L			90110401	014900	000145			G
RIASS	VW HYI	54	9.5	0409329	-712527	L 1	19137 L			90110403	030200	000100			G
RIASS	VW HYI	54	9.5	0409329	-712527	L 3	40039 L			90110403	033600	000300			G
RIASS	VW HYI	54	9.5	0409329	-712527	L 1	19138 L			90110404	041300	000100			G
RIASS	VW HYI	54	9.5	0409329	-712527	L 3	40040 L			90110404	044800	000230			G
RIASS	VW HYI	54	9.5	0409329	-712527	L 1	19139 L			90110405	052500	000100			G
RIASS	VW HYI	54	9.5	0409329	-712527	L 3	40041 L			90110405	055900	000230			G
RIASS	VW HYI	54	9.5	0409329	-712527	L 1	19140 L			90110406	063500	000100			G
RIASS	VW HYI	54	9.5	0409329	-712527	L 3	40042 L			90110407	071000	000230			G
RIASS	VW HYI	54	9.5	0409329	-712527	L 1	19141 L			90110407	074600	000100			G
RIASS	VW HYI	54	9.5	0409329	-712527	L 3	40043 L			90110408	082100	000215			G
RIASS	VW HYI	54	9.5	0409329	-712527	L 1	19142 L			90110408	085700	000100			G
RIASS	VW HYI	54	9.5	0409329	-712527	L 3	40044 L			90110409	093200	000215			G
RIASS	VW HYI	54	9.5	0409329	-712527	L 1	19143 L			90110410	100600	000100			G
RIASS	VW HYI	54	9.5	0409329	-712527	L 3	40045 L			90110410	104500	000230			G
MIL80	VW HYI	54	11.58	0409330	-712527	L 3	40028 L	00388	SO	90110313	131539	002000		330	V
RIASS	VW HYI	54	9.5	0409330	-712527	L 1	19132 L	422	FO	90110319	191100	000130		402	G G=165,B=32
MIL80	VW HYI	54	11.28	0409330	-712527	L 1	19128 L	00127	FO	90110314	140518	001000		451	V



FPO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mmmsstt	HC	Comment
RIASS	WV HXI	54	9.5	0409330	-712527	L 3	40038 L	499	FO	90110402	022300	000400	X00	G=1.5X,B=18
ML180	WV HXI	54	11.04	0409330	-712527	L 3	40029 L	00157	FO	90110314	143913	002000	330	V
RIASS	WV HXI	54	11.7	0409330	-712527	L 3	40057 L	326	SO	90110522	224400	001000	500	G=210,B=18
ML180	WV HXI	54	10.63	0409330	-712527	L 1	19129 L	00227	FO	90110315	152758	001000	771	V
RIASS	WV HXI	54	11.7	0409330	-712527	L 1	19156 L	318	SO	90110523	231500	000700	502	G=225,B=38
ML180	WV HXI	54	10.44	0409330	-712527	L 3	40030 L	00268	FO	90110316	160632	002000	500	V
RIASS	WV HXI	54	11.7	0409330	-712527	L 3	40058 L	297	SO	90110523	234800	001000	500	G=190,B=18
ML180	WV HXI	54	10.28	0409330	-712527	L 1	19130 L	00308	FO	90110316	164317	000600	771	V
RIASS	WV HXI	54	11.7	0409330	-712527	L 1	19157 L	278	SO	90110600	002200	000600	502	G=198,B=38
ML180	WV HXI	54	10.13	0409330	-712527	L 3	40031 L	00355	FO	90110317	172442	001500	701	V
RIASS	WV HXI	54	11.7	0409330	-712527	L 3	40059 L	268	SO	90110601	010700	001000	500	G=170,B=18
ML180	WV HXI	54	10.02	0409330	-712527	L 1	19131 L	00389	FO	90110318	180433	000300	560	V
XSMH	N3C	1535	70	12.9	0411570	-124626	L 3 40076 S	141	FO	90110804	043300	000500	440	G B=153,C=150,B=18
XSMH	N3C	1535	70	12.9	0411570	-124626	L 3 40076 L	144	FO	90110804	044400	000300		G
MM142	HD27311	74	08.11	0416346	+194941	L 1	19896 S	02150	FO	91031203	040359	000400	301	V
MM142	HD27311	74	08.11	0416346	+194941	L 1	19896 L	02150	FO	91031203	034900	000400	701	V
MM142	HD27311	74	08.11	0416346	+194941	L 3	41089 L	02133	FO	91031204	041517	000300	400	V
MM142	HD27877	74	07.69	0421484	+184757	L 3	41096 S	03117	FO	91031309	091918	000700	400	V
MM142	HD27877	74	07.69	0421484	+184757	L 3	41096 L	03117	FO	91031309	093608	000700	500	V
MM142	HD27877	74	07.67	0421484	+184757	L 1	19909 S	03159	FO	91031308	083830	000400	500	V
MM142	HD27877	74	07.67	0421484	+184757	L 1	19909 L	03159	FO	91031308	084909	000400	700	V
MM142	HD28138	74	07.73	0424050	+194355	L 1	19907 S	02995	FO	91031305	055159	000200	400	V
MM142	HD28138	74	07.73	0424050	+194355	L 1	19907 L	02995	FO	91031305	054213	000200	600	V
MM142	HD28138	74	07.74	0424058	+194355	L 1	19898 S	02981	FO	91031208	082443	000800	700	V
MM142	HD28138	74	07.74	0424058	+194355	L 1	19898 L	02981	FO	91031208	080622	000800	700	V
MM142	HD28138	74	07.75	0424058	+194355	L 3	41091 S	02941	FO	91031208	084036	000600	300	V
MM142	HD28138	74	07.75	0424058	+194355	L 3	41091 L	02941	FO	91031208	085356	000600	400	V
IMMCI	HD	28170	30	8.8	0424317	+245703	L 1 19608 L	700	FO	91012016	160400	001630	X02	G=1.5X,B=37
IMMCI	HD	28170	30	8.8	0424317	+245703	L 3 40639 L	704	FO	91012016	163200	013500	502	G=230,B=32
IMMCI	HD	28170	30	8.8	0424317	+245703	L 1 19609 L	703	FO	91012017	171700	001000	502	G=209,B=38
IMMCI	HD	28170	30	8.8	0424317	+245703	L 1 19610 L	708	FO	91012018	182300	012000	?04	G=11X,B=58
MM142	HD28255	74	08.11	0425119	+274014	L 1	19899 L	02150	FO	91031209	095305	004500	700	V THREE SEGMENTS
MM142	HD28225	74	08.12	0425119	+274014	L 3	41095 L	02127	FO	91031306	063348	002500	400	V TWO SEGMENTS; FREAD
MM142	HD28225	74	08.12	0425119	+274014	L 1	19908 L	02128	FO	91031307	072524	000500	500	V
HSMKB	HD	28497	26	5.6	0426475	-130926	H 3 40273 L	16073	FO	90120508	083100	000210	402	G=170,B=35
HSMKB	HD	28497	26	5.6	0426475	-130926	H 1 19354 L	16145	FO	90120508	083700	000130	402	G=175,B=40
MM152	SKY HKGD	07		0428328	+180101	L 1	19737 L		BO	91021108	081800	062000	309	G=145,B=105
MM152	HH 29	69	15.00	0428332	+175955	L 1	19742 L	00000	BO	91021206	061633	031100	332	V
SFMOW	HD	28873	20	5.1	0429181	-450336	L 1 19963 L	23377	FO	91032220	200900	000004	502	G=211,B=35
SFMOW	HD	28873	20	5.1	0429181	-450336	L 1 19963 S	23130	FO	91032220	201700	000005	502	G=216,B=35
SFMOW	HD	28873	20	5.1	0429181	-450336	L 3 41158 L	23155	FO	91032220	202700	000005	X00	G=1.5X,B=18
SFMOW	HD	28873	20	5.1	0429181	-450336	L 3 41158 S	23647	FO	91032220	203500	000002	X00	G=1.5X,B=18
IMMCI	HD	283714	22	9.98	0429370	+250103	L 3 40586 L	273	FO	91011323	232100	011000	401	G=150,B=30
IMMCI	HD	283714	22	9.98	0429370	+250103	L 1 19571 L	275	FO	91011400	002100	001500	402	G=179,B=35
IMMCI	HD	28975	30	9.02	0431484	+240831	L 1 19547 L	616	FO	91011120	203500	013500	X03	G=8X,B=50
PHCAL	SKY HKGD	07		0433580	-102732	L 1	19764 L			91021513	130500	012000	04	G B=54
AGRE	MKN 618	84	14.0	0433599	-102836	L 3	40371 L		BO	91021512	124000	021000	353	G B=218,G=114,B=45
AGRE	MKN 618	84	14.0	0433599	-102836	L 1	19765 L		BO	91021516	161300	019500	4X5	G B=1.5X,G=190,B=70
MIO66	S32	57	13.50	0435134	-012520	L 3	40384 L	00000	BO	91022607	074154	020000	361	V
MIO66	S32	57	13.50	0435134	-012520	L 1	19836 L	00000	BO	91022611	111118	003000	202	V

IFO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mm	mm	sec	ECC	Comment
MI066	S32	57	13.50	04351.34	-012520	L 3	40935 L	00000	FO	91022611	114720	006000			250 V	
AGMW	T CFM	51	7.3	04351.40	+660254	L 1	19660 L	4273	FO	91012820	205100	015000			344 G E=193,G=117,B=52	
AGMW	T CFM	51	7.6	04351.40	+660254	L 1	19751 L	3933	FO	91021320	203000	016800			345 G E=1.5X,G=160,B=62	
AGMW	T CFM	51	7.3	04351.40	+660254	L 1	19864 L	3151	FO	91030220	200200	015000			346 G E=1.5X,G=150,B=72	
AGMW	T CFM	51	7.4	04351.40	+660254	L 1	19929 L	2514	FO	91031619	192800	006000			342 G E=1.5X,G=80,B=40	
AGMW	T CFM	51	8.2	04351.40	+660254	L 1	20003 L	2049	FO	91032823	232700	001500			237 G E=178,G=110,B=90	
AGMW	T CFM	51	8.2	04351.40	+660254	L 1	20004 L	2014	FO	91032900	001400	002500			342 G E=190,G=64,B=40	
AGMW	T CFM	51	7.4	04351.40	+660254	L 1	20126 L	1410	FO	91041218	183500	001800			242 G E=153,G=50,B=35	
MM142	HD283800	74	10.04	0440210	+265606	L 1	19897 S	00384	FO	91031205	060840	001000			401 V	
MM142	HD283800	74	10.04	0440210	+265606	L 1	19897 L	00384	FO	91031205	054931	001200			501 V	
MM142	HD283800	74	10.03	0440210	+265606	L 3	41090 L	00386	FO	91031206	062533	002000			400 V	
MM142	HD283800	74	10.08	0440210	+265606	L 3	41097 L	00371	FO	91031310	103337	001600			400 V HEAD	
MM142	HD283800	74	10.02	0440210	+265606	L 1	19906 L	00389	FO	91031304	040238	004500			700 V	
IMCI	HD 283800	24	9.85	0440214	+265603	L 1	19572 L	348	FO	91011401	015100	004600			X03 G G=6X,B=50	
IMCI	HD 283800	24	9.85	0440214	+265603	L 3	40587 L	352	FO	91011402	024300	005000			501 G G=210,B=28	
IMCI	HD 283800	24	9.85	0440214	+265603	L 1	19573 L	359	FO	91011403	034000	000800			502 G G=210,B=35	
IMCI	HD 30826	22	8.91	0448508	+231617	L 3	40588 L	915	FO	91011405	052200	003600			X01 G G=3X,B=22	
IMCI	HD 30826	22	8.91	0448508	+231617	L 1	19575 L	912	FO	91011406	060300	003000			X02 G G=7X,B=38	
IMCI	HD 30826	22	8.9	0448508	+231617	L 1	19611 L	924	FO	91012022	220500	000300			502 G G=215,B=32	
IMCI	HD 30826	22	8.9	0448508	+231617	L 3	40640 L	897	FO	91012022	221600	001200			500 G G=206,B=18	
IMCI	HD 283920	25	8.99	0448591	+265004	L 1	19546 L	615	FO	91011115	155600	013500			X04 G G=9X,B=58	
IMCI	HD 283920	25	8.99	0448591	+265004	L 3	40564 L	585	FO	91011118	182200	010000			500 G G=224,B=20	
IMCI	HD 283920	25	8.99	0448591	+265004	L 1	19574 L	624	FO	91011404	043800	001130			502 G G=225,B=35	
MAL38	HD30614	13	04.45	0449038	+661539	H 3	40733 L	00484	FU	91020106	064246	000140			500 V	
HMYB	HD 30614	13	4.3	0449038	+661539	H 1	19376 L	473	FU	90120907	075100	000035			402 G G=165,B=38	
MAL38	HD30614	13	04.43	0449038	+661539	H 3	40736 L	00491	FU	91020109	094544	000140			500 V	
HMYB	HD 30614	13	4.3	0449038	+661539	H 3	40293 L	470	FU	90120907	075700	000055			341 G E=133,G=125,B=30	
MAL38	HD30614	13	04.44	0449038	+661539	H 3	40778 L	00489	FU	91020306	060507	000150			500 V	
CEMIN	HD 30614	15	4.3	0449038	+661539	H 3	40740 L	481	FU	91020114	140300	000140			502 G G=200,B=35	
MAL38	HD30614	13	04.45	0449038	+661539	H 3	40781 L	00485	FU	91020308	083258	000150			500 V	
CEMIN	HD 30614	13	4.29	0449038	+661539	H 3	40744 L	473	FU	91020117	175200	000145			502 G G=210,B=35	
MAL38	HD30614	13	04.45	0449038	+661539	H 3	40756 L	00483	FU	91020207	071132	000150			500 V	
CEMIN	HD 30614	15	4.3	0449038	+661539	H 3	40748 L	476	FU	91020121	211900	000145			502 G G=210,B=38	
MAL38	HD30614	13	04.47	0449038	+661539	H 3	40804 L	00473	FU	91020406	064853	000150			500 V	
CEMIN	HD 30614	15	4.3	0449038	+661539	H 3	40752 L	492	FU	91020200	005500	000145			502 G G=210,B=38	
MAL38	HD30614	13	04.46	0449038	+661539	H 3	40807 L	00479	FU	91020409	093005	000150			500 V	
CEMIN	HD 30614	13	4.3	0449038	+661539	H 3	40761 L	481	FU	91020212	120900	000150			502 G G=220,B=40	
CEMIN	HD 30614	13	4.3	0449038	+661539	H 3	40763 L	485	FU	91020214	140400	000150			502 G G=220,B=38	
CEMIN	HD 30614	13	4.3	0449038	+661539	H 3	40767 L	490	FU	91020218	181100	000150			502 G G=220,B=38	
CEMIN	HD 30614	13	4.29	0449038	+661539	H 3	40771 L	477	FU	91020221	215600	000150			502 G G=220,B=40	
CEMIN	HD 30614	15	4.3	0449038	+661539	H 3	40775 L	486	FU	91020301	011100	000150			502 G G=225,B=40	
CEMIN	HD 30614	13	4.3	0449038	+661539	H 3	40786 L	478	FU	91020312	124600	000150			502 G G=215,B=38	
CEMIN	HD 30614	13	4.3	0449038	+661539	H 3	40790 L	483	FU	91020316	164300	000150			502 G G=220,B=38	
CEMIN	HD 30614	13	4.29	0449038	+661539	H 3	40794 L	485	FU	91020320	202300	000150			502 G G=230,B=38	
CEMIN	HD 30614	13	4.29	0449038	+661539	H 3	40798 L	483	FU	91020323	233700	000150			502 G G=210,B=38	
CEMIN	HD 30614	13	4.29	0449038	+661539	H 3	40801 L	473	FU	91020402	021900	000150			502 G G=225,B=40	
CEMIN	HD 30614	15	4.3	0449038	+661539	H 3	40810 L	483	FU	91020414	143900	000150			502 G G=220,B=38	
CEMIN	HD 30614	13	4.3	0449038	+661539	H 3	40814 L	479	FU	91020418	181100	000150			502 G G=220,B=38	
CEMIN	HD 30614	13	4.29	0449038	+661539	H 3	40818 L	484	FU	91020422	221200	000150			502 G G=225,B=38	
CEMIN	HD 30614	13	4.29	0449038	+661539	H 3	40822 L	487	FU	91020501	012700	000150			502 G G=215,B=38	

FRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	nummsst	BCC	Comment
CEMN HD	30614	13	4.29	0449038	+661539	H 3	40823 L	479	FU	91020501	015900	000150	502	G G=220,B=40
CEMN HD	30614	13	4.3	0449038	+661539	H 3	40825 L	484	FU	91020514	140700	000150	502	G G=220,B=38
CEMN HD	30614	13	4.3	0449038	+661539	H 3	40828 L	480	FU	91020518	183600	000150	502	G G=220,B=38
CEMN HD	30614	13	4.29	0449038	+661539	H 3	40832 L	489	FU	91020522	221400	000150	502	G G=210,B=38
CEMN HD	30614	15	4.3	0449048	+661528	H 3	40726 L	491	FU	91013121	210600	000300	X03	G G=2X,B=47
CEMN HD	30614	13	4.3	0449048	+661528	H 3	40730 L	488	FU	91020100	004800	000130	502	G G=195,B=34
ISMFB HD	31331	21	6.0	0452165	+002316	H 3	40502 L	11646	FO	90123105	054200	001200	X03	G G=1.5X,B=42
ZAMR	OS-154	57	14.3	0453170	-750827	L 1	19800 L		BO	91021912	124900	010000	354	G B=234,G=85,B=52
ZAMR	OS-154	57	15.3	0453170	-750827	L 3	40906 L		BO	91021914	143600	010000	2X1	G B=1.5X,G=45,B=30
ZAMR	OS-154	57	15.3	0453170	-750827	L 1	19801 L		BO	91021916	162200	007000	343	G B=187,G=80,B=42
ZAMR	OS-154	57	15.3	0453170	-750827	L 3	40907 L		BO	91021917	173900	001500	231	G B=73,G=46,B=27
ZAMR	OS-154	57	15.3	0453170	-750827	L 3	40907 L		BO	91021918	180100	008500	251	G B=229,G=46,B=27
MA096	BRU 22	23	13.72	0454147	-670436	L 3	40925 L	00000	BO	91022408	083838	006000	600	V
MA096	BRU 22	23	13.72	0454147	-670436	L 1	19824 L	00000	BO	91022409	094529	003000	502	V
IMCI HD	284014	22	9.6	0454594	+253245	L 1	19579 L	452	FO	91011423	231600	000930	502	G G=210,B=35
IMCI HD	284014	22	9.6	0454594	+253245	L 3	40593 L	451	FO	91011423	235100	006000	501	G G=200,B=28
IMCI HD	284014	22	9.6	0454594	+253245	L 1	19580 L	452	FO	91011500	003000	008500	X03	G G=9X,B=50
MCI55	R IEP	51	07.20	0457197	-145247	L 1	19311 L	04808	FO	90112912	121635	006000	113	V
MCI55	R IEP	50	07.58	0457197	-145248	L 1	19536 L	03431	FO	91011007	073701	011000	111	V READ
ISMFB HD	32309	22	4.9	0459152	-200724	H 3	40454 L			90122506	061700	000630		G
PHCAL GC	6142	21	5.0	0459154	-200724	L 9	02414			91020702	021300	016000		G
PHCAL GC	6142	21	5.0	0459154	-200724	L 9	02415			91020702	023500	004000		G
DAMB	0500-157	37	15.4	0500519	-154033	L 3	40247 S		BO	90120218	185500	010000	401	G G=155,B=25
DAMB	0500-157	37	15.4	0500519	-154033	L 1	19340 L		BO	90120221	210100	008000	503	G G=205,B=42
DAMB	0500-157	37	15.4	0500519	-154033	L 3	40248 L		BO	90120222	222800	005000	500	G G=205,B=20
PHCAL	G191E2B	37	11.65	0501309	+524547	L 3	41199 L	00364	SO	91032804	045126	000120	500	V
PHCAL	G 191E2B	37	11.8	0501309	+524547	L 1	19681 L	339	SO	91013016	162400	000630	X02	G G=2X,B=38
PHCAL	G191E2B	37	11.64	0501309	+524547	H 1	19999 L	00369	SO	91032805	050214	022000	503	V
PHCAL	G 191E2B	37	11.8	0501309	+524547	L 1	19683 L	337	SO	91013019	190600	000315	502	G G=253,B=34
PHCAL	G191E2B	37	11.65	0501309	+524547	L 3	41200 L	00365	SO	91032808	085133	000120	500	V
PHCAL	G191E2B	37	11.65	0501309	+524547	L 1	20000 L	00363	SO	91032810	100055	000300	501	V
PHCAL	G191E2B	37	11.64	0501309	+524547	L 3	41201 L	00367	SO	91032810	100920	000120	500	V
PHCAL	G191E2B	37	11.67	0501310	+524548	H 3	41207 L	00359	SO	91032904	040348	012500	400	V
PHCAL	G 191E2B	37	11.8	0501310	+524548	L 3	40572 L	290	SO	91011221	211200	000130	500	G G=220,B=18
PHCAL	G191E2B	37	11.51	0501310	+524548	L 1	20006 L	00103	FO	91032906	061522	000300	501	V
PHCAL	G 191E2B	37	11.8	0501310	+524548	L 1	19557 L	289	SO	91011221	212000	000315	502	G G=240,B=32
PHCAL	G191E2B	37	11.68	0501310	+524548	L 3	41208 L	00356	SO	91032907	071409	000120	500	V
PHCAL	G 191E2B	37	11.8	0501310	+524548	L 1	19558 L	296	SO	91011222	220300	000630	X02	G G=2X,B=38
PHCAL	G191E2B	37	11.66	0501310	+524548	L 1	20007 L	00360	SO	91032907	072055	000300	501	V
PHCAL	G 191E2B	37	11.8	0501310	+524548	L 3	40573 L	294	SO	91011222	224000	000300	X00	G G=2X,B=20
PHCAL	G191E2B	37	11.8	0501310	+524548	L 3	40658 L	314	SO	91012223	235500	000130	500	G G=191,B=18
PHCAL	G191E2B	37	11.8	0501310	+524548	L 1	19630 L	306	SO	91012300	000800	000630	X02	G G=2X,B=35
PHCAL	G191E2B	37	11.8	0501310	+524548	L 3	40659 L	312	SO	91012300	004100	000300	X00	G G=2X,B=18
PHCAL	G 191E2B	37	11.8	0501310	+524548	L 1	19647 L	312	SO	91012502	023500	000315	502	G G=210,B=35
PHCAL	G 191E2B	37	11.8	0501310	+524548	L 3	40708 L	314	SO	91013012	121800	000130	500	G G=214,B=18
PHCAL	G 191E2B	37	11.8	0501310	+524548	L 1	19678 L	338	SO	91013012	122700	000630	X02	G G=2X,B=38
PHCAL	G 191E2B	37	11.8	0501310	+524548	L 3	40709 L	346	SO	91013012	125700	000430	X00	G G=3X,B=19
PHCAL	G 191E2B	37	11.8	0501310	+524548	L 1	19679 L	343	SO	91013013	135900	000315	502	G G=232,B=35
PHCAL	G 191E2B	37	11.8	0501310	+524548	L 3	40710 L	347	SO	91013014	140700	000400	X00	G G=3X,B=18
PHCAL	G 191E2B	37	11.8	0501310	+524548	L 3	40711 L	348	SO	91013015	150800	000130	500	G G=220,B=18



FO	Object	CL	MAG	R.A.	DEC	D C Image A	FES	MD	Obs.date	Exptim	numscst	ECC	Comment
PHCAL G 191E2B		37	11.8	0501.310	+524548	L 1 19680 L		SO	91013015	151700	000630	X02 G	G=2X,B=40
PHCAL G 191E2B		37	11.8	0501.310	+524547	L 3 40712 L	343	SO	91013016	161500	000130	500 G	G=225,B=18
PHCAL G 191E2B		37	11.8	0501.310	+524548	L 3 40713 L	333	SO	91013017	172700	000130	500 G	G=225,B=18
PHCAL G 191E2B		37	11.8	0501.310	+524548	L 1 19682 L	334	SO	91013017	173600	000630	X02 G	G=2X,B=38
PHCAL G 191E2B		37	11.8	0501.310	+524548	L 3 40714 L	342	SO	91013018	180600	000400	X00 G	G=3X,B=18
PHCAL G 191E2B		37	11.8	0501.310	+524548	L 1 19684 L	331	SO	91013019	194300	000255	502 G	G=227,B=34
PHCAL G 191E2B		37	11.8	0501.310	+524548	L 1 19685 L	337	SO	91013020	202200	000255	502 G	G=228,B=33
PHCAL G 191E2B		37	11.8	0501.310	+524548	L 1 19958 L	360	SO	91032121	212200	000255	402 G	G=182,B=35
PHCAL G 191E2B		37	11.8	0501.310	+524548	L 3 41152 L	364	SO	91032122	223400	000130	500 G	G=175,B=18
PHCAL G 191E2B		37	11.8	0501.310	+524548	L 1 19959 L	357	SO	91032122	224000	000255	402 G	G=179,B=32
PHCAL G 191E2B		37	11.8	0501.310	+524548	L 1 19983 L	369	SO	91032500	001300	000255	501 G	G=213,B=30
PHCAL G 191E2B		37	11.8	0501.310	+524548	L 3 41175 L	358	SO	91032500	002100	000130	500 G	G=201,B=18
PHCAL G 191E2B		37	11.8	0501.310	+524548	L 1 19984 L	362	SO	91032501	012000	000550	X02 G	G=2X,B=34
PHCAL G 191E2B		37	11.8	0501.310	+524548	L 3 41176 L	365	SO	91032501	013500	000430	X00 G	G=3X,B=18
PHCAL G 191E2B		37	11.8	0501.310	+524548	H 3 41183 L	357	SO	91032600	003800	013000	403 G	G=170,B=48
PHCAL G191E2B		37	11.8	0501.310	+524548	L 3 41289 L	350	SO	91040409	095800	000130	500 G	G=211,B=18
PHCAL G191E2B		37	11.8	0501.310	+524548	H 1 20078 L	353	SO	91040410	100900	022000	405 G	G=210,B=65
MI073 SK-7036		59	13.20	0501.386	-703808	L 1 20238 L	00000	EO	91042603	034614	004500	503 V	
MI073 SK-7036		59	13.16	0501.387	-703808	L 3 40589 L	00095	SO	91011408	080355	006000	400 V	
MI073 SK-7036		59	13.11	0501.387	-703808	L 1 19576 L	00099	SO	91011409	091905	004500	500 V	
MI073 SK-7036		59	13.13	0501.387	-703808	L 3 40561 L	00097	SO	91011108	082415	006000	400 V	
MI073 SK-7036		59	13.18	0501.387	-703808	L 1 19544 L	00093	SO	91011109	093248	004500	301 V	
MI073 SK-7036		59	13.40	0501.387	-703808	L 1 20250 L	00000	EO	91042802	021407	004200	502 V	
MI073 SK-7036		59	13.40	0501.387	-703808	L 3 41493 L	00000	EO	91042803	030106	006000	401 V	
MI073 SK-7036		59	13.20	0501.387	-703808	L 3 41483 L	00000	EO	91042604	043534	006000	500 V	
MI074 SK-70 36		59	13.40	0501.387	-703808	L 3 41490 L	00000	EO	91042704	045411	005500	501 V	
MI074 SK-7036		59	13.40	0501.387	-703808	L 1 20241 L	00000	EO	91042705	055415	004200	502 V	
MI073 SK -7036		59	13.40	0501.387	-703809	L 3 41505 L	00000	EO	91042901	014211	006000	401 V	
MI073 SK -7036		59	13.40	0501.387	-703809	L 1 20264 L	00000	EO	91042902	024935	004200	502 V	
MI073 SK-7036		59	14.00	0501.387	-703809	L 1 20270 L	00000	EO	91043005	053007	004200	502 V	
MI073 SK-7036		59	14.00	0501.387	-703809	L 3 41524 L	00000	EO	91043006	062546	006000	502 V	
MI073 HV2289		59	14.30	0501.538	-703746	L 3 40562 L	00000	EO	91011110	104039	007000	500 V	
MI073 HV2289		59	14.30	0501.538	-703746	L 1 19545 L	00000	EO	91011111	115623	004500	401 V	
PHCAL HD32630		21	03.28	0503002	+411008	L 1 19696 L	01370	FU	91020608	084332	000000	500 V	1 CBC TICK
PHCAL HD 32630		21	3.2	0503002	+411008	L 1 19923 L	1292	FU	91031519	194200	000000	X01 G	G=1.5X,B=30
PHCAL HD32630		21	03.29	0503002	+411008	L 1 19697 L	01359	FU	91020609	092000	000000	500 V	1 CBC TICK
PHCAL HD 32630		21	3.2	0503002	+411008	L 1 19924 L	1297	FU	91031520	201700	000000	X01 G	G=1.5X,B=30
PHCAL HD32630		21	03.28	0503002	+411008	L 1 19698 L	01366	FU	91020609	095422	000000	600 V	1 CBC TICK
PHCAL HD 32630		21	3.2	0503002	+411008	L 1 19924 S	1297	FU	91031520	202200	000000	501 G	G=190,B=30
PHCAL HD32630		21	03.28	0503002	+411008	L 1 19699 L	01378	FU	91020610	102900	000000	600 V	1 CBC TICK
PHCAL HD32630		21	03.29	0503002	+411008	L 1 19700 L	01360	FU	91020611	110230	000000	600 V	1 CBC TICK
PHCAL HD32630		21	03.33	0503002	+411008	L 1 19770 L	01314	FU	91021605	053210	000000	601 V	1 CBC TICK
PHCAL HD32630		21	03.32	0503002	+411008	L 1 19771 L	01327	FU	91021606	061647	000000	601 V	1 CBC TICK
PHCAL HD32630		21	03.33	0503002	+411008	L 1 19772 L	01308	FU	91021606	065949	000000	601 V	1 CBC TICK
PHCAL HD32630		21	03.33	0503002	+411008	L 1 19773 L	01308	FU	91021607	073131	000000	601 V	1 CBC TICK
PHCAL HD32630		21	03.32	0503002	+411008	L 1 19774 L	01321	FU	91021608	080318	000001	801 V	
PHCAL HD32630		21	03.32	0503002	+411008	L 1 19775 L	01322	FU	91021608	083755	000001	801 V	
PHCAL HD32630		21	03.31	0503002	+411008	L 1 19776 L	01333	FU	91021609	091533	000001	801 V	
PHCAL HD32630		21	03.31	0503002	+411008	L 1 19777 L	01333	FU	91021609	095044	000001	801 V	
PHCAL HD32630		21	03.33	0503002	+411008	L 1 19778 L	01308	FU	91021610	102722	000001	801 V	

PRO	Object	CL	MAG	R.A.	DEC	D C	Inage	A	FES	MD	Obs.date	Exptim	nummsst	EC	Comment
PHCAL	HD32630	21	03.33	0503002	+411008	L 1	19779	L	01.315	FU	91021611	110136	000001	801	V
PHCAL	HD32630	21	03.32	0503002	+411008	L 3	40882	L	01.320	FU	91021706	063454	000000	501	V 1 CBC TICK
PHCAL	HD32630	21	03.32	0503002	+411008	L 3	40883	L	01.326	FU	91021707	072805	000000	501	V 1 CBC TICK
PHCAL	HD32630	21	03.31	0503002	+411008	L 3	40884	L	01.332	FU	91021708	080125	000000	501	V 1 CBC TICK
PHCAL	HD32630	21	03.31	0503002	+411008	L 3	40885	L	01.331	FU	91021708	084418	000000	501	V 1 CBC TICK
PHCAL	HD32630	21	03.31	0503002	+411008	L 3	40886	L	01.330	FU	91021709	091638	000000	501	V 1 CBC TICK
PHCAL	HD32630	21	03.31	0503002	+411008	L 3	40887	L	01.338	FU	91021709	094907	000000	501	V 1 CBC TICK
PHCAL	HD32630	21	03.30	0503002	+411008	L 3	40888	L	01.349	FU	91021710	102527	000001	501	V
PHCAL	HD32630	21	03.32	0503002	+411008	L 3	40889	L	01.320	FU	91021711	111716	000001	501	V
MITCO	N IMC 91	55	10.32	0504125	-702216	L 1	20251	L	00298	FO	91042804	042939	000700	662	V FREAD
MITCO	N IMC 91	55	10.32	0504125	-702216	L 3	41494	L	00300	FO	91042805	050659	001500	451	V
MITCO	N IMC91	55	10.34	0504125	-702216	H 1	20252	L	00294	FO	91042806	064114	012600	332	V
MITCO	NOVA IMC91	55	09.72	0504126	-702216	L 3	41482	L	00512	FO	91042601	015215	001000	430	V
NOMSS	IMC 1991	55	12.5	0504126	-702216	L 1	20198	S	140	FO	91042018	181000	000500	332	G B=60,G=78,B=35
PHCAL	T FLOOD	99		0504126	-702215	L 3	41507	L			91042910	105100	000012	X9	G B=1.5X,B=210
PHCAL	T FLOOD	99		0504126	-702215	L 3	41508	L			91042911	112000	000009	39	G B=240,B=180
PHCAL	T FLOOD	99		0504126	-702215	L 3	41509	L			91042911	114800	000007	39	G B=190,B=140
PHCAL	T FLOOD	99		0504126	-702215	L 3	41510	L			91042912	121300	000005	39	G B=160,B=110
PHCAL	T FLOOD	99		0504126	-702215	L 3	41511	L			91042912	124000	000002	34	G B=100,B=60
PHCAL	T FLOOD	99		0504126	-702215	L 3	41512	L			91042913	130500	000002	34	G B=100,B=60
MITCO	NOVA IMC91	55	09.73	0504127	-702216	L 1	20237	L	00506	FO	91042602	023516	000500	562	V
NOMSS	IMC 1991	55	12.5	0504127	-702216	L 1	20198	L	138	FO	91042017	175200	001000	502	G =1.5X,G=240,B=35
MITCO	N IMC91	55	10.72	0504127	-702216	H 3	41506	L	00208	FO	91042903	035009	028200	332	V FREAD
NOMSS	IMC 1991	55	12.5	0504127	-702216	L 3	41433	L	139	FO	91042018	182300	003000	400	G G=150,B=18
MITCO	NIMC 91	55	99.99	0504127	-702216	L 1	20265	L	00000		91042908	081615	000400	551	V FREAD
NOMSS	IMC 1991	55	11.1	0504127	-702216	L 1	20199	L	143	FO	91042019	190200	000730	522	G B=47,G=208,B=35
NOMSS	IMC 1991	55	11.1	0504127	-702216	L 3	41434	L	140	FO	91042019	194000	006000	X01	G G=1.5X,B=25
NOMSS	IMC 1991	55	9.7	0504127	-702216	L 1	20210	L	536	FO	91042219	194200	000300	452	G B=203,G=177,B=35
NOMSS	IMC 1991	55	9.7	0504127	-702216	L 1	20210	S	529	FO	91042219	195300	000700	552	G B=188,G=185,B=32
NOMSS	IMC 1991	55	9.7	0504127	-702216	L 3	41456	L	554	FO	91042220	202600	004000	X00	G G=1.5X,B=20
NOMSS	IMC 1991	55		0504127	-702216	L 3	41478	L	559	FO	91042516	162700	002500	451	G B=243,G=135,B=21
NOMSS	N IMC 91	55	9.2	0504127	-702216	L 1	20244	L	397	FO	91042712	123800	000230	452	G B=185,G=170,B=32
NOMSS	N IMC 91	55	10.0	0504127	-702216	L 3	41491	L	394	FO	91042712	124800	002000	530	G B=72,G=220,B=20
NOMSS	N IMC 91	55	10.8	0504127	-702216	L 1	20266	L	187	FO	91042909	093500	000330	452	G B=224,G=160,B=35
NOMSS	N IMC 91	55	10.8	0504127	-702216	H 1	20267	L	187	FO	91042910	102300	022000	445	G B=214,G=190,B=65
NOMSS	N IMC 91	55	10.8	0504127	-702216	L 3	41513	L	173	FO	91042914	141300	001600	430	G B=83,G=155,B=20
PHCAL	GC 6255	44	5.0	0504295	+183447	H 9	02424				91020900	003300	016000		G
PHCAL	GC 6255	44	5.0	0504295	+183447	H 9	02425				91020900	005800	016000		G
PHCAL	GC 6255	44	5.0	0504295	+183447	H 9	02423				91021000	000000	016000		G
RIASS	HD 33262	41	4.7	0504392	-573227	L 3	40694	L	290	FU	91012723	230400	004000	301	G G=10X,B=22
RIASS	HD 33262	41	4.7	0504392	-573227	H 1	19656	L	287	FU	91012723	235200	002000	X53	G B=207,G=2X,B=41
SACW	HD 33111	30	2.8	0505234	-050858	L 1	19964	L	1594	FU	91032221	214800	000002	502	G G=221,B=38
SACW	HD 33111	30	2.8	0505234	-050858	L 1	19964	S	1582	FU	91032221	215600	000002	502	G G=203,B=38
SACW	HD 33111	30	2.8	0505234	-050858	L 3	41159	L	1590	FU	91032222	220400	000017	500	G G=225,B=18
SACW	HD 33111	30	2.8	0505234	-050858	L 3	41159	S	1596	FU	91032222	221200	000008	400	G G=134,B=18
BMCG	HD 33328	26	4.3	0506450	-084900	H 3	40912	L	526	FU	91022303	030300	000055	502	G G=210,B=40
MOMH	N3C 1847	83	11.1	0507139	-690213	L 1	19286	L	203	SD	90112704	040400	004500	304	G G=129,B=60
MOMH	N3C 1847	83	11.1	0507139	-690213	L 3	40204	L	212	SD	90112705	050700	006000	301	G G=100,B=25
MIL80	IMC N88-2	55	99.99	0508139	-684122	E 9	02394	2	00000		90111812	120000	016000		V FES FOR SWP40135
RIASS	NIMC88#2	55	20	0508140	-684122	L 3	40135	L		BO	90111812	121100	083000	308	G G=170,B=95

PRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	nummsst	ECC	Comment
AEISR HD	33904	36	3.3	0510408	-161550	H 1	19224 L	1120	FU	90111503	033800	000028	402	G G=190,B=40
AEISR HD	33904	36	3.3	0510408	-161550	H 3	40109 L	1121	FU	90111503	034700	000045	401	G G=150,B=30
AEISR HD	33904	36	3.3	0510408	-161550	H 3	40110 L	1116	FU	90111504	045500	000109	502	G G=205,B=37
AEISR HD	33904	36	3.3	0510408	-161550	H 1	19225 L	1116	FU	90111505	050300	000031	402	G G=185,B=40
AEISR HD	33904	36	3.3	0510408	-161550	H 3	40111 L	1126	FU	90111506	060100	000110	502	G G=200,B=35
AEISR HD	33904	36	3.3	0510408	-161550	H 1	19226 L	1128	FU	90111506	061300	000034	502	G G=210,B=40
AEISR HD	33904	36	3.3	0510408	-161550	H 3	40112 L	1109	FU	90111507	071200	000145	X03	G G=1.5X,B=45
AEISR HD	33904	36	3.3	0510408	-161550	H 1	19227 L	1122	FU	90111507	071900	000102	X03	G G=2X,B=47
AEISR HD	33904	36	3.3	0510408	-161550	H 3	40113 L	1124	FU	90111508	082000	000145	X03	G G=1.5X,B=45
AEISR HD	33904	36	3.3	0510408	-161550	H 1	19228 L	1122	FU	90111508	082700	000105	X03	G G=2X,B=45
AEISR HD	33904	36	3.3	0510408	-161550	H 3	40114 L	1141	FU	90111509	094000	000145	X03	G G=1.5X,B=42
AEISR HD	33904	36	3.3	0510408	-161550	H 1	19229 L	1135	FU	90111509	094700	000110	X03	G G=2X,B=45
AEISR HD	33904	36	3.3	0510408	-161550	H 1	19230 L	1139	FU	90111510	103800	000140	X03	G G=3X,B=50
AEISR HD	33904	36	3.3	0510408	-161550	H 3	40118 L	1138	FU	90111607	071300	000110	502	G G=200,B=35
AEISR HD	33904	36	3.3	0510408	-161550	H 1	19233 L	1136	FU	90111607	072300	000225	X05	G G=5X,B=65
AEISR HD	33904	36	3.3	0510408	-161550	H 3	40119 L	1135	FU	90111608	082300	000220	X03	G G=3X,B=45
AEISR HD	33904	36	3.3	0510408	-161550	H 1	19234 L	1128	FU	90111608	083000	000225	X05	G G=5X,B=64
AEISR HD	33904	36	3.3	0510408	-161550	H 3	40120 L	1144	FU	90111609	091700	000220	X03	G G=3X,B=48
AEISR HD	33904	36	3.3	0510408	-161550	H 3	40121 L	1151	FU	90111609	095100	000220	X03	G G=3X,B=45
PHCAL	NULL	99		0510432	+530924	H 2	18534 S			91013022	224900	000000	300	G G=38,B=12
PHCAL	WAVCAL	98		0510433	+530925	L 1	19686 S			91013021	212000	000025	29	G B=10X,B=107
PHCAL	WAVCAL	98		0510433	+530925	L 1	19686 S			91013021	213400	000001	29	G B=10X,B=107
PHCAL	WAVCAL	98		0510433	+530925	H 1	19687 S			91013022	221500	000025	29	G B=50X,B=107
PHCAL	WAVCAL	98		0510433	+530925	H 1	19687 S			91013022	221900	000016	29	G B=50X,B=107
PHCAL	WAVCAL	98		0510433	+530925	L 3	40715 S			91013023	231500	000005	29	G B=10X,B=107
PHCAL	WAVCAL	98		0510433	+530925	L 3	40715 S			91013023	231700	000002	29	G B=10X,B=107
PHCAL	WAVCAL	98		0510433	+530925	H 3	40716 S			91013023	234200	000005	29	G B=60X,B=122
PHCAL	WAVCAL	98		0510433	+530925	H 3	40716 L			91013023	234400	000200	29	G B=60X,B=122
PHCAL	WAVCAL	98		0510433	+530925	L 2	18535 S			91013100	000400	000010	27	G B=10X,B=90
PHCAL	WAVCAL	98		0510433	+530925	L 2	18535 L			91013100	000600	000001	27	G B=10X,B=90
PHCAL	WAVCAL	98		0510433	+530925	H 2	18536 S			91013100	003600	000010	29	G B=50X,B=138
PHCAL	WAVCAL	98		0510433	+530925	H 2	18536 L			91013100	003800	000022	29	G B=50X,B=138
PHCAL	TIFLOOD	99		0510433	+530925	L 3	40717 L			91013101	015500	000005	09	G B=107
ISMFB HD	33949	22	4.4	0510554	-125957	H 3	40503 L	424	FU	90123106	064600	000600	X03	G G=2X,B=50
MAL14 HD	34085	25	00.43	0512078	-081528	E 9	02451 2	15749	FU	91031003	035000	004000		V
MAL14 HD	34085	25	00.43	0512078	-081528	H 1	19882 L	15749	FU	91031003	034631	000002	502	V
MAL14 HD	34085	25	00.38	0512079	-081527	H 1	19298 L	16344	FU	90112812	121313	00000193	502	V EFF.EXP.TIME 1.93 S
MAL14 HD	34085	25	00.36	0512079	-081527	H 1	19299 L	16464	FU	90112813	130508	00000152	502	V EFF.EXP.TIME 1.52 S
MAL14 HD	34085	25	00.36	0512079	-081527	H 3	40217 L	16500	FU	90112812	121849	00000890	700	V EFF.EXP.TIME 8.90 S
MAL14 HD	34085	25	00.35	0512079	-081527	H 1	19592 L	16599	FU	91011712	120154	000002	501	V
MAL14 HD	34085	25	00.35	0512079	-081527	H 3	40623 L	16682	FU	91011712	120717	000009	701	V
MAL14 HD	34085	25	00.31	0512079	-081527	H 3	40700 L	17111	FU	91013005	055454	000009	600	V
MAL14 HD	34085	25	00.32	0512079	-081527	H 3	40701 L	16935	FU	91013006	062917	000015	700	V
MAL14 HD	34085	25	00.36	0512079	-081527	H 1	19677 L	16544	FU	91013005	055943	000002	501	V
MAL14 HD	34085	25	00.40	0512079	-081527	H 3	40913 L	16086	FU	91022305	054246	000004	600	V
MAL14 HD	34085	25	00.41	0512079	-081527	H 1	19813 L	15968	FU	91022305	054731	000002	500	V
MAL14 HD	34085	25	00.38	0512079	-081527	H 3	40914 L	16283	FU	91022306	064500	000015	700	V
MAL14 HD	34085	25	00.41	0512079	-081528	H 3	41077 L	15962	FU	91031004	044909	000009	701	V
MAL14 HD	34085	25	00.24	0512080	-081527	H 1	19343 L	17980	FU	90120310	100057	000002	500	V 5 DEC TICKS
MAL14 HD	34085	25	00.24	0512080	-081527	H 3	40257 L	17980	FU	90120310	100451	000009	700	V



