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### IUE ESA NEWSLETTER

Editor:	J. Fernley
Editorial Assistant:	C. Ramirez
Published by:	The ESA IUE Observatory
	Apartado 50727
	28080 - Madrid, Spain

Tel: +34-1-8131100 - Fax: +34-1-8131139 - Telex: 42555 VILSE  
SPAN: VILSPA::IUEOBS - EARN/BITNET: IUEHOT@ESOC

## OBSERVATORY CONTROLLER'S MESSAGE

This newsletter finds you all hopefully well rested after your return from your vacations and the attendance of the conference season.

In the general area of UV astrophysics, a field which we all carry close at heart, many things have occurred.

1. The ESA SPC approved in June the extension of IUE for one more year until 31 December 1991, and as a consequence you will find in this newsletter the call for proposals for the 14th round of IUE Observing.
2. The SSAC however also recommended ESA to consider further extensions beyond 1991 in the context of optional programs. With this it accepted the recommendations of the so-called Pinkau report. On this important subject more information and clarification can be found on page 3.
3. The IUE Conference "Evolution in Astrophysics" was very successfully held in Toulouse under the excellent organisation of the CNES. It became clear that one should not refer to IUE as an old project, but rather that the science done with IUE at present justifies the term NEW Project. Especially the concept of "Dynamic Astronomy" was found to be the dominant concept in the many new results.



4. After the original hopes raised with the successful deployment of the Hubble Space Telescope a major shock was experienced when the problems with the HST Optics became known. The consequences of this are far reaching and have not yet been evaluated. If this will have consequences for the IUE Project it is at this point uncertain and this is not the right place to discuss this. On the other hand it is unavoidable that the extra expenses generated by this major problem will increase the pressure on the budgets, which are already highly strained.
5. The ROSAT satellite was successfully launched and has already started its first All Sky Survey in the Soft X-ray and EUV domain. Our congratulations to our colleagues in the ROSAT Project Teams. This occurrence is important, also for IUE, since a major observing program for Sky Survey Coordination between IUE and ROSAT had been accepted by the IUEAC and during the six month period from August 1990 to January 1991 some 1000 hours of coordinated observations have been planned between ESA and NASA (see page # 14 for details on this RIASS program).

In the more normal areas we are glad to inform you of the release of the IUE-ULDA version 3.0. To accommodate the larger variety of computer systems used at the institutes of the IUE community a new version of the USSP (version 3.0) is in preparation and will be released later this year. This is expected not only to support automatic down link between VMS machines but also to C-machines. The preparation for the production of the Final Archive is picking up steam and the first processing is still expected to be started in early 1991. When and how reprocessed data will be made available is still under study by the Project. Hopefully we will be able to clarify these matters in the next 3-Agency meeting.

First indications suggest that the turning off of one of the defunct Gyro heaters has been successful. The importance of this is that we have made significant power savings in the S/C and the freely accessible portion of the sky has increased significantly. The operational Beta range is now  $30 < \beta < 112$  compared to the previous values of  $33 < \beta < 105$ .

## IUE IN THE NINETIES?

Willem Wamsteker  
ESA IUE Observatory Manager

Due to the accumulation of unforeseen events as explained below, the ESA Scientific Programme faces a major problem. As explained in Space Science Newsletter #16, the mandatory science budget shows a large shortfall for a number of years to come. Therefore the Scientific Programme Committee (SPC) had to make a critical choice concerning the future of IUE. At its meeting of 12 and 13 June, 1990, the SPC approved a further extension of IUE operations throughout 1991. However, the SPC also agreed to consider extensions from 1 January 1992 only as an optional programme, i.e. outside the mandatory scientific budget of ESA.

To recall the most critical items of the financial problems, we quote below from the Space Science Newsletter #16 "A key element in these discussions is the resolving of the severe financial situation with which Horizon 2000 is faced and which results from the nearly simultaneous effects of the delays in the launches of Ulysses, the Hubble Space Telescope and Hipparcos. The cost of these delays amounts to nearly 100 MAU, to which now has to be added the extra cost of operating Hipparcos with four ground stations, instead of the one foreseen if the spacecraft were in its nominal orbit, which amounts to some extra 30 MAU."

It is therefore obvious that the budgetary pressure is very serious. Since the present outlook for IUE is continued operation with only very minor degradation for some 3-4 years to come, the accumulated cost of further extensions (at the rate of 6 MAU/year) would add a financial burden to the mandatory science budget which the SPC considered unacceptable. The Executive is therefore starting the preparations to establish an optional programme for IUE operations.

In an optional programme, member states can elect whether they want to participate or not and, if they do, provide the funding. The time has therefore come, where the community of Astronomers who want to continue reaping the benefits of the large amount of science supplied by IUE, will have to make their voice heard. Unless you make sure that your ESA delegates are aware of the importance of the IUE Project for your national astronomical community, you might find yourself without access to the UV wavelength domain.

Of course, a dramatic failure could also do away with IUE, but as we have shown over the years, the IUE Project attempts to anticipate failures (e.g. who would have guessed that a 3-axis stabilized platform with 2 or possibly even only 1 working gyroscope was a reality?).

To help you grasp the scientific impact of IUE and to see the project in a wider context, I supply in the next few pages some statistics on the project activities and national participation. I hope that this information will serve you to define your position and allow you to address your delegates in such a way that they support your country's participation in an optional programme for extended IUE operations.

For the present time professor H. Nussbaumer (ETH, Zurich) - the ESA representative on the Three Agency IUE Long Range Planning Committee - has volunteered to act as a coordinator for the efforts needed to assure the continued availability of IUE to the European Astronomers. Anyone interested in obtaining advice or information to determine how to effectively make his opinion known is welcome to take up contact with him. Of course, I will also be available as usual as your liaison to ESA management.