IFO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	nummsst	EOC	Comment	
MAL14	HD34085	25	00.23	0512080	-081527	H 1	19344 L	18141	FU	90120310	104836	000002	400 V	4 CBC TICKS	
MAL07	KWALR	31	05.25	0512088	+323754	L 3	40718 L	22119	FO	91013107	074240	000800	800 V		
MAL07	KWALR	31	05.25	0512088	+323754	H 1	19688 L	22116	FO	91013108	084902	002000	601 V		
MAL07	KWALR	31	05.22	0512088	+323754	H 3	40719 L	22496	FO	91013109	092121	004000	500 V		
MAL07	KWALR	31	05.21	0512088	+323754	H 1	19689 L	22560	FO	91013110	100953	001500	501 V		
ISMDB	HD	34098	20	8.8	0512265	+045058	L 3	40069 L	1054	FO	90110705	052900	000110	X00 G	G=1.5X,B=18
ISMDB	HD	34098	20	8.8	0512265	+045058	L 1	19167 L	1053	FO	90110705	053500	000030	502 G	G=205,B=32
PHCAL	HD	34029	44	0.08	0512595	+455658	H 1	19551 L	14659	FU	91011203	034900	000030	532 G	E=137,G=210,B=38
PHCAL	HD	34029	44	0.08	0512595	+455658	H 3	40567 L	14654	FU	91011204	040200	001430	441 G	E=146,G=155,B=30
ISMFB	HD	34310	22	5.1	0513239	-265952	H 3	40255 L	23923	FO	90120307	073300	000500	402 G	G=141,B=36
EGLR	AKN 120	84	14.5	0513378	-001215	L 3	40585 L	59	SO	91011320	201100	010000	351 G	E=224,G=99,B=25	
EGLR	AKN 120	84	14.5	0513378	-001215	L 1	19570 L	53	SO	91011322	220200	004800	452 G	E=214,G=165,B=40	
MA096	HD34664	26	12.60	0513571	-673014	L 3	40926 L	00000	EO	91022410	104549	003000	400 V		
MA096	HD34664	26	12.60	0513571	-673014	L 1	19825 L	00000	EO	91022411	112031	001500	552 V		
PHCAL	HD34816	20	04.25	0517159	-131336	L 1	19857 L	00579	FU	91030203	035715	000000	401 V	1 CBC TICK	
PHCAL	HD34816	20	04.32	0517159	-131336	L 1	19858 L	00545	FU	91030204	043655	000000	401 V	1 CBC TICK	
PHCAL	HD34816	20	04.32	0517159	-131336	L 1	19859 L	00545	FU	91030205	051739	000000	501 V	1 CBC TICK	
PHCAL	HD34816	20	04.31	0517159	-131336	L 1	19860 L	00546	FU	91030205	055000	000000	501 V	1 CBC TICK	
PHCAL	HD34816	20	04.33	0517159	-131336	L 1	19861 L	00538	FU	91030206	063001	000000	501 V	1 CBC TICK	
PHCAL	HD 34816	20	04.33	0517162	-131337	L 1	19883 L	00538	FU	91031005	053359	000000	501 V	1 CBC TICK	
PHCAL	HD 34816	20	4.3	0517162	-131337	H 3	40088 L	523	FU	90110910	103900	000022	302 G	G=70,B=34	
PHCAL	HD 34816	20	04.35	0517162	-131337	L 3	41078 L	00528	FU	91031005	053847	000000	500 V	1 CBC TICK	
PHCAL	HD 34816	20	4.3	0517162	-131337	H 1	19181 L	531	FU	90110910	104400	000022	502 G	G=200,B=40	
PHCAL	HD 34816	20	04.34	0517162	-131337	L 1	19884 L	00535	FU	91031006	063431	000001	801 V		
PHCAL	HD 34816	20	4.3	0517162	-131337	H 3	40861 L	533	FU	91021301	011500	000022	502 G	G=190,B=33	
PHCAL	HD 34816	20	04.36	0517162	-131337	L 3	41079 L	00524	FU	91031006	063901	000000	500 V	1 CBC TICK	
PHCAL	HD 34816	20	4.3	0517162	-131337	H 1	19745 L	541	FU	91021301	012000	000022	503 G	G=220,B=41	
PHCAL	HD 34816	20	04.35	0517162	-131337	L 1	19885 L	00526	FU	91031007	073425	000001	801 V		
PHCAL	HD 34816	20	4.3	0517162	-131337	H 3	41085 L	545	FU	91031119	190100	000022	502 G	G=190,B=35	
PHCAL	HD 34816	20	04.35	0517162	-131337	L 3	41080 L	00528	FU	91031007	073852	000000	500 V	1 CBC TICK	
PHCAL	HD 34816	20	4.3	0517162	-131337	H 1	19891 L	543	FU	91031119	190700	000022	502 G	G=205,B=40	
PHCAL	HD34816	20	04.36	0517162	-131337	L 1	20139 L	00524	FU	91041402	021846	000001	700 V	2 CBC TICKS	
PHCAL	HD34816	20	04.34	0517162	-131337	L 3	41378 L	00531	FU	91041404	042022	000000	500 V	1 CBC TICK	
PHCAL	HD34816	20	04.36	0517162	-131337	L 1	20140 L	00523	FU	91041404	042407	000001	700 V	2 CBC TICKS	
PHCAL	HD34816	20	04.35	0517162	-131337	L 3	41377 L	00528	FU	91041402	021400	000000	500 V	1 CBC TICK	
MAL38	HD34656	13	07.00	0517190	+372321	H 3	40732 L	05709	FO	91020105	052353	001500	500 V		
CEMIN	HD 34656	14	6.8	0517190	+372321	H 3	40728 L	5651	FO	91013123	230200	001500	503 G	G=212,B=41	
MAL38	HD34656	13	06.99	0517190	+372321	H 3	40735 L	05755	FO	91020108	084039	001500	500 V		
CEMIN	HD 34656	14	6.8	0517190	+372321	H 3	40739 L	5832	FO	91020113	130500	001500	503 G	G=220,B=41	
MAL38	HD34656	13	07.02	0517190	+372321	H 3	40777 L	05626	FO	91020305	050808	001500	500 V		
CEMIN	HD 34656	14	6.8	0517190	+372321	H 3	40742 L	5871	FO	91020115	154800	001500	503 G	G=220,B=41	
MAL38	HD34656	13	07.00	0517190	+372321	H 3	40780 L	05685	FO	91020307	073543	001500	500 V		
CEMIN	HD 34656	14	6.8	0517190	+372321	H 3	40746 L	5872		91020119	193400	001500	503 G	G=222,B=42	
MAL38	HD34656	13	07.01	0517190	+372321	H 3	40754 L	05676	FO	91020205	051715	001500	500 V		
CEMIN	HD 34656	14	6.8	0517190	+372321	H 3	40750 L	5898	FO	91020122	225600	001500	502 G	G=225,B=40	
MAL38	HD34656	13	06.99	0517190	+372321	H 3	40757 L	05756	FO	91020208	080229	001500	500 V		
CEMIN	HD 34656	14	6.8	0517190	+372321	H 3	40762 L	5673	FO	91020213	130600	001500	503 G	G=220,B=41	
MAL38	HD 34656	13	06.99	0517190	+372321	H 3	40803 L	05739	FO	91020405	055313	001500	500 V		
CEMIN	HD 34656	14	6.8	0517190	+372321	H 3	40765 L	5686	FO	91020216	161500	001500	502 G	G=220,B=40	
MAL38	HD 34656	13	07.01	0517190	+372321	H 3	40806 L	05638	FO	91020408	082221	001500	500 V		

IFO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mmwastt	ICC	Comment
CBMN HD	34656	14	6.8	0517190	+372321	H 3	40769 L	5662	FO	91020220	200800	001500	502 G	G=225,B=40
CBMN HD	34656	14	6.8	0517190	+372321	H 3	40773 L	5860	FO	91020223	233500	001500	502 G	G=225,B=40
CBMN HD	34656	14	6.8	0517190	+372321		3 40785 L	5732	FO	91020311	112800	001500	503 G	G=220,B=41
CBMN HD	34656	14	6.8	0517190	+372321	H 3	40788 L	5831	FO	91020314	144900	001500	503 G	G=220,B=41
CBMN HD	34656	14	6.8	0517190	+372321	H 3	40792 L	5749	FO	91020318	183400	001500	503 G	G=220,B=41
CBMN HD	34656	14	6.8	0517190	+372321	H 3	40796 L	5764	FO	91020321	215700	001500	502 G	G=230,B=40
CBMN HD	34656	14	6.8	0517190	+372321	H 3	40800 L	5683	FO	91020401	012700	001500	502 G	G=220,B=40
CBMN HD	34656	14	6.8	0517190	+372321	H 3	40809 L	5902	FO	91020413	134100	001500	503 G	G=220,B=41
CBMN HD	34656	14	6.8	0517190	+372321	H 3	40812 L	5813	FO	91020416	161800	001500	503 G	G=220,B=41
CBMN HD	34656	14	6.8	0517190	+372321	H 3	40816 L	5759	FO	91020420	202600	001500	502 G	G=220,B=40
CBMN HD	34656	14	6.8	0517190	+372321	H 3	40820 L	5874	FO	91020423	234700	001500	502 G	G=215,B=40
CBMN HD	34656	14	6.8	0517190	+372321	H 3	40827 L	5658	FO	91020517	173700	001500	502 G	G=190,B=35
CBMN HD	34656	14	6.8	0517190	+372321	H 3	40830 L	5778	FO	91020520	202800	001500	502 G	G=220,B=40
CBMN HD	34656	14	6.8	0517190	+372321	H 3	40834 L	5599	FO	91020600	004600	001500	502 G	G=220,B=40
ISMFB HD	34863	22	5.3	0517397	-122155	H 3	40254 L	20584	FO	90120306	063800	000600	503 G	G=200,B=41
USBS HD	34759	21	5.09	0518158	+414525	H 1	19552 L	21828	FO	91011205	052700	000222	403 G	G=190,B=42
ISMFB HD	35007	A 21	5.7	0518586	-002732	L 3	40071 L	15520	FO	90110708	080700	000004	500 G	G=225,B=18
ISMFB HD	35007	A 21	5.7	0518586	-002732	L 1	19169 L	15506	FO	90110708	081200	000002	402 G	G=165,B=34
ISMFB HD	34989	20	5.8	0519000	+082251	L 3	40068 L	13389	FO	90110704	041100	000002	X00 G	G=1.5X,B=18
ISMFB HD	34989	20	5.8	0519000	+082251	L 1	19166 L	13312	FO	90110704	041600	000001	402 G	G=170,B=36
ISMFB HD	35079	21	7.1	0519280	-030041	L 1	19170 L	4699	FO	90110709	090400	000010	402 G	G=177,B=34
PHCAL HD	35580	22	6.1	0521268	-561051	H 3	41196 L	10310	FO	91032720	202100	001000	406 G	G=200,B=75
PHCAL HD	35468	23	1.64	0522269	+061822	H 1	19550 L	5405	FU	91011202	021700	000003	502 G	G=210,B=40
PHCAL HD	35468	23	1.64	0522269	+061822	H 3	40566 L	5391	FU	91011202	025300	000004	502 G	G=190,B=35
ISMFB HD	35640	22	6.2	0523350	-053339	H 3	40253 L	9646	FO	90120305	053000	001600	403 G	G=155,B=41
ISMFB HD	35899	21	7.5	0525145	-021109	L 1	19158 L	3085	FO	90110603	035500	000012	502 G	G=224,B=32
WRMPC HD	269549	11	14.8	0527025	-690923	L 1	20197 L		FO	91041923	234500	006300	453 G	E=229,C=145,B=42
WRMPC HD	269546	11	9.89	0527028	-685218	L 1	20196 L			91041922	224100	000140	502 G	G=186,B=32
USBS HD	36166	20	5.7	0527188	+014504	H 1	19513 L	13516	FO	910110622	224500	000237	502 G	G=210,B=40
MCL80 HD36705		46	07.26	0528360	-652918	L 3	40494 L	04556	FO	90123007	075953	009000	240 V	
RIASS HD	36705	47	6.83	0528360	-652918	L 3	40499 L	4308		90123020	200700	009000		G
MCL80 HD36705		46	07.32	0528360	-652918	H 1	19496 L	04306	FO	90123012	125831	002000	332 V	
MCL80 HD36705		46	07.36	0528360	-652918	L 3	40495 L	04151	FO	90123010	104155	009000	240 V	
MCL80 HD36705		46	07.37	0528360	-652918	L 3	40496 L	04112	FO	90123012	125831	009000	240 V	
MCL80 HD36705		46	07.40	0528360	-652918	H 1	19497 L	04033	FO	90123012	122051	005000	332 V	2 SEGMENTS OF 25M
RIASS AB DCR		47	6.8	0528361	-652919	L 3	40491 L	4308	FO	90123001	014100	007000	331 G	E=117,C=55,B=26
RIASS AB DCR		47	6.8	0528361	-652919	L 1	19493 L	4496	FO	90123003	030000	000300	552 G	E=220,C=240,B=36
RIASS AB DCR		47	6.8	0528361	-652919	L 3	40492 L	4607	FO	90123003	033700	009000	342 G	E=142,C=75,B=38
RIASS AB DCR		47	6.8	0528361	-652919	L 1	19494 L	4662	FO	90123005	051500	000200	542 G	E=148,C=201,B=32
RIASS AB DCR		47	6.8	0528361	-652919	L 3	40493 L	4672	FO	90123005	054800	009000	341 G	E=177,C=74,B=30
RIASS AB DCR		47	6.8	0528361	-652919	L 1	19495 L	4575	FO	90123007	072600	000200	442 G	E=173,C=177,B=32
RIASS HD	36705	47	6.83	0528361	-652919	L 3	40497 L	4474	FO	90123015	151900	009000	241 G	E=148,C=42,B=28
RIASS HD	36705	47	6.83	0528361	-652919	H 1	19498 L	4492	FO	90123017	170300	005000	332 G	E=121,C=90,B=40
RIASS HD	36705	47	6.83	0528361	-652919	L 3	40498 L	4430	FO	90123017	174300	009000	341 G	E=172,C=47,B=25
RIASS HD	36705	47	6.83	0528361	-652919	H 1	19499 L	4389	FO	90123021	215100	007000	342 G	E=174,C=110,B=40
ISMFB HD	36429A	21	7.6	0529042	+024749	L 3	40061 L	3131	FO	90110604	044900	000025	500 G	G=175,B=18
ISMFB HD	36429A	21	7.6	0529042	+024749	L 1	19159 L	3051	FO	90110604	045300	000012	502 G	G=190,B=32
USBS HD	36512	21	4.6	0529306	-072013	H 1	19452 L	399	FU	90122023	235600	000033	502 G	G=196,B=40
USBS HD	36512	21	4.6	0529306	-072013	H 3	40415 L	397	FU	90122100	000200	000030	402 G	G=160,B=35
MA027 NRC2004/83		83	16.60	0530393	-672038	L 3	41178 L	00000	EO	91032504	043218	036100	402 V	



FRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	runmsst	ECC	Comment
MA027	N3C2004/93	83	16.90	0530430	-672017	L 3	41193 L	00000	EO	91032704	043042	037500	302	V TWO SPECTRA
MA027	N3C2004/15	83	15.10	0530487	-672133	L 3	41184 L	00000	EO	91032605	050816	024000	501	V
MA027	N3C2004/15	83	15.10	0530487	-672133	L 1	19968 L	00000	EO	91032609	091210	009500	501	V
ME028	N3C2004/14	83	16.11	0530504	-672059	L 3	41154 L	00000	EO	91032204	040633	040200	402	V
ME028	N3C2004/2	83	16.17	0530536	-672109	L 3	41162 L	00000	EO	91032303	035557	041200	403	V
MA094	R 110	23	10.32	0531124	-690459	L 3	40281 L	00298	FO	90120615	154402	003000	300	V
MA094	R 110	23	10.32	0531124	-690459	L 1	19362 L	00298	FO	90120616	161920	003000	400	V FREAD
ISMB	HD 36779A	20	6.2	0531313	-010407	L 1	19163 L	10017	FO	90110610	100200	000002	502	G G=187,B=32
ISMB	HD 36779A	20	6.2	0531313	-010407	L 3	40065 L	9911	FO	90110610	100800	000005	X00	G G=1.5X,B=18
MMFH	N3C 2014-4	83	11.3	0532189	-674144	L 1	19288 L	341	SO	90112709	094800	001500	X02	G G=2X,B=35
MMFH	N3C 2014-4	83	11.3	0532189	-674144	L 3	40206 L	336	SO	90112710	102000	002500	X00	G G=5X,B=18
MMFH	N3C 2014-3	83	11.6	0532205	-674138	L 1	19296 L	252	SO	90112808	085500	000500	402	G G=163,B=32
MMFH	N3C 2014-3	83	11.6	0532205	-674138	L 3	40215 L	254	SO	90112809	093200	000500	300	G G=117,B=18
MMFH	N3C 2014-4	83	11.3	0532206	-674312	L 1	19294 L	363	SO	90112805	052400	000300	302	G G=134,B=35
MMFH	N3C 2014-4	83	11.3	0532207	-674312	L 3	40213 L	365	SO	90112805	053500	000300	300	G G=106,B=18
MMFH	N3C 2011	83	10.0	0532260	-673315	L 1	20049 L	139	FO	91040121	213500	000500	303	G G=130,B=48
MMFH	N3C 2011	83	10.0	0532260	-673315	L 3	41264 L	137	FO	91040122	222300	000700	300	G G=75,B=20
MMFH	N3C 2014-6	83	11.8	0532280	-674312	L 1	19297 L	317	SO	90112810	101200	000500	502	G G=213,B=32
MMFH	N3C 2014-6	83	11.8	0532280	-674312	L 3	40216 L	311	SO	90112810	104100	000700	500	G G=220,B=18
MMFH	N3C 2014-G	83	9.0	0532319	-674214	L 1	19287 L	272	FO	90112706	063000	006000	403	G G=158,B=42
MMFH	N3C 2014-G	83	9.0	0532319	-674214	L 3	40205 L	275	FO	90112707	073900	012000	301	G G=120,B=25
ENMR	M42-POS4	72		0532344	-052507	H 3	40200 L			90112609	090200	009500	332	G B=65,G=75,B=40
ENMR	M42-POS4	72		0532380	-052431	H 1	19282 L			90112608	083700	013200	303	G G=100,B=50
ENMR	M42-POS4	72	0.0	0532380	-052425	H 1	19293 L		EO	90112722	221900	025500	305	G G=120,B=65
ENMR	M42-POS4	72	0.0	0532380	-052425	H 3	40212 L		EO	90112722	224500	024000	334	G B=95,G=110,B=60
ENMR	M42	72		0532410	-052516	H 3	41150 L			91032117	170800	016000	333	G B=74,G=90,B=42
ENMR	M42	72		0532415	-052411	H 1	19957 L			91032117	174000	009500	333	G B=88,G=100,B=50
ENMR	M42-P EK	72		0532437	-052612	H 1	19276 L			90112506	062300	024000	339	G B=176,G=165,B=105
ENMR	M42-POS1	72		0532450	-052516	H 1	19955 L			91032113	132300	006000	333	G B=120,G=95,B=45
ENMR	42-POS1	72		0532450	-052516	H 3	41149 L			91032114	143300	006000	332	G B=94,G=65,B=31
ENMR	M42-POS3	72		0532454	-052507	H 1	19280 L			90112604	045000	007500	344	G B=160,G=120,B=60
ENMR	M42-POS2	72		0532455	-052638	H 1	19275 L		EO	90112420	204600	040000	347	G B=208,G=180,B=90
ENMR	M42-P EK	72		0532473	+052534	H 3	40194 L			90112506	065200	023000	4X7	G B=2X,G=190,B=85
ENMR	M42-POS3	72		0532473	-052534	H 3	40198 L			90112606	062000	006000	343	G B=144,G=95,B=42
ENMR	CT AFR 2	72		0532478	-052534	H 9	02396			90112709	094200	016000		G
ENMR	M42-POS1	72	0.0	0532478	-052534	L 3	40210 L		EO	90112720	200900	000300	430	G B=87,G=130,B=18
ENMR	M 42	72		0532478	-052534	H 3	40211 L		EO	90112721	211500	003000	331	G B=76,G=60,B=28
ENMR	M42	72		0532483	-052527	H 1	19281 L			90112607	072500	000300	502	G G=240,B=32
ENMR	M42	72		0532483	-052527	L 3	40199 L			90112608	080000	000300	500	G G=200,B=18
ENMR	M42-POS3	72	0.0	0532490	-052431	H 1	19271 L		EO	90112403	034500	015000	338	G B=193,G=160,B=100
ENMR	M42-POS3	72	0.0	0532490	-052431	H 3	40182 L		EO	90112406	065200	023000	356	G B=230,G=130,B=75
ENMR	M42-POS3	72	0.0	0532490	-052431	H 1	19272 L			90112406	065600	020000	347	G B=202,G=180,B=82
ENMR	M42-POS2	72		0532490	-052600	H 3	40192 L		EO	90112420	202100	041000	429	G B=3,G=220,B=105
ENMR	CT AFR 2	72		0532490	-052600	H 9	02395			90112421	214800	016000		G
ENMR	M42-POS2	72		0532490	-052600	H 3	40193 L			90112504	043700	010000	336	G B=140,G=120,B=75
ENMR	M42-POS3	72		0532490	-052431	H 3	40197 L			90112604	044800	006000	332	G B=89,G=85,B=40
ENMR	M42-POS2	72		0532490	-052600	H 1	19956 L			91032115	155400	006000	333	G B=104,G=90,B=45
EMFY	M42 HB3	69		0532553	-052712	L 1	19334 S		EO	90120100	000100	005000	302	G G=125,B=40
EMFY	M42 HB3	69		0532553	-052712	L 1	19334 L		EO	90120123	235900	005000		G G=4K
EMFY	SERENDIP	69		0533111	-062518	L 1	19328 L		EO	90113020	200200	035000	306	G G=105,B=78

PRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	numsst	ECC	Comment	
RMFY	SERENDIP	69		0533111	-062518	L 1	19333 L	EO	90120118	182500	022500	305	G=100,B=70		
RMFY	H34N-A	69	15.5	0533151	-062452	L 3	40240 L	EO	90113019	195000	038000	304	G=115,B=60		
RMFY	H34N-A	69	15.5	0533151	-062452	L 3	40244 L	EO	90120118	182000	027000	303	G=75,B=45		
HMB	H1F	69	15.5	0533540	-064657	L 3	40657 L	EO	91012215	155400	042000	337	G=156,C=125,B=84		
MM165	H1F	72	15.50	0533545	-064656	E 9	02409 2	00000	91012207	075000	004000		V FOR SWP40657		
MM165	H2H	72	16.00	0533597	-064903	E 9	02410 2	00000	91012308	080000	016000		V FES FOR SWP40663		
HMB	H2H	69	16.0	0533598	-064903	L 3	40663 L	EO	91012314	145400	067500	347	G=215,C=120,B=90		
ISMB	HD 37209	20	5.7	0534090	-060541	L 1	19168 L	15501	FO	90110706	064100	000001	302	G=135,B=36	
ISMB	HD 37209	20	5.7	0534090	-060541	L 3	40070 L	15297	FO	90110706	065000	000001	500	G=190,B=18	
IBMP	ET TAU	66	9.6	0534329	+271434	L 3	40676 L	569	FO	91012520	203800	001200	500	G=215,B=18	
IBMP	ET TAU	66	9.7	0534329	+271434	L 3	40677 L	534	FO	91012521	212700	001200	500	G=190,B=18	
IBMP	ET TAU	66	9.7	0534329	+271434	L 3	40678 L	504	FO	91012522	221800	001300	500	G=175,B=18	
IBMP	ET TAU	66	9.8	0534329	+271434	L 3	40679 L	476	FO	91012523	231200	001200	400	G=158,B=18	
IBMP	ET TAU	66	9.8	0534329	+271434	L 3	40680 L	457	FO	91012600	000700	001500	500	G=175,B=18	
IBMP	ET TAU	66	9.8	0534329	+271434	L 3	40681 L	453	FO	91012601	010100	001800	500	G=200,B=18	
IBMP	ET TAU	66	9.8	0534329	+271434	L 3	40682 L	474	FO	91012602	020200	001500	500	G=185,B=18	
IBMP	ET TAU	66	9.7	0534329	+271434	L 3	40683 L	513	FO	91012602	025200	001200	400	G=122,B=18	
HMB	HD 37202	23	3.0	0534393	+210650	H 3	40847 L	1566	FU	91020923	232400	000040	X03	G=1.5X,B=42	
MA096	HU217	23	13.40	0535147	-692435	L 3	40904 L	00000	EO	91021907	071931	004500	401	V	
MA096	HU217	23	13.40	0535147	-692435	L 1	19798 L	00000	EO	91021908	081441	002500	402	V	
ISMB	HD 37356	20	6.2	0535253	-045032	L 3	40064 L	10096	FO	90110608	084400	000006	500	G=221,B=18	
ISMB	HD 37356	20	6.2	0535253	-045032	L 1	19162 L	9900	FO	90110608	084900	000003	402	G=172,B=32	
MA096	HU231	23	13.10	0535398	-692142	L 3	40903 L	00000	EO	91021905	054439	004500	401	V	
MA096	HU231	23	13.10	0535399	-692143	L 1	19797 L	00000	EO	91021906	063846	002500	461	V	
IMMS	IMC	73		0535420	-691630	L 3	40844 L		EO	91020913	132700	036000	303	G=98,B=50	
IMMS	IMC	73		0535420	-691700	L 3	40867 L		EO	91021312	123800	041000	208	G=110,B=92	
IMMS	IMC	73		0535430	-691420	L 3	40554 L		EO	91011016	165100	036000	303	G=80,B=45	
SNMS	SN 1987A	56	16	0535500	-691758	H 3	40268 L		EO	90120407	072700	044000	309	G=205,B=135	
SNMS	SKY RCND	07		0535500	-691758	L 1	19350 L			90120407	072900	096800	309	G=175,B=135	
SNMS	SN 1987A	56	16	0535500	-691758	L 3	40858 L		EO	91021212	124100	028000	402	G=180,B=40	
SNMS	SN 1987A	56	15.0	0535500	-691758	L 1	19743 L		EO	91021217	173100	012500	404	G=190,B=55	
SNMS	SN 1987A	56	17	0535500	-691758	L 1	19985 L		EO	91032511	111200	014000	405	G=210,B=64	
SNMS	SN 1987A	56	17	0535500	-691758	L 3	41179 L		EO	91032513	134000	031000	404	G=190,B=60	
SNMS	SN 1987A	56	17.0	0535500	-691758	H 3	41316 L		EO	91040723	234800	062500	326	G=93,C=170,B=80	
SNMS	SN 1987A	56	17.0	0535500	-691758	L 1	20102 L		EO	91040810	105300	014000	407	G=225,B=87	
ME161	SN1987A	56	16.00	0535501	-691758	L 1	19865 L	00000	EO	91030303	035739	013000	402	V	
ME161	SN1987A	56	15.00	0535502	-691759	L 3	40128 L	00000	EO	90111714	141736	027000	501	V	
ME161	SN 1987A	56	16.00	0535502	-691759	L 1	19518 L	00000	EO	91010708	085957	012000	401	V	
ME161	SN 1987A	56	16.00	0535502	-691759	L 3	40543 L	00000	EO	91010711	111113	021500	401	V	
ME161	SN1987A	56	16.00	0535502	-691759	L 3	40984 L	00000	EO	91030306	061242	027400	402	V	
SNMS	SIAR 3	21	15.8	0535503	-691758	L 1	20107 S		EO	91040910	101500	039000	405	G=170,B=70	
SNMS	SKY RCND	07		0535560	-691701	L 1	20101 L			91040800	002500	052500	307	G=140,B=90	
WRMC	MG 2	11	15.4	0536197	-673644	L 3	40900 L		EO	91021816	161400	015400	333	G=77,C=70,B=42	
ISMB	HD 37526	21	7.6	0536347	-051316	L 3	40063 L	3003	FO	90110607	073000	000033	500	G=215,B=18	
ISMB	HD 37526	21	7.6	0536347	-051316	L 1	19161 L	3004	FO	90110607	073400	000015	502	G=203,B=34	
MA094	RL27	23	09.10	0537097	-693127	H 1	19361 L	00883	FO	90120610	104122	028200	402	V	
USSBS	HD 37795	21	2.60	0537502	-340559	H 3	40337 L	1993	FU	90121500	001300	000024	401	G=160,B=30	
ISMB	HD 37889	20	7.7	0538568	-065733	L 3	40062 L		FO	90110606	060800	000020	500	G=200,B=18	
ISMB	HD 37889	20	7.7	0538568	-065733	L 1	19160 L	2911	FO	90110606	061400	000012	501	G=185,B=30	
RMSH	CT APR 2	13	9.4	0539025	-690734	L 9	02392			90111722	223100	016000		G	

FRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mmunsstt	ECC	Comment
FMSH CT AFR 2		13	12.6	0539027	-690726	L 9	02393			90111723	231400	002000		G
FMSH MEINCK42		13	12.7	0539027	+690726	L 3	40131 S	BO		90111723	232600	003000		300 G G=47,B=18
FMSH MEINCK42		13	12.7	0539027	+690726	L 3	40131 L	BO		90111723	232700	003000		300 G G=47,B=18
FMSH MEINCK42		13	12.7	0539027	-690726	L 1	19239 S	588 FO		90111800	002000	003000		302 G G=80,B=35
FMSH MEINCK42		13	12.7	0539027	-690726	L 1	19239 L	588 FO		90111800	002100	003000		302 G G=80,B=35
FMSH MEINCK42		13	12.7	0539027	-690726	L 3	40132 S	587 FO		90111801	011200	009800		301 G G=79,B=28
FMSH MEINCK42		13	12.7	0539027	-690726	L 3	40132 L	587 FO		90111801	011300	009800		301 G G=79,B=28
MMPH NGC 2074-7	83	10.4	0539260	-693245	L 1	19309 L		237 FO		90112909	090300	000300		302 G G=127,B=35
MMPH NGC 2074-7	83	10.4	0539260	-693245	L 3	40225 L		235 FO		90112909	093500	000600		300 G G=60,B=18
MMPH NGC 2074-9	83	10.4	0539335	-693215	L 1	19306 L		184 FO		90112905	051200	000600		X02 G G=1.5X,B=38
MMPH NGC 2074-9	83	10.4	0539335	-693215	L 3	40222 L		186 FO		90112905	054600	001000		X00 G G=1.5X,B=18
MMPH NGC 2074-9	83	10.4	0539335	-693215	L 1	19307 L		185 FO		90112906	062600	000300		502 G G=205,B=35
MMPH NGC 2074-9	83	10.4	0539335	-693215	L 3	40223 L		187 FO		90112906	065800	000600		500 G G=222,B=18
MMPH NGC 2074-C	83	11.0	0539360	-693215	L 1	19305 L		172 SO		90112904	040700	001500		402 G G=152,B=38
MMPH NGC 2074-C	83	11.0	0539360	-693215	L 3	40221 L		170 SO		90112904	043100	003000		400 G G=162,B=18
MMPH NGC 2074-R	83	12	0539370	-693252	L 1	19310 L		217 SO		90112910	101800	001500		502 G G=235,B=35
MMPH NGC 2074-E	83	11	0539385	-693231	L 1	19308 L		117 SO		90112907	073600	001500		302 G G=94,B=38
MMPH NGC 2074-E	83	11	0539385	-693231	L 3	40224 L		120 SO		90112908	080900	004500		300 G G=95,B=18
ISMB HD 38087	21	8.3	0540295	-022005	L 3	40072 L		1505 FO		90110710	101700	000055		400 G G=140,B=18
ISMB HD 38087	21	8.3	0540295	-022005	L 1	19171 L		1507 FO		90110710	102200	000028		402 G G=140,B=33
MMPH NGC 2092	83	12.0	0541560	-691515	L 1	19295 L		112 SO		90112806	064300	003000		302 G G=81,B=40
MMPH NGC 2092	83	12.0	0541560	-691515	L 3	40214 L		107 SO		90112807	073200	006000		300 G G=65,B=18
SMGS SFO CT AFR 2	45	8.7	0542197	-684400	L 9	02427				91021212	120200	016000		G
MA096 CL3 NGC2100	23	13.90	0542310	-691309	L 1	19823 L		00000 BO		91022407	073428	003000		402 V
MA096 CL3 NGC2100	23	13.90	0542310	-691309	L 3	40924 L		00000 BO		91022406	062935	006000		300 V
MA096 E20/N2100	23	13.71	0542313	-691335	L 1	19799 L		00000 BO		91021911	110743	002500		401 V
MA096 E20/N2100	23	12.00	0542313	-691335	L 3	40905 L		00000 BO		91021909	095904	006000		401 V
RIASS IHG 83	59	16.2	0543489	-682336	L 3	40047 L				90110420	203300	037500		G
MI073 IH383	59	16.20	0543490	-682336	L 3	40590 L		00000 BO		91011410	102930	025800		301 V
RIASS IHG 83	59	16.2	0543490	-682336	L 3	40017 L				90110120	203000	038000		334 G B=117,G=100,B=60
MI073 IH383	59	16.20	0543490	-682336	L 3	40563 L		00000 BO		91011113	131147	009500		300 V
RIASS IHG 83	59	16.2	0543490	-682336	L 3	40075 L				90110720	202800	038000		304 G G=100,B=60
CSMFS HD 38666	12	5.2	0544083	-321928	L 1	19831 L				91022421	212600	000600		G
CSMFS HD 38666	12	5.2	0544083	-321928	L 1	19831 L		23073 FO		91022421	212600	000600		502 G G=196,B=38
CSMFS HD 38666	12	5.2	0544083	-321928	L 3	41471 L		22924 FO		91042417	173100	000300		500 G G=188,B=18
CSMFS HD 38666	12	5.2	0544083	-321928	L 1	20230 L		22883 FO		91042417	174700	000000		402 G G=177,B=33
PHCAL HD 38666	12	5.2	0544084	-321927	H 3	41195 L		22739 FO		91032719	193400	000051		502 G G=200,B=38
PHCAL HD 38666	12	5.2	0544084	-321927	H 1	19996 L		22131 FO		91032719	193900	000045		502 G G=224,B=40
PHCAL SAC249346	30	04.62	0544409	-654515	L 3	41167 L		00415 FU		91032403	035606	000007		300 V
MM147 HD39060	31	04.17	0546059	-510502	H 1	19424 L		00623 FU		90121615	153527	000400		501 V
MM147 HD 39060	31	3.85	0546059	-510501	H 3	40366 L		613 FU		90121611	110900	055300		309 G G=40X,B=110
MM147 HD39060	31	04.20	0546059	-510502	H 1	19421 L		00604 FU		90121609	093950	000400		502 V
MM147 HD 39060	31	3.85	0546059	-510501	H 1	19425 L		619 FU		90121620	201800	002000		X05 G G=6X,B=70
MM147 HD39060	31	04.20	0546059	-510502	H 3	40365 L		00606 FU		90121609	095039	001000		501 V
MM147 HD 39060	31	3.85	0546059	-510501	H 1	19426 L		606 FU		90121622	225500	000400		502 G G=244,B=40
MM147 HD39060	31	04.20	0546059	-510502	H 1	19422 L		00604 FU		90121610	103338	002000		801 V
CD80Y HD 39060	60	3.85	0546059	-510501	H 1	19548 L		609 FU		91011123	235700	000650		X03 G G=1.5X,B=45
MM147 HD 39060	31	04.17	0546059	-510502	H 1	19423 L		00623 FU		90121613	131841	000400		502 V
CD80Y HD 39060	60	3.85	0546059	-510501	H 3	40565 L		605 FU		91011200	001200	001000		502 G G=207,B=32
MM147 HD39060	31	99.99	0546059	-510502	E 9	02401 2		00000 FU		90121609	093000	004000		V FOR S/NP40366



PRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mmrestt	HC	Comment
CD80Y HD	39060	60	3.85	0546059	-510501	H 1	19549 L	608	FU	91011201	011400	001000	X03	G G=2X,B=50
MM04 HD39060		31	04.15	0546059	-510502	H 1	19936 L	00632	FU	91031710	102631	000300	500	V
CD80Y HD	HD39060	60	3.85	0546059	-510501	H 1	19723 L	648	FU	91020920	202000	000325	502	G G=215,B=40
MM04 HD39060		31	04.15	0546059	-510502	H 3	41122 L	00632	FU	91031710	103359	001000	500	V
CD80Y HD	HD39060	60	3.85	0546059	-510501	H 3	40845 L	646	FU	91020920	203100	001000	502	G G=212,B=35
CD80Y HD	HD39060	60	3.85	0546059	-510501	H 1	19724 L	647	FU	91020921	210600	000650	X03	G G=2X,B=48
DMGB	0549+000	37	15.1	0548035	+000507	L 3	40853 S		EO	91021021	214100	007500	301	G G=70,B=22
DMGB	0549+000	37	15.1	0548035	+000507	L 1	19734 L		EO	91021023	230100	005000	503	G G=210,B=50
PHCAL PG	549+158	37	13.1	0549340	+155242	L 1	19690 L	122	SO	91013112	124900	001200		G
PHCAL PG	549+158	37	13.1	0549340	+155242	L 3	40720 L	122	SO	91013113	131800	000600	500	G G=195,B=18
PHCAL PG	549+158	37	13.1	0549340	+155242	L 1	19691 L	136	SO	91013113	135900	002400	X02	G G=2X,B=40
PHCAL PG	549+158	37	13.1	0549340	+155242	L 3	40721 L	155	SO	91013114	143400	001400	X00	G G=2X,B=18
PHCAL PG	549+158	37	13.1	0549345	+155242	L 1	19692 L	167	SO	91013115	151400	001200	502	G G=218,B=38
PHCAL PG	549+158	37	13.1	0549345	+155242	L 3	40722 L	154	SO	91013115	154800	000700	500	G G=210,B=18
PHCAL PG	549+158	37	13.1	0549345	+155242	L 1	19693 L	132	SO	91013116	163400	002400	X02	G G=2X,B=38
PHCAL PG	549+158	37	13.1	0549345	+155242	L 3	40723 L	130	SO	91013117	171000	001400	X00	G G=2X,B=18
PHCAL PG	549+158	37	13.1	0549345	+155246	L 1	19694 L	126	SO	91013117	174800	001200	502	G G=225,B=38
PHCAL PG	549+158	37	13.1	0549345	+155246	L 3	40724 L	121	SO	91013118	182500	000700	500	G G=215,B=18
PHCAL PG	549+158	37	13.1	0549345	+155246	L 1	19695 L	123	SO	91013119	190400	002400	X02	G G=2X,B=38
MCL57 HD	39853	87	05.92	0552235	-114657	L 1	19650 L	13961	FO	91012606	065835	006000	572	V HEAD
MCL57 HD	39853	87	05.92	0552235	-114657	L 3	40684 L	13961	FO	91012605	052515	009000	111	V
LSMAD HD	39801	49	0.5	0552279	+072357	H 1	19979 L	11808	FU	91032418	182400	007500	X24	G B=18X,C=4X,B=60
LSMAD HD	39801	49	0.5	0552280	+072358	H 1	19145 L			90110503	033800	000245		G
LSMAD HD	39801	49	0.5	0552280	+072358	L 3	40048 L			90110503	034800	002500		G
LSMAD HD	39801	49	0.5	0552280	+072358	L 1	19146 L			90110504	042500	000005		G
LSMAD HD	39801	49	0.5	0552280	+072358	L 3	40048 L			90110504	043200	002500		G
LSMAD HD	39801	49	0.5	0552280	+072358	H 1	19147 L			90110505	051000	007500		G
LSMAD HD	39801	49	0.5	0552280	+072358	L 3	40049 L			90110506	063300	001230		G
LSMAD HD	39801	49	0.5	0552280	+072358	H 3	40158 L	12943	FU	90112123	234600	021000	303	G B=1.5X,C=80,B=50
LSMAD HD	39801	49	0.5	0552280	+072358	L 1	19262 L	12925	FU	90112200	002200	000005	342	G B=171,C=70,B=32
LSMAD HD	39801	49	0.5	0552280	+072358	H 1	19263 L			90112203	034600	007500		G
LSMAD HD	39801	49	0.5	0552280	+072358	L 3	40159 L	12445	FU	90112205	051000	005000	323	G B=45.2,C=120,B=45
LSMAD HD	39801	49	0.5	0552280	+072358	H 1	19264 L	12366	FU	90112206	060900	000245	342	G B=170,C=80,B=35
LSMAD HD	39801	49	0.5	0552280	+072358	L 3	40160 L	12395	FU	90112206	064600	001230	341	G B=168,C=80,B=30
LSMAD HD	39801	49	0.5	0552280	+072358	H 1	19644 L	12888	FU	91012422	220000	006500	X24	G B=15X,C=3X,B=58
LSMAD HD	39801	49	0.5	0552280	+072358	L 3	40672 L	12879	FU	91012423	231400	005000	401	G B=4X,C=145,B=22
LSMAD HD	39801	49	0.5	0552280	+072358	H 1	19645 L	12634	FU	91012500	000900	000245	342	G B=172,C=80,B=32
LSMAD HD	39801	49	0.5	0552280	+072358	L 3	40673 L	12728	FU	91012500	004700	001230	340	G B=156,C=52,B=20
LSMAD HD	39801	49	0.5	0552280	+072358	L 1	19646 L	12546	FU	91012501	012000	000005	342	G B=148,C=71,B=32
LSMAD HD	39801	49	0.5	0552280	+072358	H 1	19766 L	13000	FU	91021520	201800	006500	X23	G B=15X,C=6X,B=50
LSMAD HD	39801	49	0.5	0552280	+072358	L 3	40872 L	12899	FU	91021521	213200	005000	521	G B=45,C=200,B=30
LSMAD HD	39801	49	0.5	0552280	+072358	H 1	19767 L	12860	FU	91021522	222800	000245	352	G B=194,C=80,B=35
LSMAD HD	39801	49	0.5	0552280	+072358	L 3	40873 L	13038	FU	91021523	230400	001230	341	G B=164,C=80,B=28
LSMAD HD	39801	49	0.5	0552280	+072358	L 1	19768 L	12862	FU	91021523	233800	000005	341	G B=159,C=70,B=30
LSMAD HD	39801	49	0.5	0552280	+072358	L 3	40996 L	12556	FU	91030323	234200	001230	340	G B=165,C=60,B=18
LSMAD HD	39801	49	0.5	0552280	+072358	H 1	19866 L	12500	FU	91030400	000100	000245	752	G B=202,C=20,B=38
LSMAD HD	39801	49	0.5	0552280	+072358	L 3	40997 L	12568	FU	91030400	004100	002500	400	G B=4X,C=140,B=20
LSMAD HD	39801	49	0.5	0552280	+072358	L 1	19867 L	12684	FU	91030401	011400	000005	341	G B=175,C=70,B=30
LSMAD HD	39801	49	0.5	0552280	+072358	H 1	19868 L			91030401	015600	005300		G
LSMAD HD	39801	49	0.5	0552280	+072358	H 3	41172 L	12304	FU	91032414	144600	021000	344	G B=1.5X,C=95,B=60

PRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mmunestt	ECC	Comment	
LSMFD	HD	39801	49	0.5	0552280	+072358	L 3	41173	L	11938	FU	91032419	194700	005000	401 G B=4X,C=152,B=26
LSMFD	HD	39801	49	0.5	0552280	+072358	H 1	19980	L	12020	FU	91032421	210600	000245	342 G B=182,C=65,B=34
LSMFD	HD	39801	49	0.5	0552280	+072358	L 3	41174	L	12115	FU	91032421	211600	001230	340 G B=162,C=57,B=20
LSMFD	HD	39801	49	0.5	0552280	+072358	L 1	19981	L	11985	FU	91032422	221000	000005	342 G B=182,C=70,B=36
LSMFD	HD	39801	49	0.5	0552280	+072358	L 1	19982	S	12086	FU	91032422	224700	000035	342 G B=3X,C=130,B=32
USSES	HD	41117	23	4.70	0600569	+200829	H 3	40669	L	322	FU	91012413	135600	001000	532 G B=130,C=235,B=35
USSES	HD	41117	23	4.70	0600569	+200829	H 1	19642	L	327	FU	91012414	143900	000245	502 G C=230,B=40
EGMH	2164-40	80	11.0	0601008	-684006	L 3	41263	L	53	SO	91040118	182200	012000	04 G B=58	
EGMH	2164-40	80	11.7	0601008	-684006	L 1	20050	L	BO	91040123	232300	006300	02 G B=35		
PHCAL	G 191E2B	37	11.8	0601310	+524548	L 3	41151	L	358	SO	91032121	213000	000130	500 G C=184,B=18	
IBMP	HD	41335	26	5.2	0601475	-064218	H 3	40271	L	19955	FO	90120504	043000	000330	502 G C=203,B=38
IBMP	HD	41335	26	5.2	0601475	-064218	H 1	19352	L	19968	FO	90120504	043800	000130	403 G C=175,B=41
IBMP	HD	41335	26	5.2	0601476	-064219	H 3	40252	L	20651	FO	90120304	044200	000330	502 G C=210,B=40
IBMP	HD	41335	26	5.2	0601476	-064219	H 3	40292	L	19842	FO	90120904	044200	000330	402 G C=190,B=40
IBMP	HD	41335	26	5.2	0601476	-064219	H 3	41292	L	19752	FO	91040421	213700	000330	502 G C=215,B=38
IBMP	HD	41335	26	5.2	0601476	-064719	H 1	20082	L	19796	FO	91040421	214500	000130	502 G C=210,B=40
IBMP	HD	41335	26	5.2	0601476	-064219	H 3	41329	L	20419	FO	91041000	003700	000330	502 G C=200,B=38
IBMP	HD	41335	26	5.2	0601476	-064219	H 1	20112	L	20632	FO	91041000	004500	000130	402 G C=190,B=40
COMS	HD	41593	46	6.8	0603486	+153259	H 1	19938	L	4798	FO	91031719	194000	008000	453 G B=224,C=142,B=42
MM04	HD42111A	30	05.98	0606214	+023033	H 3	41120	L	13297	FO	91031703	035029	004500	400 V GUIDE STAR HD42111B	
MM04	HD42111A	30	05.98	0606214	+023033	H 1	19934	L	13320	FO	91031704	044333	002500	501 V GUIDE STAR HD42111B	
MM04	HD42111B	30	07.15	0606230	+023021	H 3	41121	L	05002	FO	91031705	052443	011000	601 V GUIDE STAR HD42111A	
MM04	HD42111B	30	07.18	0606231	+023021	H 1	19935	L	04861	FO	91031707	072129	006900	701 V GUIDE STAR HD 42111A	
XEMR	IB 1800	63	13.0	0609159	-484342	L 3	41357	L			91041200	002300	002000	331 G B=115,C=45,B=21	
XEMR	IB 1800	63	13.4	0609160	-484343	L 3	41349	L	BO	91041117	175000	002000		30 G B=116,B=18	
XEMR	IB 1800	63	13.4	0609160	-484343	L 3	41350	L	BO	91041118	183600	002000		331 G B=114,C=45,B=21	
XEMR	IB 1800	63	13.4	0609160	-484343	L 3	41351	L	BO	91041119	192000	002000		331 G B=116,C=50,B=22	
XEMR	IB 1800	63	13.4	0609160	-484343	L 1	20121	L	113	SO	91041119	194900	002500		333 G B=117,C=100,B=50
XEMR	IB 1800	63	13.4	0609160	-484343	L 3	41352	S	112	SO	91041120	202400	003500		02 G B=39
XEMR	IB 1800	63	13.4	0609160	-484343	L 3	41353	L	112	SO	91041121	213300	001300		330 G B=74,C=45,B=20
XEMR	IB 1800	63	13.4	0609160	-484343	L 3	41354	L			91041122	221100	001900		341 G B=126,C=55,B=22
XEMR	IB 1800	63	13.4	0609160	-484343	L 3	41355	L			91041122	225400	002000		230 G B=84,C=40,B=20
XEMR	IB 1800	63	13.4	0609160	-484343	L 3	41356	L			91041123	233800	002000		331 G B=110,C=45,B=21
XEMR	IB1800	63	13.0	0609160	-484343	L 3	41380	L	BO	91041418	181400	002000		231 G B=117,C=40,B=25	
XEMR	IB1800	63	13.0	0609160	-484343	L 1	20142	L	BO	91041418	184400	006000		343 G B=171,C=130,B=50	
XEMR	IB1800	63	13.0	0609160	-484343	L 3	41381	S	111	SO	91041419	195800	005000		233 G B=116,C=59,B=42
XEMR	IB1800	63	13.0	0609160	-484343	L 3	41381	L	108	SO	91041421	210600	002000		333 G B=107,C=67,B=42
XEMR	IB1800	63	13.0	0609160	-484343	L 1	20143	L	110	SO	91041421	213700	002500		332 G B=100,C=85,B=38
XEMR	IB1800	63	13.0	0609160	-484343	L 3	41382	L	111	SO	91041422	221400	001500		231 G B=93,C=34,B=25
XEMR	IB1800	63	13.0	0609160	-484343	L 3	41383	L	111	SO	91041422	225400	002000		230 G B=115,C=36,B=20
XEMR	IB1800	63	13.0	0609160	-484343	L 1	20144	L	BO	91041423	232500	002000		02 G B=38	
XEMR	IB1800	63	13.0	0609160	-484343	L 3	41384	S	BO	91041500	000700	004100		231 G B=112,C=43,B=28	
MIL35	U0608-49	59	13.04	0609161	-484343	L 1	20146	L	00105	SO	91041502	022328	002500		330 V
MIL35	U0608-49	59	12.95	0609161	-484343	L 1	20147	L	00114	SO	91041503	034326	002500		330 V
MIL35	U0608-49	59	12.99	0609161	-484343	L 1	20145	L	00110	SO	91041501	011344	002000		330 V
MIL35	U0608-49	59	13.02	0609161	-484343	L 3	41385	L	00107	SO	91041501	014411	003000		340 V
MIL35	U0608-49	59	13.01	0609161	-484343	L 3	41386	L	00108	SO	91041503	030043	003000		230 V
MIL35	U0608-49	59	12.95	0609161	-484343	L 3	41387	L	00114	SO	91041504	041849	002500		240 V
MIL35	U0608-49	59	99.99	0609161	-484343	L 1	20148	L	00000		91041504	044902	002400		000 V ECLIPSE
MIL35	U0608-49	59	13.45	0609161	-484343	L 3	41388	L	00073	SO	91041505	052320	003000		340 V

FRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
ISMFB HD	43445	22	5.0	0613273	-134202	H 3	40504 L	232	FU	90123107	074100	000900	503 G	G=225, B=41
MIL35 HD551-82	59	12.95	0616540	-814823	L 1	20158 L	00114	SO	91041606	065614	002400	400 V		
MIL35 HD551-82	59	13.09	0616540	-814823	L 3	41399 L	00101	SO	91041607	073244	007500	300 V		
ISMFB HD	44182	22	7.3	0617283	-173012	H 3	40453 L			90122504	041500	005500	G	
USBS HD	44402	21	3.0	0618235	-300224	H 1	19740 L	1598	FU	91021202	021600	000016	503 G	G=225, B=41
SAMEG HD	44594	44	6.6	0618471	-484250	H 1	20135 L	5847	FO	91041318	185900	009000	406 G	G=210, B=75
ISMFB HD	44485	22	7.9	0619058	-164645	H 3	40452 L			90122501	014300	010000	G	
EQMAD SKYBKND	07			0619393	-271336	L 3	41194 L			91032712	121700	009000	02 G	B=38
EQMAD NEC	2217	81	12.4	0619399	-271230	L 1	19473 L			90122517	175800	018000	G	
EQMAD NEC	2217	81	12.4	0619399	-271230	L 1	19473 L			90122521	210800	022100	G	
EQMAD NEC	2217	81	12.4	0619400	-271231	L 1	19995 L	166	SO	91032711	113100	044000	309 G	G=175, B=130
PHCAL HD	45057	24	6.9	0621145	-531831	L 1	19267 L	5738	FO	90112307	074700	000008	502 G	G=200, B=35
PHCAL HD	45057	24	6.9	0621145	-531831	H 3	40176 L	5707	FO	90112307	075500	001800	503 G	G=200, B=41
PHCAL HD	45057	24	6.9	0621145	-531831	H 1	19268 L	5652	FO	90112308	083400	000920	G	
PHCAL HD	45057	24	6.9	0621145	-531831	L 3	40177 L	5560	FO	90112309	090400	000013	500 G	G=210, B=18
PHCAL HD	45057	24	6.9	0621145	-531831	H 3	40651 L	5474	FO	91012123	234100	001800	502 G	G=220, B=40
PHCAL HD	45057	24	6.9	0621145	-531831	H 1	19622 L	5472	FO	91012200	001100	000920	503 G	G=200, B=41
PHCAL HD	45057	24	6.9	0621145	-531831	L 3	40652 L	5604	FO	91012200	004200	000013	500 G	G=222, B=18
PHCAL HD	45057	24	6.9	0621145	-531831	L 1	19623 L	5533	FO	91012201	012100	000008	502 G	G=230, B=32
PHCAL HD	45557	30	5.79	0623366	-601510	L 3	40178 L	13194	FO	90112309	094700	000035	500 G	G=240, B=18
PHCAL HD	45557	30	5.8	0623366	-601510	H 3	40653 L	13079	FO	91012202	020700	002900	503 G	G=227, B=42
PHCAL HD	45557	30	5.8	0623366	-601510	H 1	19624 L	13102	FO	91012202	024600	001200	503 G	G=222, B=42
PHCAL HD	45557	30	5.8	0623366	-601510	L 3	40654 L	13030	FO	91012203	031700	000035	500 G	G=246, B=18
PHCAL HD	45557	30	5.8	0623366	-601510	L 1	19625 L	13191	FO	91012203	035600	000010	502 G	G=227, B=32
HEMFB HD	45677	26	8.8	0625590	-130113	H 3	40272 L	1638	FO	90120505	052900	008000	4x4 G	B=1.5X, G=188, B=58
HEMFB HD	45677	26	8.8	0625590	-130113	H 1	19353 L	1651	FO	90120506	065900	004000	4x3 G	B=2X, G=195, B=50
SMDW HD	46056	12	8.2	0628482	+045214	L 1	19966 L	1638	FO	91032301	010900	000115	502 G	G=204, B=38
SMDW HD	46056	12	8.2	0628482	+045214	L 1	19966 S	1574	FO	91032301	012200	000115	502 G	G=211, B=38
SMDW HD	46056	12	8.2	0628482	+045214	L 3	41161 L	1582	FO	91032301	013200	000720	500 G	G=235, B=18
SMDW HD	46056	12	8.2	0628482	+045214	L 3	41161 S	1589	FO	91032301	015600	000720	500 G	G=222, B=18
SMDW HD	46106	20	7.9	0628588	+050347	L 1	20205 S	1926	FO	91042123	232500	000600	X02 G	G=5X, B=40
SMDW HD	46106	20	7.9	0628588	+050347	L 1	20205 L	1946	FO	91042123	234000	000220	502 G	G=232, B=40
SMDW HD	46106	20	7.9	0628588	+050347	L 3	41449 L	1968	FO	91042123	235800	000340	500 G	G=208, B=18
SMDW HD	46106	20	7.9	0628588	+050347	L 3	41449 S	1954	FO	91042200	001400	000140	500 G	G=206, B=18
IGMS HD	46867	20	8.3	0633152	+052104	H 1	19248 L	1397	FO	90111923	232700	006000	503 G	G=209, B=50
IGMS HD	46867	20	8.3	0633152	+052104	H 3	40144 L	1408	FO	90112000	003300	013700	403 G	G=180, B=45
IGMS HD	46868	21	8.9	0633172	+052058	H 1	19303 L	685	FO	90112820	201600	010000	404 G	G=180, B=55
IGMS HD	47032	12	9.1	0634073	+044414	H 1	19256 L	845	FO	90112023	233000	015000	404 G	G=200, B=55
MC082 GL239	48	09.89	0634203	+173605	H 1	19849 L	00438	FO	91022809	093641	015000	031 V		
SMDW HD	47240	23	6.10	0635132	+050004	L 1	19965 L	9678	FO	91032223	232400	000035	502 G	G=213, B=38
SMDW HD	47240	23	6.10	0635132	+050004	L 1	19965 S	9634	FO	91032223	233300	000035	X02 G	G=5X, B=38
SMDW HD	47240	23	6.10	0635132	+050004	L 3	41160 L	9586	FO	91032223	234100	000105	500 G	G=193, B=18
SMDW HD	47240	23	6.10	0635132	+050004	L 3	41160 S	9580	FO	91032223	235200	000035	500 G	G=181, B=18
IGMS HD	47382	20	8.2	0635439	+044008	H 1	19185 L	4096	FO	90111002	021000	003500	X04 G	G=3.5X, B=55
IGMS HD	47360	20	8.2	0635439	+044008	H 3	40151 L	1622	FO	90112019	195400	012000	403 G	G=195, B=48
IGMS HD	47360	20	8.2	0635439	+044008	H 1	19255 L	1599	FO	90112022	220100	004000	403 G	G=190, B=42
IGMS HD	47359	20	8.6	0635454	+045532	H 1	19247 L	756	FO	90111919	193800	005000	303 G	G=135, B=42
IGMS HD	47359	20	8.6	0635454	+045532	H 3	40143 L	757	FO	90111920	204000	013000	G	
IGMS HD	47382	20	7.1	0635494	+043907	H 3	40152 L	4143	FO	90112102	021500	003600	402 G	G=180, B=35
IGMS HD	47382	20	7.1	0635495	+043908	H 1	19304 L	4023	FO	90112822	224500	001000	402 G	G=150, B=40



FRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	numms	stt	ECC	Comment
IGMS HD	47398	20	8.7	0635576	+044019	H 1	19184 L	1060	FO	90110923	234900	010000		X04 G	G=2X,B=57
MQ036 FKS0637-75	85	15.80	0637233	-751338	L 3	40461	L	00000	EO	90122610	100235	040400		331 V	
MQ036 FKS 0637-75	85	15.80	0637233	-751337	L 1	19471	L	00000	EO	90122509	093304	018000		331 V	
MQ036 FKS 0637-75	85	15.80	0637233	-751337	L 1	19472	L	00000	EO	90122513	131159	021500		341 V	
MAL38 HD47839	12	04.63	0638135	+095637	H 3	40737	L	00412	FU	91020110	103235	000043		500 V	
CEMIN HD	47839	12	4.6	0638135	+095637	H 3	40725 L	414	FU	91013120	200900	000037		502 G	G=197,B=38
MAL38 HD47839	12	04.62	0638135	+095637	H 3	40783	L	00414	FU	91020309	095800	000043		500 V	
CEMIN HD	47839	12	4.6	0638135	+095637	H 3	40729 L	409	FU	91020100	000000	000040		403 G	G=190,B=41
MAL38 HD47839	12	04.63	0638135	+095637	H 3	40759	L	00413	FU	91020210	100202	000043		500 V	
CEMIN HD	47839	12	4.6	0638135	+095637	H 3	40743 L	414	FU	91020116	165400	000043		503 G	G=220,B=41
CEMIN HD	47839	12	4.6	0638135	+095637	H 3	40747 L	406	FU	91020120	203300	000043		502 G	G=215,B=40
CEMIN HD	47839	12	4.6	0638135	+095637	H 3	40751 L	415	FU	91020123	235900	000043		502 G	G=210,B=40
CEMIN HD	47839	12	4.6	0638135	+095637	H 3	40766 L	412	FU	91020217	172100	000043		503 G	G=205,B=41
CEMIN HD	47839	12	4.6	0638135	+095637	H 3	40770 L	409	FU	91020221	211300	000043		502 G	G=220,B=40
CEMIN HD	47839	12	4.6	0638135	+095637	H 3	40774 L	410	FU	91020300	002900	000043		502 G	G=220,B=40
CEMIN HD	47839	12	4.6	0638135	+095637	H 3	40789 L	420	FU	91020315	155500	000043		503 G	G=225,B=41
CEMIN HD	47839	12	4.6	0638135	+095637	H 3	40793 L	407	FU	91020319	193600	000043		502 G	G=230,B=40
CEMIN HD	47839	12	4.6	0638135	+095637	H 3	40797 L	408	FU	91020322	225200	000043		502 G	G=225,B=40
CEMIN HD	47839	12	4.6	0638135	+095637	H 3	40813 L	415	FU	91020417	172100	000043		503 G	G=230,B=41
CEMIN HD	47839	12	4.6	0638135	+095637	H 3	40817 L	407	FU	91020421	212100	000043		502 G	G=230,B=40
CEMIN HD	47839	12	4.6	0638135	+095637	H 3	40821 L	409	FU	91020500	004400	000043		502 G	G=225,B=40
CEMIN HD	47839	12	4.6	0638135	+095637	H 3	40831 L	408	FU	91020521	212400	000043		502 G	G=225,B=40
CEMIN HD	47839	12	4.6	0638135	+095637	H 3	40835 L	402	FU	91020601	013800	000043		502 G	G=195,B=40
CEMIN HD	47839	12	4.6	0638135	+095637	H 3	40836 L	402	FU	91020602	021100	000043		502 G	G=210,B=39
MC087 HD48329	45	03.39	0640514	+251057	H 1	19269	L	01240	FU	90112312	122132	034500		766 V	
MC006 HD48565	41	07.53	0641559	+205446	L 3	40013	L	03595	FO	90110111	114253	003000		300 V	
MC006 HD48565	41	07.55	0641559	+205446	L 1	19107	L	03529	FO	90110112	122303	000200		600 V	
MC006 HD48565	41	07.56	0641560	+205447	L 3	40014	L	03500	FO	90110112	125604	013500		600 V	
MC006 HD48565	41	07.55	0641560	+205447	L 1	19108	L	03534	FO	90110115	151553	000100		500 V	NO GUIDING
ISMFB HD	49591	22	5.3	0645387	-375224	H 3	40505 L	19511	FO	90123108	083900	000800		503 G	G=205,B=42
USBS HD	50013	20	4.00	0647583	-322658	H 1	19416 L	1005	FU	90121423	234000	000017		503 G	G=220,B=42
IBMP HD	50846	66	8.4	0652225	-011841	L 1	19341 L	1425	FO	90120301	015100	000045		402 G	G=182,B=32
IBMP HD	50846	66	8.4	0652225	-011841	H 3	40250 L	1437	FO	90120302	020000	009000		403 G	G=185,B=45
IBMP HD	50846	66	8.4	0652225	-011841	L 3	40251 L	1435	FO	90120304	040200	000115		500 G	G=175,B=18
IBMP HD	50846	66	8.4	0652225	-011841	H 3	40267 L	1335	FO	90120403	035500	006500		403 G	G=155,B=41
IBMP HD	50846	66	8.4	0652225	-011841	L 1	19351 L	1294	FO	90120501	013200	000045		502 G	G=215,B=34
IBMP HD	50846	66	8.4	0652225	-011841	H 3	40269 L	1309	FO	90120501	014000	009000		403 G	G=190,B=42
IBMP HD	50846	66	8.4	0652225	-011841	L 3	40270 L	1326	FO	90120503	034200	000115		500 G	G=215,B=18
IBMP HD	50846	66	8.4	0652225	-011841	H 3	40283 L	1341	FO	90120701	013500	008000		403 G	G=170,B=41
IBMP HD	50846	66	8.4	0652225	-011841	L 1	19375 L	1265	FO	90120901	013700	000045		502 G	G=225,B=31
IBMP HD	50846	66	8.4	0652225	-011841	H 3	40290 L	1265	FO	90120901	014800	009000		502 G	G=200,B=40
IBMP HD	50846	66	8.4	0652225	-011841	L 3	40291 L	1278	FO	90120903	035100	000115		500 G	G=210,B=15
IBMP HD	50846	66	8.4	0652225	-011841	H 3	41293 L	1334	FO	91040422	223900	008000		402 G	G=185,B=40
IBMP HD	50846	66	8.4	0652225	-011841	L 3	41327 L	1401	FO	91040921	214800	000100		400 G	G=160,B=15
IBMP HD	50846	66	8.4	0652225	-011841	L 1	20111 L	1401	FO	91040921	215500	000040		401 G	G=180,B=30
IBMP HD	50846	66	8.4	0652225	-011841	H 3	41328 L	1426	FO	91040922	223400	008000		402 G	G=180,B=40
PHCAL CT APR 2	47	6.1	0652572	+573746	L 9	02431				91021400	000600	016000		G	
PHCAL CT APR 2	47	6.1	0652572	+573746	L 9	02432				91021400	005900	016000		G	
PHCAL CT APR 2	47	6.1	0652572	+573746	L 9	02433				91021401	014200	016000		G	
PHCAL WAV C	98	6.1	0655426	-272810	L 1	20116 S				91041018	180900	000001		?1 G	B=10X,B=30

FRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mmmsst	EOC	Comment
FHDAL	WAV CAL	98	6.1	0655426	-272810	L 3	41342 S			91041018	182900	000002	70	G B=10X, B=18
FHDAL	WAV CAL	99	6.1	0655426	-272810	L 1	20117 S			91041018	185600	000025	08	G B=100
FHDAL	WAV CAL	98	6.1	0655426	-272810	H 1	20118 S			91041019	192700	000016	32	G B=60X, B=35
FHDAL	WAV CAL	99	6.1	0655426	-272810	H 2	18548 L			91041020	200800	000000	06	G B=75
FHDAL	WAV CAL	99	6.1	0655426	-272810	L 3	41343 S			91041020	203600	000005	08	G B=100
FHDAL	WAV CAL	98	6.1	0655426	-272810	H 3	41344 S			91041021	210000	000200	31	G B=60X, B=30
FHDAL	WAV CAL	98	6.1	0655426	-272810	L 2	18549 S			91041021	211300	000001	71	G B=10X, B=21
FHDAL	WAV CAL	99	6.1	0655426	-272810	L 2	18550 S			91041021	214700	000010	09	G B=120
FHDAL	WAV CAL	98	6.1	0655426	-272810	H 2	18551 S			91041022	221600	000022	31	G B=60X, B=25
MM061	M3-1	70	14.80	0700557	-313103	L 3	41323 L	00000	EO	91040902	021842	002000	330	V
MI073	M 3-1	70	14.00	0700557	-313102	L 3	41523 L	00000	EO	91043003	030611	010000	442	V
MI073	M 3-1	70	14.00	0700557	-313102	L 1	20269 L	00000	EO	91043001	015841	006000	401	V
MA100	HD 54031	21	06.49	0704048	-303440	H 3	41436 L	08863	FO	91042102	020823	001000	500	V
MA100	HD 54031	21	06.47	0704048	-303440	H 1	20200 L	09009	FO	91042102	022548	000800	600	V
MA100	HD 54031	21	06.47	0704048	-303440	H 3	41437 L	08969	FO	91042103	030019	001000	500	V
MA100	HD54031	21	06.47	0704048	-303440	H 1	20201 L	08983	FO	91042103	034325	000700	500	V
MA100	HD 54031	21	06.46	0704048	-303440	H 3	41438 L	09033	FO	91042104	042521	001000	500	V
MA100	HD54031	21	06.43	0704048	-303441	H 1	20177 L	09306	FO	91041801	014246	000800	500	V
MA100	HD54031	21	06.44	0704048	-303441	H 3	41413 L	09236	FO	91041802	020013	000800	500	V
MA100	HD54031	21	06.46	0704048	-303441	H 1	20178 L	09075	FO	91041802	024945	000800	500	V
MA100	HD54031	21	06.46	0704048	-303441	H 3	41414 L	09029	FO	91041803	032103	001000	500	V
MA100	HD54031	21	06.47	0704048	-303440	H 3	41415 L	09009	FO	91041804	043139	001000	500	V
MA100	HD54031	21	06.45	0704048	-303440	H 1	20179 L	09123	FO	91041803	035636	000800	500	V
USSES	HD 54605	41	1.84	0706214	-261845	H 3	40012 L	3395	FU	90110109	091300	005500	502	G G=200, B=40
USSES	HD 54605	41	1.84	0706214	-261845	H 1	19106 L	3383	FU	90110110	101600	000220	502	G G=200, B=32
MI135	H0709-36	59	15.50	0710454	-360030	L 1	20149 L	00000	EO	91041506	065201	004000	301	V
MI135	H0709-36	59	15.50	0710454	-360030	L 3	41389 L	00000	EO	91041507	074055	003000	130	V
MI135	H0709-36	59	15.50	0710454	-360030	L 3	41397 L	00000	EO	91041601	013714	012500	331	V
MI135	H0709-36	59	15.50	0710454	-360030	L 1	20157 L	00000	EO	91041603	034745	011000	331	V
MI135	H0709-36	59	15.50	0710454	-360030	L 3	41398 L	00000	EO	91041605	054431	002000	120	V ECLIPSE
IBMP	HD 56014	26	4.7	0712129	-261554	H 1	20083 L	424	FU	91040500	003600	000100	X03	G G=2X, B=48
IBMP	HD 56014	26	4.7	0712129	-261554	H 3	41294 L	425	FU	91040500	004100	000130	X02	G G=1.5X, B=40
MC154	SPO6143	30	10.20	0713029	+702236	L 2	18532 L	00332	FO	91011011	115415	007000	111	V IWR: -4.5 KV
MQ117	Q 0716+71	87	12.50	0716133	+712614	L 1	19752 L	00000	EO	91021405	052543	012000	502	V
MQ117	Q 0716+71	87	12.50	0716133	+712614	L 1	19753 L	00000	EO	91021408	080509	018500	402	V MULTIPLE 2*60+65/R,P
MQ117	Q0716+71	87	12.50	0716133	+712614	L 1	19760 L	00000	EO	91021505	053406	006000	401	V
MQ117	Q0716+71	87	12.50	0716133	+712614	L 1	19761 L	00000	EO	91021507	071031	006000	401	V
MQ117	Q0716+71	87	12.50	0716133	+712614	L 1	19762 L	00000	EO	91021508	085242	006000	401	V
MQ117	Q0716+71	87	12.50	0716133	+712614	L 1	19763 L	00000	EO	91021510	102606	006000	401	V
SANDW	HD 57118	40	6.1	0716502	-191115	L 3	41448 L	9101	FO	91042120	205200	003000	501	G G=206, B=25
MC154	SPO 6174	40	09.10	0718551	+700241	L 2	18533 L	00883	FO	91011013	135252	002300	701	V IWR: -4.5 KV
MM061	MI-13	70	17.00	0719017	-180256	L 3	41324 L	00000	EO	91040903	035250	017000	231	V
MI074	A20	70	16.60	0720220	+015124	L 1	20240 L	00000	EO	91042701	015925	012000	302	V
MC154	SPO 14183	41	09.25	0720260	+693314	L 2	18531 L	00776	FO	91011010	104220	002500	601	V IWR: -4.5 KV
MI141	EX MON	57	11.97	0722529	-032951	L 3	40243 L	00274	SO	90120110	101233	012000	332	V
OD72Y	MVC 560	57	10.1	0723279	-073735	L 1	19112 L	373	FO	90110207	074400	001500		G
OD72Y	MVC 560	57	10.1	0723279	-073735	L 3	40018 L	397	FO	90110209	090600	008000	551	G B=194, G=220, B=25
OD72Y	MVC 560	57	10.1	0723279	-073735	L 1	19114 L	382	FO	90110210	103300	001200	352	G B=231, G=111, B=35
OD72Y	MVC 560	57	9.0	0723279	-073735	L 1	19443 L	408	FO	90121906	060000	001500		G
OD72Y	MVC 560	57	9.0	0723279	-073735	L 3	40387 L	402	FO	90121906	062500	008000		G



FRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	nummsst	ECC	Comment
CD72Y	MWC 560	57	9.0	0723279	-073735	L 1	19444 L	410	FO	90121907	075400	001300		G
CD72Y	MWC 560	57	9.4	0723279	-073735	L 1	19738 L	379	FO	91021120	202800	001200		552 G B=205,C=190,B=35
CD72Y	MWC 560	57	9.4	0723279	-073735	L 3	40857 L	392	FO	91021120	204800	009000		532 G B=109,C=186,B=35
CD72Y	MWC 560	57	9.4	0723279	-073735	L 1	19739 L	414	FO	91021122	222700	006000		XX3 G B=5X,C=5X,B=41
CD72Y	MWC 560	57	9.4	0723279	-073735	L 1	20245 L	378	FO	91042713	135700	006000		XX2 G B=5X,C=4.5X,B=40
CD72Y	MWC 560	57	9.4	0723279	-073735	L 3	41492 L	381	FO	91042715	150400	010500		351 G B=192,C=78,B=25
HSMKB HD	58978	26	5.5	0724522	-225903	H 1	19364 L	15854	FO	90120703	033500	000130		403 G C=180,B=41
HSMKB HD	58978	26	5.5	0724522	-225903	H 3	40284 L	15949	FO	90120703	034800	000255		502 G C=200,B=38
HSMKB HD	HD58978	26	5.5	0724522	-225903	H 3	40846 L	16301	FO	91020922	221800	000255		502 G C=208,B=40
HSMKB HD	HD58978	26	5.5	0724522	-225903	H 1	19725 L	16252	FO	91020922	222500	000130		402 G C=190,B=40
FM5H NCC	2392	70	10.4	0726134	+210056	H 3	40129 L	328	FO	90111719	195300	008000		452 G B=202,C=140,B=40
FM5H NCC	2392	70	10.4	0726134	+210056	L 1	19238 L	321	FO	90111721	211800	000200		XX2 G C=1.5X,B=32
FM5H NCC	2392	70	10.4	0726134	+210056	L 3	40130 L	327	FO	90111721	215100	000200		540 G B=157,C=210,B=12
RUMEB	U MON	52	6.0	0728210	-094000	H 1	20246 L	6758	FO	91042717	171300	012000		434 G B=143,C=160,B=60
CD72Y	MWC 560	57	10.1	0728279	-073735	L 1	19113 L	401	FO	90110208	084500	001300		4X2 G B=1.5X,C=134,B=32
MC113 YY GEM		48	09.04	0731257	+315846	L 1	20051 L	00935	FO	91040201	015753	002000		352 V 2 R. P.
MC113 YY GEM		48	09.05	0731257	+315846	L 3	41265 L	00927	FO	91040202	023909	002700		130 V
MC113 YY GEM		48	09.05	0731257	+315846	L 1	20052 L	00924	FO	91040203	031037	002000		352 V 2 R. P.
MC113 YY GEM		48	09.00	0731257	+315846	L 3	41266 L	00000	EO	91040203	035430	002700		130 V
MC113 YY GEM		48	09.00	0731257	+315846	L 1	20053 L	00000	EO	91040204	042921	001600		352 V 2 R. P.
MC113 YY GEM		48	09.00	0731257	+315846	L 3	41267 L	00000	EO	91040205	053430	002700		130 V
MC113 YY GEM		48	09.00	0731257	+315846	L 1	20054 L	00000	EO	91040206	060816	000800		352 V
MC113 YY GEM		48	09.12	0731257	+315846	H 1	20055 L	00873	FO	91040207	071954	005000		132 V
MC113 YY GEM		48	09.44	0731257	+315846	E 9	02455 2	00655	FO	91040208	085000	016000		V FES FOR SWP41268
MC113 YY GEM		48	09.11	0731257	+315846	H 1	20069 L	00882	FO	91040306	060104	006000		131 V
MC113 YY GEM		48	09.11	0731257	+315846	H 1	20070 L	00882	FO	91040307	074712	006000		131 V
MC113 YY GEM		48	09.08	0731257	+315846	L 1	20066 L	00900	FO	91040301	015319	001600		241 V 2 R. P.
MC113 YY GEM		48	99.99	0731257	+315846	L 3	41277 L	00000		91040302	023810	002700		130 V
MC113 YY GEM		48	09.36	0731257	+315846	L 1	20067 L	00703	FO	91040303	032022	001632		231 V 2 R. P.
MC113 YY GEM		48	99.99	0731257	+315846	L 3	41278 L	00000		91040304	040908	002700		130 V
MC113 YY GEM		48	09.10	0731257	+315846	L 1	20068 L	00883	FO	91040304	045109	000800		251 V
MC113 YY GEM		48	99.99	0731257	+315846	L 3	41279 L	00000		91040305	052132	002700		130 V
MC113 YY GEM		48	99.99	0731257	+315846	L 3	41280 L	00000		91040307	070834	002700		140 V
PHCAL HD60753		24	06.88	0732079	-502828	L 1	19628 L	06341	FO	91012212	125745	000007		500 V
PHCAL HD60753		21	06.77	0732080	-502829	L 1	19115 L	06958	FO	90110211	115635	000006		501 V NO GUIDING
PHCAL HD	60753	21	6.69	0732080	-502828	L 3	40367 L	6515	FO	90121701	014500	000010		500 G C=170,B=18
PHCAL HD60753		21	06.85	0732080	-502829	L 1	19116 L	06522	FO	90110212	122725	000006		501 V NO GUIDING
PHCAL HD	60753	21	6.69	0732080	-502828	L 2	18521 L			90122405	055500	000009		G
PHCAL HD60753		21	06.84	0732080	-502829	L 1	19117 L	06565	FO	90110213	130337	000006		501 V NO GUIDING
PHCAL HD60753		21	06.82	0732080	-502829	L 1	19118 L	06700	FO	90110213	133757	000006		501 V NO GUIDING
PHCAL HD60753		21	06.80	0732080	-502829	L 1	19119 L	06810	FO	90110214	140946	000006		501 V NO GUIDING
PHCAL HD60753		24	06.85	0732080	-502829	L 3	40644 L	06480	FO	91012108	080804	000008		400 V
PHCAL HD60753		24	06.86	0732080	-502829	L 1	19615 L	06480	FO	91012108	081103	000010		601 V
PHCAL HD60753		24	06.84	0732080	-502829	L 3	40645 L	06537	FO	91012109	090847	000008		400 V
PHCAL HD60753		24	06.84	0732080	-502829	L 3	40646 L	06539	FO	91012110	102719	000011		500 V
PHCAL HD60753		24	06.87	0732080	-502829	L 3	40647 L	06413	FO	91012110	105916	000011		500 V
PHCAL HD60753		24	06.87	0732080	-502829	L 1	19616 L	06413	FO	91012111	110316	000007		500 V
PHCAL HD60753		24	06.84	0732080	-502829	L 3	40648 L	06580	FO	91012112	120601	000011		500 V
PHCAL HD60753		24	06.84	0732080	-502829	L 1	19617 L	06580	FO	91012112	120945	000007		500 V
PHCAL HD60753		24	06.81	0732080	-502829	L 3	40649 L	06716	FO	91012113	131005	000011		500 V

PRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	num	sum	stt	ECC	Comment
FHCAL	HD60753	24	06.81	0732080	-502829	L 1	19618 L	06716	FO	91.01.2113	131359	000007			500	V
FHCAL	HD60753	24	06.82	0732080	-502829	L 3	40650 L	06661	FO	91.01.2114	141.012	000025			800	V
FHCAL	HD60753	24	06.80	0732080	-502829	L 1	19619 L	06813	FO	91.01.2114	141.401	000018			800	V
FHCAL	HD60753	24	06.88	0732080	-502829	L 1	19629 L	06330	FO	91.01.2213	133344	000006			500	V
FHCAL	HD60753	21	06.87	0732080	-502829	L 2	18538 L	06347	FO	91.02.1806	061513	000008			401	V
FHCAL	HD60753	21	06.89	0732080	-502829	L 2	18539 L	06283	FO	91.02.1807	070152	000011			501	V
FHCAL	HD60753	21	06.89	0732080	-502829	L 2	18540 L	06263	FO	91.02.1807	074231	000014			501	V 35 TIMES 0.5 SEC EXP
FHCAL	HD60753	21	06.90	0732080	-502829	L 3	40898 L	06245	FO	91.02.1809	095400	000011			501	V
FHCAL	HD60753	21	06.86	0732080	-502829	L 2	18541 L	06430	FO	91.02.1809	094818	000011			501	V
FHCAL	HD 60753	21	06.86	0732080	-502829	L 1	19791 L	06428	FO	91.02.1811	113116	000026			801	V FREAD
FHCAL	HD60753	21	06.86	0732080	-502829	L 3	40959 L	06427	FO	91.03.0110	101212	000011			501	V
FHCAL	HD60753	21	06.88	0732080	-502829	L 3	40960 L	06345	FO	91.03.0110	104216	000020			701	V
FHCAL	HD60753	21	06.81	0732080	-502829	L 1	19862 L	06714	FO	91.03.0207	074240	000007			501	V
FHCAL	HD 60753	24	06.88	0732080	-502829	H 3	41081 L	06333	FO	91.03.1010	103220	001300			500	V
FHCAL	HD 60753	24	06.87	0732080	-502829	L 1	19886 L	06411	FO	91.03.1009	092119	000018			801	V
FHCAL	HD 60753	24	06.85	0732080	-502829	L 1	19887 L	06500	FO	91.03.1009	095757	000018			801	V
FHCAL	HD 60753	24	06.84	0732081	-502829	L 1	19635 L	06556	FO	91.01.2312	121858	000006			500	V
FHCAL	HD 60753	21	6.7	0732081	-502829	L 1	19148 L			9011.0508	081600	000026				G
FHCAL	HD60753	24	06.86	0732081	-502829	L 1	19636 L	06457	FO	91.01.2313	130122	000006			500	V
FHCAL	HD 60753	21	6.7	0732081	-502829	L 3	40050 L			9011.0508	082700	000041				G
FHCAL	HD 60753	21	6.7	0732081	-502829	L 1	19149 L			9011.0509	093000	000006				G
FHCAL	HD 60753	21	6.7	0732081	-502829	L 3	40051 L			9011.0509	093400	000010				G
FHCAL	HD 60753	21	6.7	0732081	-502829	L 1	19150 S			9011.0510	102900	000018				G
FHCAL	HD 60753	21	6.7	0732081	-502829	L 3	40052 S			9011.0510	103400	000030				G
FHCAL	HD 60753	21	6.7	0732081	-502829	L 3	40163 L	6544	FO	9011.2219	195600	000041			500	G C=185,B=15
FHCAL	HD 60753	21	6.7	0732081	-502829	L 3	40164 L	6621	FO	9011.2220	203800	000016			300	G C=98,B=18
FHCAL	HD 60753	21	6.7	0732081	-502829	L 3	40165 L	6622	FO	9011.2221	211500	000049			500	G C=219,B=18
FHCAL	HD 60753	21	6.7	0732081	-502829	L 3	40166 L	6548	FO	9011.2221	215200	000105			X00	G C=1.5X,B=18
FHCAL	NULL	99		0732081	-502829	L 3	40167			9011.2222	222500	000000			00	G B=18
FHCAL	HD 60753	21	6.7	0732081	-502829	L 3	40168 L	6590	FO	9011.2222	225300	000045			500	G C=210,B=18
FHCAL	HD 60753	21	6.7	0732081	-502829	L 3	40169 L	6588	FO	9011.2223	233100	000018			300	G C=108,B=18
FHCAL	HD 60753	21	6.7	0732081	-502829	L 3	40170 L	6580	FO	9011.2300	000700	000053			500	G C=230,B=18
FHCAL	HD 60753	21	6.7	0732081	-502829	L 3	40171 L	6625	FO	9011.2300	004400	000041			500	G C=190,B=18
FHCAL	HD 60753	21	6.7	0732081	-502829	L 3	40172 L	6646	FO	9011.2301	012000	000011			500	G C=196,B=18
FHCAL	HD 60753	21	6.7	0732081	-502829	L 3	40173 L	6625	FO	9011.2301	014900	000005			500	G C=195,B=18
FHCAL	HD 60753	21	6.7	0732081	-502829	L 3	40174 L	6661	FO	9011.2302	021700	000014			500	G C=221,B=18
FHCAL	HD 60753	21	6.7	0732081	-502829	L 3	40175 L	6669	FO	9011.2302	024600	000011			500	G C=200,B=18
FHCAL	HD 60753	21	6.69	0732081	-502829	L 1	19427 L	6495	FO	9012.1701	013400	000006			502	G C=190,B=32
FHCAL	HD 60753	21	6.69	0732081	-502829	L 1	19427 S	6495	FO	9012.1701	014000	000018			X02	G C=1.5X,B=32
FHCAL	HD 60753	21	6.69	0732081	-502829	L 3	40367 S	6473	FO	9012.1701	015000	000030			500	G C=226,B=18
FHCAL	HD 60753	21	6.69	0732081	-502829	L 1	19428 L	6544	FO	9012.1702	024900	000026			502	G C=190,B=32
FHCAL	HD 60753	21	6.69	0732081	-502829	L 3	40368 L	6553	CF	9012.1703	030000	000041			500	G C=190,B=18
FHCAL	HD 60753	21	6.7	0732081	-502829	9	02413			91.02.0613	132700	016000				G
FHCAL	HD 60753	21	6.7	0732081	-502829	L 1	19701 L	6722	FO	91.02.0613	135200	000026			502	G C=190,B=35
FHCAL	SKY BKGD	07		0732081	-502829	L 1	19702 L			91.02.0614	144800	004500			03	G B=41
FHCAL	HD 60753	21	6.7	0732081	-502829	L 1	19703 L	6567	FO	91.02.0616	163400	000010			302	G C=118,B=35
FHCAL	HD 60753	21	6.7	0732081	-502829	L 1	19704 L	6420	FO	91.02.0617	171600	000031			502	G C=200,B=35
FHCAL	HD 60753	21	6.7	0732081	-502829	L 1	19705 L	6404	FO	91.02.0618	180000	000041			X02	G C=1.5X,B=35
FHCAL	HD 60753	21	6.7	0732081	-502829	L 1	19706 L	6364	FO	91.02.0618	184700	000026			502	G C=190,B=35
FHCAL	NULL	99		0732081	-502829	L 1	19707 L			91.02.0619	192300	000000			02	G B=38

FO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	numinst	BCC	Comment
PHCAL HD	60753	21	6.69	0732081	-502829	L 3	40838 L	6242	FO	91020700	003100	000010	G	
PHCAL HD	60753	21	6.69	0732081	-502829	L 3	40838 S	6227	FO	91020700	003900	000030	G	
PHCAL HD	60753	21	6.69	0732081	-502829	L 1	19709 L	6165	FO	91020700	004400	000006	501 G	G=210,B=30
PHCAL HD	60753	21	6.69	0732081	-502829	L 1	19709 S	6146	FO	91020700	004900	000018	X01 G	G=1.5X,B=30
PHCAL HD	60753	21	6.7	0732081	-502829	L 3	40860 L	6426	FO	91021300	002700	000041	500 G	G=190,B=18
PHCAL HD	HD 6075	21	6.7	0732081	-502829	F 9	01008 1			91031420	201600	016000	G	
PHCAL HD	HD 6075	21	6.7	0732081	-502829	F 9	02454 2			91031420	202800	016000	G	
PHCAL HD	60753	21	6.7	0732081	-502829	L 3	41104 L	6379	FO	91031420	204100	000010	500 G	G=180,B=18
PHCAL HD	60753	21	6.7	0732081	-502829	L 3	41104 S	6536	FO	91031420	204600	000030	X00 G	G=1.5X,B=18
PHCAL HD	60753	21	6.7	0732081	-502829	L 1	19916 L	6544	FO	91031420	205200	000006	502 G	G=200,B=38
PHCAL HD	60753	21	6.7	0732081	-502829	L 1	19916 S	6551	FO	91031420	205700	000018	502 G	G=250,B=35
PHCAL HD	60753	21	6.7	0732081	-502829	L 1	19917 L	6619	FO	91031421	215700	000026	502 G	G=190,B=35
PHCAL HD	60753	21	6.7	0732081	-502829	L 3	41105 L	6553	FO	91031422	220900	000041	500 G	G=190,B=18
PHCAL HD	60753	21	6.7	0732081	-502829	L 1	20182 L	6393	FO	91041817	174700	000026	502 G	G=197,B=35
PHCAL HD	60753	21	6.7	0732081	-502829	L 3	41418 L	6402	FO	91041817	175800	000041	500 G	G=191,B=18
WRMFC HD	63099	10	11.0	0743575	-341230	L 3	40899 L	183	FO	91021812	122900	015000	332 G	B=128,G=98,B=40
WRMFC HD	63099	10	11.0	0743575	-341230	L 1	19792 L	188	FO	91021815	150800	003000	452 G	B=215,G=187,B=40
USSES HD	63922	23	4.1	0747428	-461447	H 3	40146 L	631	FU	90112009	095700	000029	502 G	G=190,B=35
USSES HD	63922	23	4.1	0747428	-461447	H 1	19251 L	628	FU	90112010	100300	000026	503 G	G=220,B=41
RIASS X	0748-67	59	17.5	0748249	-673731	L 3	40542 L			91010615	154800	037000	336 G	B=113,G=100,B=72
RIASS X	0748-67	59	17.5	0748250	-673731	L 3	40490 L		FO	90122917	173900	044000	305 G	G=110,B=70
RIASS X	0748-67	59	17.5	0748250	-673731	L 3	40607 L		FO	90123117	170100	039300	305 G	G=95,B=65
IBMP	TU MCN	66	10.9	0750491	-025441	L 3	41473 L	131	FO	91042510	105300	001000	200 G	G=30,B=18
IBMP	TU MCN	66	10.9	0750491	-025441	L 3	41474 L	124	FO	91042511	113500	004000	330 G	B=42,G=48,B=20
IBMP	TU MCN	66	10.9	0750491	-025441	L 3	41475 L	124	FO	91042512	124400	007000	501 G	=187,G=210,B=28
IBMP	TU MCN	66	10.9	0750491	-025441	L 3	41476 L	214	FO	91042514	142300	003000	X01 G	G=3X,B=22
IBMP	TU MCN	66	10.9	0750491	-025441	L 3	41477 L	312	FO	91042515	153100	000700	X00 G	G=1.5X,B=18
NOMES N	IMC199	55		0750491	-025441	L 1	20236 L	559	FO	91042516	161600	000600	X02 G	G=1.5X,B=35
LIL30	U GEM	54	09.97	0752078	+220803	L 3	40141 S	00409	FO	90111916	163607	000040	V	
LIL30	U GEM	54	09.97	0752078	+220803	L 3	40141 L	00409	FO	90111916	163207	000040	300 V	
LIL30	U GEM	54	09.96	0752078	+220803	L 1	19246 S	00413	FO	90111916	164757	000100	V	
LIL30	U GEM	54	09.96	0752078	+220803	L 1	19246 L	00413	FO	90111916	164033	000100	501 V	
LIL30	U GEM	54	09.94	0752078	+220803	H 3	40142 L	00419	FO	90111917	173612	006500	300 V	
DMPP	U GEM	54	10	0752079	+220808	H 3	40181 L	344	FO	90112400	000900	016500	404 G	G=180,B=55
USSES HD	65575	21	3.50	0755303	-525050	H 1	19467 L			90122407	074600	000023	G	
AIMP HD	65607	66	8.2	0756480	-072159	L 1	19893 L	1436	FO	91031200	000800	000300	502 G	G=190,B=35
AIMP HD	65607	66	8.2	0756480	-072159	L 3	41087 L	1429	FO	91031200	002000	001000	550 G	B=188,G=190,B=18
AIMP HD	65607	66	8.2	0756480	-072159	L 1	19894 L	1414	FO	91031201	010000	001000	X02 G	G=2X,B=35
AIMP HD	65607	66	8.2	0756480	-072159	L 3	41088 L	1396	FO	91031201	013700	002500	X00 G	G=1.5X,B=18
AIMP HD	65607	66	8.2	0756480	-072159	L 1	19895 L	1392	FO	91031202	021400	000500	X02 G	G=1.5X,B=35
AIMP HD	65607	66	8.2	0756480	-072159	L 1	19903 L	1252	FO	91031223	234600	000300	451 G	B=211,G=180,B=30
AIMP HD	65607	66	8.2	0756480	-072159	L 3	41092 L	1232	FO	91031223	235700	001000	440 G	B=120,G=140,B=18
AIMP HD	65607	66	8.7	0756480	-072159	L 1	19904 L	1236	FO	91031300	003500	000600	XX2 G	B=1.5X,G=1.5X,B=35
AIMP HD	65607	66	8.7	0756480	-072159	L 3	41093 L	1226	FO	91031301	011000	002000	540 G	B=164,G=240,B=18
AIMP HD	65607	66	8.7	0756480	-072159	L 1	19905 L	1231	FO	91031301	014800	000400	552 G	B=241,G=210,B=35
AIMP HD	65607	66	8.7	0756480	-072159	L 3	41094 L	1251	FO	91031302	022700	001500	540 G	B=128,G=200,B=18
AIMP HD	65607	66	8.9	0756480	-072159	L 1	19912 L	1084	FO	91031323	233600	000300	551 G	B=189,G=190,B=30
AIMP HD	65607	66	8.9	0756480	-072159	L 3	41098 L	1095	FO	91031323	234800	001000	430 G	B=102,G=130,B=18
AIMP HD	65607	66	8.9	0756480	-072159	L 1	19913 L	1129	FO	91031400	002800	001000	XX2 G	B=2X,G=2X,B=35
AIMP HD	65607	66	8.9	0756480	-072159	L 3	41099 L	1117	FO	91031401	010900	002000	540 G	B=162,G=210,B=18

FRO	Object	CL	MAG	R.A.	DEC	D C Image A	FES	MD	Obs.date	Exptim	mmmsst	BCC	Comment
ADMP HD	65607 66		8.9	0756480	-072159	L 1 19914 L	1152	FO	91031401	014600	000500	5X2 G	B=1.5X,G=240,B=35
ADMP HD	65607 66		8.9	0756480	-072159	L 3 41100 L	1172	FO	91031402	022100	001500	540 G	B=133,G=190,B=18
ADMP HD	65607 66		8.5	0756480	-072159	L 1 19918 L	1516	FO	91031423	232800	000300	5X2 G	B=1.5X,G=240,B=35
ADMP HD	65607 66		8.5	0756480	-072159	L 3 41106 L	1493	FO	91031423	233800	001000	530 G	B=114,G=180,B=18
ADMP HD	65607 66		8.5	0756480	-072159	H 1 19919 L	1527	FO	91031500	002100	012000	443 G	B=173,G=170,B=50
ADMP HD	65607 66		8.5	0756480	-072159	L 3 41107 L	1502	FO	91031502	022900	002000	X50 G	B=208,G=2X,B=18
ADMP HD	65607 66		8.6	0756480	-072159	L 1 19925 L	1406	FO	91031523	233200	000400	X02 G	G=1.5X,B=35
ADMP HD	65607 66		8.6	0756480	-072159	L 3 41111 L	1395	FO	91031523	234500	001000	540 G	B=157,G=200,B=18
ADMP HD	65607 66		8.6	0756480	-072159	L 1 19926 L	1381	FO	91031600	002000	000200	552 G	B=246,G=200,B=35
ADMP HD	65607 66		8.6	0756480	-072159	L 3 41112 L	1388	FO	91031600	005400	001600	X50 G	B=223,G=2X,B=18
ADMP HD	65607 66		8.6	0756480	-072159	H 1 19927 L	1396	FO	91031601	013100	008000	333 G	B=132,G=135,B=45
ADMP HD	65607 66		9.4	0756480	-072159	L 1 19931 L	684	FO	91031623	234600	000600	5X2 G	B=1.5X,G=210,B=35
ADMP HD	65607 66		9.4	0756480	-072159	L 3 41117 L	715	FO	91031700	000000	002000	440 G	B=129,G=150,B=18
ADMP HD	65607 66		9.2	0756480	-072159	L 1 19932 L	788	FO	91031700	003800	000300	451 G	B=228,G=170,B=30
ADMP HD	65607 66		9.1	0756480	-072159	L 3 41118 L	888	FO	91031701	011100	001600	540 G	B=137,G=170,B=18
ADMP HD	65607 66		9.0	0756480	-072159	L 1 19933 L	994	FO	91031701	014700	000600	X01 G	G=2X,B=30
ADMP HD	65607 66		8.9	0756480	-072159	L 3 41119 L	1042	FO	91031702	022000	002000	X50 G	B=213,G=1.5X,B=18
IRMEW QSO	0759+651 85		14.4	0759529	+650821	L 3 40376 L		FO	90121718	185300	022000	333 G	B=87,G=100,B=42
IRMEV QSO	0759+651 85		14.4	0759529	+650821	L 1 19437 L		FO	90121722	224300	013000	333 G	B=90,G=130,B=45
PHCAL HD	66811 13		2.3	0801496	-395141	H 1 19997 L	3324	FU	91032721	213600	000003	503 G	G=225,B=42
PHCAL HD	66811 13		2.3	0801496	-395141	H 3 41197 L	3346	FU	91032721	214100	000003	502 G	G=190,B=38
DFMGB	0802+413 37		15.2	0802345	+411809	L 3 40851 L		FO	91021016	162900	004500	500 G	G=205,B=18
DFMGB	0802+413 37		15.2	0802345	+411809	L 1 19733 L			91021017	172600	009000	X03 G	G=1.5X,B=48
DFMGB	0802+413 37		15.2	0802345	+411809	L 3 40852 S			91021019	190600	009000	401 G	G=146,B=30
PHCAL ED+75/325	16		09.62	0804430	+750648	L 1 19433 L	00559	FO	90121713	130721	000020	500 V	
PHCAL ED+75/325	16		09.62	0804430	+750648	L 1 19434 L	00558	FO	90121714	140945	000020	500 V	
PHCAL ED+75/325	16		09.63	0804430	+750648	L 1 19435 L	00551	FO	90121715	151633	000045	700 V	
PHCAL ED+75/325	16		09.63	0804430	+750648	L 3 40371 L	00554	FO	90121710	103357	000014	500 V	
PHCAL ED+75/325	16		09.62	0804430	+750648	L 3 40373 L	00558	FO	90121714	141522	000014	500 V	
PHCAL ED+75/325	16		09.64	0804430	+750648	L 1 19436 L	00547	FO	90121716	163430	000045	700 V	PHREAD
PHCAL ED+75/325	16		09.64	0804430	+750648	L 3 40375 L	00548	FO	90121716	163936	000014	500 V	PHREAD
PHCAL ED +75/325	16		09.64	0804430	+750648	H 1 19431 L	00549	FO	90121709	093813	003000	501 V	
PHCAL ED+75/325	16		09.62	0804430	+750648	H 1 19432 L	00557	FO	90121711	110742	006000	701 V	
PHCAL ED +75/325	16		09.62	0804430	+750648	H 3 40372 L	00557	FO	90121712	121629	002500	500 V	
PHCAL ED+75/325	16		09.62	0804430	+750648	H 3 40374 L	00555	FO	90121715	152454	002500	500 V	
PHCAL ED+75/325	16		09.65	0804430	+750648	H 1 19441 L	00543	FO	90121815	154930	003000	402 V	
PHCAL ED+75/325	16		09.66	0804430	+750648	H 3 40381 L	00537	FO	90121816	162914	002000	400 V	
PHCAL ED+75325	16		09.64	0804430	+750648	L 3 40638 L	00549	FO	91012014	143618	000014	500 V	PHREAD
PHCAL ED+75325	16		09.64	0804430	+750648	L 1 19607 L	00549	FO	91012014	143933	000020	500 V	PHREAD
PHCAL ED+75 325	16		09.67	0804430	+750648	L 1 19948 L	00534	FO	91031810	103851	000020	400 V	PHREAD
PHCAL ED+75 325	16		09.65	0804430	+750648	L 3 41128 L	00541	FO	91031810	103526	000014	400 V	PHREAD
PHCAL ED+75 325	16		09.64	0804430	+750648	H 3 41127 L	00546	FO	91031808	080303	002500	500 V	
PHCAL ED+75 325	16		09.66	0804430	+750648	H 1 19947 L	00538	FO	91031808	085327	006000	701 V	
PHCAL ED+75325	16		09.64	0804430	+750648	L 1 19945 L	00548	FO	91031805	054616	000020	400 V	
PHCAL ED+75 325	16		09.65	0804430	+750648	L 1 19946 L	00545	FO	91031807	075731	000045	700 V	
PHCAL ED+75 325	16		09.63	0804430	+750648	L 3 41125 L	00553	FO	91031804	040954	000014	400 V	PHREAD
PHCAL ED+75 325	16		09.63	0804430	+750648	H 1 19944 L	00551	FO	91031804	041900	003000	501 V	
PHCAL ED+75 325	16		09.63	0804430	+750648	H 3 41126 L	00554	FO	91031805	050146	002500	500 V	
PHCAL ED+75325	16		09.58	0804430	+750648	L 1 20187 L	00577	FO	91041904	040610	000022	500 V	
PHCAL ED+75325	16		09.58	0804430	+750648	L 1 20188 L	00579	FO	91041904	045038	000025	500 V	



FRO	Object	CL	MPG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
PHCAL	ED+75325	16	09.58	0804430	+750648	L 1	20189 L	00579	FO	91041905	053106	000025	500	V
PHCAL	ED+75325	16	09.57	0804430	+750648	L 1	20190 L	00588	FO	91041906	060643	000050	700	V
PHCAL	ED+75 325	16	09.57	0804430	+750648	L 1	20191 L	00584	FO	91041906	064243	000050	700	V
PHCAL	ED+75 325	16	09.59	0804430	+750648	L 3	41439 L	00574	FO	91042105	055847	000017	500	V
PHCAL	ED+75 325	16	09.60	0804430	+750648	L 3	41440 L	00566	FO	91042106	062617	000018	500	V
PHCAL	ED+75 325	16	09.60	0804430	+750648	L 3	41441 L	00565	FO	91042106	065333	000018	500	V
PHCAL	ED+75 325	16	09.60	0804430	+750648	L 3	41442 L	00566	FO	91042107	072932	000050	800	V
PHCAL	ED+75 325	16	09.61	0804430	+750648	L 3	41443 L	00564	FO	91042107	075820	000040	700	V
PHCAL	ED+75 325	16	09.59	0804430	+750648	L 3	41444 L	00570	FO	91042108	083856	000040	700	V
PHCAL	ED +75 325	16	9.54	0804431	+750647	L 2	18520 L			90122404	045100	000033		G
PHCAL	ED +75 0325	16	9.54	0804431	+750647	L 3	40459 L	565		90122605	054400	000014	400	G G=165,B=18
PHCAL	ED +75 0325	16	9.54	0804431	+750647	L 3	40459 S	571		90122605	055100	000042	400	G G=165,B=18
PHCAL	ED +75 0325	16	9.54	0804431	+750647	L 1	19477 L	568		90122606	062300	000140		G
PHCAL	ED +75 0325	16	9.54	0804431	+750647	L 3	40460 L	571		90122606	064900	000043		G
PHCAL	ED +75 0325	16	9.5	0804432	+750648	L 1	19176 L	539	FO	90110904	041600	000140	502	G G=195,B=37
PHCAL	ED +75 0325	16	9.5	0804432	+750648	L 3	40083 L	546	FO	90110904	043100	000043	400	G G=138,B=18
PHCAL	ED +75 0325	16	9.5	0804432	+750648	L 1	19177 L	552	FO	90110905	053100	000020	502	G G=190,B=32
PHCAL	ED +75 0325	16	9.5	0804432	+750648	L 3	40084 L	549	FO	90110905	053500	000014	500	G G=185,B=18
PHCAL	ED +75 0325	16	9.5	0804432	+750648	L 1	19178 S	558	FO	90110906	063500	000100	X01	G G=1.5X,B=30
PHCAL	ED +75 0325	16	9.5	0804432	+750648	L 3	40085 S	555	FO	90110906	064000	000042	X00	G G=1.5X,B=18
PHCAL	ED 75 0325	16	9.54	0804432	+750648	L 1	19430 L	550	FO	90121708	082900	000020	502	G G=195,B=35
PHCAL	ED 75 0325	16	9.54	0804432	+750648	L 3	40370 L	549	FO	90121708	083500	000014	500	G G=175,B=15
PHCAL	ED +75 0325	16	9.54	0804432	+750648	L 1	19476 L	555	FO	90122604	045800	000020	501	G G=190,B=30
PHCAL	ED +75 0325	16	9.54	0804432	+750648	L 1	19476 S	567	FO	90122605	050500	000100	501	G G=247,B=30
PHCAL	ED +75 0325	16	9.54	0804432	+750648	L 1	19522 L	546	FO	91010801	015600	000020	402	G G=185,B=35
PHCAL	ED +75 0325	16	9.54	0804432	+750648	L 1	19522 S	546	FO	91010802	020100	000100	502	G G=245,B=35
PHCAL	ED +75 0325	16	9.54	0804432	+750648	L 3	40548 L	551	FO	91010802	020700	000014	500	G G=170,B=15
PHCAL	ED +75 0325	16	9.54	0804432	+750648	L 3	40548 S	546	FO	91010802	021200	000042	500	G G=190,B=18
PHCAL	ED +75 0325	16	9.5	0804432	+750648	L 3	40632 L	562	FO	91011905	055000	000043	400	G G=145,B=18
PHCAL	ED +75 0325	16	9.5	0804432	+750648	L 1	19601 L	556	FO	91011906	060300	000140	502	G G=200,B=35
LSMAD	ED +75 325	16	9.54	0804432	+750648	L 3	40874 L	559	FO	91021601	010300	000014	500	G G=220,B=18
LSMAD	ED +75 325	16	9.54	0804432	+750648	L 3	40874 S	564	FO	91021601	010900	000042	500	G G=180,B=18
PHCAL	ED +75 325	16	9.54	0804432	+750648	L 1	19769 L	563	FO	91021601	011400	000020	X01	G G=1.5X,B=30
PHCAL	ED +75 325	16	9.54	0804432	+750648	L 1	19769 S	568	FO	91021601	011400	000020	502	G G=200,B=35
PHCAL	ED +75 325	16	9.5	0804432	+750648	L 3	41177 L	560	FO	91032502	023900	000014	500	G G=194,B=18
PHCAL	ED +75 325	16	9.5	0804432	+750648	L 3	41177 S	556	FO	91032502	024400	000042		G G=1.5X
PHCAL	ED +75 325	16	9.5	0804432	+750648	L 1	19987 L	566	FO	91032523	231600	000140	502	G G=208,B=37
PHCAL	ED +75 325	16	9.5	0804432	+750648	L 3	41182 L	561	FO	91032523	234900	000043	400	G G=148,B=18
PHCAL	ED +75 0325	16	9.5	0804432	+750648	L 1	20152 L	559	FO	91041518	185300	000140	502	G G=198,B=38
PHCAL	ED +75 0325	16	9.5	0804432	+750648	L 3	41392 L	562	FO	91041519	190700	000043	400	G G=159,B=18
PHCAL	ED +75 0325	16	9.5	0804432	+750648	L 1	20153 L	580	FO	91041520	200600	000020	502	G G=197,B=32
PHCAL	ED +75 0325	16	9.5	0804432	+750648	L 1	20153 S	569	FO	91041520	201200	000100	X02	G G=1.5X,B=32
PHCAL	ED +75 0325	16	9.5	0804432	+750648	L 3	41393 L	574	FO	91041520	201700	000014	400	G G=168,B=18
PHCAL	ED +75 0325	16	9.5	0804432	+750648	L 3	41393 S	575	FO	91041520	202300	000042	500	G G=244,B=18
MIL28	SU UMA	54	14.00	0808054	+624523	L 3	40356 L	00000	ED	90121516	161954	001100	220	V
MIL28	SU UMA	54	14.00	0808054	+624523	L 3	40348 L	00000	ED	90121509	093312	001100	220	V
MIL28	SU UMA	54	14.00	0808054	+624523	L 3	40349 L	00000	ED	90121510	103301	001100	220	V
MIL28	SU UMA	54	14.00	0808054	+624523	L 3	40350 L	00000	ED	90121511	111614	001100	220	V
MIL28	SU UMA	54	14.00	0808054	+624523	L 3	40351 L	00000	ED	90121512	120212	001100	220	V
MIL28	SU UMA	54	14.00	0808054	+624523	L 3	40352 L	00000	ED	90121512	124707	001100	220	V

IFO	Object	CL	MFG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	numssct	ECC	Comment
ML28	SU UMA	54	14.00	0808054	+624523	L 3	40353 L	00000	EO	90121513	133144	001100	220 V	
ML28	SU UMA	54	14.00	0808054	+624523	L 3	40354 L	00000	EO	90121514	143047	001100	220 V	
ML28	SU UMA	54	14.00	0808054	+624523	L 3	40355 L	00000	EO	90121515	151500	001100	220 V	
NMSB	SU UMA	54	14.5	0808055	+624524	L 3	40338 L	32	SO	90121501	015600	001100	220 G	E=30, C=25, B=18
NMSB	SU UMA	54	14.5	0808055	+624524	L 3	40339 L			90121502	023700	001100	220 G	E=31, C=28, B=18
NMSB	SU UMA	54	14.5	0808055	+624524	L 3	40340 L			90121503	031900	001100	220 G	E=35, C=30, B=18
NMSB	SU UMA	54	14.5	0808055	+624524	L 3	40341 L			90121504	040200	001100	220 G	E=33, C=31, B=19
NMSB	SU UMA	54	14.5	0808055	+624524	L 3	40342 L	29	SO	90121504	045300	001100	220 G	E=38, C=32, B=18
NMSB	SU UMA	54	14.5	0808055	+624524	L 3	40343 L			90121505	053600	001100	220 G	E=38, C=35, B=20
NMSB	SU UMA	54	14.5	0808055	+624524	L 3	40344 L			90121506	062400	001100	220 G	E=36, C=34, B=18
NMSB	SU UMA	54	14.5	0808055	+624524	L 3	40345 L			90121507	070700	001100	220 G	E=33, C=30, B=18
NMSB	SU UMA	54	14.5	0808055	+624524	L 3	40346 L			90121507	074900	001100	230 G	E=40, C=34, B=18
NMSB	SU UMA	54	14.5	0808055	+624524	L 3	40347 L			90121508	083100	001100	230 G	E=39, C=32, B=18
ME100	RX RUP	57	12.41	0812282	-413318	L 3	41209 L	00185	SO	91032908	083348	006000	131 V	PREP, FEM 0.3 VOLTS
ME100	RX RUP	57	12.44	0812282	-413318	L 1	20008 L	00180	SO	91032909	094359	003000	342 V	PREP, FEM 0.7 VOLTS
SJMC	JUPTIER	03	-2.4	0822451	+201251	H 3	41132 S			91031817	170600	010500	332 G	E=68, C=60, B=39
SJMC	JUPTIER	03	-2.4	0822460	+201242	L 3	41131 S			91031813	133000	018500	432 G	E=84, C=160, B=40
SJMC	JUPTIER	03	-2.4	0822463	+201238	L 3	41130 L			91031812	122100	002000	X00 G	C=3.5X, B=18
SJMC	JUPTIER	03	-2.4	0822464	+201236	L 3	41129 L			91031811	112900	002000	X30 G	E=96, C=3.5X, B=18
SJMC	JUPTIER	03	-2.4	0823051	+201147	H 3	41116 S			91031616	162000	015000	323 G	E=55, C=105, B=42
SJMC	JUPTIER	03	-2.4	0823063	+201139	H 3	41115 S			91031612	120100	010000	332 G	E=66, C=93, B=32
SJMC	SKMEKND	07		0823283	+200702	H 3	41114 L			91031612	120100	009000	51 G	E=245, B=25
SJMC	SKMEKND	07		0823283	+200702	H 3	41114 S			91031612	120200	009000	51 G	E=245, B=25
MS10	JUPTIER	03	-02.20	0824162	+200621	L 3	41424 L	00000	EO	91041902	022438	002000	750 V	TRACKING ON GANMEDE
MS10	JUPTIER	03	-02.20	0824162	+200621	E 9	02457 2	00000	EO	91041902	023000	016000		V JUPTIER IN SALA
SJMM	JUPTIER	03	-2.5	0825015	+200510	L 3	41063 L		EO	91030810	102100	001500	X40 G	E=160, C=2X, B=18
SJMM	JUPTIER	03	-2.5	0825015	+200510	L 3	41064 L		EO	91030811	111300	001500	X50 G	E=177, C=2X, B=18
SJMM	JUPTIER	03	-2.5	0825015	+200510	L 3	41065 L		EO	91030811	115900	002000	X50 G	E=240, C=2X, B=18
SJMM	JUPTIER	03	-2.5	0825015	+200510	L 3	41066 L		EO	91030812	125100	002000	X40 G	E=1.5X, C=2X, B=18
SJMM	JUPTIER	03	-2.5	0825015	+200510	L 3	41067 L		EO	91030814	143700	001400	X50 G	E=240, C=2X, B=18
SJMM	JUPTIER	03	-2.5	0825015	+200510	L 3	41068 L		EO	91030815	152200	001400	X50 G	E=199, C=2X, B=18
SJMM	JUPTIER	03	-2.5	0825015	+200510	L 3	41069 L		EO	91030816	160800	001400	X40 G	E=165, C=2X, B=18
SJMM	JUPTIER	03	-2.5	0825015	+200510	L 3	41070 L		EO	91030816	165100	001330	X50 G	E=175, C=2X, B=18
SJMM	JUPTIER	03	-2.5	0825015	+200510	L 3	41071 L		EO	91030817	174000	001330	X40 G	E=138, C=2X, B=18
SJMM	JUPTIER	03	-2.5	0825015	+200510	L 3	41072 L		EO	91030818	182400	001330	X40 G	E=151, C=2X, B=20
MS039	JUPTIER	03	99.99	0825019	+200500	L 3	41062 L	00000		91030809	093820	001500	700 V	NORTH ALPRA
MS039	JUPTIER	03	99.99	0825023	+200458	L 3	41061 L	00000		91030808	085143	001500	700 V	NORTH ALPRA
MS039	JUPTIER	03	99.99	0825030	+200455	L 3	41060 L	00000		91030807	075849	001500	700 V	NORTH ALPRA
MS039	JUPTIER	03	99.99	0825035	+200454	L 3	41059 L	00000		91030807	071708	001500	700 V	NORTH ALPRA
MS039	JUPTIER	03	99.99	0825040	+200452	L 3	41058 L	00000		91030806	063501	001500	700 V	NORTH ALPRA
MS039	JUPTIER	03	99.99	0825044	+200451	L 3	41057 L	00000		91030805	055321	001500	700 V	NORTH ALPRA
MS039	JUPTIER	03	99.99	0825069	+200449	L 3	41053 L	00000		91030802	025629	001500	700 V	SOUTH ALPRA
MS039	JUPTIER	03	99.99	0825069	+200449	L 3	41054 L	00000		91030803	033839	001500	700 V	SOUTH ALPRA
MS039	JUPTIER	03	99.99	0825069	+200449	L 3	41055 L	00000		91030804	042621	001500	700 V	SOUTH ALPRA
MS039	JUPTIER	03	99.99	0825069	+200449	L 3	41056 L	00000		91030805	051152	001500	700 V	NORTH ALPRA
SJMM	JUPTIER	03	-2.5	0825131	+200430	L 3	41046 L			91030721	212600	001500	X40 G	E=137, C=2X, B=20
SJMM	JUPTIER	03	-2.5	0825132	+200431	L 3	41047 L			91030722	221000	001500	X41 G	E=137, C=2X, B=22
SJMM	JUPTIER	03	-2.5	0825132	+200431	L 3	41048 L			91030722	225400	001500	X41 G	E=137, C=2X, B=24
SJMM	JUPTIER	03	-2.5	0825132	+200431	H 3	41049 L			91030723	234300	001743	X41 G	E=158, C=2X, B=22
SJMM	JUPTIER	03	-2.5	0825132	+200431	L 3	41050 L			91030800	003400	001500	X40 G	E=165, C=2X, B=20

PRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	nummsst	REC	Comment
SJMM	JPTIER	03	-2.5	0825132	+200431	L 3	41051 L			91030801	011700	001500	X40 G	E=1.63, G=2X, B=20
SJMM	JPTIER	03	-2.5	0825132	+200431	L 3	41052 L			91030802	020100	001500	X50 G	E=1.76, G=2X, B=20
SJMM	JPTIER	03	-2.5	0825190	+200410	L 3	41034 L	BO		91030710	105300	001000	X40 G	E=1.27, G=2X, B=18
SJMM	JPTIER	03	-2.5	0825190	+200410	L 3	41035 L	BO		91030711	113300	001000	X40 G	E=1.41, G=2X, B=18
SJMM	JPTIER	03	-2.5	0825190	+200410	L 3	41036 L	BO		91030712	121100	001500	X50 G	E=1.82, G=2X, B=18
SJMM	JPTIER	03	-2.5	0825190	+200410	L 3	41037 L	BO		91030712	125600	001500	X50 G	E=2.52, G=2X, B=18
SJMM	JPTIER	03	-2.5	0825190	+200410	L 3	41038 L	BO		91030714	144000	001500	X50 G	E=2.52, G=2X, B=18
SJMM	JPTIER	03	-2.5	0825190	+200410	L 3	41039 L	BO		91030715	152800	001500	X50 G	E=1.98, G=2X, B=18
SJMM	JPTIER	03	-2.5	0825190	+200410	L 3	41040 L	BO		91030716	161300	001500	X50 G	E=1.90, G=2X, B=18
SJMM	JPTIER	03	-2.5	0825190	+200410	L 3	41041 L	BO		91030716	165400	002000	X50 G	E=2.27, G=2X, B=18
SJMM	JPTIER	03	-2.5	0825190	+200410	L 3	41042 L	BO		91030717	174300	002000	X50 G	E=2.06, G=2X, B=18
SJMM	JPTIER	03	-2.5	0825190	+200410	L 3	41043 L			91030719	191500	001500	X40 G	E=1.36, G=2X, B=20
SJMM	JPTIER	03	-2.5	0825190	+200410	L 3	41044 L			91030719	195900	001500	40 G	E=1.68, B=20
SJMM	JPTIER	03	-2.5	0825190	+200410	L 3	41045 L			91030720	204300	001500	X41 G	E=1.68, G=2X, B=22
MS039	JPTIER	03	99.99	0825198	+200357	L 3	41032 L	00000		91030709	091526	001500	700 V	SOUTH ALCRA
MS039	JPTIER	03	99.99	0825198	+200357	L 3	41033 L	00000		91030709	051152	001500	700 V	NORTH ALCRA
MS039	JPTIER	03	99.99	0825213	+200353	L 3	41029 L	00000		91030707	070331	001500	700 V	SOUTH ALCRA
MS039	JPTIER	03	99.99	0825213	+200353	L 3	41030 L	00000		91030707	074520	001500	700 V	SOUTH ALCRA
MS039	JPTIER	03	99.99	0825213	+200353	L 3	41031 L	00000		91030708	083123	001500	700 V	SOUTH ALCRA
SJMM	IO TORUS	07		0825249	+200211	L 3	41460 L			91042309	095400	030000	33 G	E=64, B=50
MS039	JPTIER	03	99.99	0825251	+200350	E 9	02449 2	00000		91030703	030000	016000		V
MS039	JPTIER	03	99.99	0825251	+200350	L 3	41024 L	00000		91030703	031148	001500	700 V	NORTH ALCRA
MS039	JPTIER	03	99.99	0825251	+200350	L 3	41025 L	00000		91030703	035840	001500	700 V	SOUTH ALCRA
MS039	JPTIER	03	99.99	0825251	+200350	L 3	41026 L	00000		91030704	044457	001500	700 V	SOUTH ALCRA
MS039	JPTIER	03	99.99	0825251	+200350	L 3	41028 L	00000		91030706	062149	001500	700 V	SOUTH ALCRA
MS039	JPTIER	03	99.99	0825251	+200350	L 3	41027 L	00000		91030705	052828	001500	700 V	SOUTH ALCRA
SJMM	IO TORUS	07		0825301	+200152	L 3	41461 L			91042316	160100	030000	35 G	E=98, B=70
SJMM	JPTIER	03	-2.1	0825309	+200149	L 3	41462 L			91042321	214100	001500	X50 G	E=1.73, G=2X, B=20
SJMM	JPTIER	03	-2.1	0825309	+200149	L 3	41463 L			91042322	222800	001500	X40 G	E=1.58, G=2X, B=20
SJMM	JPTIER	03	-2.1	0825309	+200149	L 3	41464 L			91042323	231400	001500	X50 G	E=1.75, G=2X, B=20
SJMM	JPTIER	03	-2.1	0825309	+200149	L 3	41465 L			91042323	235900	001500	X40 G	E=1.49, G=2X, B=20
SJMM	JPTIER	03	-2.5	0825311	+200329	L 3	41019 L			91030622	224700	001500	X50 G	E=1.80, G=2X, B=18
SJMM	JPTIER	03	-2.5	0825311	+200329	L 3	41020 L			91030623	233700	001500	X40 G	E=1.62, G=2X, B=18
SJMM	JPTIER	03	-2.5	0825311	+200329	L 3	41021 L			91030700	002600	001500	X50 G	E=1.69, G=2X, B=18
SJMM	JPTIER	03	-2.5	0825311	+200329	L 3	41022 L			91030701	012200	001500	X40 G	E=1.38, G=2X, B=18
SJMM	JPTIER	03	-2.5	0825311	+200329	L 3	41023 L			91030702	020800	001500	X40 G	E=1.38, G=2X, B=18
SJMM	IO TORUS	07	5.0	0825435	+200246	L 3	41017 L			91030601	013100	058000	38 G	E=1.87, B=100
SJMM	CT AER 2	07		0825435	+200246	L 9	02448			91030601	015600	002000		G
SJMM	IO TORUS	07		0825435	+200246	L 3	41018 L			91030612	120500	053000	344 G	E=1.61, G=1.05, B=60
SJMC	JPTIER	03	-2	0825466	+200057	L 3	41468 L			91042410	101000	002000	X01 G	G=2X, B=30
SJMC	JPTIER	03	-2	0825466	+200057	L 3	41468 S			91042411	110400	002000	301 G	C=72, B=30
SJMC	JPTIER	03	-2	0825466	+200057	L 3	41469 S			91042412	125500	006000	X01 G	C=1.5X, B=25
SJMC	JPTIER	03	-2	0825466	+200057	L 3	41470 L			91042414	142400	006000	X03 G	E=1.5X, C=3X, B=45
SJMC	JPTIER	03	-2	0825466	+200057	L 3	41470 S			91042415	152800	002000	X43 G	E=1.93, G=1.5X, B=45
SJMM	JPTIER	03	-2.5	0825498	+200225	L 3	41010 L			91030519	191200	001500	X50 G	E=1.71, G=2X, B=18
SJMM	JPTIER	03	-2.5	0825498	+200225	L 3	41011 L			91030520	200500	001500	X40 G	E=1.50, G=2X, B=18
SJMM	JPTIER	03	-2.5	0825498	+200225	L 3	41012 L			91030520	205700	001500	X40 G	E=1.40, G=2X, B=18
SJMM	JPTIER	03	-2.5	0825498	+200225	L 3	41013 L			91030521	215600	001500	X40 G	E=1.43, G=2X, B=18
SJMM	JPTIER	03	-2.5	0825498	+200225	L 3	41014 L			91030522	224600	001500	X40 G	E=1.31, G=2X, B=20
SJMM	JPTIER	03	-2.5	0825498	+200225	L 3	41015 L			91030523	234100	001500	X40 G	E=1.54, G=2X, B=20



PRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exp	time	mm	mm	st	FCC	Comment
SMM	JPTIER	03	-2.5	0825498	+200225	L 3	41016 L			91.030600	003400	001500				X40	G B=167, C=2X, B=18
SMM	JPTIER	03	-2.5	0825500	+200225	L 3	41009 L			91.030518	182200	001500				X50	G B=176, C=2X, B=18
SMM	ID	04	5.0	0825531	+200214	L 3	41007 L			91.030516	164200	001500				X50	G B=218, C=2X, B=18
SMM	JPTIER	03	-2.5	0825531	+200214	L 3	41008 L			91.030517	173300	001500				X50	G B=205, C=2X, B=18
SMM	CT AER 2	03	-2.5	0826027	-200140	L 9	02446			91.030501	010800	016000					G
SMM	ID	04	5.0	0826027	+200140	L 3	41006 L	19674		91.030501	014700	077000				339	G B=135, C=160, B=110
SMM	ID	04	-2.5	0826062	+200125	L 3	40998 L			91.030404	040700	076200				339	G B=157, C=180, B=122
SMM	ID	04	-2.5	0826062	+200125	L 3	40998			91.030411	114400	012600					G
SMM	ID	04	-2.5	0826062	+200125	L 3	40998			91.030415	150000	019600					G
SMMC	JPTIER	03	-2	0826090	+195940	H 3	41480 L			91.042518	184000	012000				334	G B=115, C=90, B=57
SMMC	JPTIER	03	-2	0826091	+195940	L 3	41479 L			91.042517	174900	002000				X40	G B=143, C=2.5X, B=20
SMMC	JPTIER	03	-2	0826091	+195940	H 3	41481 S			91.042521	211800	019000				344	G B=203, C=100, B=58
SMM	JPTIER	03	-2.5	0826092	+200118	L 9	02446			91.030402	021600	000000					G
SMM	JPTIER	03	-2.5	0826092	+200118	L 9	02447			91.030402	025100	000000					G
SMM	JPTIER	03	-2.5	0826092	+200118	L 3	40999 L			91.030418	185600	001500				X40	G B=150, C=2X, B=18
SMM	JPTIER	03	-2.5	0826092	+200118	L 3	40999			91.030418	185600	001500					G
SMM	JPTIER	03	-2.5	0826092	+200118	L 3	41000 L			91.030419	195200	001500					G
SMM	JPTIER	03	-2.5	0826092	+200118	L 3	41001 L			91.030420	204400	001500					G
SMM	JPTIER	03	-2.5	0826092	+200118	L 3	41002 L			91.030421	213700	001500					G
SMM	JPTIER	03	-2.5	0826092	+200118	L 3	41003 L			91.030422	222900	001500					G
SMM	JPTIER	03	-2.5	0826092	+200118	L 3	41004			91.030423	232000	001000					G
SMM	JPTIER	03	-2.5	0826092	+200118	L 3	41004 L			91.030423	232000	001000				X30	G B=116, C=2X, B=18
SMM	JPTIER	03	-2.5	0826092	+200118	L 3	41005 L			91.030500	000600	001500				X40	G B=126, C=2X, B=18
SMM	JPTIER	03	-2.5	0826092	+200118	L 3	41005			91.030500	000600	001500					G
SMMC	JPTIER	03	-2.0	0826215	+195845	L 3	41484 L			91.042610	101700	001500				X40	G B=1.5X, C=2.5X, B=18
SMMC	JPTIER	03	-2.0	0826215	+195845	L 3	41485 L			91.042611	111100	006000				351	G B=245, C=100, B=25
SMMC	JPTIER	03	-2.0	0826215	+195845	L 3	41485 S			91.042612	121500	002000				XX2	G B=3X, C=2X, B=35
SMMC	JPTIER	03	-2.0	0826215	+195845	L 3	41486 L			91.042614	141700	006000				340	G B=137, C=80, B=18
SMMC	JPTIER	03	-2.0	0826215	+195845	H 3	41487 L			91.042615	155300	006000				324	G B=54, C=130, B=52
SMMC	JPTIER	03	-2.0	0826215	+195845	H 3	41487 S			91.042616	165800	002000				XX2	G B=204, C=2.5X, B=35
SMMC	JPTIER	03	-2.0	0826215	+195845	L 3	41488 S			91.042619	194200	010000				531	G B=106, C=245, B=28
SMMC	JPTIER	03	-2.0	0826215	+195845	H 3	41489 S			91.042622	221500	013500				?2	G B=30, B=35
MS018	ID	05	05.40	0826276	+200032	E 9	02445 2	20133	FO	91.030403	035300	016000					V
SMM	JPTIER	03	-2.1	0827093	+195556	L 3	41496 L			91.042817	173800	001500				X40	G B=142, C=2X, B=15
SMM	JPTIER	03	-2.1	0827093	+195556	L 3	41497 L			91.042818	182500	001500				X30	G B=84, C=2X, B=20
SMM	JPTIER	03	-2.1	0827093	+195556	L 3	41498 L			91.042819	191100	001500				X30	G B=81, C=2X, B=18
SMM	JPTIER	03	-2.1	0827093	+195556	L 3	41499 L			91.042819	195600	001500				X30	G B=79, C=2X, B=19
SMM	JPTIER	03	-2.1	0827093	+195556	L 3	41500 L			91.042820	204100	001500				X30	G B=79, C=2X, B=15
SMM	JPTIER	03	-2.1	0827093	+195556	L 3	41501 L			91.042821	212700	001500				X30	G B=61, C=2X, B=15
SMM	JPTIER	03	-2.1	0827093	+195556	L 3	41502 L			91.042822	221200	001500				X30	G B=54, C=2X, B=15
SMM	JPTIER	03	-2.1	0827093	+195556	L 3	41503 L			91.042822	225600	001500				X40	G B=143, C=2X, B=15
SMM	JPTIER	03	-2.1	0827093	+195556	L 3	41504 L			91.042823	234000	001500				X40	G B=134, C=2X, B=15
SMM	JPTIER	03	-2.5	0827114	+195742	L 3	40970 L			91.030120	203800	001500				X50	G B=190, C=3X, B=20
SMM	JPTIER	03	-2.5	0827114	+195742	L 3	40972 L			91.030122	222600	001500				X50	G B=177, C=3X, B=20
SMM	JPTIER	03	-2.5	0827114	+195742	L 3	40973 L			91.030123	231800	001500				X50	G B=197, C=3X, B=20
SMM	JPTIER	03	-2.5	0827114	+195742	L 3	40974 L			91.030200	001200	001500				XX1	G B=193, C=3X, B=30
SMM	JPTIER	03	-2.5	0827114	+195742	L 3	40975 L			91.030201	010900	001500				X50	G B=173, C=3X, B=20
SMM	JPTIER	03	-2.5	0827114	+195742	L 3	40976 L			91.030202	020400	001800				X50	G B=173, C=3X, B=20
SMM	SKY BACK	07	-2.5	0827187	+195716	L 3	40961 L			91.030111	115300	002000				30	G B=117, B=18
SMM	JPTIER	03	-2.5	0827187	+195716	L 3	40962 L			91.030112	124900	001500				X50	G B=227, C=3X, B=18



PRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	numscstt	ECC	Comment
SMM	SKY BACK	07	-2.5	0827187	+195716	L 3	40963 L			91030113	134000	001500	50	G B=231,B=18
SMM	JPTIER	03	-2.5	0827187	+195716	L 3	40964 L			91030114	145300	001500	X50	G B=194,G=3X,B=18
SMM	JPTIER	03	-2.5	0827187	+195716	L 3	40965 L			91030115	154100	001500	X50	G B=206,G=3X,B=18
SMM	JPTIER	03	-2.5	0827187	+195716	L 3	40966 L			91030116	163500	001500	X50	G B=184,G=2X,B=18
SMM	JPTIER	03	-2.5	0827187	+195716	L 3	40967 L			91030117	173100	001500	X50	G B=175,G=2X,B=18
SMM	JPTIER	03	-2.5	0827187	+195716	L 3	40968 L			91030118	181900	002000	X50	G B=227,G=2X,B=20
SMM	JPTIER	07	-2.5	0827187	+195716	L 3	40969 L			91030119	191800	003000	30	G B=75,B=18
SMM	JPTIER	03	-2.5	0827187	+195716	L 3	40971 L			91030121	213300	001500	X50	G B=178,G=3X,B=20
SMM	JPTIER	03	-2.1	0827309	+195438	L 3	41514 L			91042917	174800	001500	X30	G B=61,G=2X,B=18
SMM	JPTIER	03	-2.1	0827309	+195438	L 3	41515 L			91042918	183600	001500	X30	G B=63,G=2X,B=20
SMM	JPTIER	03	-2.1	0827309	+195438	L 3	41516 L			91042919	192200	001500	X30	G B=80,G=2X,B=20
SMM	JPTIER	03	-2.1	0827309	+195438	L 3	41517 L			91042920	200800	001500	X30	G B=64,G=2X,B=20
SMM	JPTIER	03	-2.1	0827309	+195438	L 3	41518 L			91042920	205400	001500	X30	G B=57,G=2X,B=15
SMM	JPTIER	03	-2.1	0827309	+195438	L 3	41519 L			91042921	214100	001500	X30	G B=48,G=2X,B=18
SMM	JPTIER	03	-2.1	0827309	+195438	L 3	41520 L			91042922	222700	001500	X40	G B=146,G=2X,B=18
SMM	JPTIER	03	-2.1	0827309	+195438	L 3	41521 L			91042923	231300	001500	X40	G B=132,G=2X,B=18
SMEG	HD 72905	44	5.64	0834466	+651144	H 1	20108 L	13053	FO	91040917	175600	002000	442	G B=135,G=160,B=35
SMEG	HD 72905	44	5.64	0834466	+651144	L 3	41326 L	12993	FO	91040918	182600	008000	501	G C=190,B=25
SMEG	HD 72905	44	5.64	0834466	+651144	L 1	20109 L	12854	FO	91040919	191200	000022	451	G B=217,G=180,B=30
SMEG	HD 72905	44	5.64	0834466	+651144	H 1	20110 L	13113	FO	91040920	201400	001800	432	G B=132,G=160,B=40
SMEG	HD 72905	44	5.64	0834466	+651144	H 1	20136 L	13586	FO	91041321	212500	002500	442	G B=160,G=180,B=40
SMEG	HD 72905	44	5.64	0834466	+651144	L 3	41376 L	13417	FO	91041321	215900	008500	531	G B=53,G=190,B=25
SMEG	HD 72905	44	5.64	0834466	+651144	L 1	20137 L	13145	FO	91041322	225100	000023	501	G C=190,B=30
SMM	JPTIER	03	-2.2	0857138	+175618	L 3	40486 S			EO 90122905	053800	005000	431	G B=89,G=127,B=22
SMM	JPTIER	03	-2.2	0857138	+175618	L 3	40487 S			EO 90122907	070400	004000	530	G B=81,G=178,B=18
SMM	JPTIER	03	-2.2	0857138	+175618	L 3	40488 S			EO 90122908	081500	002000	430	G B=53,G=144,B=18
SMM	JPTIER	03	-2.2	0857210	+175544	L 3	40482 S			EO 90122901	012500	002500	430	G B=55,G=147,B=18
SMM	JPTIER	03	-2.2	0857210	+175544	L 3	40483 S			EO 90122902	023000	002500	330	G B=59,G=92,B=18
SMM	JPTIER	03	-2.2	0857210	+175544	L 3	40484 S			EO 90122903	033100	004000	431	G B=88,G=124,B=22
SMM	JPTIER	03	-2.2	0857210	+175544	L 3	40485 S			EO 90122904	044400	002000	430	G B=62,G=145,B=18
SJMC	JPTIER	03	-2.0	0857248	+175513	L 3	40481 S			EO 90122821	210300	022500	X82	G B=1.5X,G=2X,B=40
SJMC	JPTIER	03	-2.0	0857269	+175514	L 3	40480 S			EO 90122818	180000	004500	350	G B=247,G=95,B=20
RIASS	HD CT APR 2	44	6.9	0857339	-273710	L 9	02386			90111110	104800	016000		G
RIASS	HD 77137	44	6.9	0857339	-273710	H 1	19202 L	4566	FO	90111117	170400	009000	443	G B=189,G=170,B=47
MCI80	HD77137	44	07.74	0857340	-273710	L 3	40093 L	02974	FO	90111007	070707	009000	330	V SEGMENTED 3X30MIN
RIASS	SAP CT APR 2	44	6.9	0857340	-273711	H 9	02383			90111003	034500	016000		G
MCI80	HD 77137	44	07.22	0857340	-273710	L 3	40094 L	04690	FO	90111013	131038	009000	330	V SEGMENTED 3 X 30 MIN
RIASS	SAP 176805	44	6.9	0857340	-273711	H 1	19186 L	4923	FO	90111004	040300	006000	343	G B=149,G=125,B=49
MCI80	HD77137	44	07.29	0857340	-273710	H 1	19189 L	04425	FO	90111009	094132	006000	341	V
RIASS	SAP 176805	44	6.9	0857340	-273711	L 3	40092 L	4399	FO	90111005	051400	003000	320	G B=35,G=40,B=18
MCI80	HD77137	44	07.21	0857340	-273710	H 1	19190 L	04760	FO	90111011	114840	006000	341	V
RIASS	SAP 176805	44	6.9	0857340	-273711	H 1	19187 L	3855	FO	90111005	055500	006000	334	G B=148,G=110,B=52
MCI80	HD77137	44	07.24	0857340	-273710	H 1	19191 L	04623	FO	90111013	135321	006000	331	V
RIASS	SAP 176805	44	6.9	0857340	-273711	H 1	19188 L	3047	FO	90111007	074700	006000	333	G B=146,G=118,B=50
MCI80	HD77137	44	07.24	0857340	-273710	H 1	19192 L	04632	FO	90111015	155700	009000	441	V
RIASS	SAP CT APR 2	44	6.9	0857340	-273711	H 9	02384			90111010	105000	016000		G
MCI80	HD 77137	44	09.99	0857340	-273710	E 9	02385 2	00000		90111018	182500	016000		V
RIASS	HD 77137	44	6.9	0857340	-273711	H 1	19193 L	4710	FO	90111018	182100	009000	443	G B=158,G=170,B=50
MCI80	HD77137	44	07.22	0857340	-273710	L 3	40097 L	04710	FO	90111111	110229	012000	330	V SEGMENTED 3X40MIN
RIASS	HD 77137	44	6.9	0857340	-273711	L 3	40095 L	4779	FO	90111020	201100	009000	332	G B=89,G=88,B=35

PRO	Object	CL	MAG	R.A.	DEC	D C	Image	A	FES	MD	Obs.date	Exptim	numms	stt	ECC	Comment
MC180	HD77137	44	07.21	0857340	-273710	H 1	19199	L	04734	FO	90111109	090203	009000		442	V
RIASS	HD 77137	44	6.9	0857340	-273711	H 1	19194	L	4794	FO	90111020	205100	009000		443	G E=154,C=160,B=47
MC180	HD77137	44	07.23	0857340	-273710	H 1	19200	L	04689	FO	90111111	115712	009000		441	V
RIASS	HD 77137	44	6.9	0857340	-273711	H 1	19195	L	4820	FO	90111023	231400	009000		443	G E=165,C=170,B=45
MC180	HD77137	44	07.27	0857340	-273710	H 1	19201	L	04521	FO	90111114	143052	009000		441	V
RIASS	HD 77137	44	6.9	0857340	-273711	H 1	19196	L	4867	FO	90111101	013700	009000		443	G E=162,C=160,B=50
MC180	HD77137	44	99.99	0857340	-273710	E 9	02387	2	00000		90111118	184000	016000			V
RIASS	HD 77137	44	6.9	0857340	-273711	L 3	40096	L	4985	FO	90111103	031700	009000		331	G E=87,C=90,B=25
MC180	HD 77137	44	07.26	0857340	-273710	L 3	40100	L	04529	FO	90111210	101058	012000		330	V SEQUENCED: 3 X 40 MI
RIASS	HD 77137	44	6.9	0857340	-273711	H 1	19197	L	4939	FO	90111104	040000	009000		443	G E=159,C=170,B=50
MC180	HD 77137	44	07.25	0857340	-273710	H 1	19209	L	04545	FO	90111211	110917	009000		441	V
RIASS	HD 77137	44	6.9	0857340	-273711	H 1	19198	L	4801	FO	90111106	062100	009000		X49	G E=225,C=1.5X,B=118
MC180	HD 77137	44	07.26	0857340	-273710	H 1	19210	L	04532	FO	90111214	140555	009000		441	V
RIASS	HD 77137	44	6.9	0857340	-273711	L 3	40098	L	4441	FO	90111118	185900	012000		332	G E=114,C=90,B=35
MC180	HD 77137	44	07.26	0857340	-273710	H 1	19211	L	04538	FO	90111216	164315	009000		441	V
RIASS	HD 77137	44	6.9	0857340	-273711	H 1	19203	L	3849	FO	90111120	200300	009000		343	G E=173,C=130,B=45
MC180	HD77137	44	99.99	0857340	-273710	E 9	02388	2	00000		90111218	184000	016000			V
RIASS	HD 77137	44	6.9	0857340	-273711	H 1	19204	L	3033	FO	90111122	223600	009000		343	G E=176,C=140,B=45
RIASS	HD 77137	44	6.9	0857340	-273711	H 1	19205	L	4745	FO	90111201	010900	009000		443	G E=177C=155,B=45
RIASS	HD 77137	44	6.9	0857340	-273711	L 3	40099	L	4628	FO	90111202	025000	004000		332	G E=107,C=90,B=32
RIASS	HD 77137	44	6.9	0857340	-273711	H 1	19206	L	4620	FO	90111203	034100	009000		434	G E=150,C=160,B=52
RIASS	HD 77137	44	6.9	0857340	-273711	H 1	19207	L	4545	FO	90111206	064000	006000		339	G E=179,C=180,B=105
RIASS	HD 77137	44	6.9	0857340	-273711	H 1	19208	L	4545	FO	90111208	082900	009000		444	G E=157,C=160,B=55
RIASS	HD 77137	44	6.9	0857340	-273711	L 3	40101	L	4588	FO	90111218	183000	012000		332	G E=117,C=100,B=35
RIASS	HD 77137	44	6.9	0857340	-273711	H 1	19212	L	4608	FO	90111219	192400	009000		443	G E=154,C=160,B=47
RIASS	HD 77137	44	6.9	0857340	-273711	H 1	19213	L	4701	FO	90111221	215700	009000		443	G E=156,C=160,B=50
RIASS	HD 77137	44	6.9	0857340	-273711	H 1	19214	L	4843	FO	90111300	002800	009000		443	G E=153,C=160,B=50
RIASS	HD 77137	44	6.9	0857340	-273711	L 3	40102	L	4813	FO	90111302	021000	011000		331	G E=118,C=100,B=25
RIASS	HD 77137	44	6.9	0857340	-273711	H 1	19215	L	4761	FO	90111303	030200	009000		443	G E=156,C=160,B=50
RIASS	HD 77137	44	6.9	0857340	-273711	H 1	19216	L	4732	FO	90111305	054600	007000		338	G E=191,C=190,B=100
RIASS	HD 77137	44	6.9	0857340	-273711	H 1	19217	L	4740	FO	90111307	073700	007500		447	G E=204,C=190,B=85
RIASS	HD 77137	44	6.9	0857340	-273711	H 1	19218	L	4495	FO	90111309	094800	009000		343	G E=184,C=145,B=47
MS039	JUPIITER N	03	-01.00	0859458	+174402	L 3	40426	L	00000	BO	90122109	094225	001000		641	V
MS039	JUPIITER N	03	-01.00	0859458	+174402	L 3	40427	L	00000	BO	90122110	103405	001500		751	V
MS039	JUPIITER N	03	-01.00	0859459	+174403	L 3	40428	L	00000	BO	90122111	112343	001500		741	V
MS039	JUPIITER N	03	-01.00	0859459	+174403	L 3	40429	L	00000	BO	90122113	130005	001500		731	V
MS039	JUPIITER N	03	-01.00	0859459	+174403	L 3	40430	L	00000	BO	90122113	135058	001500		731	V
MS039	JUPIITER S	03	-01.00	0859459	+174403	L 3	40431	L	00000	BO	90122114	144536	001500		731	V
MS039	JUPIITER S	03	-01.00	0859459	+174403	L 3	40432	L	00000	BO	90122115	154400	001500		731	V
MS039	JUPIITER S	03	-01.00	0859459	+174403	L 3	40433	L	00000	BO	90122116	163520	000600		631	V HEAD
AMER	HD 77350	36	5.45	0859486	+243910	L 3	40117	L			90111605	055100	000043			G
AMER	HD 77350	36	5.45	0859487	+243911	H 1	19231	L	16577	FO	90111604	040800	000656		502	G C=215,B=40
AMER	HD 77350	36	5.45	0859487	+243911	H 3	40116	L	16672	FO	90111604	041900	001630		502	G C=215,B=35
AMER	HD 77350	36	5.45	0859487	+243911	L 1	19232	L	16976	FO	90111605	053800	000022		402	G C=180,B=35
AMER	HD 77350	36	5.45	0859487	+243911	H 3	40122	L	17956	FO	90111610	103800	001100		401	G C=145,B=30
SJMM	JUPIITER	03	-2.5	0859513	+174335	L 3	40416	L			90122101	012600	001500		X40	G E=136,C=2X,B=18
SJMM	JUPIITER	03	-2.5	0859513	+174335	L 3	40417	L			90122102	021200	001500		X40	G E=138,C=2X,B=18
SJMM	JUPIITER	03	-2.5	0859513	+174335	L 3	40418	S			90122102	025900	001500		330	G E=44,C=110,B=18
SJMM	JUPIITER	03	-2.5	0859513	+174335	L 3	40419	L			90122103	034500	001500		X40	G E=145,C=2X,B=18
SJMM	JUPIITER	03	-2.5	0859513	+174335	L 3	40420	L			90122104	043100	001500		X40	G E=148,C=2X,B=18

PRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mmuresett	ECC	Comment
SMM	JPTIER	03	-2.5	085951.3	+174335	L 3	40421 L			90122105	052200	001500	X50	G B=198,C=2X,B=18
SMM	JPTIER	03	-2.5	085951.3	+174335	L 3	40422 L			90122106	060800	001500	X50	G B=219,C=2X,B=18
SMM	JPTIER	03	-2.5	085951.3	+174335	L 3	40423 L			90122106	065200	001500	X50	G B=206,C=2X,B=18
SMM	JPTIER	03	-2.5	085951.3	+174335	L 3	40424 L			90122107	073600	001500	X50	G B=182,C=2X,B=18
SMM	JPTIER	03	-2.5	085951.3	+174335	L 3	40425 L			90122108	082000	001500	X50	G B=217,C=2X,B=18
MS039	JPTIER S.	03	-01.50	0900024	+174238	L 3	40404 L	0000	EO	90122009	091019	001500	770	V
MS039	JPTIER S.	03	-01.50	0900024	+174238	L 3	40405 L	0000	EO	90122010	101219	001500	770	V
MS039	JPTIER N.	03	-01.50	0900024	+174238	L 3	40406 L	0000	EO	90122011	115049	001500	770	V MOVEIPRG, -9.52,3.25
MS039	JPTIER N.	03	-01.50	0900024	+174238	L 3	40407 L	0000	EO	90122012	125931	001000	770	V MOVEIPRG, -9.52,3.25
MS039	JPTIER N.	03	-01.50	0900024	+174238	L 3	40408 L	0000	EO	90122013	134223	001000	770	V MOVEIPRG, -9.52,3.2
MS039	JPTIER N.	03	-01.50	0900024	+174238	L 3	40409 L	0000	EO	90122014	142837	001000	770	V MOVEIPRG, -9.10,3.11
MS039	JPTIER N.	03	-01.50	0900024	+174238	L 3	40410 L	0000	EO	90122015	151814	001500	770	V MOVEIPRG, -9.10,3.11
MS039	JPTIER N.	03	-01.50	0900024	+174238	L 3	40411 L	0000	EO	90122016	160439	001500	770	V
SMM	JPTIER	03	-2.5	0900070	+174217	L 3	40395 L			90122001	014500	001000	X40	G B=139,C=2X,B=18
SMM	JPTIER	03	-2.5	0900070	+174217	L 3	40396 L			90122002	022900	001500	X40	G B=162,C=1.5X,B=18
SMM	JPTIER	03	-2.5	0900070	+174217	L 3	40397 L			90122003	031500	001000	X40	G B=124,C=2X,B=18
SMM	JPTIER	03	-2.5	0900070	+174217	L 3	40398 L			90122003	035500	001000	X30	G B=113,C=1.5X,B=18
SMM	JPTIER	03	-2.5	0900070	+174217	L 3	40399 L			90122004	043500	001000	X30	G B=94,C=1.5X,B=18
SMM	JPTIER	03	-2.5	0900070	+174217	L 3	40400 L			90122005	051800	001000	X30	G B=101,C=1.7X,B=18
SMM	JPTIER	03	-2.5	0900070	+174217	L 3	40401 L			90122006	060900	002000	X40	G B=154,C=2X,B=18
SMM	JPTIER	03	-2.5	0900070	+174217	L 3	40402 L			90122007	071300	001500	X40	G B=137,C=2X,B=18
SMM	JPTIER	03	-2.5	0900070	+174217	L 3	40403 L			90122008	080600	001000	X30	G B=97,C=2X,B=19
MO87	HD78647	47	02.51	0906093	-431348	H 1	19277 L	02732	FU	90112511	114757	042000	673	V
PHCAL	HD 80007	32	1.67	0912396	-693040	H 3	40875 L	4416	FU	91021604	041500	000100	502	G G=211,B=38
PHCAL	CT AER 2	47	5.93	0917115	-153719	L 9	02438			91022021	213800	016000		G
PHCAL	ED +48 1777	16	10.8	0927221	+482912	L 1	19553 L	102	FO	91010917	174600	000058	402	G G=158,B=35
PHCAL	ED +48 1777	16	10.8	0927221	+482912	L 3	40568 L	201	FO	91011206	062900	000050	500	G G=190,B=15
RMEB	R CAR	51	6.3	0930592	-623401	L 1	19109 L	9971	FO	90110203	033500	000500	302	G G=60,B=32
RMEB	R CAR	51	6.3	0930592	-623401	L 1	19110 L	9879	FO	90110204	042000	004000	432	G B=131,C=1.75,B=40
RMEB	R CAR	51	5.0	0930592	-623401	L 1	19222 L	6635	FO	90111405	053700	006000	X06	G G=2X,B=80
RMEB	R CAR	51	7.2	0930592	-623401	L 1	19336 L	4791	FO	90120205	054600	001500	333	G B=105,C=90,B=42
RMEB	R CAR	51	5.0	0930592	-623401	H 1	19374 L	4018	FO	90120819	195200	029500	335	G B=123,C=125,B=67
RMEB	R CAR	51	7.6	0930592	-623401	H 1	19454 L			90122119	190800	034500		G
RMEB	R CAR	51	6.5	0930592	-623401	H 1	19526 L	2359	FO	91010817	173200	031700	306	G G=125,B=73
RMEB	R CAR	51	8.0	0930592	-623401	H 1	19621 L	1993	FO	91012116	164800	036000	337	G B=144,C=140,B=82
RMEB	R CAR	51	8.2	0930592	-623401	H 1	19712 L	1779	FO	91020713	133900	035000	336	G B=127,C=105,B=72
RMEB	R CAR	51	8.2	0930592	-623401	L 1	19806 L	2088	FO	91022102	020500	004000	432	G B=97,C=150,B=38
CUMDT	PG 0943+521	63	14.2	0943506	+520803	L 1	19846 L	85	SD	91022721	214200	003000	502	G G=217,B=38
CUMDT	PG 0943+521	63	14.2	0943506	+520803	L 3	40947 L	85	SD	91022722	222100	007500	502	G G=251,B=38
IGML	HD 84748	49	5.8	0944522	+113942	L 1	19100 L	7500	FO	90110101	015400	002000	32	G B=78,B=35
IGML	HD 84748	49	5.8	0944522	+113942	L 1	19101 L	7547	FO	90110102	025500	007500	342	G B=161,C=75,B=40
PHCAL	WAVCAL	98		0944522	+113942	L 1	19102 S			90110104	045100	000000	21	G B=10X,B=30
PHCAL	WAVCAL	98		0944522	+113942	L 1	19102 L			90110104	045500	000001	21	G B=10X,B=30
PHCAL	WAVCAL	98		0944522	+113942	L 1	19103 S			90110105	052400	000025	28	G B=10X,B=100
PHCAL	WAVCAL	98		0944522	+113942	L 1	19103 L			90110105	052600	000001	28	G B=10X,B=100
PHCAL	WAVCAL	98		0944522	+113942	H 1	19104 S			90110106	061700	000025	28	G B=50X,B=100
PHCAL	WAVCAL	98		0944522	+113942	H 1	19104 L			90110106	065500	000016	28	G B=50X,B=100
PHCAL	TFLOOD	99		0944522	+113942	H 1	19105 L			90110108	083200	000025	08	G B=100
IGML	HD 84748	49	5.8	0944522	+113942	L 1	19514 L	344	FU	91010700	000700	002000	302	G G=60,B=32
IGML	HD 84748	49	5.8	0944522	+113942	L 1	19515 L	342	FU	91010701	010500	010500	334	G B=82,C=90,B=58

PRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	nummsst	EOC	Comment
IGML	HD 84748	49	5.8	0944522	+113942	H 1	20044 L	9075	FO	91040109	095000	012000	33	G B=92, B=45
IGML	HD 84748	49	5.8	0944522	+113942	L 1	20047 L	8189	FO	91040115	152900	001300	232	G B=133, C=45, B=35
IGML	HD 84748	49	5.8	0944522	+113942	L 1	20048 L	8189	FO	91040116	161400	003000	352	G B=216, C=65, B=40
USSES	HD 84937	43	8.2	0946129	+135848	L 3	41110 L	1270	FO	91031521	212400	006000	X01	G C=2X, B=25
MA097	HD85567	26	08.76	0948598	-604358	L 1	19729 L	01200	FO	91021008	085707	000700	700	V NO GUIDING
RIASS	HD 85444	45	4.12	0949042	-143642	H 1	19249 L	447	FU	90112003	033600	005000	X03	G C=2X, B=45
RIASS	HD 85444	45	4.12	0949042	-143642	L 3	40145 L	441	FU	90112004	043500	009000	404	G C=180, B=52
RIASS	HD 85444	45	4.12	0949042	-143642	L 1	19250 L	442	FU	90112006	061100	000015	302	G C=110, B=35
AGMR	MKN 1239	84	14.0	0949463	-012235	L 3	40618 L		EO	91011621	210800	009000	01	G B=25
AGMR	NGC 3031	88	7.8	0951272	+691808	L 3	40696 L	156	FO	91012806	060200	062000	347	G B=214, C=135, B=85
AGMR	NGC 3031	88	7.8	0951272	+691808	L 1	19659 L	156	FO	91012816	163200	017700	355	G B=253, C=130, B=63
MQ023	NGC 3031	80	12.60	0951273	+691808	E 9	02411 2	00000		91012805	055000	004000		V FES FOR SWP 40696
MQ092	M82	82	15.00	0951450	+695423	D 9	02407 2	00000		91011813	133300	016000		V IWP 19596
MQ092	M82	82	15.00	0951450	+695423	L 1	19596 L	00000	EO	91011808	082652	038000	203	V FREAD
MQ092	M82 KNOT B	82	15.00	0951450	+695423	L 3	41101 L	00000	EO	91031404	040949	039700	202	V
MQ092	M82	82	15.00	0951510	+695529	L 3	40596 L	00000	EO	91011507	074312	042400	100	V
MQ092	M82 KNOT-A	82	15.00	0951510	+695529	L 1	19920 L	00000	EO	91031504	040702	040000	302	V
QEMG	Q80 0953+549	85	17.2	0953521	+545434	L 1	19671 L		EO	91012912	122300	042500	08	G B=100
USSES	HD 86606	23	6.34	0955169	-710859	H 3	40447 L			90122406	065500	002400		G
CWMT	FG 1000+667	63	15.1	1000453	+664348	L 1	19847 L		EO	91022800	000600	003000	302	G C=75, B=40
CWMT	FG 1000+667	63	15.1	1000453	+664348	L 3	40948 L		EO	91022800	004200	012000	301	G C=65, B=30
CWMT	FG 1002+506	63	15.4	1002165	+503515	L 3	40949 L		EO	91022803	033500	007500	301	G C=72, B=24
RMEB	S CAR	51	6.9	1007462	-611814	L 1	19337 L	6113	FO	90120207	070200	002000	303	G C=66, B=42
RMEB	S CAR	51	6.9	1007462	-611814	L 1	19338 L	6029	FO	90120207	075800	005000	302	G C=80, B=40
RMEB	S CAR	51	5.0	1007462	-611814	L 1	19373 L	6662	FO	90120817	175900	005000	333	G B=95, C=97, B=41
RMEB	S CAR	51	6.3	1007462	-611814	L 1	19453 L			90122117	175100	003000		G
RMEB	S CAR	51	6.5	1007462	-611814	L 1	19525 L	16286	FO	91010816	160200	002000	X12	G C=1.5X, B=38
RMEB	S CAR	51	5.7	1007462	-611814	L 1	19620 L	14684	FO	91012115	153400	002000	502	G C=223, B=37
RMEB	S CAR	51	6.2	1007462	-611814	L 1	19711 L	11164	FO	91020712	123000	002000	442	G B=164, C=142, B=35
RMEB	S CAR	51	6.6	1007462	-611814	L 1	19805 L	7910	FO	91022100	004900	002000	352	G B=191, C=82, B=38
MGMB	S CAR	51	7.7	1007462	-611814	H 1	19878 L	3063	FO	91030912	120600	030000	346	G B=198, C=130, B=72
MGMB	S CAR	51	7.7	1007462	-611814	L 3	41074 L	2812	FO	91030917	171300	003000	00	G B=18
MGMB	S CAR	51	7.7	1007462	-611814	H 1	19879 L	2810	FO	91030917	175000	030000	48	G B=214, B=95
MGMB	S CAR	51	7.8	1007462	-611814	H 1	19888 L	2847	FO	91031011	112800	036000	356	G B=232, C=135, B=80
MGMB	S CAR	51	7.8	1007462	-611814	H 1	19889 L	2752	FO	91031018	181000	028000	246	G B=209, C=10, B=80
MGMB	S CAR	51	7.9	1007462	-611814	H 1	19900 L	2691	FO	91031211	115300	020000	343	G B=160, C=100, B=50
MGMB	S CAR	51	7.9	1007462	-611814	H 1	19901 L	2661	FO	91031215	154800	020000	43	G B=166, B=50
MGMB	S CAR	51	7.9	1007462	-611814	H 1	19902 L	2610	FO	91031219	194600	018000	45	G B=165, B=65
MGMB	HD 88366	51	7.7	1007462	-611814	H 1	19910 L	2477	FO	91031312	124500	028000	46	G B=213, B=72
MGMB	S CAR	51	7.7	1007462	-611814	H 1	19911 L	2440	FO	91031318	180100	028800	46	G B=216, B=80
DMES	GL 382	48	9.3	1009460	-032942	L 1	19369 L	714	FO	90120804	041400	004000	334	G B=140, C=75, B=52
RIASS	HD 88661	26	5.70	1010017	-574847	H 1	19483 L	14639	FO	90122702	024600	000300	502	G C=240, B=40
RIASS	HD 88661	26	5.70	1010017	-574847	H 3	40465 L	14505	FO	90122702	025500	000430	502	G C=200, B=38
ME042	NGC 3156	81	13.81	1010058	+032239	L 3	40516 L	00053	SO	91010207	075555	041500	202	V FREAD
ME042	NGC 3156	81	13.75	1010059	+032240	L 3	40512 L	00056	SO	91010108	083250	037500	202	V
MI067	HR4049	25	05.62	1015499	-284429	H 1	19300 L	17343	FO	90112814	142218	005000	502	V
MI067	HR 4049	25	05.63	1015499	-284429	L 3	40218 L	17222	FO	90112815	151929	001600	500	V
MI067	HR 4049	25	05.62	1015499	-284429	H 1	19440 L	17323	FO	90121809	095016	006000	501	V
MI067	HR4049	25	05.62	1015499	-284429	L 3	40379 L	17355	FO	90121811	110339	001600	500	V
SEMP	-24 9052	16	11.8	1023300	-243800	L 3	41340 L	306	SO	91041010	101400	000400	500	G C=236, B=18



PRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exp	lim	num	ssst	ECC	Comment
SDMP	-24 9052	16	11.8	1023300	-243800	H 3	41341 L	307	SO	91041010	105200	032000			406	G G=225,B=80
SDMP	-24 9052	16	11.8	1023300	-243800	L 1	20115 L	320	SO	91041016	162700	000800			X02	G G=1.5X,B=35
MQ175	HS1029-140	85	13.83	1029270	-140124	L 3	40388 L	00052	SO	90121909	093746	005000			340	V
MQ175	HS1029-140	85	13.79	1029270	-140124	L 1	19445 L	00054	SO	90121910	103949	007000			401	V
MQ175	HS1029-140	85	13.83	1029270	-140124	L 3	40389 L	00052	SO	90121911	115925	009000			350	V
MQ175	HS1029-140	85	13.87	1029270	-140124	L 1	19446 L	00050	SO	90121913	133727	009000			501	V
MQ175	HS1029-140	85	13.79	1029270	-140124	L 3	40390 L	00054	SO	90121915	151527	009000			350	V
HSMKB	HD 91465	26	3.50	1030145	-612540	H 3	40362 L	1133	FU	90121604	044000	000040			502	G G=190,B=36
HSMKB	HD 91465	26	3.50	1030145	-612540	H 1	19418 L	1118	FU	90121604	044500	000022			502	G G=215,B=40
PHCAL	PG 1034+001	17	12.8	1034302	+000715	L 3	40642 L	86	SO	91012104	042500	001400			X00	G G=2X,B=18
PHCAL	PG 1034+001	17	12.8	1034302	+000715	L 1	19613 L	87	SO	91012104	044900	002800			X02	G G=2X,B=38
PHCAL	PG 1034+001	17	12.8	1034302	+000715	L 3	40643 L	87	SO	91012105	052700	000920			X00	G G=1.5X,B=18
PHCAL	PG 1034+001	17	12.8	1034302	+000715	L 1	19614 L	89	SO	91012106	061400	001400			502	G G=243,B=37
PHCAL	PG 1034+001	17	12.9	1034302	+000715	L 3	41290 L	86	SO	91040415	150200	000600			X00	G G=1.5X,B=18
PHCAL	PG 1034+001	17	12.9	1034302	+000715	L 1	20079 L	86	SO	91040415	151700	002600			X02	G G=2X,B=40
PHCAL	PG 1034+001	17	12.9	1034302	+000715	L 3	41291 L	88	SO	91040415	154800	000440			500	G G=210,B=15
PHCAL	PG 1034+001	17	12.9	1034302	+000715	L 1	20080 L	83	SO	91040416	163000	001300			X02	G G=1.5X,B=35
PHCAL	PG 1034+001	17	12.9	1034302	+000715	L 1	20155 L	97	SO	91041522	223600	001100			502	G G=212,B=32
PHCAL	PG 1034+001	17	12.9	1034302	+000715	L 3	41395 L	97	SO	91041523	231300	000440			500	G G=202,B=18
PHCAL	PG 1034+001	17	12.9	1034302	+000715	L 1	20156 L	101	SO	91041523	235400	001100			502	G G=210,B=32
PHCAL	PG 1034+001	17	12.9	1034302	+000715	L 3	41396 L	100	SO	91041600	002700	000440			500	G G=192,B=18
PHCAL	PG 1034+001	17	12.9	1034302	+000715	L 3	41419 L	99	SO	91041818	185700	001000			X00	G G=2X,B=18
PHCAL	PG 1034+001	17	12.9	1034302	+000715	L 1	20183 L	10	SO	91041819	193400	002200			X02	G G=2X,B=40
PHCAL	PG 1034+001	17	12.9	1034302	+000715	L 3	41420 L	101	SO	91041820	200800	001000			X00	G G=2X,B=18
IGMIA	HD 92626	50	7.1	1038418	-474549	L 3	40383 L	3580	FO	90121819	192900	032100			205	G G=80,B=62
IGMIA	HD 92626	50	7.1	1038418	-474549	H 9	02402			90121821	213000	016000				G
WRMFC	HD 93162	11	8.14	1042142	-592724	L 1	20195 L	1792	FO	91041921	214000	000040			501	G G=198,B=30
WRMFC	HD 93162	11	8.14	1042142	-592724	L 3	41429 L	1773	FO	91041921	214400	000113			451	G F=204,G=170,B=22
MCI80	HD93497	45	03.08	1044369	-490920	H 1	19465 L	01636	FU	90122309	094906	001500			771	V
MCI80	HD93497	45	03.07	1044369	-490920	L 3	40444 L	01650	FU	90122310	101923	002500			730	V
PHCAL	HD 93521	12	7.04	1045336	+375003	L 2	18519 L			90122404	040400	000004				G
PHCAL	HD 93521	12	7.0	1045336	+375004	L 1	19179 L	5275	FO	90110907	075100	000003			502	G G=190,B=34
PHCAL	HD 93521	12	7.0	1045336	+375004	L 3	40086 L	5253	FO	90110907	075500	000003			400	G G=150,B=18
PHCAL	HD 93521	12	7.04	1045336	+375004	L 1	19429 L	5129	FO	90121707	071300	000003			501	G G=190,B=30
PHCAL	HD 93521	12	7.04	1045336	+375004	L 3	40369 L	5168	FO	90121707	071800	000003			400	G G=164,B=15
PHCAL	HD 93521	12	7.04	1045336	+375004	L 1	19521 L	5107	FO	91010800	003000	000003			502	G G=200,B=31
PHCAL	HD 93521	12	7.04	1045336	+375004	L 3	40547 L	5082	FO	91010800	003400	000003			400	G G=150,B=18
PHCAL	HD CT AFR 2	12	7.0	1045336	+375004	H 9	02453			91031119	195100	016000				G
PHCAL	HD 93521	12	7.0	1045336	+375004	L 3	41086 L	5047	FO	91031120	204300	000003			500	G G=176,B=18
PHCAL	HD 93521	12	7.0	1045336	+375004	L 1	19892 L	5057	FO	91031120	204800	000003			501	G G=190,B=30
PHCAL	HD 93521	12	7.0	1045336	+375004	L 1	20154 L	5151	FO	91041521	213000	000003			502	G G=200,B=32
PHCAL	HD 93521	12	7.0	1045336	+375004	L 3	41394 L	5097	FO	91041521	213500	000003			430	G F=85,G=165,B=18
QSMFG	QSO 1047+550	85	17.9	1047430	+550313	L 1	19649 L			FO 91012513	131400	007700			306	G G=120,B=72
MA097	WFA 689	26	10.74	1053539	-595811	L 1	19727 L	00206	FO	91021006	065643	000500			301	V
MA097	WFA 689	26	10.71	1053540	-595812	L 1	19728 L	00210	FO	91021007	074042	000830			500	V
ARMIK	HD 95370	30	4.39	1057512	-415726	H 3	41408 L	385	FU	91041714	145000	006000			X07	G G=5X,B=82
ARMIK	HD 95370	30	4.39	1057512	-415726	H 1	20172 L	390	FU	91041716	160200	000800			503	G G=244,B=45
USSES	HD 95418	30	2.4	1058507	+563904	H 1	19837 L	2473	FU	91022618	184300	000040			502	G G=220,B=40
MQ036	MC1104+167	85	15.70	1104365	+164416	L 3	41309 L	00000	BO	91040602	020706	040000			352	V
MQ036	MC1104+167	85	15.70	1104365	+164416	L 1	20094 L	00000	BO	91040702	021105	039700			452	V

FRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	runms	stt	ECC	Comment
IGMIA HD	96360	50	8.1	1104397	+683814	L 1	20159 L	1901	FO	91041609	095500	007500		343	G B=159,C=70,B=41
MEMC	EM CAP	12	8.4	1109564	-604923	H 3	40514 L	887	FO	91010121	215500	020000		304	G C=155,B=58
MEMC	EM CAP	12	8.4	1109564	-604923	H 3	40515 L	1028	FO	91010201	015500	029000		X09	G C=1.5X,B=120
MEMC	EM CAP	12	8.4	1109564	-604923	H 3	40517 L	1304	FO	91010215	154600	030000		X06	G C=1.5X,B=72
MEMC	EM CAP	12	8.4	1109564	-604923	H 3	40518 L	1295	FO	91010221	211700	030000		X06	G C=1.5X,B=72
MEMC	EM CAP	12	8.4	1109564	-604923	H 3	40519 L	1312	FO	91010302	024900	024000		408	G C=240,B=100
MEMC	EM CAP	12	8.4	1109564	-604923	H 3	40521 L	841	FO	91010315	155800	030000		405	G C=210,B=65
MEMC	EM CAP	12	8.4	1109564	-604923	H 3	40522 L	1141	FO	91010321	212900	024000		404	G C=205,B=60
MEMC	EM CAP	12	8.4	1109564	-604923	L 1	19504 L	1303	FO	91010401	013700	000500		X02	G C=4X,B=38
MEMC	EM CAP	12	8.4	1109564	-604923	L 3	40523 L	1310	FO	91010402	020700	000500		500	G C=242,B=18
MEMC	EM CAP	12	8.4	1109564	-604923	H 3	40524 L	1303	FO	91010402	024500	024000		406	G C=222,B=72
MEMC HD	97484	12	8.4	1109564	-604923	H 3	40526 L	1260	FO	91010415	154800	030000		X06	G C=1.5X,B=78
MEMC HD	97484	12	8.4	1109564	-604923	L 1	19506 L	1295	FO	91010421	212400	000200		X02	G C=2X,B=35
MEMC HD	97484	12	8.4	1109564	-604923	H 3	40528 L	1294	FO	91010422	221600	024000		405	G C=210,B=65
MEMC HD	97484	12	8.4	1109564	-604923	H 3	40530 L	1199	FO	91010503	033600	019300		406	G C=190,B=72
MEMC HD	97484	12	8.4	1109564	-604923	H 3	40535 L	1281	FO	91010520	202500	024000		405	G C=215,B=65
MEMC HD	97484	12	8.4	1109564	-604923	L 1	19510 L	1369	FO	91010600	005500	000100		502	G C=205,B=32
MEMC HD	97484	12	8.4	1109564	-604923	H 3	40537 L	1330	FO	91010601	014400	030000		X09	G C=1.5X,B=107
MEMC	EM CAP	12	8.4	1109570	-604923	H 3	40513 L	1308	FO	91010115	155500	033000		X07	G C=1.5X,B=85
MEMC HD	97484	12	8.4	1109570	-604923	L 3	40527 L	1285	FO	91010421	213500	000500		500	G C=249,B=18
MEMC HD	97484	12	8.4	1109570	-604923	L 1	19507 L	1248	FO	91010502	025100	000030		402	G C=145,B=32
MEMC HD	97484	12	8.4	1109570	-604923	L 3	40529 L	1236	FO	91010502	025700	000400		500	G C=205,B=18
MEMC HD	97484	12	8.4	1109570	-604923	H 3	40534 L	1229	FO	91010515	154900	024000		405	G C=220,B=70
MEMC HD	97484	12	8.4	1109570	-604923	L 3	40536 L	1354	FO	91010601	010100	000430		500	G C=215,B=18
PNMFD NCC	3587	71		1111477	+551755	L 3	41145 L			91032015	155800	028500		332	G E=107,C=80,B=40
PNMFD NCC	3587	71		1111499	+551851	L 3	41146 L			91032021	213200	030500		33	G E=94,B=50
PNMFD NCC	3587	71	12.0	1111553	+551803	L 3	41144 L		EO	91032011	114800	020000		331	G E=121,C=55,B=25
PNMFD NCC	3587	71	12.0	1111553	+551803	L 1	19952 L		EO	91032015	151500	030000		335	G E=100,C=100,B=70
PNMFD NCC	3587	71		1111574	+551859	L 1	19953 L		EO	91032021	210600	034500		336	G E=111,C=115,B=75
QMRG QSO	1116+603	85	17.2	1116192	+602121	L 1	19653 L		EO	91012712	121600	043300		07	G B=90
MATTO NOVA MJS91	59	13.28	1124185	-682402	L 1	19593 L		00085	SO	91011713	133906	003000		411	V
XEMCS NOVA MJS	59	13.5	1124185	-682401	L 1	19594 L		83	SO	91011800	002100	015000		X07	G C=3X,B=82
MATTO NOVA MJS91	59	13.28	1124185	-682402	L 3	40624 L		00085	SO	91011714	142826	002200		330	V HEAD
XEMCS NOVA MJS	59	13.5	1124185	-682401	L 3	40627 L		82	SO	91011803	030000	006000		332	G E=134,C=100,B=35
MATTO N MJS 91	55	14.00	1124185	-682420	L 1	19833 L		00000	EO	91022512	120800	004500		302	V PARTIAL HEAD
XEMCS NOVA MJS	59	13.5	1124185	-682401	L 1	19595 L		82	SO	91011804	040900	004500		402	G C=160,B=40
MATTO N MJS 91	55	14.00	1124185	-682402	L 3	40929 L		00000	EO	91022510	101400	011000		441	V
XEMCS NOVA MJS	59	13.5	1124185	-682401	L 3	40628 L		82	SO	91011805	050600	010000		441	G E=164,C=130,B=30
XEMCS NOVA MJS	59	13.5	1124185	-682401	L 3	40630 L		78	SO	91011900	000700	012000		442	G E=172,C=150,B=40
XEMCS NOVA MJS	59	13.5	1124185	-682401	L 1	19599 L		77	SO	91011902	021500	004500		304	G C=150,B=60
XEMCS NOVA MJS	59	13.5	1124185	-682401	L 3	40641 L		78	SO	91012023	235400	012000		452	G E=206,C=165,B=38
XEMCS NOVA MJS	59	13.5	1124185	-682401	L 1	19612 L		79	SO	91012102	020400	004500		403	G C=173,B=47
XEMCS NOVA MJS	59	13.5	1124185	-682401	L 3	40664 L		79	SO	91012400	000900	011100		442	G E=185,C=144,B=38
XEMCS NOVA MJS	59	13.5	1124185	-682401	L 1	19637 L		72	SO	91012402	020900	004500		402	G C=145,B=40
XEMCS NOVA MJS	59	13.5	1124185	-682401	L 3	40697 L		173	SO	91012901	011400	008000		342	G E=134,C=98,B=34
XEMCS NOVA MJS	59	13.5	1124185	-682401	L 3	40837 L		200	SO	91020620	205400	012000		342	G E=157,C=120,B=35
XEMCS NOVA MJS	59	13.5	1124185	-682401	L 1	19708 L		200	SO	91020623	230200	004500		402	G C=140,B=40
XEMCS NOVA MJS	59	13.5	1124185	-682401	L 3	40859 L		197	SO	91021220	201900	013000		342	G E=155,C=110,B=32
XEMCS NOVA MJS	59	13.5	1124185	-682401	L 1	19744 L			EO	91021222	223700	006000		403	G C=160,B=50
XEMCS NOVA MJS	59	13.5	1124185	-682401	L 1	19793 L		161	SO	91021820	200900	008000		403	G C=170,B=42

PRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mmssst	ECC	Comment
XEMCS NOVA MJS		59	13.5	1124185	-682401	L 3	40901 L	162	SO	91021821	213800	013000	342	G B=150,G=125,B=40
XEMCS NOVA MJS		59	13.5	1124185	-682401	L 3	40950 L	52	SO	91022813	132300	012000	332	G B=112,G=92,B=35
PHCAL TFLOOD		99		1124185	-682401	L 1	19850 L			91022814	142900	000025	08	G B=100
XEMCS NOVA MJS		59	13.5	1124185	-682401	L 1	19851 L		BO	91022815	152700	005500	303	G C=130,B=45
PHCAL TFLOOD		99		1124185	-682401	L 3	40951 L			91022815	155900	000005	09	G B=110
XEMCS NOVA MJS		59	13.5	1124185	-682401	L 3	41109 L	52	SO	91031515	152400	015000	332	G B=125,G=110,B=33
XEMCS NOVA MJS		59	13.5	1124185	-682401	L 1	19922 L	51	SO	91031518	180000	005000	302	G C=105,B=38
XEMCS NOVA MJS		59	14	1124185	-682401	L 1	19998 L		BO	91032723	233900	005500	303	G C=117,B=42
XEMCS NOVA MJS		59	14	1124185	-682401	L 3	41198 L		BO	91032800	003800	013000	331	G B=113,G=105,B=30
XEMCS NOVA MJS		59	14	1124185	-682401	L 3	41453 L		BO	91042210	101600	012000	332	G B=86,G=80,B=32
XEMCS NOVA MJS		59	14	1124185	-682401	L 1	20208 L		BO	91042212	122100	005000	302	G C=85,B=35
LGMFU HD	99592	49	6.3	1125069	+452738	L 1	19516 L	8983	FO	91010703	035500	003500	333	G B=113,G=80,B=48
LGMFU HD	99592	49	6.28	1125069	+452738	L 1	19721 L	8364	FO	91020822	225900	004500	342	G B=144,G=70,B=38
LGMFU HD	99592	49	6.3	1125069	+452738	L 1	19811 L	8896	FO	91022222	220300	004500	332	G B=122,G=70,B=38
LGMFU HD	99592	49	6.3	1125069	+452738	L 1	19874 L	7720	FO	91030823	233500	004500	333	G B=129,G=80,B=50
LGMFU HD	99592	49	6.3	1125069	+452738	L 1	19968 L	6611	FO	91032319	190900	003500	339	G B=194,G=180,B=135
LGMFU HD	99592	49	6.3	1125069	+452738	L 1	20129 L	6840	FO	91041300	001300	003500	332	G B=99,G=80,B=35
LGMFU HD	99592	49	6.2	1125069	+452738	L 1	20249 L	6740	FO	91042800	004600	000300	02	G B=32
MMO61 FG 1		70	14.30	1126150	-523935	L 3	41325 L	00000	BO	91040907	074834	006000	540	V
COMDS ED	+63 0965	48	9.0	1128240	+632500	L 1	19939 L	305	FO	91031721	215600	000500	01	G B=27
MITO20 SY MJS		57	11.11	1129550	-650836	L 1	19566 L	00148	FO	91011312	120040	001000	331	V
MITO20 SY MJS		57	11.11	1129550	-650836	L 3	40582 L	00147	FO	91011312	122431	000800	130	V
MITO20 SY MJS		57	99.99	1129550	-650836	L 1	19567 L	00000		91011313	130316	002500	351	V BUMPED GUIDE
MITO20 SY MJS		57	99.99	1129550	-650836	L 3	40583 L	00000		91011313	133259	007300	360	V BUMPED GUIDE
MITO20 SY MJS		57	10.94	1129550	-650836	L 3	41416 L	00171	FO	91041805	053253	001500	240	V
MITO20 SY MJS		57	10.94	1129550	-650836	L 1	20180 L	00171	FO	91041806	060810	001500	340	V
MITO20 SY MJS		57	10.96	1129550	-650836	L 3	41417 L	00169	FO	91041806	065002	011700	371	V
MQ180 NGC3783		84	13.02	1136330	-372741	L 3	40469 L	00107	SO	90122710	100446	016500	351	V 3x55 MIN SEGMENTS
AGMFE MKN 744		84	13.5	1137048	+321113	L 1	19585 L		BO	91011616	162500	017000	34	G B=96,B=60
AGMFE CT AER 2		84	13.5	1137048	+321113	9	02406			91011716	160400	000500	G	
AGMFE MKN 744		84	13.5	1137048	+321113	L 3	40625 L	49	SO	91011716	162400	015000	02	G B=40
AGMFE MKN 744		84	13.5	1137048	+321113	L 1	19597 L	52	SO	91011816	162000	008000	303	G C=72,B=46
EGLCR H1143-18		84	14.6	1143083	-181037	L 3	40282 L	50	SO	90120623	233200	007000	352	G B=241,G=70,B=32
EGLCR 1143-182		84	14.5	1143083	-181037	L 1	19368 L	50	SO	90120723	233600	007500	452	G B=220,G=160,B=38
MC180 HD102870		51	03.98	1148074	+020237	L 3	40307 L	00734	FU	90121110	100625	006500	700	V
DMSS GL 450		48	9.7	1148330	+353248	L 1	19370 L	412	FO	90120806	061000	004000	333	G B=106,G=68,B=45
MAL18 GQ MJS		55	17.30	1149350	-665539	E 9	02408 2	00000		91011908	080000	004000		V S/P 40633
CMSS GQ MJS		55	15.5	1149350	-665539	L 3	40633 L		BO	91011908	082600	084000	3x9	G B=1.5X,G=160,B=110
SGMFB NGC	3982	84		1153424	+552357	L 3	40930 L		BO	91022514	143700	050500	307	G C=136,B=85
SGMFB NGC	3982	84		1153516	+552418	L 3	40936 L		BO	91022614	141300	032800	304	G C=90,B=55
LGMFU HD	103681	49	7.9	1153542	+580859	L 1	19517 L			91010705	053500	007000	232	G B=73,G=60,B=40
LGMFU HD	103681	49	6.5	1153542	+580859	L 1	19812 L	8555	FO	91022300	000100	007000	332	G B=114,G=70,B=40
LGMFU HD	103681	49	7.9	1153542	+580859	L 1	19969 L	5970	FO	91032321	211700	003500	X9	G B=1.5X,B=215
LGMFU HD	103681	49	7.9	1153542	+580859	L 1	20248 L	3348	FO	91042722	225200	007000	252	G B=242,G=55,B=40
PHCAL FG	1159-035	17	14.8	1159123	-032857	L 3	40571 L	60	SO	91011218	185200	002000	500	G C=240,B=18
PHCAL FG	1159-035	17	14.8	1159123	-032857	L 1	19633 L	41	SO	91012305	050000	002600	402	G C=155,B=35
PHCAL FG	1159-035	17	14.8	1159123	-032857	L 1	19638 L	40	SO	91012404	040900	007400	X02	G C=2X,B=40
PHCAL FG	1159-035	17	14.8	1159123	-032857	L 3	40665 L	40	SO	91012405	052800	003600	X00	G C=2X,B=18
PHCAL FG	1159-035	17	14.8	1159124	-032857	L 1	19556 L	64	SO	91011219	192700	002000	402	G C=159,B=38
PHCAL FG	1159-035	17	14.8	1159124	-032857	L 3	40662 L	41	SO	91012305	053900	002000	500	G C=218,B=18



PRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	runn	stst	ECC	Comment
PHCAL	PG 1159-035	17	14.8	1159124	-032857	L 1	19634 L	41	SO	91012306	061600	003200		402	G G=181,B=38
MQ180	NG04051	84	13.00	1200364	+444835	L 3	40161 L	00000	EO	90112212	122352	013300		231	V
MQ180	NG04051	84	13.00	1200364	+444835	L 1	19265 L	00000	EO	90112214	144544	013300		452	V
MQ180	NG04051	84	13.00	1200364	+444835	L 3	40162 L	00000	EO	90112217	170734	010000		231	V
USBS	HD 105056	13	7.5	1203128	-691741	H 1	19804 L	3347	FO	91022003	034300	001600		502	G G=230,B=40
MQ180	NG04151	84	12.14	1208004	+394102	L 3	40207 L	00215	FO	90112711	115725	010000		470	V
EGLR	NGC 4151	84	11.5	1208004	+394102	L 1	19415 L	231	SO	90121419	195300	003000		5X2	G E=1.5X,G=200,B=38
MQ180	NGC 4151	84	12.19	1208004	+394102	L 1	19289 L	00225	FO	90112713	135036	005000		561	V
MQ180	PGL211+143	85	14.80	1211449	+141954	L 3	40308 L	00000	EO	90121112	122505	020000		361	V
MQ180	PGL211+143	85	14.80	1211449	+141954	L 1	19886 L	00000	EO	90121115	155038	006000		301	V
USBS	HD 106591	30	3.3	1212576	+571837	H 3	40955 L	961	FU	91030102	023500	001400		X05	G G=3X,B=68
MC180	HD108102	41	08.46	1222319	+255014	L 3	40294 L	01564	FO	90120913	135324	012000		401	V
MC180	HD108102	41	08.42	1222319	+255014	H 1	19377 L	01623	FO	90120910	101329	021000		402	V
MC180	HD108102	41	08.48	1222319	+255014	L 1	19378 L	01538	FO	90120916	160300	000440		600	V
IGMD	ED +49 2137	22	10.7	1222348	+492508	H 3	40890 L	194	FO	91021712	125500	030000		306	G G=175,B=80
MC155	SS VIR	52	07.32	1222460	+010428	L 1	19717 L	04309	FO	91020806	060655	011500		111	V
MQ023	NGC 4438	88	12.96	1225135	+131707	E 9	02398 2	00113	SO	90120710	100000	002000			V FOR SAP 40288
AGMR	NGC 4438	88	10.9	1225136	+131707	L 1	19363 L	113	SO	90120618	182200	026000		305	G G=112,B=70
AGMR	NGC 4438	88	10.9	1225136	+131707	L 3	40288 L	113	SO	90120717	175100	028000		2X8	G E=5X,G=110,B=100
MQ044	3C 273	85	12.80	1226332	+021943	L 3	40333 L	00131	SO	90121416	162752	002500		431	V HFRAD
MQ044	3C 273	85	12.84	1226332	+021943	L 1	19411 L	00126	SO	90121412	125032	003000		502	V
MQ044	3C 273	85	12.85	1226332	+021943	L 3	40331 L	00125	SO	90121413	133257	003000		432	V
MQ044	3C 273	85	12.84	1226332	+021943	L 1	19412 L	00126	SO	90121414	141300	003000		502	V
MQ044	3C 273	85	12.80	1226332	+021943	L 3	40332 L	00131	SO	90121414	145314	003000		431	V
MQ044	3C 273	85	12.82	1226332	+021943	L 1	19413 L	00128	SO	90121415	153456	003000		502	V
MQ044	3C273	85	12.88	1226333	+021942	L 1	19486 L	00121	SO	90122713	134430	003000		500	V
EGLR	3C 273	85	12.9	1226333	+021942	L 3	40334 L	130	SO	90121417	172800	003000		351	G E=208,G=103,B=23
MQ044	3C273	85	12.90	1226333	+021942	L 3	40470 L	00119	SO	90122714	142218	003000		350	V
EGLR	3C 273	85	12.9	1226333	+021942	L 1	19414 L	130	SO	90121418	180700	003000		502	G G=226,B=38
MQ044	3C273	85	12.88	1226333	+021942	L 3	40580 L	00121	SO	91011307	074727	003000		350	V
RIASS	3C 273	85	12.8	1226333	+021942	L 1	19447 L	129	SO	90121917	174300	003000		502	G G=230,B=38
MQ044	3C273	85	12.92	1226333	+021942	L 1	19564 L	00117	SO	91011308	082534	003000		501	V
RIASS	3C 273	85	12.8	1226333	+021942	L 3	40391 L	128	SO	90121918	182200	003000		351	G E=229,G=105,B=22
MQ044	3C273	85	12.93	1226333	+021942	L 3	40581 L	00116	SO	91011309	090529	007000		560	V
RIASS	3C 273	85	12.8	1226333	+021942	L 1	19448 L	134	SO	90121919	190000	002700		502	G G=210,B=38
MQ044	3C273	85	12.92	1226333	+021942	L 1	19565 L	00117	SO	91011310	102638	003500		601	V
RIASS	3C 273	85	12.8	1226333	+021942	L 3	40392 L	134	SO	90121919	193600	003000		351	G E=209,G=110,B=22
MQ044	3C273	85	12.82	1226333	+021942	L 1	19639 L	00128	SO	91012406	065913	003000		500	V
RIASS	3C 273	85	12.8	1226333	+021942	L 3	40393 L	132	SO	90121920	203500	002500		351	G E=190,G=95,B=25
MQ044	3C273	85	12.78	1226333	+021942	L 3	40666 L	00133	SO	91012407	073824	003000		350	V
RIASS	3C 273	85	12.8	1226333	+021942	L 3	40412 L	138	SO	90122017	174300	002500		351	G E=183,G=90,B=22
MQ044	3C273	85	12.80	1226333	+021942	L 1	19640 L	00130	SO	91012408	081907	003000		500	V
RIASS	3C 273	85	12.8	1226333	-021942	L 1	19450 L	134	SO	90122018	181600	002700		502	G G=190,B=34
MQ044	3C273	85	12.80	1226333	+021942	L 3	40667 L	00130	SO	91012408	085922	005000		460	V
RIASS	3C 273	85	12.8	1226333	+021942	L 3	40413 L	139	SO	90122018	185100	003000		351	G E=216,G=102,B=21
MQ044	3C273	85	12.65	1226333	+021942	L 3	40840 L	00149	SO	91020808	084709	003000		350	V
RIASS	3C 273	85	12.8	1226333	+021942	L 1	19451 L	136	SO	90122019	192900	002700		502	G G=195,B=38
MQ044	3C273	85	99.99	1226333	+021942	L 1	19718 L	00000		91020809	093353	003000		451	V
RIASS	3C 273	85	12.8	1226333	+021942	L 3	40414 L	138	SO	90122020	200500	003000		351	G E=202,G=100,B=22
MQ044	3C273	85	99.99	1226333	+021942	L 3	40841 L	00000		91020810	101124	005000		460	V

FRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	nummsst	EOC	Comment
CD82Y	3C 273	85	12.9	1226333	+021942	L 1	19519 L	129	SO	91.01.07.19	195800	003000	552	G B=209,C=220,B=38
MQ044	3C273	85	99.99	1226333	+021942	L 1	19719 L	00000		91.02.08.11	110633	002400	451	V
CD82Y	3C 273	85	12.9	1226333	+021942	L 3	40546 L	147	SO	91.01.07.20	204100	003000	450	G B=215,C=140,B=18
CD82Y	3C 273	85	12.9	1226333	+021942	L 1	19520 L	170	SO	91.01.07.21	211900	003000	502	G C=235,B=37
CD82Y	3C 273	85	12.9	1226333	+021942	L 1	19568 L	113	SO	91.01.13.16	165900	003000	502	G C=245,B=38
CD82Y	3C 273	85	12.9	1226333	+021942	L 3	40584 L	115	SO	91.01.13.17	173800	003000	450	G B=240,C=153,B=18
CD82Y	3C 273	85	12.9	1226333	+021942	L 1	19569 L	118	SO	91.01.13.18	181600	002700	502	G C=233,B=38
CD82Y	3C 273	85	12.9	1226333	+021942	L 1	19581 L	112	SO	91.01.15.03	035800	002500	502	G C=210,B=38
CD82Y	3C 273	85	12.9	1226333	+021942	L 3	40594 L	110	SO	91.01.15.04	043400	003000	351	G B=221,C=120,B=30
CD82Y	3C 273	85	12.9	1226333	+021942	L 1	19582 L	113	SO	91.01.15.05	051400	002500	502	G C=200,B=35
CD82Y	3C 273	85	12.9	1226333	+021942	L 3	40595 L	115	SO	91.01.15.05	055200	003000	351	G B=223,C=110,B=23
CD82Y	3C 273	85	12.8	1226333	+021942	L 1	19586 L	114	SO	91.01.16.23	235600	002500	502	G C=210,B=35
CD82Y	3C 273	85	12.8	1226333	+021942	L 3	40619 L	116	SO	91.01.17.00	003000	003000	450	G B=211,C=140,B=18
CD82Y	3C 273	85	12.8	1226333	+021942	L 1	19587 L	118	SO	91.01.17.01	011000	002500	502	G C=190,B=38
CD82Y	3C 273	85	12.8	1226333	+021942	L 3	40620 L	116	SO	91.01.17.01	014600	003000	450	G B=213,C=140,B=18
CD82Y	3C 273	85	12.8	1226333	+021942	L 1	19588 L	119	SO	91.01.17.02	022500	002500	403	G C=190,B=41
CD82Y	3C 273	85	12.9	1226333	+021942	L 1	19631 L	135	SO	91.01.23.02	020300	002500	402	G C=190,B=40
CD82Y	3C 273	85	12.9	1226333	+021942	L 3	40660 L	136	SO	91.01.23.02	023900	003000	350	G B=218,C=115,B=20
CD82Y	3C 273	85	12.9	1226333	+021942	L 1	19632 L	136	SO	91.01.23.03	031800	002500	502	G C=192,B=40
CD82Y	3C 273	85	12.9	1226333	+021942	L 3	40661 L	132	SO	91.01.23.03	035300	003000	450	G B=188,C=122,B=17
NC091	HD108907	49	05.07	1227557	+692840	L 3	41295 L	24513	FO	91.04.05.01	015638	002000	340	V
NC091	HD108907	49	05.04	1227557	+692840	L 3	41296 L	24899	FO	91.04.05.02	024904	002000	340	V
NC091	HD108907	49	05.01	1227558	+692841	L 3	41297 L	25311	FO	91.04.05.03	035701	002000	340	V
NC091	HD108907	49	05.00	1227558	+692841	L 3	41298 L	25426	FO	91.04.05.04	044736	001500	330	V
CSMRS	HD 108903	49	1.6	1228227	-565000	L 1	19832 L	5305	FU	91.02.24.22	223200	009000	345	G B=196,C=111,B=62
PHCAL	NULL	99		1228227	-565000	L 2	18542 L			91.02.25.00	003800	000000	300	G C=32,B=10
PHCAL	TFLOOD	99		1228227	-565000	L 2	18543 L			91.02.25.01	011100	000010	09	G B=135
PHCAL	CAIWL	98		1228227	-565000	L 2	18544 L			91.02.25.01	013900	000001	71	G B=10X,B=25
PHCAL	CAIWL	98		1228227	-565000	L 2	18544 L			91.02.25.01	013900	000001	71	G B=10X,B=25
PHCAL	CAIWL	98		1228227	-565000	H 2	18545 L			91.02.25.02	021000	000022	31	G B=50X,B=26
PHCAL	CAIWL	98		1228227	-565000	H 2	18545 L			91.02.25.02	021000	000022	31	G B=50X,B=26
PHCAL	WAWCAL	98		1228227	-565000	L 2	18546 S			91.02.25.02	024000	000010	78	G B=10X,B=100
PHCAL	WAWCAL	98		1228227	-565000	L 2	18546 L			91.02.25.02	024200	000001	78	G B=10X,B=100
PHCAL	WAWCAL	98		1228227	-565000	H 2	18547 S			91.02.25.03	031400	000010	79	G B=50X,B=130
PHCAL	WAWCAL	98		1228227	-565000	H 2	18547 L			91.02.25.03	031600	000022	79	G B=50X,B=130
MA059	HD108945	36	05.68	1228308	+245035	H 3	41402 L	16683	FO	91.04.17.01	014504	006000	500	V
AMEIK	HD 108945	36	5.4	1228308	+245034	H 3	41405 L	17050	FO	91.04.17.08	081800	006000	X04	G C=2X,B=51
MA059	HD108945	36	05.66	1228308	+245035	H 1	20166 L	16829	FO	91.04.17.02	025532	002000	501	V
AMEIK	HD 108945	36	5.4	1228308	+245034	H 1	20169 L	17166	FO	91.04.17.09	093900	002000	503	G C=235,B=42
MA059	HD108945	36	05.66	1228308	+245035	H 3	41403 L	16841	FO	91.04.17.03	032824	012000	700	V
AMEIK	HD 108945	36	5.5	1228308	+245034	H 3	41406 L	17140	FO	91.04.17.10	101900	006000	X04	G C=2X,B=52
MA059	HD108945	36	05.66	1228308	+245035	H 1	20167 L	16866	FO	91.04.17.05	054401	002000	501	V
AMEIK	HD 108945	36	5.4	1228308	+245034	H 1	20170 L	17076	FO	91.04.17.11	113000	002000	503	G C=230,B=45
MA059	HD108945	36	05.65	1228308	+245035	H 3	41404 L	16984	FO	91.04.17.06	062837	006000	500	V
AMEIK	HD 108945	36	5.4	1228308	+245034	H 3	41407 L	17146	FO	91.04.17.12	120500	006000	X03	G C=2X,B=50
MA059	HD108945	36	05.65	1228308	+245035	H 1	20168 L	17016	FO	91.04.17.07	073138	002000	501	V
AMEIK	HD 108945	36	5.4	1228308	+245034	H 1	20171 L	17731	FO	91.04.17.13	131600	002000	503	G C=220,B=45
MA059	HD108945	36	05.65	1228308	+245035	E 9	02456 2	17050	FO	91.04.17.08	080800	016000		V FES FOR SWP 41405
AMEIK	HD 108945	36	5.4	1228308	+245034	H 3	41409 L	17528	FO	91.04.17.17	171400	006000	X03	G C=2X,B=50
AMEIK	HD 108945	36	5.4	1228308	+245034	H 1	20173 L	17531	FO	91.04.17.18	182700	002000	503	G C=230,B=50

PRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	numms	sett	BCC	Comment
AEMIK HD	108945	36	5.4	1228308	+245034	H 3	41410 L	17445	FO	91041719	190500	006000		X04	G G=2X,B=60
AEMIK HD	108945	36	5.4	1228308	+245034	H 1	20174 L	17500	FO	91041720	201700	002000		503	G G=240,B=50
AEMIK HD	108945	36	5.4	1228308	+245034	H 3	41411 L	17475	FO	91041720	205100	006000		X04	G G=2X,B=55
AEMIK HD	108945	36	5.4	1228308	+245034	H 1	20175 L	17582	FO	91041722	220900	002000		503	G G=230,B=45
AEMIK HD	108945	36	5.4	1228308	+245034	H 3	41412 L	17671	FO	91041722	224500	006000		X03	G G=2X,B=50
AEMIK HD	108945	36	5.4	1228308	+245034	H 1	20176 L	17852	FO	91041723	235700	002000		503	G G=225,B=47
ME168	PKS1229-02	85	16.00	1229259	-020732	L 1	19710 L	00000	EO	91020707	070532	026500		232	V HEAD
ME168	PKS1229-02	85	16.00	1229259	-020732	L 3	40843 L	00000	EO	91020906	060455	032200		301	V
SNMK	SN 1991T	56	11.8	1231368	+025627	L 1	20268 L	310	SO	91042915	153300	007000		402	G G=160,B=35
ME100	SN1991T	56	11.87	1231369	+025628	L 1	20242 L	00300	SO	91042708	081139	002000		302	V
SNMK	SN 1991T	56	12.0	1231369	+025628	L 1	20243 L	317	SO	91042710	102900	005000		502	G G=210,B=40
ML159	HZ 29	63	14.07	1232287	+345415	L 3	41083 L	00042	SO	91031106	061420	004000		500	V
ML159	HZ 29	63	14.2	1232287	+375415	H 3	41084 L	42	SO	91031107	073400	056000		306	G G=150,B=80
ML159	HZ29	63	14.20	1232290	+375448	E 9	02452 2	00000	EO	91031104	042200	004000			V FES FOR SWP41083
ML159	HZ 29	63	14.20	1232290	+375448	L 3	41082 L	00000	EO	91031104	043412	004000		001	V WRONG TARGET
COMDS	ED +52 1638	46	8.5	1233296	+512948	L 1	19940 L	1061	FO	91031722	225100	000430		302	G G=65,B=34
ME042	NEC 4564	81	12.77	1233553	+114256	L 3	40506 L	00134	SO	90123110	100007	036700		202	V
PHCAL	NULL	99		1235020	-265145	H 3	40471			90122801	015500	000000		703	G G=12,B=5
PHCAL	WAVCAL	98		1235028	-265146	L 3	40472			90122802	023700	000000		X0	G E=1.5X,B=18
PHCAL	WAVCAL	98		1235028	-265146	L 1	19488 L			90122803	030700	000025		78	G E=10X,B=100
PHCAL	WAVCAL	98		1235028	-265146	L 1	19488 S			90122803	030900	000001		78	G E=10X,B=100
PHCAL	WAVCAL	98		1235028	-265146	H 1	19489 L			90122803	033900	000025		29	G E=50X,B=105
PHCAL	WAVCAL	98		1235028	-265146	H 1	19489 S			90122803	034100	000016		29	G E=50X,B=105
PHCAL	WAVCAL	98		1235028	-265146	L 3	40473 L			90122804	043700	000005		28	G E=10X,B=100
PHCAL	WAVCAL	98		1235028	-265146	L 3	40473 S			90122804	043900	000002		28	G E=10X,B=100
PHCAL	WAVCAL	98		1235028	-265146	H 3	40474 L			90122805	050700	000005		29	G E=60X,B=112
PHCAL	WAVCAL	98		1235028	-265146	H 3	40474 S			90122805	050900	000200		29	G E=60X,B=112
PHCAL	WAVCAL	98		1235028	-265146	L 2	18522 L			90122805	052400	000010		27	G E=10X,B=90
PHCAL	WAVCAL	98		1235028	-265146	L 2	18522 S			90122805	052700	000001		27	G E=10X,B=90
PHCAL	WAVCAL	98		1235028	-265146	H 2	18523 L			90122806	060200	000010		29	G E=50X,B=105
PHCAL	WAVCAL	98		1235028	-265146	H 2	18523 S			90122806	060600	000022		29	G E=50X,B=105
PHCAL	TFLOOD	99		1235028	-265146	H 1	19490 L			90122807	073100	000025		07	G B=90
PHCAL	TFLOOD	99		1235028	-265146	H 3	40475 L			90122807	073300	000005		08	G B=100
RIASS	HD 110432	26	5.2	1239532	-624705	H 1	19657 L	18182	FO	91012801	011000	000300		503	G G=200,B=41
RIASS	HD 110432	26	5.2	1239532	-624705	H 3	40695 L	18265	FO	91012801	012000	000900		401	G G=180,B=30
ME048	UGC7905	82	99.99	1241319	+551011	E 9	02389 2	00000		90111412	121236	016000			V FES FOR SWP40108
AGMSL	UGC7905S	88	14.0	1241319	+551011	L 3	40108 L		EO	90111412	123800	081000		407	G G=200,B=90
MCI80	HD111812	44	05.26	1249159	+274845	L 3	40330 L	21910	FO	90121411	115041	002000		432	V NO GUIDE BUT STABLE;
ML180	EX HYA	54	13.28	1249426	-285840	L 1	19511 L	00085	SO	91010609	095400	003000		561	V
ML180	EX HYA	54	13.09	1249426	-285840	L 3	40539 L	00101	SO	91010610	103148	004000		350	V
ML180	HD112091	26	05.20	1251396	-565350	H 3	40675 L	00000	EO	91012511	112545	000600		600	V NORTH EAST COMPONENT
SCMF	COM IEVY	06	8.0	1252055	-390045	9	02404			91010916	163000	002000			G
SCMF	C/ IEVY	06	8.0	1252055	-390045	L 1	19532 L	102	FO	91010916	164700	001500		352	G E=194,G=60,B=38
SCMF	C/ IEVY	06	8.0	1252055	-390045	L 1	19533 S	102	FO	91010917	174600	019000		334	G E=95,G=85,B=60
SCMF	C/ IEVY	06	8.0	1252055	-390045	L 3	40553 S	102	FO	91010917	174600	015000		51	G E=195,B=25
SCMF	C/ IEVY	06	8.0	1252055	-390045	L 3	40553 L	102	FO	91010917	174600	015000		X1	G E=9X,B=25
SCMF	C/ IEVY	06	8.0	1252055	-390045	L 1	19533 L	77	FO	91010919	190300	019000		334	G E=148,G=105,B=60
MCI80	3C279	85	14.50	1253359	-053108	L 1	19492 L	00000	EO	90122910	103711	012000		401	V
AGMW	3C 279	85	14.5	1253359	-053108	L 1	19589 L	33	SO	91011703	035400	017500		304	G G=120,B=58
MCI80	3C279	85	14.50	1253359	-053108	L 3	40489 L	00000	EO	90122912	124320	024000		331	V



FRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	numscans	BCC	Comment
SOMF	COM IEVY	06	7.5	1254167	-393002	H 9	02403			91010900	004500	002000		G
SOMF	COM IEVY	06	7.5	1254167	-393002	L 1	19528 L	101	FO	91010901	013500	001100		242 G E=154,C=45,B=38
SOMF	COM IEVY	06	7.5	1254167	-393002	L 1	19529 L	102	FO	91010902	022700	001800		252 G E=209,C=55,B=40
SOMF	COM IEVY	06	7.5	1254167	-393002	L 3	40550 L	103	FO	91010902	025300	000300		30 G E=66,B=15
SOMF	COM IEVY	06	7.5	1254167	-393002	L 1	19530 L	103	FO	91010903	033500	010000		3x4 G E=3.5x,C=125,B=60
SOMF	COM IEVY	06	7.5	1254167	-393002	L 3	40551 L	103	FO	91010904	042500	000900		40 G E=153,B=15
SOMF	COM IEVY	06	7.5	1254167	-393002	L 3	40552 L	101	FO	91010905	053000	000900		40 G E=150,B=15
PHCAL	GD 153	37	13.4	1254350	+221812	L 3	40920 L	86	SD	91022315	152600	001000		500 G C=215,B=18
PHCAL	GD 153	37	13.4	1254350	+221812	L 1	19816 L	94	SD	91022315	154900	001500		401 G C=180,B=30
PHCAL	GD 153	37	13.4	1254350	+221812	L 3	40921 L	107	SD	91022316	163300	001000		500 G C=210,B=18
PHCAL	GD 153	37	13.4	1254350	+221812	L 1	19817 L	145	SD	91022317	172800	001730		X02 G C=1.5x,B=35
PHCAL	GD 153	37	13.4	1254350	+221812	L 1	19834 L	77	SD	91022601	015500	001730		502 G C=232,B=32
PHCAL	GD 153	37	13.4	1254350	+221812	L 3	40931 L	77	SD	91022602	022100	002000		X00 G C=2x,B=18
PHCAL	GD 153	37	13.4	1254350	+221812	L 1	19835 L	75	SD	91022602	025900	001730		502 G C=231,B=34
PHCAL	GD 153	37	13.4	1254350	+221812	L 3	40932 L	74	SD	91022603	033300	002000		X00 G C=2x,B=18
PHCAL	GD 153	17	13.4	1254350	+221812	L 3	41421 L	72	SD	91041821	212200	001000		500 G C=237,B=18
PHCAL	GD 153	17	13.4	1254350	+221812	L 1	20184 L	71	SD	91041821	215300	003000		X02 G C=2x,B=38
PHCAL	GD 153	17	13.4	1254350	+221812	L 3	41422 L	75	SD	91041822	223200	003000		X00 G C=3x,B=18
PHCAL	GD 153	17	13.4	1254350	+221812	L 1	20185 L	75	SD	91041823	231000	003000		X02 G C=2x,B=38
PHCAL	GD 153	17	13.4	1254350	+221812	L 3	41423 L	74	SD	91041823	234800	003000		X00 G C=3x,B=18
PHCAL	GD 153	17	13.4	1254350	+221812	L 1	20186 L	75	SD	91041900	002700	001500		502 G C=190,B=38
COMDS	HD 238179	44	8.9	1257296	+545645	L 1	19941 L	358	FO	91031723	234400	002000		402 G C=168,B=32
MA097	WFA1048	26	10.70	1258239	-483707	L 1	19726 L	00213	FO	91021005	054928	000500		461 V
MA085	GD323	37	99.99	1302301	+594333	E 9	02391 2	00000		90111611	114500	016000		V FES FOR SWP40123
WMES	GD323	37	14.4	1302301	+594333	H 3	40123 L			90111612	122300	040000		309 G C=180,B=145
DMSS	GL 499A	48	9.4	1303490	+205942	L 1	19371 L	508	FO	90120807	075700	005200		342 G E=186,C=75,B=40
MCI80	HD114710	41	04.63	1309320	+280800	L 3	40380 L	00412	FU	90121812	123619	013000		830 V
EGMDB	N3C 5018	81	11.8	1310198	-191512	L 3	40909 L	184	SD	91022005	051900	090000		309 G C=145,B=105
EGMDB	N3C 5018	81	11.8	1310198	-191512	L 1	19810 L	167	SD	91022215	151500	033500		305 G C=130,B=70
ME033	N3C 5018	81	12.00	1310199	-191511	E 9	02437 2	00000	EO	91022004	045000	016000		V FES FOR SWP#40909
AGMRE	N3C 5033	84	11.0	1311091	+365131	L 3	40868 L		EO	91021412	122700	021000		223 G E=60,C=62,B=42
AGMRE	N3C 5033	84	11.0	1311091	+365131	L 1	19754 L		EO	91021416	160000	016000		335 G E=160,C=100,B=61
COMDS	HD 238208	46	9.0	1312452	+571656	L 1	19942 L	365	FO	91031800	005200	002000		402 G C=143,B=38
AGMEL	U308335E	88	14.4	1313418	+622318	L 3	40115 L		EO	90111513	131000	080000		307 G C=160,B=89
MCI80	HD115659	45	03.42	1316119	-225430	L 3	40538 L	01206	FU	910110607	074229	008500		530 V
ME033	N3C 5077	81	13.04	1316528	-122342	E 9	02444 2	00105	SD	91022205	055800	004000		V
EGMDB	N3C 5077	81	12.6	1316528	-122342	L 3	40910 L	109	SD	91022006	063200	085500		308 G C=130,B=95
EGMDB	N3C 5077	81	12.6	1316528	-122342	L 1	19809 L	105	SD	91022205	055800	044000		306 G C=115,B=78
ME033	N3C 5077	81	12.00	1316530	-122343	E 9	02441 2	00000	EO	91022106	060000	016000		V FES FOR SWP#40910
IQMPJ	HD HD115898	49	7.54	1317171	+454722	L 1	19722 L	3367	FO	91020900	003700	009000		333 G E=88,C=70,B=48
IQMPJ	HD 115898	49	7.5	1317171	+454722	L 1	19875 L	4618	FO	91030900	005400	009000		343 G E=173,C=65,B=42
IQMPJ	HD 115898	49	7.5	1317171	+454722	L 1	20128 L	6160	FO	91041221	214600	009000		333 G E=85,C=80,B=45
SAPCW	HD 115823	22	5.5	1317346	-522908	L 1	19602 L	17723	FO	91011923	234800	000011		502 G C=205,B=38
SAPCW	HD 115823	22	5.5	1317346	-522908	L 1	19602 L	17796	FO	91011923	235700	000006		X02 G C=1.5x,B=35
SAPCW	HD 115823	22	5.5	1317346	-522908	L 3	40634 L	18107	FO	91012000	003500	000018		500 G C=220,B=18
SAPCW	HD 115823	22	5.5	1317346	-522908	L 3	40634 L	18108	FO	91012000	004400	000009		500 G C=240,B=18
DMSS	GL 509.1	48	9.7	1321260	+581000	L 1	19382 L	382	FO	90121101	014800	006000		342 G E=181,C=80,B=40
MCI80	HD117555	45	08.52	1328247	+242925	H 1	19468 L	01482	FO	90122409	095046	013000		331 V
MCI80	HD 117555	45	08.56	1328247	+242925	L 3	40449 L	01441	FO	90122412	120711	014000		330 V
PHCAL	EIA UM	21	1.84	1345342	+493343	H 3	40436 L			90122208	083800	000006		G

PRO	Object	CL	MAG	R.A.	DEC	D C Image A	FES	MD	Obs.date	Exptim	nummsst	ECC	Comment
PHCAL	EIA UMA	21	1.84	1345342	+493343	H 2 18518 L			90122403	031600	000008	G	
PHCAL	EIA UMA	21	1.84	1345342	+493343	H 1 19478 L	4264		90122607	075100	000005	G	
PHCAL	HD 120315	21	1.8	1345343	+493344	H 3 40125 L		FU	90111707	075000	000006	402 G	G=170,B=32
PHCAL	HD 120315	21	1.8	1345343	+493344	H 1 19236 L	4208	FU	90111707	075400	000005	502 G	G=218,B=40
PHCAL	HD 120315	21	1.8	1345343	+493344	L 3 40126 L	4201	FU	90111709	091200	000000	500 G	G=210,B=18
PHCAL	HD 120315	21	1.8	1345343	+493344	L 3 40127 L	4211	FU	90111709	095500	000000	500 G	G=208,B=18
PHCAL	HD 120315	21	1.8	1345343	+493344	L 1 19237 L	4209	FU	90111710	102800	000000	402 G	G=155,B=32
PHCAL	HD 120315	21	1.8	1345343	+493344	H 3 40655 L	4167	FU	91012205	051200	000006	402 G	G=173,B=35
PHCAL	HD 120315	21	1.8	1345343	+493344	H 1 19626 L	4190	FU	91012205	051900	000005	502 G	G=215,B=40
PHCAL	HD 120315	21	1.8	1345343	+493344	H 1 19736 L	4294	FU	91021102	020800	000005	503 G	G=206,B=42
PHCAL	EIA UMA	21	1.84	1345343	+493344	H 3 40870 L	4294	FU	91021502	022200	000007	501 G	G=190,B=25
PHCAL	HD 120315	21	1.8	1345343	+493344	H 3 41076 L	4195	FU	91031002	021500	000006	401 G	G=170,B=30
PHCAL	HD 120315	21	1.8	1345343	+493344	H 1 19881 L	4168	FU	91031002	022000	000005	503 G	G=217,B=45
PHCAL	EIA UMA	21	1.84	1345343	+493344	H 3 41321 L	4157	FU	91040823	231800	000006	402 G	G=170,B=33
PHCAL	EIA UMA	21	1.84	1345343	+493344	H 1 20106 L	4156	FU	91040823	232500	000005	503 G	G=210,B=41
MC154	SFO 181983	41	09.94	1346174	-280728	L 2 18525 L	00420	FO	91010908	081917	005000	602 V	IWR: -4.5 KV
HEMP	HD 120324	26	3.3	1346357	-421332	H 3 41322 L	1084	FU	91040900	004500	000018	401 G	G=135,B=30
MC154	SFO 181993	30	09.18	1346580	-282331	L 2 18530 L	00827	FO	91010914	140012	003000	701 V	IWR: -4.5 KV
MC154	SFO 181996	30	08.07	1347042	-275618	L 2 18526 L	02215	FO	91010909	095305	006600	500 V	IWR: -4.5 KV
MC154	SFO 181999	22	06.38	1347161	-284959	L 2 18527 L	09670	FO	91010910	104235	000130	800 V	IWR: -4.5 KV
MC154	SFO 181999	22	06.36	1347161	-284959	L 2 18528 S	09859	FO	91010911	111821	000040	500 V	IWR: -4.5 KV
MC154	SFO 181999	22	06.36	1347161	-284959	L 2 18528 L	09859	FO	91010911	111345	000040	700 V	IWR: -4.5 KV
MC154	HD120657	30	10.18	1348318	-285356	L 2 18529 L	00338	FO	91010912	120850	004500	601 V	IWR: -4.5 KV
MQ180	MRK 279	84	13.75	1351536	+693313	L 3 40074 L	00056	SD	90110714	145449	012000	340 V	
AGMS	MRK-279	84	14.5	1351536	+693313	L 3 40104 L	57	SD	90111319	195400	018000	352 G	E=204,G=128,B=38
MQ180	MRK 279	84	13.71	1351536	+693313	L 1 19173 L	00058	SD	90110717	170018	010700	451 V	
AGMS	MRK-279	84	14.5	1351536	+693313	L 1 19220 L	58	SD	90111323	230200	009000	443 G	E=1.5X,G=180,B=43
AGMS	MRK-279	84	14.5	1351536	+693313	L 3 40105 L	57	SD	90111400	004100	013500	342 G	E=147,G=100,B=35
AGMS	MRK-279	84	14.5	1351536	+693313	L 3 40626 L	61	SD	91011720	201500	016000	452 G	E=237,G=180,B=40
AGMS	MRK-279	84	14.5	1351536	+693313	L 3 40629 L	58	SD	91011818	181600	017000	5X3 G	E=1.5X,G=197,B=44
AGMS	MRK-279	84	14.5	1351536	+693313	L 1 19598 L	58	SD	91011821	211600	009000	X03 G	G=1.5X,B=41
AGMS	MRK-279	84	14.5	1351536	+693313	L 3 41123 L		EO	91031712	121800	016000	442 G	E=1.5X,G=152,B=38
AGMS	MRK-279	84	14.5	1351536	+693313	L 1 19937 L		EO	91031715	150300	008000	5X2 G	E=1.5X,G=243,B=40
AGMS	MRK-279	84	14.5	1351536	+693313	L 3 41124 L		EO	91031716	162700	014500	452 G	E=254,G=146,B=32
PHCAL	HD 121263	20	2.5	1352245	-470235	H 3 41189 L	2447	FU	91032620	205400	000006	502 G	G=190,B=32
PHCAL	HD 121263	20	2.5	1352245	-470235	H 1 19990 L	2442	FU	91032620	205800	000006	502 G	G=227,B=40
IGMD	HD 121800	20	9.1	1353544	+662138	H 3 40876 L	800	FO	91021617	172500	012500	504 G	G=230,B=55
USSES	HD 122879	23	6.40	1402525	-592839	H 3 40897 L	8225	FO	91021803	035300	001900	502 G	G=230,B=40
MI180	E1405-451	59	15.50	1405582	-450305	L 3 40570 L	00000	EO	91011211	115619	008200	220 V	
MI180	E1405-451	59	15.50	1405582	-450305	L 1 19555 L	00000	EO	91011213	132218	008400	331 V	
SEMEC	EARTH	01		1410120	+240600	H 3 40908 L		EO	91021920	205600	006000	50 G	E=220,B=18
SEMEC	EARTH	01		1410120	+240600	H 1 19802 L		EO	91021921	211100	001000	00 G	B=20
CSMRS	HD 124897	47	0.0	1413227	+192631	L 1 19827 L	16712	FU	91022413	135000	004500	XX3 G	E=2.5X,G=2X,B=42
CSMRS	HD 124897	47	0.0	1413227	+192631	L 1 19827 L	16823	FU	91022414	144200	000002	343 G	E=151,G=130,B=42
MC180	HD124850	41	04.45	1413233	-054546	L 3 40636 L	00482	FU	91012010	103737	003500	831 V	
MI037	ED-21/3873	57	11.06	1413458	-213156	L 3 40919 L	00149	FO	91022312	120449	004500	360 V	FFRAD
MI066	ED-213873	57	11.10	1413458	-213156	L 3 40933 L	00149	FO	91022606	060156	003000	350 V	
MQ180	NGC5548	84	13.36	1415432	+252200	L 3 40531 L	00079	SD	91010508	083214	005000	340 V	
MQ180	NGC5548	84	13.35	1415432	+252200	L 1 19508 L	00080	SD	91010509	093059	005000	351 V	
MQ180	NGC5548	84	13.38	1415432	+252200	L 3 40532 L	00078	SD	91010510	102910	005000	240 V	

PRO	Object	CL	MAG	R.A.	DEC	D C	Image	A	FES	MD	Obs.date	Exptim	mmmsst	EQC	Comment
IGMD HD	126138	21	7.5	1420185	+534454	H 3	40691	L	3051	FO	91.021718	184600	004500	503 G	G=230,B=45
MCL80 HD126660	41	04.43	1423296	+520452	L 3	40329	L	00494	FU	90121410	100655	002500	601	V	
IGMD HD	127557	30	8.9	1427581	+673442	H 1	19780	L	717	FO	91.021612	120500	030000	407 G	G=205,B=90
RCMEW V854 CEN	52	10.7	1431415	-392013	L 1	19951	S	201	FO	91.032001	014200	016500	304 G	G=122,B=60	
RCMEW V854 CEN	52	10.7	1431415	-392013	L 1	19951	S	201	FO	91.032001	014200	016500	404 G	G=197,B=60	
RCMEW V854 CEN	52	13	1431415	-392013	L 1	20141	L		BO	91.041409	095800	041000	346 G	B=1.5X,G=150,B=60	
RCMEW V854 CEN	52	13	1431415	-392013	L 1	20150	L	54	SO	91.041509	094400	021000	354 G	B=249,G=95,B=58	
MAL39 HD127972	26	02.43	1432192	-415621	H 3	41218	L	02915	FU	91.033003	030231	000010	500	V	
HEMP HD	127972	26	2.3	1432192	-415621	H 3	41213	L	2816	FU	91.032919	194200	000010	502 G	G=215,B=40
MAL39 HD127972	26	02.43	1432192	-415621	H 1	20015	L	02924	FU	91.033003	031328	000005	502	V	
HEMP HD	127972	26	2.3	1432192	-415621	H 1	20011	L	2819	FU	91.032919	195000	000008	403 G	G=1.5X,B=45
MAL39 HD127972	26	02.44	1432192	-415621	H 3	41221	L	02897	FU	91.033006	065946	000010	500	V	
HEMP HD	127972	26	2.3	1432192	-415621	H 1	20013	L	2908	FU	91.032923	233000	000005	502 G	G=205,B=40
MAL39 HD127972	26	02.46	1432192	-415621	H 1	20017	L	02851	FU	91.033007	070436	000005	401	V	
HEMP HD	127972	26	2.3	1432192	-415621	H 3	41215	L	2910	FU	91.032923	233500	000010	502 G	G=218,B=40
MAL39 HD127972	26	02.43	1432192	-415621	H 3	41237	L	02934	FU	91.033102	025503	000010	500	V	
HEMP HD	127972	26	2.3	1432192	-415621	H 3	41224	L	2885	FU	91.033010	103600	000010	502 G	G=220,B=38
MAL39 HD127972	26	02.42	1432192	-415621	H 1	20028	L	02950	FU	91.033103	030000	000006	402	V	
HEMP HD	127972	26	2.3	1432192	-415621	H 1	20019	L	2853	FU	91.033010	104100	000005	502 G	G=210,B=40
MAL39 HD127972	26	02.39	1432192	-415621	H 3	41242	L	03042	FU	91.033109	090626	000010	500	V	
HEMP HD	127972	26	2.3	1432192	-415621	H 1	20021	L	2940	FU	91.033014	144400	000006	502 G	G=210,B=40
MAL39 HD127972	26	02.39	1432192	-415621	H 1	20031	L	03020	FU	91.033109	091108	000006	401	V	
HEMP HD	127972	26	2.3	1432192	-415621	H 3	41227	L	2986	FU	91.033014	144900	000010	502 G	G=220,B=40
MAL39 HD127972	26	02.39	1432192	-415621	H 3	41257	L	03018	FU	91.040101	015537	000010	500	V	
HEMP HD	127972	26	2.3	1432192	-415621	H 1	20023	L	2992	FU	91.033017	175100	000006	503 G	G=220,B=42
MAL39 HD127972	26	02.38	1432192	-415621	H 1	20040	L	03046	FU	91.040102	020029	000006	402	V	
HEMP HD	127972	26	2.3	1432192	-415621	H 3	41230	L	2965	FU	91.033017	175500	000010	502 G	G=230,B=40
MAL39 HD127972	26	99.99	1432192	-415621	H 3	41260	L	00000		91.040105	053810	000010	500	V	
HEMP HD	127972	26	2.3	1432192	-415621	H 1	20026	L	2864	FU	91.033023	233400	000005	403 G	G=180,B=42
MAL39 HD127972	26	02.45	1432192	-415621	H 1	20042	L	02871	FU	91.040105	054252	000006	402	V	
HEMP HD	127972	26	2.3	1432192	-415621	H 3	41234	L	2855	FU	91.033023	234100	000008	402 G	G=180,B=35
HEMP HD	127972	26	2.3	1432192	-415621	H 3	41245	L	2826	FU	91.033112	123800	000010	502 G	G=205,B=38
HEMP HD	127972	26	2.3	1432192	-415621	H 1	20033	L	2910	FU	91.033112	124300	000006	403 G	G=180,B=42
HEMP HD	127972	26	2.3	1432192	-415621	H 3	41248	L	2819	FU	91.033116	163200	000010	502 G	G=195,B=40
HEMP HD	127972	26	2.3	1432192	-415621	H 1	20035	L	2885	FU	91.033116	163700	000006	502 G	G=200,B=40
HEMP HD	127972	26	2.3	1432192	-415621	H 3	41251	L	2954	FU	91.033119	195000	000010	502 G	G=220,B=40
HEMP HD	127972	26	2.3	1432192	-415621	H 1	20037	L	2938	FU	91.033119	195500	000006	503 G	G=220,B=42
HEMP HD	127972	26	2.3	1432192	-415621	H 3	41254	L	3071	FU	91.033122	225800	000010	502 G	G=225,B=40
HEMP HD	127972	26	2.3	1432192	-415621	H 1	20039	L	3063	FU	91.033123	230300	000006	502 G	G=200,B=40
CSMIA HD	128621	46	1.3	1435510	-603729	L 3	40690	L	24744	FU	91.012702	022100	002200	341 G	B=140,G=110,B=22
CSMIA HD	128620	44	0.1	1435525	-603713	L 3	40689	L	24281	FU	91.012701	012300	002300	750 G	B=225,G=10X,B=18
RIASS HD	129333	44	7.53	1437562	+643024	H 1	19285	L	2515	FO	90112619	194400	009000	303 G	G=130,B=48
RIASS HD	129333	44	7.53	1437562	+643024	H 3	40203	L	2510	FO	90112621	212600	030000	404 G	G=178,B=58
MAL58 HD128898	40	03.45	1438268	-644527	H 3	40915	L	01178	FU	91.022307	074550	001500	603	V	
MAL58 HD128898	40	03.46	1438268	-644527	H 1	19814	L	01171	FU	91.022308	081138	001000	801	V	
MAL58 HD128898	40	03.47	1438268	-644527	H 3	40916	L	01167	FU	91.022308	084604	001300	500	V	
MAL58 HD128898	40	03.47	1438268	-644527	H 3	40917	L	01156	FU	91.022309	094515	001300	500	V	
MAL58 HD128898	40	99.99	1438268	-644527	H 3	40918	L	00000		91.022311	110346	001100	600	V	
MAL58 HD128898	40	03.47	1438268	-644527	H 1	19815	L	01156	FU	91.022310	105335	000700	701	V	
MQ180 MK478	84	14.60	1440045	+353907	L 1	19509	L	00000	BO	91.010511	114756	006000	341	V	



FRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs. date	Exptim	runmsst	REC	Comment
MQ180 MK478		84	14.60	1440045	+353907	L 3	40533 L	00000	ED	91010512	125900	010000	350	V REF. INT. (-130,-180)
SAMW HD	129502	41	3.89	1440253	-052636	L 1	19605 L	583	FU	91012006	062700	000017	502	G G=220,B=35
SAMW HD	129502	41	3.89	1440253	-052636	L 1	19605 L	590	FU	91012006	063600	000007	302	G G=60,B=35
SAMW HD	129502	41	3.9	1440253	-052636	L 3	40923 S	593	FU	91022401	015500	001300	501	G G=192,B=25
SAMW HD	129502	41	3.9	1440253	-052636	L 3	40923 L	591	FU	91022402	021700	000500	X01	G G=1.5X,B=25
USSES HD	129988	30	5.1	1442479	+271706	L 3	40848 L	2216	FU	91021002	021100	000010	500	G G=205,B=18
MA097 HD130437		26	09.96	1446583	-600443	L 1	19731 L	00410	FO	91021011	111557	000800	501	V HEAD
MA097 HD130437		26	09.96	1446583	-600443	L 1	19730 L	00413	FO	91021010	103156	000800	501	V
MCI80 HD131156		44	04.86	1449048	+191826	L 3	40635 L	27402	FO	91012007	073515	009000	341	V
MCI80 HD131156		44	04.94	1449048	+191827	H 1	19606 L	26269	FO	91012009	091940	002500	661	V
SAMW HD	133216	49	3.26	1501082	-250512	L 1	19603 L	1127	FU	91012001	012700	000105	352	G E=229,G=60,B=35
SAMW HD	133216	49	3.26	1501082	-250512	L 1	19603 L	1135	FU	91012001	013400	000105	32	G E=70,B=35
SAMW HD	133216	49	3.26	1501082	-250512	L 1	19604 L	1131	FU	91012003	030800	000600	423	G E=6,G=170,B=41
SAMW HD	133216	49	3.26	1501082	-250512	L 1	19604 L	1143	FU	91012003	032900	000600	342	G E=3X,G=110,B=39
SAMW HD	133216	49	3.3	1501082	-250512	L 1	19819 L	1093	FU	91022322	223700	000900	542	G E=6X,G=240,B=34
MQ180 MK 841		84	14.00	1501363	+103756	L 1	19648 L	00000	ED	91012506	060557	008000	441	V
MQ180 MK 841		84	14.00	1501363	+103756	L 3	40674 L	00000	ED	91012507	073028	016000	451	V
MCI80 HD134083		41	05.21	1505062	+250346	L 3	40637 L	22607	FO	91012012	121204	009500	831	V
RIASS HD	134083	41	4.9	1505062	+250346	H 1	19658 L	22042	FO	91012802	022100	003000	X34	G E=151,G=2X,B=60
CR80K HD	135262	44	8.2	1509570	+640342	H 1	20138 L	1241	FO	91041400	001200	003700	302	G G=75,B=35
PHCAL GC 20697		31	6.10	1521089	-005043	9	02422			91020801	015400	016000		G
SDMPT EG 1524+611		16	12.5	1524274	+610531	L 3	40357 L	131	SO	90121517	174800	001700	500	G G=218,B=18
SDMPT EG 1524+611		16	12.5	1524274	+610531	L 3	40358 L	131	SO	90121518	184400	035000	306	G G=150,B=75
PHCAL CT AFR 2		47	5.92	1525259	-163237	L 9	02434			91021422	224600	016000		G
PHCAL CT AFR 2		47	5.92	1525259	-163237	L 9	02435			91021423	232100	016000		G
PHCAL CT AFR 2		47	5.92	1525259	-163237	L 9	02436			91021423	235500	016000		G
MI121 HD137387		26	05.45	1526011	-731307	H 3	41240 L	19489	FO	91033107	070132	000330	500	V
MI121 HD137387		26	05.45	1526011	-731307	L 1	20030 L	19426	FO	91033107	071059	000002	500	V
MI121 HD137387		26	05.45	1526011	-731307	L 3	41241 L	19403	FO	91033108	081741	000003	500	V
USSES HD	139365	21	3.7	1535347	-293653	H 3	40902 L	879	FU	91021904	040200	000032	502	G G=195,B=35
QSMG QSO 1542+541		85	16.0	1542419	+540826	L 1	19652 L		ED	91012612	125600	039200	307	G G=126,B=90
PHCAL ED +33 2642		20	10.8	1550019	+330528	L 1	19600 L	173	FO	91011904	041500	000310	502	G G=200,B=35
PHCAL ED +33 2642		20	10.8	1550019	+330528	L 3	40631 L	171	FO	91011904	042300	000400	400	G G=160,B=18
PHCAL ED +33 2642		20	10.8	1550019	+330528	L 3	40869 L	170	FO	91021501	011200	000400	400	G G=160,B=18
PHCAL ED +33 2642		20	10.8	1550019	+330528	L 1	19759 L	172	FO	91021501	012100	000310	502	G G=215,B=40
PHCAL ED +33 2642		20	10.8	1550019	+330528	L 1	19880 L	161	FO	91031000	005600	000310	502	G G=224,B=32
PHCAL ED +33 2642		20	10.8	1550019	+330528	L 3	41075 L	165	FO	91031001	010700	000400	500	G G=170,B=18
PHCAL ED +33 2642		20	10.8	1550019	+330528	L 3	41320 L	164	FO	91040821	215400	000400	400	G G=160,B=18
PHCAL ED +33 2642		20	10.8	1550019	+330528	L 1	20105 L	165	FO	91040822	220300	000310	502	G G=210,B=38
PHCAL HD	142669	20	3.86	1553474	-290410	H 3	40881 L			91021704	040800	000030		G
PHCAL HD	142669	20	3.9	1553475	-290411	H 1	19989 L	710	FU	91032619	193100	000020	502	G G=200,B=40
PHCAL HD	142669	20	3.9	1553475	-290411	H 3	41188 L	704	FU	91032619	193600	000024	401	G G=157,B=30
MAL39 HD142983		60	05.08	1555231	-140812	L 1	20016 L	24353	FO	91033004	045640	000002	501	V 5 CBC TICKS
BEMF HD	142983	26	4.8	1555231	-140812	L 3	41214 L	260	FU	91032921	210900	000002	400	G G=135,B=15
MAL39 HD142983		60	05.07	1555231	-140812	L 3	41220 L	24443	FO	91033006	060910	000002	400	V 6 CBC TICKS
BEMF HD	142983	26	4.8	1555231	-140812	L 1	20012 L	260	FU	91032921	211700	000002	402	G G=180,B=38
MAL39 HD142983		60	05.04	1555231	-140812	L 1	20018 L	24950	FO	91033008	083659	000002	501	V 5 CBC TICKS
BEMF HD	142983	26	4.8	1555231	-140812	L 3	41216 L	246	FU	91033000	004400	000002	400	G G=155,B=18
MAL39 HD142983		60	05.05	1555231	-140812	L 3	41223 L	24709	FO	91033009	094418	000003	500	V 7 CBC TICKS
BEMF HD	142983	26	4.8	1555231	-140812	L 1	20014 L	247	FU	91033000	005000	000002	502	G G=195,B=32

FRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	numms	stt	EC	Comment
MAL39 HD142983		60	05.07	1555231	-140812	H 3	41219 L	24445	FO	91033004	044729	000330		500	V
HMGP HD	142983	26	4.8	1555231	-140812	H 3	41217 L	249	FU	91033001	012600	000330		502	G G=195,B=32
MAL39 HD142983		60	05.02	1555231	-140812	H 3	41222 L	25207	FO	91033008	082746	000330		400	V
HMGP HD	142983	26	4.8	1555231	-140812	H 3	41225 L	24796	FO	91033012	124100	000330		502	G G=200,B=38
MAL39 HD142983		60	05.03	1555231	-140812	L 1	20029 L	24998	FO	91033104	044310	000002			V 6 CBC TICKS
HMGP HD	142983	26	4.8	1555231	-140812	L 3	41226 L	24719	FO	91033013	131800	000002		400	G G=150,B=18
MAL39 HD142983		60	05.05	1555231	-140812	L 3	41239 L	24780	FO	91033105	054547	000004		500	V 9 CBC TICKS
HMGP HD	142983	26	4.8	1555231	-140812	L 1	20020 L	24845	FO	91033013	132400	000002		502	G G=200,B=35
MAL39 HD142983		60	05.00	1555231	-140812	H 3	41261 L	25474	FO	91040107	071210	000345		500	V
HMGP HD	142983	26	4.8	1555231	-140812	H 3	41228 L	25070	FO	91033016	160200	000345		502	G G=210,B=35
MAL39 HD142983		60	05.01	1555231	-140812	L 3	41256 L	25287	FO	91040101	010132	000003		500	V 8 CBC TICKS
HMGP HD	142983	26	4.8	1555231	-140812	L 1	20022 L	24931	FO	91033016	164100	000002		501	G G=200,B=30
MAL39 HD142983		60	05.02	1555231	-140812	L 1	20041 L	25199	FO	91040103	034648	000002		502	V 5 CBC TICKS
HMGP HD	142983	26	4.8	1555231	-140812	L 3	41229 L	24707	FO	91033016	164700	000003		500	G G=205,B=18
MAL39 HD142983		60	05.02	1555231	-140812	L 3	41259 L	25179	FO	91040104	044415	000003		500	V 8 CBC TICKS
HMGP HD	142983	26	4.8	1555231	-140812	H 3	41232 L	251	FU	91033021	213300	000330		502	G G=215,B=40
MAL39 HD142983		60	05.02	1555231	-140812	H 3	41238 L	25205	FO	91033104	043332	000345		500	V
HMGP HD	142983	26	4.8	1555231	-140812	L 1	20025 L	256	FU	91033022	220800	000002		502	G G=205,B=31
MAL39 HD142983		60	05.00	1555231	-140812	H 3	41258 L	25344	FO	91040103	033751	000345		500	V
HMGP HD	142983	26	4.8	1555231	-140812	L 3	41233 L	249	FU	91033022	221300	000002		500	G G=200,B=15
MAL39 HD142983		60	05.01	1555231	-140812	L 1	20043 L	25276	FO	91040107	072116	000002		502	V 5 CBC TICKS
HMGP HD	142983	26	4.8	1555231	-140812	H 3	41235 L	250	FU	91033100	005600	000335		502	G G=190,B=32
MAL39 HD142983		60	05.01	1555231	-140812	L 3	41262 L	25379	FO	91040108	082035	000003		500	V 8 CBC TICKS
HMGP HD	142983	26	4.8	1555231	-140812	L 1	20027 L	249	FU	91033101	013200	000002		402	G G=170,B=35
HMGP HD	142983	26	4.8	1555231	-140812	L 3	41236 L	249	FU	91033101	013700	000003		500	G G=178,B=15
HMGP HD	142983	26	4.8	1555231	-140812	H 3	41243 L	25476	FO	91033110	103900	000345		502	G G=200,B=35
HMGP HD	142983	26	4.8	1555231	-140812	L 3	41244 L	25290	FO	91033111	111300	000003		500	G G=180,B=18
HMGP HD	142983	26	4.8	1555231	-140812	L 1	20032 L	25357	FO	91033111	111800	000002		402	G G=170,B=35
HMGP HD	142983	26	4.8	1555231	-140812	H 3	41246 L	25655	FO	91033114	140700	000345		502	G G=200,B=35
HMGP HD	142983	26	4.8	1555231	-140812	L 3	41247 L	25290	FO	91033115	150000	000003		500	G G=180,B=18
HMGP HD	142983	26	4.8	1555231	-140812	L 1	20034 L	25396	FO	91033115	150500	000002		402	G G=170,B=35
HMGP HD	142983	26	4.8	1555231	-140812	H 3	41249 L	24751	FO	91033117	175900	000345		502	G G=210,B=35
HMGP HD	142983	26	4.8	1555231	-140812	L 3	41250 L	25172	FO	91033118	183500	000003		500	G G=210,B=18
HMGP HD	142983	26	4.8	1555231	-140812	L 1	20036 L	25139	FO	91033118	184000	000002		502	G G=200,B=32
HMGP HD	142983	26	4.8	1555231	-140812	H 3	41252 L	251	FU	91033121	210200	000345		503	G G=220,B=48
HMGP HD	142983	26	4.8	1555231	-140812	L 3	41253 L	246	FU	91033121	213700	000003		500	G G=190,B=18
HMGP HD	142983	26	4.8	1555231	-140812	L 1	20038 L	254	FU	91033121	214200	000002		402	G G=180,B=32
HMGP HD	142983	26	4.8	1555231	-140812	H 3	41255 L	252	FU	91040100	001400	000345		502	G G=200,B=32
AMER HD	144206	36	4.8	1601143	+461042	H 3	40556 L	306	FU	91011101	015100	000500		502	G G=210,B=35
AMER HD	144206	36	4.8	1601143	+461042	H 1	19539 L	305	FU	91011102	022600	000215		503	G G=207,B=42
AMER HD	144206	36	4.8	1601143	+461042	H 3	40557 L	307	FU	91011102	023500	000500		502	G G=205,B=35
AMER HD	144206	36	4.8	1601143	+461042	H 1	19540 L	308	FU	91011103	031400	000215		502	G G=210,B=39
AMER HD	144206	36	4.8	1601143	+461042	H 1	19541 L	305	FU	91011104	041500	000320		X03	G G=1.5X,B=43
AMER HD	144206	36	4.8	1601143	+461042	H 3	40558 L	307	FU	91011104	042600	000700		X02	G G=1.5X,B=40
AMER HD	144206	36	4.8	1601143	+461042	H 1	19542 L	306	FU	91011105	052400	000320		X02	G G=1.5X,B=40
AMER HD	144206	36	4.8	1601143	+461042	H 3	40559 L	302	FU	91011105	053400	000700		X02	G G=1.5X,B=38
AMER HD	144206	36	4.8	1601143	+461042	H 1	19543 L	275	FU	91011106	063400	000215		502	G G=205,B=40
AMER HD	144206	36	4.8	1601143	+461042	H 3	40560 L	309	FU	91011106	064300	000500		502	G G=210,B=35
AMER HD	144206	36	4.8	1601143	+461042	L 1	19560 L	316	FU	91011301	015100	000008		502	G G=200,B=35
AMER HD	144206	36	4.8	1601143	+461042	H 3	40576 L	309	FU	91011302	022900	000700		X02	G G=1.5X,B=38

IFO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mmmsst	ECC	Comment
AEMSR HD	144206	36	4.8	1601143	+461042	H 1	19561 L	308	FU	91011303	030500	000320	X03	G C=1.5X,B=45
AEMSR HD	144206	36	4.8	1601143	+461042	H 3	40577 L	306	FU	91011303	034100	000940	X02	G C=2X,B=37
AEMSR HD	144206	36	4.8	1601143	+461042	H 1	19562 L	305	FU	91011304	042000	000530	X02	G C=2X,B=35
AEMSR HD	144206	36	4.8	1601143	+461042	H 3	40578 L	307	FU	91011304	045400	000940	X02	G C=2X,B=40
AEMSR HD	144206	36	4.8	1601143	+461042	H 1	19563 L	313	FU	91011305	053000	000630	X02	G C=2.5X,B=38
AEMSR HD	144206	36	4.8	1601143	+461042	H 3	40579 L	311	FU	91011306	061400	000940	X02	G C=2X,B=38
AEMSR HD	144206	36	4.8	1601145	+461042	L 3	40575 L	315	FU	91011301	014100	000016	500	G C=200,B=20
MEL80 AG DFA		57	10.18	1601240	+665630	L 3	40226 S	00337	FO	90112916	164327	000200	230	V
MEL80 AG DFA		57	10.18	1601240	+665630	L 3	40226 L	00337	FO	90112916	162621	001000	350	V
MEL80 AG DFA		57	10.19	1601240	+665630	L 1	19313 S	00334	FO	90112917	172740	000400	232	V
MEL80 AG DFA		57	10.19	1601240	+665630	L 1	19313 L	00334	FO	90112916	165338	001000	342	V
MEL80 AG DFA		57	10.19	1601240	+665630	H 3	40227 L	00334	FO	90112917	173659	007100	151	V
MCL63 SPO 84184		48	09.46	1602543	+274626	L 1	19842 L	00640	FO	91022709	095213	001000	110	V
SPOW HD	144608	45	4.3	1604281	-204406	L 1	19818 S	387	FU	91022321	213100	000100	502	G C=249,B=34
SPOW HD	144608	45	4.3	1604281	-204406	L 1	19818 L	384	FU	91022321	214100	000200	502	G C=234,B=34
USBS HD	146051	49	2.8	1611432	-033407	H 1	19803 L	1783	FU	91022000	002900	001000	351	G B=197,C=65,B=27
MQL80 MK 876		84	15.20	1613361	+655037	L 3	40289 L	00000	EO	90120809	095255	024000	351	V
MQL80 MK 876		84	15.20	1613361	+655037	L 1	19372 L	00000	EO	90120813	135845	017000	351	V
MQL80 MK 876		84	15.20	1613362	+655037	L 3	40274 L	00000	EO	90120510	105330	024000	351	V
MQL80 MK876		84	15.20	1613362	+655037	L 1	19355 L	00000	EO	90120514	145642	010900	342	V
MQL80 MK 876		84	15.20	1613362	+655037	L 3	40305 L	00000	EO	90121010	100818	024000	351	V
MQL80 MK876		84	15.20	1613362	+655037	L 1	19380 L	00000	EO	90121014	141322	015400	401	V
MQ046 MK 876		84	15.20	1613362	+655037	L 3	40928 L	00000	EO	91022505	054040	020000	351	V
MQ046 MK 876		84	15.20	1613362	+655038	L 1	19877 L	00000	EO	91030908	082403	014300	402	V
MQL80 MK876		84	15.50	1613522	+654908	L 3	40246 L	00000	EO	90120210	103336	024000	351	V
MQL80 MK876		84	15.50	1613522	+654908	L 1	19339 L	00000	EO	90120214	144116	012500	441	V
PHCAL CD-3810980		37	11.16	1620099	-390648	H 1	20114 L	00141	FO	91041006	060004	016700	502	V
PHCAL -3810980		37	10.9	1620099	-390648	L 3	40877 L			91021622	221400	000200		G
PHCAL NULL		99	99.99	1620099	-390648	L 3	41338 L	00000		91041007	070000	000000	004	V HI-GAIN READ
PHCAL -3810980		37	10.9	1620099	-390648	L 1	19782 L			91021622	225000	000700		G
PHCAL NULL		99	99.99	1620099	-390648	L 3	41339 L	00000		91041007	073000	000000	000	V
PHCAL -3810980		37	10.9	1620099	-390648	L 3	40878 L			91021623	230600	000600		G
PHCAL NULL		99	99.99	1620099	-390648	L 2	18553 L	00000		91042502	025500	000000	000	V HI-GAIN READ
PHCAL -3810980		37	10.9	1620099	-390648	L 1	19783 L			91021623	234300	000330		G
PHCAL -3810980		37	10.9	1620099	-390648	L 3	40879 L			91021700	004900	000200		G
PHCAL -3810980		37	10.9	1620099	-390648	L 1	19784 L			91021701	010300	000700		G
PHCAL -3810980		37	10.9	1620099	-390648	L 3	40880 L			91021701	013500	000200		G
PHCAL CD-3810980		37	11.18	1620100	-390649	L 3	41168 L	00138	FO	91032408	084622	000200	500	V FB#1.08
PHCAL -3810980		37	10.9	1620100	-390649	L 1	19781 L	162	FO	91021620	204600	000330	502	G C=228,B=32
PHCAL CD-3810980		37	11.18	1620100	-390649	L 1	19975 L	00139	FO	91032408	085429	000230	501	V FB#1.26
PHCAL -3810980		37	10.9	1620100	-390649	L 1	19785 L	181	FO	91021720	205000	000320	X02	G C=1.5X,B=33
PHCAL CD-3810980		37	11.18	1620100	-390649	L 3	41169 L	00139	FO	91032410	100231	000200	500	V FB#0.72
PHCAL -3810980		37	10.9	1620100	-390649	L 3	40892 L	183	FO	91021720	205800	000200	500	G C=222,B=18
PHCAL CD-3810980		37	11.18	1620100	-390649	L 1	19976 L	00139	FO	91032410	100854	000230	501	V FB#0.84
PHCAL -3810980		37	10.9	1620100	-390649	L 1	19786 L	183	FO	91021721	213700	000600	X02	G C=2X,B=35
PHCAL CD-3810980		37	11.20	1620100	-390649	H 1	20113 L	00136	FO	91041002	021809	018000	502	V
PHCAL -3810980		37	10.9	1620100	-390649	L 3	40893 L	185	FO	91021722	221400	000600	X00	G C=3X,B=18
PHCAL NULL		99	99.99	1620100	-390649	L 3	41330 L	00000		91041002	023000	000000	003	V HI-GAIN READ
PHCAL -3810980		37	10.9	1620100	-390649	L 1	19787 L	186	FO	91021723	231200	000300	502	G C=230,B=35
PHCAL 60% CALLV		99	99.99	1620100	-390649	L 3	41331 L	00000		91041003	030519	000149	006	V FINAL UWF TEMP=36



PRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mmmsst	ECC	Comment
PHCAL	-3810980	37	10.9	1620100	-390649	L 3	40894 L	184	FO	91021723	232200	000200	500	G G=220,B=18
PHCAL	20% CALV	99	99.99	1620100	-390649	L 3	41332 L	00000		91041003	033940	000036	002	V FINAL UMF TEMP=33
PHCAL	-3810980	37	10.9	1620100	-390649	L 1	19788 L	186	FO	91021800	000200	000600	X02	G G=2X,B=38
PHCAL	120% CALV	99	99.99	1620100	-390649	L 3	41333 L	00000		91041004	041036	000338	009	V FINAL UMF TEMP=40
PHCAL	-3810980	37	10.9	1620100	-390649	L 3	40895 L	187	FO	91021800	004400	000600	X00	G G=3X,B=18
PHCAL	60% CALV	99	99.99	1620100	-390649	L 3	41334 L	00000		91041004	044356	000149	006	V FINAL UMF TEMP=37
PHCAL	-3810980	37	10.9	1620100	-390649	L 1	19789 L	188	FO	91021801	014100	000300	502	G G=221,B=35
PHCAL	100% TFLOD	99	99.99	1620100	-390649	L 3	41335 L	00000		91041006	060921	000016	00X	V
PHCAL	-3810980	37	10.9	1620100	-390649	L 3	40896 L	188	FO	91021801	014900	000200	500	G G=210,B=18
PHCAL	160% CALV	99	99.99	1620100	-390649	L 3	41336 L	00000		91041006	064025	000451	00X	V
PHCAL	-3810980	37	10.9	1620100	-390649	L 1	19794 L	185	FO	91021900	002900	000300	502	G G=235,B=35
PHCAL	SECOND REA	99	99.99	1620100	-390649	L 3	41337 L	00000		91041006	064025	000000	000	V
PHCAL	-3810980	37	10.9	1620100	-390649	L 1	19795 L	184	FO	91021901	011000	000600	X02	G G=2X,B=38
PHCAL	CD-3810980	37	11.14	1620100	-390649	L 3	41345 L	00143	FO	91041102	021308	000200	510	V
PHCAL	-3810980	37	10.9	1620100	-390649	L 1	19796 L	185	FO	91021901	015600	000600	X02	G G=2X,B=35
PHCAL	CD-3810980	37	11.15	1620100	-390649	L 1	20119 L	00142	FO	91041102	022109	000230	510	V
PHCAL	38 10980	37	10.9	1620100	-390649	H 3	40922 L	155	FO	91022318	184500	012500	403	G G=155,B=47
PHCAL	CD-3810980	37	11.15	1620100	-390649	H 3	41346 L	00142	FO	91041103	034455	013500	411	V
PHCAL	-3810980	17	10.9	1620100	-390649	L 3	41170 L	142	FO	91032411	113400	000200	500	G G=210,B=15
PHCAL	CD-3810980	37	11.14	1620100	-390649	H 1	20120 L	00144	FO	91041107	073100	007600	410	V
PHCAL	-3810980	17	10.9	1620100	-390649	L 1	19977 L	143	FO	91032411	114500	000330	X02	G G=1.5X,B=35
PHCAL	CD-38 1098	37	11.22	1620100	-390649	H 3	41379 L	00134	FO	91041405	055116	017500	401	V
PHCAL	-3810980	17	10.9	1620100	-390649	L 1	19978 L	142	FO	91032412	124900	000700	X02	G G=2.5X,B=38
PHCAL	NULL	99	99.99	1620100	-390649	L 1	20224 L	00000		91042402	025333	000000	005	V HI-GAIN READ
PHCAL	-3810980	17	10.9	1620100	-390649	L 3	41171 L	139	FO	91032413	130600	000600	X00	G G=3X,B=15
PHCAL	60% CALV	99	99.99	1620100	-390649	L 1	20225 L	00000		91042403	032927	000000	006	V FINAL UMF TEMP=39
PHCAL	-3810980	37	10.9	1620100	-390649	H 3	41435 L	130	FO	91042021	214800	018000	404	G G=205,B=58
PHCAL	20% CALV	99	99.99	1620100	-390649	L 1	20226 L	00000		91042404	043212	000000	002	V FINAL UMF TEMP=36
PHCAL	38 10980	37	10.9	1620100	-390649	H 3	41495 L	130	FO	91042710	100800	036000	X07	G G=2X,B=90
PHCAL	120% CALV	99	99.99	1620100	-390649	L 1	20227 L	00000		91042405	053100	000000	009	V FINAL UMF=33
PHCAL	T FLOD	99		1620100	-390649	L 1	20253 L			91042810	101500	000115	X9	G B=1.5X,B=210
PHCAL	60% CALV	99	99.99	1620100	-390649	L 1	20228 L	00000		91042406	062043	000204	005	V FINAL UMF=35
PHCAL	T FLOD	99		1620100	-390649	L 1	20254 L			91042810	104700	000100	39	G B=215,B=185
PHCAL	100% TFLOD	99	99.99	1620100	-390649	L 1	20229 L	00000		91042407	075902	000140	000	V
PHCAL	T FLOD	99		1620100	-390649	L 1	20255 L			91042811	111900	000045	39	G B=211,B=145
PHCAL	CD-38 1098	37	11.30	1620100	-390649	H 3	41466 L	00124	FO	91042402	024111	020000	501	V
PHCAL	T FLOD	99		1620100	-390649	L 1	20256 L			91042811	114800	000030	39	G B=160,B=110
PHCAL	CD-3810980	37	11.15	1620100	-390649	H 3	41467 L	00142	FO	91042407	070825	009900	301	V
PHCAL	T FLOD	99		1620100	-390649	L 1	20257 L			91042812	121800	000015	35	G B=120,B=70
PHCAL	NULL	99	99.99	1620100	-390649	L 2	18552 L	00000		91042501	015022	000000	001	V
PHCAL	T FLOD	99		1620100	-390649	L 1	20258 L			91042812	124500	000015	35	G B=125,B=65
PHCAL	60% CALV	99	99.99	1620100	-390649	L 2	18554 L	00000		91042503	032915	000234	005	V FINAL UMF TEMP=40
PHCAL	T FLOD	99		1620100	-390649	L 1	20259 L			91042813	131400	000030	39	G B=160,B=115
PHCAL	20% CALV	99	99.99	1620100	-390649	L 2	18555 L	00000		91042504	042310	000051	002	V FINAL UMF TEMP=37
PHCAL	T FLOD	99		1620100	-390649	L 1	20260 L			91042813	134300	000045	39	G B=210,B=150
PHCAL	120% CALV	99	99.99	1620100	-390649	L 2	18556 L	00000		91042505	051601	000509	009	V FINAL UMF TEMP=43
PHCAL	T FLOD	99		1620100	-390649	L 1	20261 L			91042814	141200	000045	39	G B=210,B=150
PHCAL	60% CALV	99	99.99	1620100	-390649	L 2	18557 L	00000		91042505	055146	000234	005	V FINAL UMF TEMP=39
PHCAL	T FLOD	99		1620100	-390649	L 1	20262 L			91042814	143900	000030	39	G B=160,B=110
PHCAL	100% TFLOD	99	99.99	1620100	-390649	L 2	18558 L	00000		91042506	063740	000030	000	V

PRO	Object	CL	MPG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	numscnt	REC	Comment		
PHAL	T FLOOD	99		1620100	-390649	L 1	20263 L			91042815	150700	000015	36 G	B=120, B=75		
PHAL	160% CAILV	99	99.99	1620100	-390649	L 2	18559 L	00000		91042507	071530	000652	009 V	FINAL UAF TEMP=31		
PHAL	2ND READ	99	99.99	1620100	-390649	L 2	18560 L	00000		91042507	073900	000000	000 V	SECOND READ		
PHAL	NULL	99	99.99	1620100	-390649	L 2	18561 L	00000		91042508	080930	000000	006 V	HI-GAIN READ		
PHAL	NULL	99	99.99	1620100	-390649	L 1	20235 L	00000		91042508	083350	000000	000 V			
CMDS	HD	147513	44	5.4	1620377	-390441	H 1	19943 L	15904	FO	91031802	020800	002400	541 G	B=157, G=218, B=30	
IGMS	HR	6134	49	0.96	1626202	-261922	H 1	19757 L	8488	FU	91021421	213600	000215	543 G	B=174, G=200, B=41	
IGMS	HR	6134	49	0.96	1626202	-261922	L 1	19758 L	8582	FU	91021422	221400	000002	552 G	B=232, G=240, B=32	
CMRS	HD	148478	49	0.96	1626202	-261922	L 1	19829 L	8802	FU	91022418	184000	003000	402 G	G=150, B=40	
CMRS	HD	148478	49	1.0	1626202	-261922	L 3	40927 L	8785	FU	91022419	192800	003000	500 G	G=192, B=20	
CMRS	HD	148478	49	0.9 C	1626202	-261922	L 1	19830 L	8731	FU	91022420	201600	000502	302 G	G=120, B=34	
IGMS	6134	49	1.0	1626202	-261922	H 1	19871 L	8642	FU	91030821	212200	000215	543 G	B=173, G=215, B=42		
IGMS	6134	49	1.0	1626202	-261922	L 1	19872 L	8562	FU	91030821	215800	000002	502 G	G=235, B=35		
IGMS	6134	49	1.0	1626202	-261922	H 1	19873 L	8603	FU	91030822	223400	000230	X43 G	B=183, G=1.5X, B=45		
CMRS	HD	148478	49	0.96	1626202	-261922	L 1	19960 L	8368	FU	91032123	235100	011000	453 G	B=209, G=160, B=45	
CMRS	HD	148478	49	0.96	1626202	-261922	L 3	41153 L	8404	FU	91032201	015400	003000	500 G	G=235, B=18	
CMRS	HD	148478	49	0.96	1626202	-261922	L 3	41153 L	8363	FU	91032202	023400	000002	400 G	G=145, B=18	
IGMS	HR	6134	49	1.0	1626202	-261922	L 1	20161 L	8994	FU	91041621	213600	000002	502 G	G=242, B=32	
IGMS	6134	49	1.0	1626202	-261922	H 1	20162 L	9017	FU	91041622	221500	000215	442 G	B=168, G=170, B=40		
CMRS	HD	148478	49	0.96	1626202	-261922	L 1	20233 L	9028	FU	91042423	233300	000001	302 G	G=107, B=33	
CMRS	HD	148478	49	0.96	1626202	-261922	L 3	41472 L	9038	FU	91042423	233900	000001	300 G	G=65, B=18	
IMDM	HD	148422	23	8.65	1626530	-562315	H 3	41348 L	1101	FO	91041113	135000	018000	504 G	G=220, B=60	
SAMW	HD	148783	49	4.7	1626598	+415926	L 1	19820 L	493	FU	91022323	234600	001600	X03 G	G=2X, G=177, B=46	
SAMW	HD	148783	49	4.7	1626598	+415926	L 1	19820 S	492	FU	91022400	001100	001600	33 G	B=74, B=46	
SAMW	HD	148783	49	4.7	1626598	+415926	L 1	19822 L	492	FU	91022404	041600	001000	3X2 G	B=1.5X, G=80, B=34	
SAMW	HD	148783	49	4.7	1626598	+415926	L 1	19822 S	492	FU	91022404	043500	001400	242 G	B=151, G=47, B=34	
SEMC	EARTH	01		1630029	+150121	H 3	40911 L		EO	91022122	223600	010000	X0 G	B=1.5X, B=18		
SEMC	EARTH	01		1630030	+150121	H 1	19808 L		EO	91022122	223700	010000	302 G	G=80, B=40		
SEMC	EARTH	01		1630030	+150121	H 1	19808 L		EO	91022122	223700	010000	302 G	G=80, B=40		
XSMH	1631+781	37	13.1	1631307	+781102	L 3	40078 L	109	SO	90110807	072500	000900	500 G	G=215, B=18		
XSMH	1631+781	37	13.1	1631307	+781102	L 1	19174 L	107	SO	90110807	074200	001800	503 G	G=250, B=42		
XSMH	1631+781	37	13.1	1631307	+781102	L 3	40079 S	109	SO	90110808	081800	001700	500 G	G=200, B=20		
PHAL	TRU SCO	20	2.84	1632459	-280651	H 3	41319 L	1928	FU	91040820	203300	000006	402 G	G=175, B=33		
PHAL	TRU SCO	20	2.84	1632459	-280651	H 1	20104 L	1923	FU	91040820	203800	000006	502 G	G=210, B=40		
PHAL	HD	149757	12	2.5	1634241	-102803	H 3	41190 L	2185	FU	91032622	220800	000019	502 G	G=190, B=34	
PHAL	HD	149757	12	2.5	1634241	-102803	H 1	19991 L	2191	FU	91032622	221300	000011	502 G	G=220, B=40	
MCL80	HD	150708	44	08.74	1638218	+604750	L 3	40549 L	01226	FO	91010807	075538	010000	300 V		
MCL80	HD	150708	44	08.75	1638218	+604750	H 1	19524 L	01216	FO	91010809	094352	030300	332 V		
AGMW	3C 345	85	16	1641176	+395411	L 1	19845 L		EO	91022717	171900	020100	305 G	G=140, B=62		
AGMW	3C 345	85	15.9	1641176	+395411	L 3	40952 L		EO	91022817	171700	017500	302 G	G=78, B=40		
AGMW	3C 345	85	15.5	1641176	+395411	L 1	19890 L		EO	91031023	235900	017000	334 G	B=103, G=100, B=52		
AGMW	3C345	85	16.0	1641176	+395411	L 3	41102 L		EO	91031411	114600	018000	302 G	G=70, B=32		
AGMW	3C345	85	16.0	1641176	+395411	L 1	19967 L		EO	91032312	120000	018000	339 G	B=212, G=230, B=178		
AGMW	3C345	85	16.0	1641176	+395411	L 3	41163 L		EO	91032315	150800	018000	308 G	G=150, B=100		
AGMW	3C 345	85	16.0	1641176	+395411	L 1	20009 L		EO	91032912	120300	009000		G B=1.5X		
AGMW	3C 345	85	16.0	1641176	+395411	L 3	41211 L		EO	91032915	155200	011500	309 G	G=245, B=210		
AGMW	3C 345	85	15.9	1641176	+395411	L 3	41454 L		EO	91042214	144300	015000	301 G	G=70, B=30		
AGMW	3C 345	85	15.9	1641176	+395411	L 1	20231 L		EO	91042419	190600	016500	305 G	G=110, B=70		
IGMTA	ED	-18	4320	50	6.89	1642346	-190247	L 3	41139 L	6404	FO	91031913	135800	030000	03 G	B=45
IMPF	HD	151527	30	6.0	1645364	-144920	H 3	40937 L	10091	FO	91022621	215900	004000	302 G	G=135, B=38	

FFO	Object	CL	MAG	R.A.	DEC	D C	Image A	EES	MD	Obs. date	Exptim	numscst	ETC	Comment
IMFF HD	151527	30	6.0	1645364	-144920	H 1	19838 L	10158	FO	91022622	224700	002000	403 G	G=180, B=47
IMFF HD	151527	30	6.0	1645364	-144920	H 3	40938 L	10085	FO	91022623	232400	007000	404 G	G=205, B=60
IMFF HD	151527	30	6.0	1645364	-144920	H 1	19839 L	10118	FO	91022700	004300	002500	503 G	G=203, B=47
IMFF HD	151527	30	6.0	1645364	-144920	H 3	40939 L	9985	FO	91022701	011900	008000	503 G	G=215, B=48
IMFF HD	151527	30	6.0	1645364	-144920	H 1	19840 L	10033	FO	91022702	025100	001300	403 G	G=181, B=45
IMFF HD	151527	30	6.0	1645364	-144920	H 3	40940 L	10080	FO	91022704	040200	004700	402 G	G=150, B=38
SMDW HD	151769	41	4.6	1647039	-104146	L 1	19821 S	302	FU	91022403	031400	000200	X02 G	G=2X, B=38
SMDW HD	151769	41	4.6	1647039	-104146	L 1	19821 L	303	FU	91022403	032300	000043	502 G	G=217, B=38
OBMC HD	151804	13	5.22	1648041	-410847	H 3	40980 L	19227	FO	91030223	234300	000400	502 G	G=210, B=40
MA137 HD151804	13	05.37	1648042	-410848	H 3	40977 L	20175	FO	91030208	082933	000410	501 V		
OBMC HD	151804	13	5.2	1648042	-410847	H 3	40989 L	19219	FO	91030316	164200	000400	552 G	B=226, G=215, B=35
OBMC HD	151804	13	5.2	1648042	-410847	H 3	40990 L	19359	FO	91030317	171400	000400	552 G	B=235, G=210, B=35
WRMC HD	151992	11	6.6	1648484	-414617	L 1	20194 L	7351	FO	91041920	203900	000030	X42 G	B=157, G=2.5X, B=35
IMDM HD	151990	13	9.4	1649310	-523300	H 3	41187 L	532	FO	91032615	152900	020000	404 G	G=190, B=58
IMDM HD	151990	13	9.4	1649310	-523300	H 3	41347 L	553	FO	91041109	098800	021000	404 G	G=195, B=58
OBMC HD	152236	12	4.8	165027	-421700	H 3	40994 L	304	FU	91030321	214900	002500	502 G	G=215, B=40
OBMC HD	152236	12	4.8	1650280	-421700	L 3	40995 L	299	FU	91030322	224200	000018	400 G	G=140, B=18
MA137 HD152218	13	11.26	1650293	-413801	H 3	40978 L	00129	FO	91030209	093640	004000	001 V	WRONG OBJECT	
OBMC HD	152218	12	7.6	1650293	-413800	H 3	40985 L	2569	FO	91030312	120000	005000	402 G	G=170, B=40
OBMC HD	152218	12	7.6	1650293	-413800	H 3	40986 L	2587	FO	91030313	132200	005300	402 G	G=175, B=40
OBMC HD	152218	12	7.6	1650293	-413800	H 3	40993 L	2571	FO	91030320	200200	006000	503 G	G=210, B=45
OBMC HD	152233	12	6.59	1650326	-414237	H 3	40981 L	6768	FO	91030300	003200	001640	402 G	G=190, B=40
OBMC HD	152233	12	6.7	1650326	-414237	H 3	40987 L	6592	FO	91030314	145400	001640	542 G	B=159, G=195, B=35
OBMC HD	152233	12	6.7	1650326	-414237	H 3	40988 L	6596	FO	91030315	154100	001640	542 G	B=176, G=190, B=35
OBMC HD	152623	12	6.68	1652462	-403453	H 3	40982 L	6176	FO	91030301	013000	001640	502 G	G=205, B=40
OBMC HD	152623	12	6.68	1652462	-403453	H 3	40983 L	6163	FO	91030302	021900	001640	502 G	G=210, B=40
OBMC HD	152623	12	6.7	1652462	-403453	H 3	40991 L	5976	FO	91030318	181000	001640	502 G	G=210, B=40
OBMC HD	152623	12	6.7	1652462	-403453	H 3	40992 L	5843	FO	91030318	185900	001640	502 G	G=210, B=40
MCL63 SPO 141439	48	09.14	1652463	-081518	L 3	40943 L	00855	FO	91022710	103902	005800	040 V	2 EXPOSURES	
MCL63 SPO GL644	48	9.0	1652463	-081518	L 3	40944 L	839	FO	91022712	122400	004800	21 G	B=34, B=24	
MCL63 SPO 141439	48	99.99	1652463	-081518	L 1	19843 L	00000		91022711	114702	001000	010 V	DRIFTED OUT ?	
MCL63 SPO GL644	48		1652463	-081518	L 3	40945 L	847	FO	91022714	140400	002200	21 G	B=36, B=24	
MCL63 SPO GL644	48	9.0	1652463	-081518	L 1	19844 L	843	FO	91022715	150600	001000	242 G	B=178, G=48, B=38	
MCL63 SPO GL644	48	9.0	1652463	-081518	L 3	40946 L	825	FO	91022715	153400	003000	20 G	B=40, B=20	
PHCAL GC 22938	47	6.11	1658263	+564540	9	02421			91020801	012600	016000	G		
ISMIS HD	154368	13	6.1	1703085	-352305	H 3	41364 L	8780	FO	91041209	095800	014000	X55 G	B=228, G=2X, B=65
ISMIS HD	154368	13	6.1	1703085	-352305	L 1	20123 L	8958	FO	91041212	124800	000017	X02 G	G=1.5X, B=34
ISMIS HD	154368	13	6.1	1703085	-352305	H 3	41365 L	9089	FO	91041213	130500	007000	543 G	B=166, G=195, B=42
ISMIS HD	154368	13	6.1	1703085	-352305	L 1	20124 L	8970	FO	91041214	142000	000045	X02 G	G=4X, B=35
ISMIS HD	154368	13	6.1	1703085	-352305	H 3	41366 L	9234	FO	91041214	145700	007000	443 G	B=158, G=190, B=42
ISMIS HD	154368	13	6.1	1703085	-352305	H 1	20125 L	8888	FO	91041216	161300	004000	X03 G	G=2X, B=50
PHCAL HD155763	25	03.40	1708381	+654634	H 3	40258 L	01237	FU	90120312	120908	000045	500 V		
PHCAL HD155763	25	03.40	1708381	+654634	H 3	40259 L	01230	FU	90120313	132138	000045	500 V		
PHCAL HD155763	25	03.29	1708381	+654634	H 3	40260 L	01363	FU	90120314	140246	000045	500 V		
PHCAL HD155763	25	03.26	1708381	+654634	H 1	19345 L	01400	FU	90120314	143438	000025	501 V		
PHCAL HD155763	25	03.31	1708381	+654634	H 1	19346 L	01336	FU	90120315	151022	000025	501 V		
PHCAL HD155763	25	03.32	1708381	+654634	H 1	19347 L	01321	FU	90120315	154718	000025	501 V		
PHCAL HD155763	25	03.33	1708381	+654634	L 3	40261 L	01310	FU	90120316	160735	000001	500 V		
PHCAL HD155763	25	03.32	1708381	+654634	L 3	40262 L	01321	FU	90120316	163503	000001	500 V		
PHCAL HD155763	25	03.35	1708381	+654634	L 1	19661 L	01289	FU	91012906	080439	000000	500 V	1 CBC TICK	



PRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.	date	Exptim	num	inst	ROC	Comment
PHCAL	HD155763	25	03.35	1708381	+654634	L 1	19662 L	01285	FU	91012906	063912	000000			500 V 1	CEC TICK
PHCAL	HD155763	25	03.40	1708381	+654634	L 1	19663 L	01235	FU	91012907	071320	000000			500 V 1	CEC TICK
PHCAL	HD155763	25	03.31	1708381	+654634	L 1	19664 L	01333	FU	91012907	074744	000000			500 V 1	CEC TICK
PHCAL	HD155763	25	03.36	1708381	+654634	L 1	19665 L	01276	FU	91012908	082323	000000			500 V 1	CEC TICK
PHCAL	HD155763	25	03.34	1708381	+654634	L 1	19666 L	01295	FU	91012908	085558	000001			700 V	
PHCAL	HD155763	25	03.34	1708381	+654634	L 1	19667 L	01304	FU	91012909	092959	000001			700 V	
PHCAL	HD155763	25	03.34	1708381	+654634	L 1	19668 L	01302	FU	91012910	100603	000001			700 V	
PHCAL	HD 155763	25	03.43	1708381	+654634	L 1	19669 L	01201	FU	91012910	103856	000001			700 V	
PHCAL	HD155763	25	03.35	1708381	+654634	L 1	19670 L	01294	FU	91012911	111138	000001			700 V	PREAD
PHCAL	HD155763	25	03.28	1708381	+654634	L 3	40702 L	01373	FU	91013007	074830	000000			300 V 1	CEC TICK
PHCAL	HD155763	25	03.34	1708381	+654634	L 3	40703 L	01303	FU	91013008	082137	000000			300 V 1	CEC TICK
PHCAL	HD155763	25	03.30	1708381	+654634	L 3	40704 L	01349	FU	91013008	085120	000000			300 V 1	CEC TICK
PHCAL	HD155763	25	03.34	1708381	+654634	L 3	40705 L	01302	FU	91013009	092200	000000			300 V 1	CEC TICK
PHCAL	HD155763	25	03.34	1708381	+654634	L 3	40706 L	01302	FU	91013009	095123	000000			300 V 1	CEC TICK
WRMFC	HR 6392B	11	10.6	1710580	-394220	L 1	20192 L		EO	91041917	172700	001800			5x2 G	B=1.5X,G=242,B=38
WRMFC	HR 6392B	11	10.6	1710580	-394220	L 3	41427 L		EO	91041917	175400	005000			4x2 G	B=1.5X,G=163,B=35
MIL74	V795 HER	63	13.04	1711054	+333449	L 3	41133 L	00105	SO	91031904	043048	004000			400 V	TWO EXPOSURES
MIL74	V795 HER	63	12.88	1711054	+333449	L 3	41134 L	00122	SO	91031905	054827	004000			300 V	TWO EXPOSURES
MIL74	V795 HER	63	12.88	1711054	+333449	L 3	41135 L	00121	SO	91031907	071132	004000			300 V	TWO EXPOSURES
MIL74	V795 HER	63	12.96	1711054	+333449	L 3	41136 L	00113	SO	91031908	083823	004000			300 V	TWO EXPOSURES
MIL74	V795 HER	63	12.92	1711054	+333449	L 3	41137 L	00117	SO	91031909	095751	004000			300 V	TWO EXPOSURES
MIL74	V795 HER	63	12.87	1711054	+333449	L 3	41140 L	00123	SO	91032004	043942	004000			400 V	TWO EXPOSURES
MIL74	V795 HER	63	12.92	1711054	+333449	L 3	41141 L	00117	SO	91032006	060803	006000			400 V	TWO EXPOSURES
MIL74	V795 HER	63	12.85	1711054	+333449	L 3	41142 L	00125	SO	91032008	081047	004000			300 V	TWO EXPOSURES
MIL74	V795 HER	63	12.85	1711054	+333449	L 3	41143 L	00125	SO	91032009	094940	005000			400 V	TWO EXPOSURES
CSMPS	HD 156014	49	3.5	1712219	+142645	L 1	19828 L	2004	FU	91022415	155400	009000			433 G	B=88,G=150,B=50
CSMPS	HD 156014	49	3.5	1712219	+142645	L 1	19828 L	2027	FU	91022417	173100	009000			343 G	B=157,G=110,B=50
CSMPS	HD 156014	49	3.5	1712219	+142645	L 1	20232 L	1895	FU	91042422	224300	000015			342 G	B=142,G=130,B=35
CSMPS	HD 156014	49	3.5	1712219	+142645	L 1	20234 L	1887	FU	91042500	002200	002500			222 G	B=58,G=50,B=38
IGMS	HR 6406	49	3.48	1712220	+142650	L 1	19755 L	1912	FU	91021419	195900	000040			5x2 G	B=1.5X,G=200,B=32
IGMS	HR 6406	49	3.48	1712220	+142650	H 1	19756 L	1937	FU	91021420	204400	000930			352 G	B=236,G=80,B=33
IGMS	HR 6406	49	3.5	1712220	+142650	L 1	19869 L	2223	FU	91030819	195100	000040			5x2 G	B=1.5X,G=220,B=38
IGMS	HR 6406	49	3.5	1712220	+142650	H 1	19870 L	2224	FU	91030820	202900	000930			352 G	B=223,G=90,B=38
IGMS	HR 6406	49	3.5	1712220	+142650	H 1	20163 L	1913	FU	91041623	230800	000930			352 G	B=216,G=98,B=37
IGMS	HR 6406	49	3.5	1712220	+142650	L 1	20164 L	1933	FU	91041623	235300	000040			552 G	B=243,G=238,B=35
IGMS	HR 6406	49	3.5	1712220	+142650	H 1	20165 L	1920	FU	91041700	003200	000930			352 G	B=228,G=98,B=38
WRMFC	HD 157451	10	10.6	1721469	-432656	L 1	20193 L	246	FO	91041919	192300	000300			452 G	B=222,G=148,B=32
WRMFC	HD 157451	10	10.6	1721469	-432656	L 3	41428 L	248	FO	91041919	193400	000600			340 G	B=145,G=103,B=20
CSMIA	HD 159181	45	3.0	1729181	+522015	L 3	40386 L	1472	FU	90121904	042800	002300			531 G	B=82,G=240,B=30
CSMIA	HD 159181	45	3.0	1729181	+522015	L 3	40685 L	1535	FU	91012620	200300	002000			551 G	B=227,G=225,B=21
GOMR	NEC 6388	83	6.7	1732375	-444214	L 3	41445 L	608	FO	91042110	101300	024000			303 G	G=100,B=45
MA096	HD160529	14	06.96	1738412	-332846	L 1	19826 L	05883	FO	91022412	122357	003000			702 V	PARTIAL READ
DMSS	GL 694.2	48	10.4	1744110	+465224	L 1	19384 L	160	FO	90121105	055900	006000			233 G	B=82,G=65,B=45
IMDM	HD 161633	23	9.9	1745150	-465530	L 3	41185 L	378	EO	91032611	113300	001200			X00 G	G=2X,B=20
GOMR	NEC 6441	83	7.19	1746486	-370213	L 3	41426 L		EO	91041909	094900	042000			306 G	G=110,B=72
GOMR	NEC 6441	83	7.19	1746486	-370213	L 1	20202 L		EO	91042114	143800	013500			303 G	G=105,B=50
CMSS	RS OPH 55	11.5	1747315	-064148	L 3	40979 L		410	SO	91030211	112300	034000			336 G	B=142,G=140,B=75
CMSS	RS OPH 55	11.5	1747315	-064148	L 1	19863 L		103	FO	91030217	171200	009800			403 G	G=180,B=45
MQ180	KAZ 102	85	16.00	1803374	+673754	L 3	40691 L	00000	EO	91012705	055707	033300			462 V	PREAD
IGMIA	HD 165774	50	8.2	1805531	-365831	L 3	41401 L	1773	FO	91041614	141300	033000			07 G	B=85

FO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	numscnt	ECC	Comment
IGMIA HD	165774	50	8.2	1805531	-365831	L 1	20160 L	1634	FO	91041619	194800	006500	335	G B=116,O=101,B=67
PHCAL SPO CT AER 2	47		7.2	1811468	+660716	H 9	02442			91022202	020800	016000		G
PHCAL SPO CT AER 2	47		7.2	1811468	+660716	H 9	02443			91022204	042000	002000		G
PHCAL WAVCAL	98			1811468	+660717	L 1	19852 S			91022822	223900	000025		78 G B=10X,B=98
PHCAL WAVCAL	98	7.2		1811468	+660717	H 1	19853 S			91022823	231400	000025		79 G B=50X,B=107
PHCAL WAVCAL	98	7.2		1811468	+660717	L 3	40953 S			91022823	234900	000005		78 G B=10X,B=100
PHCAL WAVCAL	98	7.2		1811468	+660717	H 3	40954 S			91030100	001700	000005		79 G B=60X,B=120
PHCAL SPO CT AER 2	46		7.2	1811468	+660716	H 9	02450			91030923	235400	016000		G
MI019 AS 296	57	11.21		1812329	-001953	L 1	19876 L	00135	FO	91030904	043742	003000		333 V
MI019 AS 296	57	11.21		1812329	-001953	L 3	41073 L	00135	FO	91030905	051416	011000		242 V
MI144 AM HER	59	13.39		1814586	+495055	L 3	41357 L	00077	SO	91041302	023157	002500		350 V
MI144 AM HER	59	13.24		1814586	+495055	L 1	20130 L	00088	SO	91041303	031148	002000		440 V
MI144 AM HER	59	99.99		1814586	+495055	L 3	41358 L	00000		91041303	033933	002500		350 V
MI144 AM HER	59	13.32		1814586	+495055	L 3	41359 L	00082	SO	91041304	043425	002500		350 V
MI144 AM HER	59	99.99		1814586	+495055	L 1	20131 L	00000		91041305	050608	002000		340 V
MI144 AM HER	59	13.36		1814586	+495055	L 3	41370 L	00079	SO	91041305	054550	002500		350 V
MI144 AM HER	59	13.36		1814586	+495055	L 3	41371 L	00079	SO	91041306	064229	002500		350 V
MI144 AM HER	59	12.83		1814586	+495055	L 1	20132 L	00127	SO	91041307	071706	002000		450 V
MI144 AM HER	53	13.29		1814586	+495055	L 3	41372 L	00084	SO	91041307	075407	002500		340 V
MI144 AM HER	59	13.27		1814586	+495055	L 1	20133 L	00086	SO	91041308	083125	002000		450 V FREAD
MI144 AM HER	59	13.27		1814587	+495055	L 3	41358 L	00086	SO	91041203	030334	002500		350 V
MI144 AM HER	59	13.28		1814587	+495055	L 1	20122 L	00085	SO	91041203	033629	002000		350 V
MI144 AM HER	59	99.99		1814587	+495055	L 3	41359 L	00000		91041204	040356	002500		350 V
MI144 AM HER	59	13.20		1814587	+495055	L 3	41360 L	00091	SO	91041205	053210	002500		450 V
MI144 AM HER	59	13.29		1814587	+495055	L 3	41361 L	00084	SO	91041206	064100	002500		350 V
MI144 AM HER	59	13.33		1814587	+495055	L 3	41362 L	00081	SO	91041207	073542	002500		350 V
MI144 AM HER	59	13.38		1814587	+495055	L 3	41363 L	00078	SO	91041208	083032	002000		350 V FREAD
MA056 HD168206	10	09.44		1816198	-113916	L 3	41113 L	00654	FO	91031604	042512	000500		230 V
MA056 HD168206	10	09.44		1816198	-113916	H 1	19928 L	00657	FO	91031605	055202	029500		403 V
MA056 HD168206	10	09.47		1816198	-113916	H 1	20077 L	00637	FO	91040401	015740	041000		503 V
IMDM HD	168750	23	8.3	1819140	-262630	H 3	41186 L	1573	FO	91032612	124600	012000		504 G G=235,B=55
IMDM HD	168750	23	8.3	1819140	-262630	H 3	41390 L	1572	FO	91041513	135200	012000		X03 G G=1.5X,B=50
IMDM HD	168750	23	8.3	1819141	-262630	H 3	41373 L	1516	FO	91041309	095600	012000		X04 G G=1.5X,B=58
IMDM HD	168941	13	9.8	1820180	-265846	H 3	41374 L	583	FO	91041312	123700	024500		X06 G G=2X,B=75
GMFR NGC	6624	83	7.99	1820279	-302315	L 3	41432 L		EO	91042011	111800	033000		303 G G=90,B=50
MQ180 H1821+643	85	13.90		1821416	+641900	L 1	19182 L	00049	SO	90110912	122540	010000		441 V
MQ180 H1821+643	85	13.92		1821416	+641900	L 3	40089 L	00048	SO	90110914	141444	027200		461 V
MQ180 H1821+643	85	14.20		1821417	+641901	L 3	40046 L	00000	EO	90110412	121935	028000		461 V
MQ180 H1821+643	85	14.20		1821417	+641901	L 1	19144 L	00000	EO	90110417	170405	010600		551 V
MQ180 H 1821+643	85	14.30		1821417	+641901	L 1	19219 L	00000	EO	90111312	123117	010000		341 V
MQ180 H1821+643	85	14.30		1821417	+641901	L 3	40103 L	00000	EO	90111314	141929	027100		461 V
GMFR NGC	6637	83	7.6	1828074	-322302	L 1	20181 L	122	FO	91041809	094600	042000		407 G G=195,B=87
NMSS NOVA HER	55	7.5		1844118	+121045	L 1	19992 L	2251	FO	91032623	235200	000030		4x2 G B=1.5X,G=155,B=35
NMSS NOVA HER	55	7.5		1844118	+121045	L 1	19992 S	2250	FO	91032623	235700	000200		XX2 G B=3X,G=1.5X,B=35
NMSS NOVA HER	55	7.5		1844118	+121045	L 3	41191 L	2253	FO	91032700	000600	000500		500 G G=194,B=18
NMSS NOVA HER	55	7.9		1844118	+121045	H 1	19993 L	2257	FO	91032700	004300	003000		352 G B=228,G=130,B=38
NMSS NOVA HER	55	8.0		1844118	+121045	L 3	41192 L	2228	FO	91032701	012200	002000		X00 G G=3.5X,B=18
NMSS NOVA HER	55	7.9		1844118	+121045	H 1	19994 L	2228	FO	91032701	015300	005500		402 G G=190,B=40
NMSS NOVA HER	55	8.5		1844118	+121045	L 1	20001 S	1486	FO	91032819	191300	000300		XX3 G B=4X,G=1.5X,B=50
NMSS NOVA HER	55	8.5		1844119	+121045	L 3	41205 L	1499	FO	91032818	185300	000700		X02 G G=1.5X,B=35

FFO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	numscnt	EQC	Comment
NOM5	NOVA HER	55	8.5	1844119	+121045	L 1	20001 L	1506	FO	91.032819	190600	000040	4X3	G E=2X, G=195, B=50
NOM5	NOVA HER	55	8.5	1844119	+121045	L 3	41206 L	1502	FO	91.032819	194800	000330	502	G G=230, B=35
NOM5	NOVA HER	55	8.5	1844119	+121045	L 1	20002 L	1658	FO	91.032820	202900	000020	353	G E=226, G=134, B=42
NOM5	NOVA HER	55	8.5	1844119	+121045	L 1	20010 L	1244	FO	91.032914	142300	000020	352	G E=211, G=100, B=40
NOM5	NOVA HER	55	8.5	1844119	+121045	L 1	20010 S	1253	FO	91.032914	143300	000300	X2	G E=4X, G=1.5X, B=35
NOM5	NOVA HER	55	8.5	1844119	+121045	L 3	41210 L	1266	FO	91.032914	144500	000420	X01	G G=1.5X, B=30
NOM5	NOVA HER	55	8.6	1844119	+121045	L 3	41212 L	1249	FO	91.032918	183700	000800	X03	G G=2X, B=42
NOM5	NOVA HER	55	9.02	1844119	+121045	L 1	20024 L	963	FO	91.033019	193600	000020	341	G E=158, G=75, B=30
NOM5	NOVA HER	55	9.02	1844119	+121045	L 1	20024 S	964	FO	91.033019	194100	000300	3X1	G E=2X, G=125, B=30
NOM5	NOVA HER	55	9.02	1844119	+121045	L 3	41231 L	967	FO	91.033019	194800	000330	350	G E=237, G=75, B=15
NOM5	NOVA HER	55	11.4	1844119	+121045	H 3	41317 L	445	SO	91.040814	141800	024000	344	G E=176, G=150, B=55
NOM5	NOVA HER	55	11.4	1844119	+121045	L 1	20103 L	372	SO	91.040818	182700	000700	342	G E=169, G=95, B=35
NOM5	NOVA HER	55	12.0	1844119	+121045	L 3	41318 L	400	SO	91.040819	190000	000600	350	G E=189, G=80, B=20
NOM5	NOVA HER	55	12.0	1844119	+121045	L 3	41318 S	422	SO	91.040819	192200	000900	341	G E=132, G=80, B=22
NOM5	NOVA HER	55	12.4	1844119	+121045	L 1	20151 L	170	SO	91.041516	163900	001300	332	G E=116, G=90, B=35
NOM5	NOVA HER	55	12.4	1844119	+121045	L 3	41391 L	163	SO	91.041517	170000	001200	250	G E=169, G=32, B=18
NOM5	NOVA HER	55	13	1844119	+121045	L 1	20209 L	119	SO	91.042217	175500	002000	342	G E=136, G=99, B=35
NOM5	NOVA HER	55	13	1844119	+121045	L 3	41455 L	153	SO	91.042218	182700	002000	240	G E=141, G=30, B=18
NOM5	NOVA HER	55	7.0	1844125	+121051	L 1	19986 L	4839	FO	91.032519	194900	000030	X02	G G=1.5X, B=34
NOM5	NOVA HER	55	7.0	1844125	+121051	L 1	19986 S	4850	FO	91.032519	195500	000020	402	G G=144, B=34
NOM5	NOVA HER	55	7.0	1844125	+121051	L 3	41180 L	4836	FO	91.032520	200000	000500	500	G G=206, B=18
NOM5	NOVA HER	55	7.0	1844125	+121051	L 3	41181 L	4795	FO	91.032520	203800	002000	X00	G G=4X, B=18
PHCAL	NULL	99	99.99	1845378	+794305	L 1	20213 L	00000		91.042302	021500	000000		V SERENDIPITY
PHCAL	LINEARITY	99	99.99	1845378	+794305	L 1	20214 L	00000		91.042302	024919	000003		V SERENDIPITY, IIF, 1
PHCAL	LINEARITY	99	99.99	1845378	+794305	L 1	20215 L	00000		91.042303	033423	000014		V SERENDIPITY, IIF, 2
PHCAL	NULL	99	99.99	1845378	+794305	L 1	20216 L	00000		91.042304	040900	000000		V SERENDIPITY
PHCAL	LINEARITY	99	99.99	1845378	+794305	L 1	20217 L	00000		91.042304	043622	000028		V SERENDIPITY, IIF, 3
PHCAL	LINEARITY	99	99.99	1845378	+794305	L 1	20218 L	00000		91.042305	050502	000055		V SERENDIPITY, IIF, 6
PHCAL	LINEARITY	99	99.99	1845378	+794305	L 1	20219 L	00000		91.042305	054112	000034		V SERENDIPITY, IIF, 4
PHCAL	NULL	99	99.99	1845378	+794305	L 1	20220 L	00000		91.042306	061015	000000		V SERENDIPITY
PHCAL	LINEARITY	99	99.99	1845378	+794305	L 1	20221 L	00000		91.042306	064314	000103		V SERENDIPITY, IIF, 7
PHCAL	LINEARITY	99	99.99	1845378	+794305	L 1	20222 L	00000		91.042307	072219	000117		V SERENDIPITY, IIF, 8
PHCAL	NULL	99	99.99	1845378	+794305	L 1	20223 L	00000		91.042307	075000	000000		V SERENDIPITY
MQ049	3C390-3	84	14.40	1845378	+794305	L 3	41459 L	00000	EO	91.042301	014809	041800		352 V
MQ049	3C390.3	86	15.00	1845379	+794306	L 3	40479 L	00000	EO	90.122814	140044	016700		331 V
MI073	NOVA SCUTII	55	14.50	1846581	-061445	L 1	20239 L	00000	EO	91.042606	063753	013000		101 V
IGML	HD 175865	49	4.0	1853587	+435246	L 1	19099 L	774	FU	90.110100	002600	001000		3X2 G E=3X, G=125, B=35
IGML	HD 175865	49	4.0	1853587	+435246	H 1	20045 L	807	FU	91.040113	132300	002000		352 G E=202, G=80, B=40
IGML	HD 175865	49	4.0	1853587	+435246	L 1	20046 L	820	FU	91.040114	142200	000200		3X2 G E=1.5X, G=80, B=32
SSMH	SKYEGND	07		1856511	-230840	L 3	41202 L			91.032812	120300	004500		38 G E=118, B=95
SSMH	URANUS	03	5.7	1856511	-230840	L 3	41203 L	11156	FO	91.032813	132300	010000		339 G E=188, G=210, B=130
SSMH	URANUS	03	5.7	1856518	-230840	L 3	41204 L	11028	FO	91.032815	153900	015000		448 G E=229, G=210, B=100
MS010	URANUS	03	06.17	1857407	-230813	E 9	02460 2	11510	FO	91.042004	043200	016000		V
MS010	URANUS	03	06.17	1857407	-230813	L 3	41431 S	11510	FO	91.042004	044908	023100		441 V IEAP CLOSED 120 MINS
MS010	URANUS	03	06.17	1857407	-230813	L 3	41431 L	11510	FO	91.042004	044908	012000		041 V IEAP CLOSED 120 MINS
RCMEW	RY SCR	52	7.4	1913169	-333641	L 1	19950 L	3909	FO	91.031919	193900	007500		X03 G G=3X, B=45
RCMEW	RY SCR	52	7.4	1913169	-333641	L 1	19950 L	3909	FO	91.031920	201300	007500		X03 G G=1.5X, B=45
AGMEB	E141-G55	84	14.1	1916570	-584600	L 3	41108 L	88	SO	91.031512	123100	006500		341 G E=157, G=70, B=27
AGMEB	E141-G55	84	14.1	1916570	-584600	L 1	19921 L	88	SO	91.031513	134400	005000		342 G E=185, G=129, B=40
MI021	BF CYGN	57	10.04	1921550	+293434	L 3	40054 L	00383	FO	90.110516	163413	002000		500 V



FPO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs. date	Exptim	mm	mm	sec	BCC	Comment
MI021	EF CXGN1	57	10.01	1921550	+293434	L 1	19153 L	00392	FO	90110517	171802	003000				701 V
MI021	EF CXGN1	57	10.00	1921550	+293434	L 3	40055 L	00398	FO	90110517	175754	004000				600 V FREAD
MI021	EF CXGN1	57	99.99	1921550	+293434	L 1	19154 L	00000		90110518	185501	000500				601 V FREAD, NO GUIDING
FH0AL	EF CXG	57	10.10	1921552	+293434	H 1	19274 L	00363	FO	90112417	170432	010200				352 V HIGH GAIN FREAD
RAMM	CH CXG	57	7.0	1923141	+500830	L 3	41157 L	2705	FO	91032218	183000	002000				5X1 G B=1.5X,G=176,B=21
MI000	CH CXG	57	07.92	1923142	+500831	L 1	19469 L	02536	FO	90122415	153233	000400				560 V
RAMM	CH CXG	57	7.0	1923142	+500831	L 1	19961 L	2842	FO	91032212	120500	001000				X2 G B=2X,G=1.5X,B=35
MI000	CH CXG	57	07.92	1923142	+500831	L 3	40450 L	02543	FO	90122415	154715	001800				560 V
RAMM	CH CXG	57	7.0	1923142	+500831	L 3	41155 L	2867	FO	91032212	122300	006000				X40 G B=2X,G=2X,B=18
MI000	CH CXG	57	99.99	1923142	+500831	H 1	19470 L	00000	FO	90122416	161941	002800				341 V
RAMM	CH CXG	57	7.0	1923142	+500831	L 1	19962 L	2922	FO	91032213	132100	000300				352 G B=224,G=125,B=32
RAMM	CH CXG	57	7.0	1923142	+500831	H 3	41156 L	2857	FO	91032214	140700	023000				3X3 G B=1.5X,G=110,B=45
CD83Y	SATURN	03	0.6	1930127	-215514	L 1	19257 L		FO	90112104	042200	000120				?04 G G=16X,B=60
CD83Y	SATURN	03	0.6	1930127	-215514	L 1	19257 S		FO	90112104	043100	000530				?04 G G=10X,B=60
CD83Y	SATURN	03	0.6	1930127	-215514	L 3	40153 L		FO	90112104	044500	001500				500 G G=230,B=19
CD83Y	SATURN	03	0.6	1930127	-215514	L 1	19258 L		FO	90112107	070500	000120				?05 G G=15X,B=62
CD83Y	SATURN	03	0.6	1930127	-215514	L 1	19258 S		FO	90112107	071300	001000				?05 G G=10X,B=62
CD83Y	SATURN	03	0.6	1930127	-215514	L 3	40154 L		FO	90112107	072900	001500				501 G G=241,B=22
CD83Y	SATURN	03	0.6	1930127	-215514	L 1	19259 L		FO	90112109	094900	000120				?04 G G=15X,B=55
CD83Y	SATURN	03	0.6	1930127	-215514	L 1	19259 S		FO	90112109	095700	001000				?04 G G=10X,B=55
AGMIW	V450 AQL	51	6.0	1931180	+052124	L 1	19111 L	13024	FO	90110205	055500	003000				3X3 G B=1.5X,G=100,B=50
AGMIW	V450 AQL	51	6.4	1931180	+052124	L 1	19221 L		FO	90111403	034400	003000				352 G B=239,G=80,B=35
SAMOW	HD 185395	41	4.48	1935059	+500615	L 1	19464 L			90122308	080800	000030				G
SAMOW	HD 185395	41	4.48	1935059	+500615	L 1	19464 S			90122308	081800	000015				G
SAMOW	HD 185395	41	4.48	1935059	+500615	L 3	40443 L			90122308	083700	000020				G
SAMOW	HD 185395	41	4.48	1935059	+500615	L 3	40443 S			90122308	084300	000320				G
MI083	HM SGE	57	11.60	1939411	+163733	L 1	19127 L	00380	SO	90110311	113600	000800				251 V
MI083	HM SGE	57	11.56	1939411	+163733	H 3	40081 L	00394	SO	90110812	122522	038000				362 V
ZAMIE	HD 187076	49	3.8	1945094	+182435	H 1	19126 L			90110309	091700	000730				G
ZAMIE	HD 187076	49	3.8	1945094	+182435	H 3	40027 L			90110310	100100	004500				G
MA105	N306853	70	12.94	1957270	+223501	L 3	40066 L	00115	SO	90110612	125901	001000				530 V
XSMH	N306853	70	14.1	1957270	+223500	H 3	40067 L	116	SO	90110613	135100	033000				3X9 G B=1.5X,G=215,B=130
MA105	N306853	70	12.94	1957270	+223501	L 1	19164 L	00116	SO	90110618	181716	002000				110 V SERENDIPITY WITH SWP
XSMH	SKYKND	07		1957270	+223500	L 1	19165 L			90110619	193900	035000				336 G B=160,G=125,B=80
IGMTA	HD 191589	50	7.1	2007368	+333201	L 3	41400 L	3672	FO	91041611	115300	008500				300 G G=75,B=20
MC029	FG SGE	41	09.73	2009430	+201054	L 1	19151 L	00503	FO	90110512	120844	011000				501 V
FH0AL	FG SGE	41	09.90	2009430	+201054	L 1	19273 L	00436	FO	90112413	130033	011000				501 V
MCL55	RS CXG	51	07.64	2011345	+383436	L 1	19312 L	03250	FO	90112914	143601	004500				243 V
ZAMIE	HD 192577	47	3.7	2012033	+463520	H 1	19125 L			90110307	074300	001000				G
ZAMIE	HD 192577	47	3.7	2012033	+463520	H 3	40026 L			90110308	080200	001200				G
IEMIE	HD 192577	47	3.7	2012033	+463520	H 1	19366 L	655	FU	90120707	072800	001000				X33 G B=2X,G=2X,B=50
IEMIE	HD 192577	47	3.7	2012033	+463520	H 3	40287 L	644	FU	90120708	080100	001200				503 G G=227,B=42
IEMIE	HD 192577	47	3.7	2012033	+463520	H 1	19367 L	653	FU	90120708	083600	000500				553 G B=207,G=195,B=41
MA064	HD192641	10	08.11	2012394	+363028	L 1	19284 L	02145	FO	90112615	153510	000040				500 V
MA064	HD192641	10	08.09	2012394	+363028	H 3	40202 L	02186	FO	90112616	161513	015200				500 V
MA064	HD192641	10	99.99	2012394	+363028	L 1	20207 L	00000		91042206	065445	000040				550 V
MA064	HD192641	10	08.18	2012394	+363028	H 3	41452 L	02010	FO	91042205	053814	016800				441 V
LIT047	HD193237	23	05.06	2015565	+375236	H 3	40053 L	24598	FO	90110514	143440	002000				500 V
HEMKB	HD 193237	11	5.0	2015565	+375236	H 3	40285 L	288	FU	90120705	050600	002000				503 G G=215,B=41
LIT047	HD193237	23	05.09	2015565	+375236	H 1	19152 L	24200	FO	90110515	151500	000400				601 V

FRO	Object	CL	MAG	R.A.	DEC	D C	Image	A	FES	MD	Obs.date	Exptim	numms	stt	ECC	Comment
HM8B HD	193237	11	5.0	2015565	+375236	H 1	19365	L	287	FU	90120705	054100	000230		453 G	B=204,G=170,B=41
HM8B HD	193237	13	5.00	2015565	+375236	H 3	40360	L	291	FU	90121602	023700	002000		542 G	B=146,G=225,B=35
CEMIS HD	193237	23	4.8	2015565	+375236	H 3	40377	L	298	FU	90121805	055300	002500		503 G	G=240,B=42
CEMIS HD	193237	23	4.8	2015565	+375236	H 1	19438	L	297	FU	90121806	062700	000400		503 G	G=200,B=41
CEMIS HD	193237	23	4.8	2015565	+375236	H 3	40378	L	295	FU	90121807	070800	002500		502 G	G=240,B=37
CEMIS HD	193237	23	4.8	2015565	+375236	H 1	19439	L	292	FU	90121807	075400	000400		503 G	G=200,B=41
MA064 HD	193793	10	07.10	2018467	+434143	L 1	19283	L	05239	FO	90112612	124534	000022		401 V	
MA064 HD	193793	10	07.07	2018467	+434143	H 3	40201	L	05352	FO	90112613	131000	012000		500 V	
MA064 HD	193793	10	07.15	2018467	+434143	L 3	41450	L	03027	FO	91042202	020703	000110		450 V	
MA064 HD	193793	10	07.14	2018467	+434143	H 3	41451	L	05062	FO	91042202	024215	012000		551 V	
MA064 HD	193793	10	07.13	2018467	+434143	L 1	20206	L	05105	FO	91042204	044806	000022		550 V	
MA090 FU	VUL	57	10.76	2019010	+212443	L 3	40155	L	00201	FO	90112112	120846	001500		360 V	
MA090 FU	VUL	57	10.75	2019010	+212443	H 3	40156	L	00203	FO	90112113	132127	029500		261 V	
MA090 FU	VUL	57	10.76	2019010	+212443	L 1	19260	S	00202	FO	90112118	182719	000300		V	
MA090 FU	VUL	57	10.76	2019010	+212443	L 1	19260	L	00202	FO	90112118	183519	000500		360 V	
MI100 FU	VUL	57	10.74	2019010	+212443	L 3	41299	L	00206	FO	91040505	055214	001500		360 V	
MI100 FU	VUL	57	10.74	2019010	+212443	L 1	20084	S	00205	FO	91040506	065937	000300		341 V	
MI100 FU	VUL	57	10.74	2019010	+212443	L 1	20084	L	00205	FO	91040506	064749	000500		461 V	
MI100 FU	VUL	57	10.74	2019010	+212443	H 3	41300	L	00206	FO	91040507	071035	009600		261 V	
MCD68 GL	793	48	10.61	2029500	+651636	L 3	41147	L	00230	FO	91032104	042204	003000		110 V	HEAD
MCD68 GL	793	48	10.64	2029500	+651636	L 1	19954	L	00224	FO	91032105	050151	003000		130 V	3 SEGMENTS OF 10 MI
MCD68 GL	793	48	10.66	2029500	+651636	L 3	41148	L	00220	FO	91032106	060706	028000		111 V	
MS010 SAIURN		03	00.70	2032196	-190904	E 9	02458	2	00000	EO	91041908	085900	016000			V SAIURN IN SWIA
MS010 SAIURN		03	00.70	2032196	-190904	L 3	41425	L	00000	EO	91041907	074325	006000			740 V TRACKING ON TITAN
MS010 SAIURN		03	00.70	2032280	-190838	E 9	02459	2	00000	EO	91042002	020500	000000			V
MS010 SAIURN		03	00.70	2032280	-190839	L 3	41430	L	00000	EO	91042002	021413	016000			740 V TRACKING ON TITAN
FHCAL HD	197637	21	6.8	2038017	+791515	L 1	19972	L	5386	FO	91032401	014800	000007		502 G	G=248,B=33
FHCAL HD	197637	21	6.8	2038018	+791515	L 3	41166	L	5364	FO	91032401	015300	000008		500 G	G=197,B=18
AGLIC MK	509	84	13.0	2041260	-105418	L 3	40020	L			90110219	195400	006000		G	
AGLIC MK	509	84	13.0	2041260	-105418	L 1	19121	L			90110221	210400	003500		G	
AGLIC MK	509	84	13.0	2041260	-105418	L 3	40021	L			90110221	214700	004500		G	
AGLIC MK	509	84	13.0	2041260	-105418	L 1	19122	L			90110222	223800	001500		G	
AGLIC MK	509	84	13.0	2041262	-105418	L 3	40090	L	86	SO	90110919	194600	005500		351 G	B=198,G=100,B=25
AGLIC MK	509	84	13.0	2041262	-105418	L 1	19183	L	85	SO	90110920	205100	003500		452 G	B=213,G=150,B=38
AGLIC MK	509	84	13.0	2041262	-105418	L 3	40091	L	87	SO	90110921	213500	006000		351 G	B=216,G=95,B=25
SNWB CIG	PO4	75		2053386	+314825	L 1	19379	L			90120918	181600	036000		06 G	B=73
SNWB CIG	PO3	75		2053413	+314729	L 3	40295	L		EO	90120917	174800	042000		23 G	B=61,B=45
SNWB CIG	LOOP	75		2053424	+314745	L 1	19381	L		EO	90121018	182700	034500		06 G	B=72
SNWB CIG	LOOP	75		2053452	+314649	L 3	40306	L		EO	90121017	175500	041500		23 G	B=68,B=48
ML180 HD	200120	26	04.86	2058074	+471930	H 3	40208	L	27403	FO	90112715	153130	000115		500 V	
SAMOW HD	199532	41	5.14	2058440	-771301	L 3	41447	L	18872	FO	91042119	192900	000320		400 G	G=132,B=18
SAMOW HD	199532	41	5.14	2058440	-771301	L 1	20204	L	19020	FO	91042119	195800	000125		502 G	G=239,B=38
SAMOW HD	199532	41	5.14	2058440	-771301	L 1	20204	S	18944	FO	91042120	200900	000040		502 G	G=254,B=38
ML180 HD	201091	46	05.65	2104548	+383206	L 3	40140	L	17001	FO	90111911	115732	018500		231 V	
FHCAL HD	201908	22	5.9	2106320	+775527	L 1	19970	L	12563	FO	91032323	233300	000007		502 G	G=229,B=35
FHCAL HD	201908	22	5.9	2106320	+775527	L 3	41164	L	12537	FO	91032323	233800	000013		500 G	G=192,B=18
FHCAL HD	201908	22	5.9	2106320	+775527	L 1	19971	L	12548	FO	91032400	003500	000007		502 G	G=230,B=33
FHCAL HD	201908	22	5.9	2106320	+775527	L 3	41165	L	12427	FO	91032400	003900	000013		500 G	G=193,B=18
RMEB T	CEP	51	7.8	2108529	+681712	L 1	19807	L	2770	FO	91022104	043300	002000		3x2 G	B=1.5x,G=102,B=38
RMEB T	CEP	51	7.1	2108529	+681712	H 1	19930	L	2053	FO	91031621	211700	009000		53 G	B=208,B=50



FFO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	numrest	stt	EC	Comment
RMEB	T CEP	5L	8.2	2108529	+681712	H 1	20005 L	2072	FO	91032901	012200	008800		43	G B=172, B=45
RMEB	T CEP	5L	6.0	2108529	+681712	H 1	20127 L	1948	FO	91041220	200800	004200		334	G B=109, O=100, B=55
RMEB	T CEP	5L	6.0	2108529	+681712	H 1	20247 L	2460	FO	91042720	201300	007000		32	G B=93, B=35
PHCAL	FG 2111+498	37	13.1	2111031	+495353	L 3	41457 L		SO	91042222	224700	000800		500	G O=237, B=18
PHCAL	FG 2111+498	37	13.1	2111031	+495353	L 1	20211 L	145	SO	91042223	230900	001300		X02	G O=1.5x, B=35
PHCAL	FG 2111+498	37	13.1	2111031	+495353	L 3	41458 L	143	SO	91042223	234200	002400		X00	G O=3x, B=20
PHCAL	FG 2111+498	37	13.1	2111031	+495353	L 1	20212 L	145	SO	91042300	002200	002600		X02	G O=2x, B=38
MAICO	HD205021	23	03.09	2128013	+702028	H 3	40476 L	01630	FU	90122810	102009	000014		500	V
MAICO	HD205021	23	03.07	2128013	+702028	H 3	40477 L	01657	FU	90122810	105717	000014		500	V
MAICO	HD205021	23	03.07	2128013	+702028	H 1	19491 L	01651	FU	90122810	102510	000015		700	V
AGMW	V460 CYG	5L	5.6	2139543	+351653	L 1	19266 L	12081	FO	90112303	035500	017000		39	G B=182, C160, B=130
AGMW	V460 CYG	5L	6.4	2139543	+351653	L 1	19335 L	12645	FO	90120202	021100	015000		336	G B=116, O=110, B=80
PHCAL	TF100D	99		2139543	+351653	L 3	40245			90120202	024500	000005		09	G B=105
AGMW	V460 CYG	5L	5.6	2139543	+351653	L 1	19455 L	11481	FO	90122201	015600	017000		336	G B=158, O=105, B=78
AGMW	V460 CYG	5L	6.4	2139543	+351653	L 1	19523 L	11437	FO	91010803	031500	021500		337	G B=176, O=118, B=85
IBMB	HD 207739	39	8.6	2147598	+434354	L 3	40106 L	935	FO	90111407	075600	001400		550	G B=201, O=175, B=20
IBMB	HD 207739	39	8.6	2147598	+434354	H 1	19223 L	951	FO	90111408	081900	013000		445	G B=198, O=175, B=61
IBMB	HD 207739	39	8.6	2147598	+434354	L 3	40107 L	982	FO	90111410	103700	001400		550	G B=198, O=180, B=18
MA090	AG FEG	57	08.68	2148362	+122327	L 3	40147 L	01292	FO	90112012	121454	000500		471	V
MA090	AG FEG	57	08.70	2148362	+122327	L 1	19252 L	01268	FO	90112012	122655	000500		772	V
MA090	AG FEG	57	08.70	2148362	+122327	H 3	40148 L	01263	FO	90112013	131457	001500		161	V
MA090	AG FEG	57	08.71	2148362	+122327	H 1	19253 L	01260	FO	90112013	135835	002000		342	V
MA090	AG FEG	57	08.69	2148362	+122327	H 3	40149 L	01273	FO	90112014	144420	015000		272	V
PHCAL	ED+284211	16	10.60	2148560	+283734	H 1	19290 L	00232	FO	90112716	160316	006500		501	V
PHCAL	ED+28 4211	16	10.61	2148560	+283734	H 3	40209 L	00230	FO	90112717	171454	004500		500	V
PHCAL	ED+28 4211	16	10.64	2148560	+283734	H 1	19291 L	00225	FO	90112718	180552	004200		401	V
PHCAL	ED+28 4211	16	10.62	2148560	+283734	H 3	40219 L	00229	FO	90112817	170953	004500		500	V
PHCAL	ED+28 4211	16	10.60	2148560	+283734	H 1	19302 L	00232	FO	90112818	180108	004600		503	V
PHCAL	ED+28 4211	16	10.63	2148560	+283734	L 1	19301 L	00227	FO	90112817	170251	000050		502	V
PHCAL	ED+28 4211	16	10.58	2148560	+283735	H 1	19461 L	00236	FO	90122216	161937	002700		302	V
PHCAL	ED+284211	16	10.58	2148560	+283735	L 3	40437 L	00236	FO	90122210	101623	000026		500	V
PHCAL	ED+28 4211	16	10.58	2148560	+283735	L 1	19458 L	00236	FO	90122211	111032	000050		501	V
PHCAL	ED+28 4211	16	10.61	2148560	+283735	L 3	40438 L	00231	FO	90122211	115104	000030		501	V NO GUIDE
PHCAL	ED+28 4211	16	10.61	2148560	+283735	L 3	40439 L	00231	FO	90122212	122848	000030		501	V
PHCAL	ED+28 4211	16	10.60	2148560	+283735	L 1	19459 L	00232	FO	90122212	125834	000140		701	V
PHCAL	ED+28 4211	16	10.60	2148560	+283735	H 3	40440 L	00233	FO	90122213	130642	004500		402	V
PHCAL	ED+28 4211	16	10.61	2148560	+283735	H 1	19460 L	00231	FO	90122214	140429	006000		502	V
PHCAL	ED+28 4211	16	10.58	2148560	+283735	H 3	40441 L	00236	FO	90122215	151354	005500		501	V
PHCAL	ED +28 4211	16	10.5	2148573	+283733	L 3	40434 L			90122205	054000	000026		G	
PHCAL	ED +28 4211	16	10.5	2148574	+283734	L 1	19456 L	233	FO	90122205	054500	000050		501	G O=205, B=30
SAMOW	HD 207971	25	3.0	2150545	-373603	L 3	41446 L	1466	FU	91042117	175500	000003		500	G O=250, B=18
SAMOW	HD 207971	25	3.0	2150545	-373603	L 1	20203 L	1447	FU	91042118	180700	000002		502	G O=234, B=35
SAMOW	HD 207971	25	3.0	2150545	-373603	L 1	20203 S	1458	FU	91042118	181500	000001		502	G O=232, B=35
RIASS	PKS 2155-304	87	13.3	2155580	-302753	L 3	40024 L			90110304	041200	006000		G	
RIASS	PKS 2155-304	87	13.3	2155580	-302753	L 1	19124 L			90110305	052100	003000		G	
RIASS	PKS 2155-304	87	13.3	2155580	-302753	L 3	40025 L			90110305	055900	005000		G	
RIASS	PKS 2155-304	87	13.3	2155581	-302754	L 3	40056 L	76	SO	90110519	195900	008000		301	G O=118, B=24
RIASS	PKS 2155-304	87	13.3	2155581	-302754	L 1	19155 L	72	SO	90110521	212400	003000		302	G O=128, B=39
MC180	HD210334	44	06.48	2206395	+452945	H 1	19393 L	08924	FO	90121209	095919	006000		441	V
MC180	HD210334	44	06.47	2206395	+452945	H 1	19394 L	08979	FO	90121211	115850	007000		552	V

FRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mmmsst	ECC	Comment
MC180	HD210334	44	06.49	2206395	+452945	H 1	19395 L	08820	FO	90121213	135917	007000	452	V
MC180	HD210334	44	06.47	2206395	+452945	L 3	40313 L	08995	FO	90121211	111109	003000	330	V
MC180	HD210334	44	06.49	2206395	+452945	L 3	40314 L	08849	FO	90121213	131915	006000	330	V 2X30 MIN SEGMENTS
MC180	HD210334	44	99.99	2206395	+452945	E 9	02399 2	00000	FO	90121209	095000	016000		V FOR IWPL9396
MC180	HD210334	44	06.49	2206395	+452945	L 3	40318 L	08869	FO	90121313	135506	003000	330	V
MC180	HD210334	44	06.47	2206395	+452945	H 1	19404 L	08960	FO	90121310	103116	007000	352	V
MC180	HD210334	44	06.49	2206395	+452945	L 3	40317 L	08867	FO	90121309	095215	006000	340	V 2X30 MIN SEGMENTS
MC180	HD210334	44	06.48	2206395	+452945	H 1	19405 L	08937	FO	90121312	124243	006000	441	V
MC180	HD210334	44	06.49	2206395	+452945	H 1	19406 L	08871	FO	90121314	143759	006000	451	V
MC180	HD210334	44	06.49	2206395	+452945	L 3	40319 L	08833	FO	90121315	154823	004000	340	V
MC180	HD210334	44	99.99	2206395	+452945	E 9	02400 2	00000	FO	90121309	093000	016000		V FOR IWPL9407
MA138	HD210839	13	05.31	2209486	+591003	H 3	40784 L	21239	FO	91020310	104633	000930	500	V
OBMN	HD 210839	15	5.0	2209486	+591003	H 3	40727 L	20901	FO	91013122	220400	001000	503	G G=225,B=41
MA138	HD 210839	13	05.35	2209486	+591003	H 3	40760 L	20805	FO	91020211	110316	000930	500	V
OBMN	HD 210839	15	5.0	2209486	+591003	H 3	40731 L	21173	FO	91020101	013900	001000	503	G G=222,B=41
OBMN	HD 210839	15	5.0	2209486	+591003	H 3	40738 L	21192	FO	91020112	120400	001000	503	G G=230,B=41
OBMN	HD 210839	15	5.0	2209486	+591003	H 3	40741 L	21828	FO	91020114	145400	000930	503	G G=220,B=41
OBMN	HD 210839	15	5.0	2209486	+591003	H 3	40745 L	21201	FO	91020118	183900	000930	503	G G=225,B=41
OBMN	HD 210839	15	5.0	2209486	+591003	H 3	40749 L	21526	FO	91020122	220600	000930	502	G G=225,B=40
OBMN	HD 210839	15	5.0	2209486	+591003	H 3	40753 L	21826	FO	91020201	015200	000930	502	G G=225,B=40
OBMN	HD 210839	15	5.0	2209486	+591003	H 3	40764 L	20952	FO	91020215	151600	000930	503	G G=225,B=41
OBMN	HD 210839	15	5.0	2209486	+591003	H 3	40768 L	20769	FO	91020219	191300	000930	502	G G=225,B=40
OBMN	HD 210839	15	5.0	2209486	+591003	H 3	40772 L	21196	FO	91020222	224400	000930	502	G G=230,B=40
OBMN	HD 210839	15	5.0	2209486	+591003	H 3	40776 L	21484	FO	91020302	020300	000930	502	G G=230,B=40
OBMN	HD 210839	15	5.0	2209486	+591003	H 3	40787 L	21470	FO	91020313	134300	000930	503	G G=230,B=41
OBMN	HD 210839	15	5.0	2209486	+591003	H 3	40791 L	21216	FO	91020317	173500	000930	503	G G=225,B=41
OBMN	HD 210839	15	5.0	2209486	+591003	H 3	40795 L	21163	FO	91020321	211000	000930	502	G G=230,B=40
OBMN	HD 210839	15	5.0	2209486	+591003	H 3	40799 L	21631	FO	91020400	002400	000930	502	G G=220,B=40
OBMN	HD 210839	15	5.0	2209486	+591003	H 3	40808 L	21819	FO	91020412	124000	000930	503	G G=220,B=41
OBMN	HD 210839	15	5.0	2209486	+591003	H 3	40811 L	21507	FO	91020415	152400	000930	503	G G=230,B=41
OBMN	HD 210839	15	5.0	2209486	+591003	H 3	40815 L	21061	FO	91020419	191000	000930	403	G G=170,B=42
OBMN	HD 210839	15	5.0	2209486	+591003	H 3	40819 L	21005	FO	91020422	225500	000930	502	G G=220,B=40
OBMN	HD 210839	15	5.0	2209486	+591003	H 3	40826 L	21681	FO	91020516	163600	000930	503	G G=225,B=41
OBMN	HD 210839	15	5.0	2209486	+591003	H 3	40829 L	20933	FO	91020519	193200	000930	502	G G=220,B=40
OBMN	HD 210839	15	5.0	2209486	+591003	H 3	40833 L	21501	FO	91020523	235200	000930	502	G G=225,B=40
RIASS	HD 212571	23	4.7	2222434	+010723	H 3	40157 L	312	FU	90112119	195700	000120	502	G G=225,B=40
RIASS	HD 212571	23	4.7	2222434	+010723	H 1	19261 L	316	FU	90112120	200300	000045	502	G G=205,B=40
HSMKB	HD 212571	26	4.70	2222434	+010723	H 3	40361 L	322	FU	90121603	034400	000115	502	G G=225,B=36
RIASS	53 AQR	44	6.57	2223514	-165946	L 3	40124 L	13475	FO	90111703	035900	010000	531	G E=52,C=215,B=28
RIASS	53 AQR	44	6.57	2223514	-165946	H 1	19235 L	13444	FO	90111705	054600	004000	X44	G E=184,C=1.5X,B=52
ENMFD	NCC 7293 NB	71		2227002	-210101	L 1	19279 L			90112600	001800	017500	303	G G=90,B=50
ENMFD	NCC 7293-NB	71		2227014	-210204	L 3	40195 L		EO	90112519	195900	006000	21	G E=39,B=22
ENMFD	NCC 7293 NB	71		2227014	-210204	L 1	19278 L		EO	90112521	210700	015000	303	G G=78,B=50
ENMFD	NCC 7293 NB	71		2227014	-210204	L 3	40196 L		EO	90112523	234700	024000	332	G E=67,C=63,B=32
RGWIK	NCC 7385	86	12.7	2247249	+112037	L 3	40442 L			90122218	181300	039700		G
SAMOW	HD 216399	49	8.65	2249522	+223701	L 1	19462 L			90122301	012500	006000		G
SAMOW	HD 216399	49	8.65	2249522	+223701	L 1	19463 L			90122303	030500	024000		G
PHCAL	GD 246	37	13.1	2309500	+103042	L 3	40467 L	110	SD	90122706	060600	000530	500	G G=209,B=18
PHCAL	GD 246	37	13.1	2309500	+103042	L 1	19484 L	110	SD	90122706	062000	002800	X02	G G=2.5X,B=38
PHCAL	GD 246	37	13.1	2309500	+103042	L 3	40468 L	109	SD	90122706	065600	001100	X00	G G=2X,B=18

PRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	numresst	ECC	Comment
PHCAL	GD 246	37	13.1	2309500	+103042	L 1	19485 L	110	SO	90122707	073400	001400	X02	G C=1.5X,B=35
RIASS	HD 220657	41	4.40	2322530	+230744	L 3	40364 L	340	FU	90121607	071500	002000	530	G B=64,C=220,B=20
RIASS	HD HD220657	41	4.40	2322530	+230744	H 1	19420 L	341	FU	90121607	075500	002000	532	G B=134,C=250,B=40
MC006	HD221531	42	08.71	2330230	-121549	L 3	40015 L	01259	FO	90110116	162506	004500	400	V
MC006	HD221531	42	08.66	2330230	-121549	L 3	40019 L	01309	FO	90110215	151437	019000	601	V
MC006	HD221531	42	08.67	2330230	-121549	L 1	19120 L	01297	FO	90110218	183013	000130	401	V NO GUIDING
RIASS	HD 222107	45	3.88	2335065	+461114	H 1	19349 L		FU	90120402	020100	000400	352	G B=193,C=70,B=34
RIASS	HD 222107	45	3.88	2335065	+461114	L 3	40266 L	545	FU	90120402	021400	003000	351	G B=186,C=63,B=22
CSMIA	HD 222107	45	4.0	2335065	+461114	L 3	40385 L	553	FU	90121903	031500	003000	3X1	G B=2X,C=80,B=30
RIASS	HD 222107	45	3.9	2335065	+461114	H 1	19500 L	606	FU	90123101	013200	000400	352	G B=206,C=74,B=36
RIASS	HD 222107	45	3.9	2335065	+461114	L 3	40500 L	601	FU	90123101	014700	003000	351	G B=181,C=60,B=22
CSMIA	HD 222107	45	4.0	2335065	+461114	L 3	40686 L	556	FU	91012621	211200	003000	351	G B=223,C=60,B=22
RIASS	HD 222107	45	3.8	2335065	+461114	L 3	40693 L	547	FU	91012721	210400	003000	3X1	G B=1.5X,C=60,B=22
RIASS	HD 222107	45	3.8	2335065	+461114	H 1	19655 L	540	FU	91012721	214200	000400	342	G B=167,C=70,B=36
RIASS	R AQR	57	5.7	2341143	-153343	L 3	40263 L	15516	FO	90120318	180000	003000	3X0	G B=1.5X,C=41,B=20
RIASS	R AQR	57	5.7	2341143	-153343	L 1	19348 L	14873	FO	90120322	221600	003000	4X2	G B=2X,C=140,B=40
RIASS	R AQR	57	5.7	2341143	-153343	H 3	40265 L	14954	FO	90120323	230400	011500	X3	G B=1.5X,B=41
RIASS	R AQRJET	57		2341146	-153335	L 3	40264 L		EO	90120319	191000	018000	3X3	G B=1.5X,C=79,B=42
DFMB	2342+806	37	14.6	2342576	+804021	L 3	40849 L		EO	91021013	130400	002500	500	G C=210,B=18
DFMB	2342+806	37	14.6	2342576	+804021	L 1	19732 L		EO	91021013	133800	005000	502	G C=238,B=40
DFMB	2342+806	37	14.6	2342576	+804021	L 3	40850 S		EO	91021014	144300	005000	400	G C=141,B=18
MC006	ED+185215	41	10.11	2344240	+191142	L 3	40016 L	00361	FO	90110118	180744	004500	300	V
RIASS	HD 223460	45	5.9	2347099	+360852	L 3	40463 L	10360	FO	90122620	202900	010500	342	G B=142,C=120,B=39
RIASS	HD 223460	45	5.9	2347099	+360852	H 1	19481 L	10536	FO	90122622	222200	004500	443	G B=164,C=150,B=41
RIASS	HD 224085	46	7.4	2352290	+282118	L 3	40464 L	2597	FO	90122623	233000	006000	231	G B=58,C=40,B=30
RIASS	HD 224085	46	7.4	2352290	+282118	H 1	19482 L	2597	FO	90122700	003800	004000	342	G B=167,C=72,B=32



DR. M. BARYLAK  
DATA BANK RESIDENT ASTRONOMER  
ESA SATELLITE TRACKING STATION  
APARTADO 54085  
28080 MADRID  
SPAIN



### ERRORS IN FOREGOING VILSPA LOG

Please inform us by post of all errors or omissions in the log reproduced in this issue. Detach this page, fold and staple it leaving the mailing address (verso) visible.

CAMERA & IMAGE	DISPERSION	APERTURE	TARGET	DATE OF OBSERVATION	WRONG FIELD CONTENTS	CORRECT INFORMATION

UK RESIDENT ASTRONOMER  
ESA SATELLITE TRACKING STATION  
APARTADO 54065  
28080 MADRID  
SPAIN

APPENDIX B: VILSPA DATABASE USER'S GUIDE (CORRECTION TO ESA IUE NEWSLETTER 37)

Column names of the VILSPA Database - May, 1991			
Column name	Trans.	Description	Applicable Tables
\$CIDA	CM-AP	: CIDA column for format buffer	16,17,18
\$CIM	CM,IM	: camera and image number column for format buffer	12,13,14,16,17,18,25,29
\$TARG-DEC	DD,DS	: Declination of target (+DDMMSS)	12,14,16,17,18,25
\$TARG-RA	RA,RB	: Right Ascen. of target (HHMMSSs)	12,14,16,17,18,25
*	*	: selects all columns of a table	all
ADD-COMMENTS	AD	: additional comments	14,25
ARC-COMMENTS	AC	: archive comments	13
ADR1	AA	# first user address field	11
ADR2	AB	# second user address field	11
ADR3	AC	# third user address field	11
ADR4	AD	# forth user address field	11
AGENCY	AG	* agency which received program proposal	31
APERTURE	AP	* aperture (small, large, ...)	14,16,17,18,25
CAMERA	CM	* IUE camera (LWP= 1, LWR= 2, SWP= 3, SWR= 4, FES= 9)	12,13,14,16,17,18,25,29
CATALOG	CA	* homogeneous catalog as provided by CDS	29
CDI-PRIMARY	16	! TABLE 16 - Primary Core Data Items	
CDI-SECOND	17	! TABLE 17 - Secondary Core Data Items	
CDI-VERIFIED	18	! TABLE 18 - Verified Core Data Items	
CDS-DEC	DE	* homogeneous declination (+DDMM[SSs]) provided by CDS	16,17,18,29
CDS-RA	RI	* homogeneous right ascension (HHMM[SSss]) provided by CDS	16,17,18,29
CIDA	SS	* access key of CDIs table ie. Cam Image Dis Aperture	16,17,18
CIDENT	CI	* complementary object identification (table HOI)	29
CIM	SC	* camera and image number access key	12,13,14,16,17,18,25,29
CLASS	CL	* IUE object class (see any ESA IUE Newsletter)	12,14,16,17,18,25
CODENAME	CN	# user's code name	11
COMMENTS	CO	: general comments	14,16,17,18,25
CPUTIME	CP	: spent CPU time by users	11
DATE-OBS	DA	* date of observation (YYMMDD[HH])	12,14,16,17,18,25
DATE-PRO	PD	* date of last IUESIPS processing (YYMMDD)	13,14,16,17,18,25
DATE-REL	RD	* release date	14,25
DATE-VER	DV	: Date of CDI verification	16,17,18
DECLINATION	DD	* declination (epoch 1950.0 +DDMM)	14,16,17,18,25,29
DEGREES	DD	* declination - degrees only	29
DEMINUTES	DM	* declination - minutes only	29
DESECONDS	DS	* declination - seconds only	29
DIM	DI	: number of requested images for dearchiving	11
DISPERSN	DP	* dispersion	14,16,17,18,25
DMM	DM	* declination - minutes only	29
DSS	DS	* declination - seconds only	29
DTO	DA	* date of observation (YYMMDDHH)	14,16,17,18,25
ECC	EC	: exposure classification code	14,25
EPOCH	OE	* Orbital Epoch of IUE (YYMMDD)	40
EXDURATION	ED	: exposure duration time (MMMMSS)	14,16,17,18,25
EXP-MOD1	PE	: exposure mode 1: P=Point E=Extended source	16,17,18
EXP-MOD2	TL	: Trailed exposure: 0=no, 1=trail-x, 2=trail-y	16,17,18
EXP-MOD3	MU	: Multiple exposures: Y=Yes, N=No	16,17,18
EXP-MOD4	SE	: Segmented exposure: Y=Yes, N=No	16,17,18
EXP-MODES	EM	: All 4 exposure modes	14,16,17,18,25
EXPOGAIN	EG	: Expo Gain: X=max, D=medium, M=minimum	16,17,18
EXPOTIME	ED	: exposure duration time (MMMMSSs)	14,16,17,18,25
EXPTIME	ED	: exposure duration time (MMMMSSs)	14,16,17,18,25

Column names of the VILSPA Database - May, 1991			
Column name	Trans.	Description	Applicable Tables
FCOUNTS	FC	: FES counts	14,16,17,18,25
FED	FE	: image file's end position on magtape	13
FES-MODE	FM	: FES mode (FO, FU, SO, BO)	14,16,17,18,25
FESCOUNTS	FC	: FES counts	14,16,17,18,25
FESMODE	FM	: FES mode (FO, FU, SO, BO)	14,16,17,18,25
FLAG	FL	# completion flag of homogenization of object ids.	29
FLG	FL	# completion flag of homogenization of object ids.	29
FMODE	FM	: FES mode (FO, FU, SO, BO)	14,16,17,18,25
FOCUS	FS	: Focus	16,17,18,25
FPM	FP	: Fast Particle Monitor read out	16,17,18,25
FST	FS	: image file's start position on magtape	13
GONAME	GO	: Guest observers name	14,25
GSCOUNT	GC	# Guide star FES count	16,17,18
GSFC	25	! TABLE 25: GSFC log of IUE observations	
GSTAR-CN	GC	: FES counts of guide star	16,17,18
GSTAR-MD	GM	: FES mode of guide star (FO, FU, SO, NO=no guide used)	16,17,18
GSTAR-X	GX	: FES X coordinate of guide star	16,17,18
GSTAR-Y	GY	: FES Y coordinate of guide star	16,17,18
GSX	GX,U	# Guide star X	16,17,18
GSY	GY,U	# Guide star Y	16,17,18
HOI	29	! TABLE 29 - homogeneous object identifications	
IDENT	FO	* identification field of homogeneous object id.	29
IMAGENUMBER	IM	: number of IUE image	12,13,14,16,17,18,25,29
IUE-CLASS	CL	* IUE object class (see any ESA IUE Newsletter)	12,14,16,17,18,25
IUEORBELEM	40	! TABLE 40 - IUE orbital elements	
JOURNAL	JO	* name of journal of IUE publication	12
LAMP	TF	: Lamp: T=TFlood, U=UVcal, N=None	16,17,18
LAPSTAT	LA	: status of the large aperture (C=closed, O=open)	14,16,17,18,25
LOGINS	LO	# number of user's logins	11
MAGNITUDE	MA	: magnitude of observed object	14,25
MJD-OBS	JD	: Modified Julian Date in CDI tables	16,17,18
NAME	NA	# user's name	11
NIMAGE	IM	: number of IUE image	12,13,14,16,17,18,25,29
NULL	..	: unselect columns	
OBJ-IDENT	CT,OI	: object identification	14,25
OBJECT	CT,OI	: object identification	14,25
OID	CT,OI	: object identification	14,25
ORB-AXIS	OA	: Semi-Major Axis in km of IUE Orbit	40
ORBANOMALY	OO	: Mean Anomaly of IUE Orbit (degrees)	40
ORBASCEN	OR	: Ascending Node of IUE Orbit (longitude)	40
ORBAXIS	OA	: Semi-Major Axis in km of IUE Orbit	40
ORBECCENT	OC	: Eccentricity of IUE Orbit	40
ORBEPOCH	OE	* Orbital Epoch of IUE (YYMMDD)	40
ORBINCLI	OI	: Inclination of IUE Orbit in degrees	40
ORBPERRIGEE	OP	: Arg of Perigee (degrees)	40
PAGE	PA	* page of a IUE publication	12
PDATE	PD	* date of last IUESIPS processing (YYMMDD)	13,14,25
PGM-ID	PI	* IUE program identification	14,16,17,18,25,31
PIDENT	PI	* IUE program identification	14,16,17,18,25,31
PIUE	12	! TABLE 12 - IUE publications	
POSANGLE	PA	: Position Angle of Large aperture	16,17,18
PROGRAMS	31	! TABLE 31 - program titles, PIs, etc.	
PSTATION	PS	* processing station	13,14,25

Column names of the VILSPA Database - May, 1991			
Column name	Trans.	Description	Applicable Tables
RAS	RA	* right ascension (HHMM)	12,14,25
RDATE	RD	* release date	14,25
READGAIN	RG	: Read Gain: H=High, L=Low	16,17,18
READMODE	RM	: Read Mode: P=Partial, F=Full	16,17,18
RELFLAG	RF	* release flag (RELFLAG=* means image is public domain)	14,25
RFLAG	RF	* release flag (RFL=* means image is in public domain)	14,25
RHH	RH	* right ascension - hours	29
RMM	RM	* right ascension - minutes	29
RSS	RS	* right ascension - seconds	29
SOCODE	SO	# image code	14,25
STATION	OS	* observing station (G=GSFC, V=VILSPA)	13,14,25
STATUS	ST	* Status flag of CDI verification (O=Open, P=Pending)	16,17,18
STN	OS	* observing station (G=GSFC, V=VILSPA)	14,25
TAPES	13	! TABLE 13 - tape log of IUE observations	
TARG-DEC	DD	* Declination of target (+DDMM)	14,16,17,18,25
TARG-RA	RA	* Right Ascen. of target (HHMM)	14,16,17,18,25
TARGET	TA	: Target of IUE observation as given by Guest Observer	16,17,18
TELEPHONE	TE	# telephone number of user	11
THDA	TH	: temperature of head amplifier	14,16,17,18,25
THDAREAD	TR	: THDA at read of exposure	16,17,18
THDASTRT	TH	: THDA at start of exposure	16,17,18
TIDENT	TI	* magtape identification (reel id.)	13
TIME-OBS	ET	: time of observation (HHMMSS)	14,16,17,18,25
TIME-VER	TV	: Time of CDI verification	16,17,18
TITLE	TA	: title of proposed IUE program	31
TRAIL-NR	TN	: Number of trail passes	16,17,18
TRAIL-RT	TE	: Trail rate of low dispersion image	16,17,18
USER-ID	UI	* Userid. of CDI verification	16,17,18
USERS	11	! TABLE 11 - users of VILSPA database	
UVC-VOLT	UV	: voltage of UV converter	14,16,17,18,25
VILSPA	14	! TABLE 14 - VILSPA log of IUE observations	
VMAGNITUDE	MA	: magnitude of observed object	14,25
VOLUMN	VO	* volumn of IUE publication	12
YEAR	YR	* year of IUE publication or program observation	12,31





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## ERRORS IN FOREGOING VILSPA LOG

Please inform us by post of all errors or omissions in the log reproduced in this issue. Detach this page, fold and staple it leaving the mailing address (verso) visible.

ERA & IMAGE	DISPERSION	APERTURE	TARGET	DATE OF OBSERVATION	WRONG FIELD CONTENTS	CORRECT INFORMATION

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ESA  
VILAFRANCA SATELLITE TRACKING STATION  
APARTADO 50727  
28080 MADRID