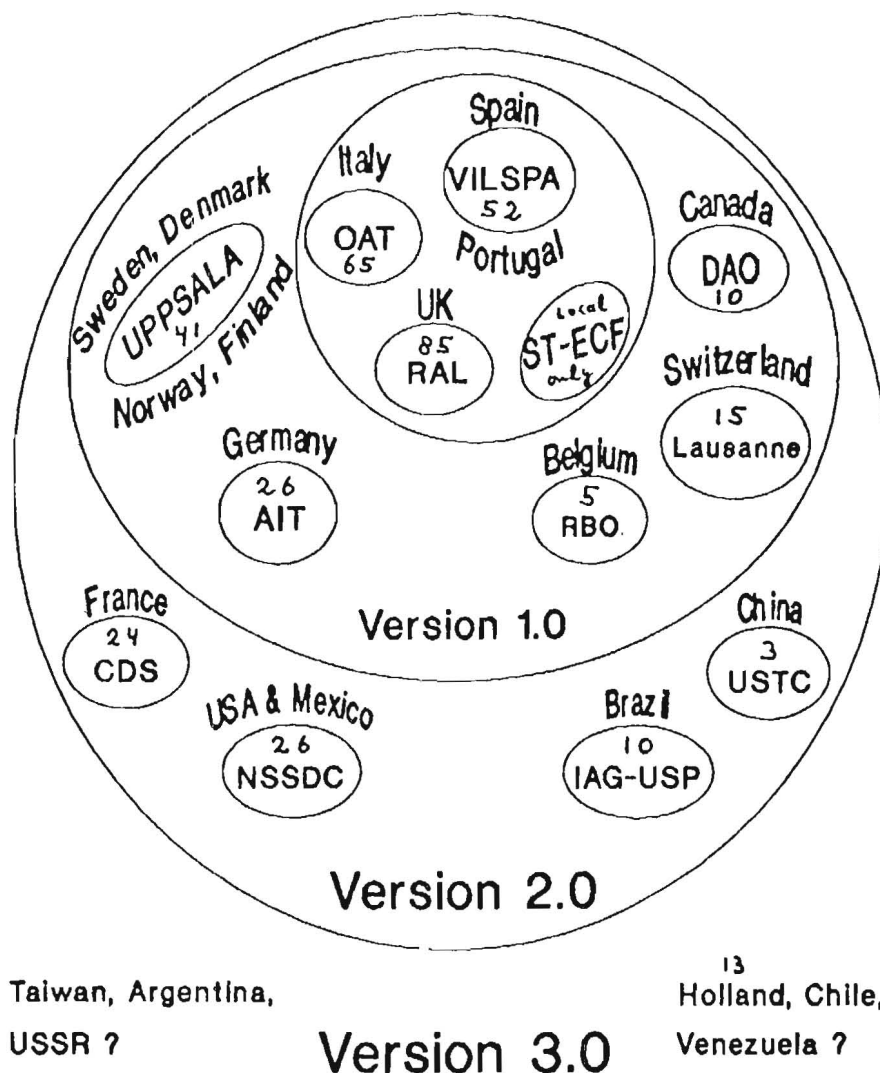
As a final point I include here a summary of the discussion held at the IUE Conference in Toulouse when these matters were raised. This summary is based on the notes made by Dr. P. O'Brien (UCL) to record the discussion. During this meeting it also became quite obvious that a common wish for a continuation of the IUE Project was very much alive in the Astronomers associated with all three parties in the IUE Project: ESA, NASA and SERC, while both ESA and NASA appeared to be considering a serious re-evaluation of the continuation of the support to the IUE Project.

National Participation in the IUE Science  
Program over the last 5 years.

YEAR OF OPERATIONS	9th year	10th year	11th year	12th year	(1) 13th year	Total	Percent
	PI /Co-I	PI /Co-I	PI /Co-I	PI /Co-I	PI /Co-I	PI /Co-I	
Austria	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0.0 %
Belgium	0/ 3	0/ 3	1/ 2	0/ 3	2/ 0	3/ 11	0.6 %
Denmark	1/ 2	0/ 2	1/ 2	0/ 0	0/ 3	2/ 9	0.5 %
France	21/38	19/24	14/14	19/29	14/30	87/135	9.7 %
Germany	24/56	19/40	20/23	26/30	26/63	115/212	14.3 %
Ireland	0/ 0	1/ 2	3/ 8	2/ 5	0/ 0	6/ 15	0.9 %
Italy	26/59	18/44	16/39	16/36	20/40	96/218	13.7 %
Netherlands	6/ 8	6/ 8	15/23	10/19	11/20	48/ 78	5.5 %
Norway	3/ 5	2/ 4	2/ 4	1/ 3	2/ 7	10/ 23	1.4 %
Spain	3/ 8	4/ 9	3/ 3	4/ 6	0/ 6	14/ 32	2.0 %
Sweden	5/14	0/ 1	2/ 3	1/ 2	0/ 1	8/ 21	1.3 %
Switzerland	3/ 4	3/ 5	3/ 7	4/ 3	6/ 7	19/ 26	2.0 %
U.K.	32/87	33/55	34/34	37/77	43/67	179/320	21.8 %
Non-member States	10/70	11/94	13/96	10/97	6/19	50/376	18.6 %
VILSPA	11/30	16/30	11/20	9/21	11/20	58/121	7.8 %

(1) For this year the combined applications under the RIASS program have not been included.

This table shows the distribution of Principal and Co-Investigators over the last five years, for successful applications for IUE observing time. During these years the oversubscription has been steady between 2-3 times the available time ( For comparison , if allowance is made for successful applications of the VILSPA staff, as is done at ground based observatories, the oversubscription rate is comparable to that of the major 4-meter class telescopes).

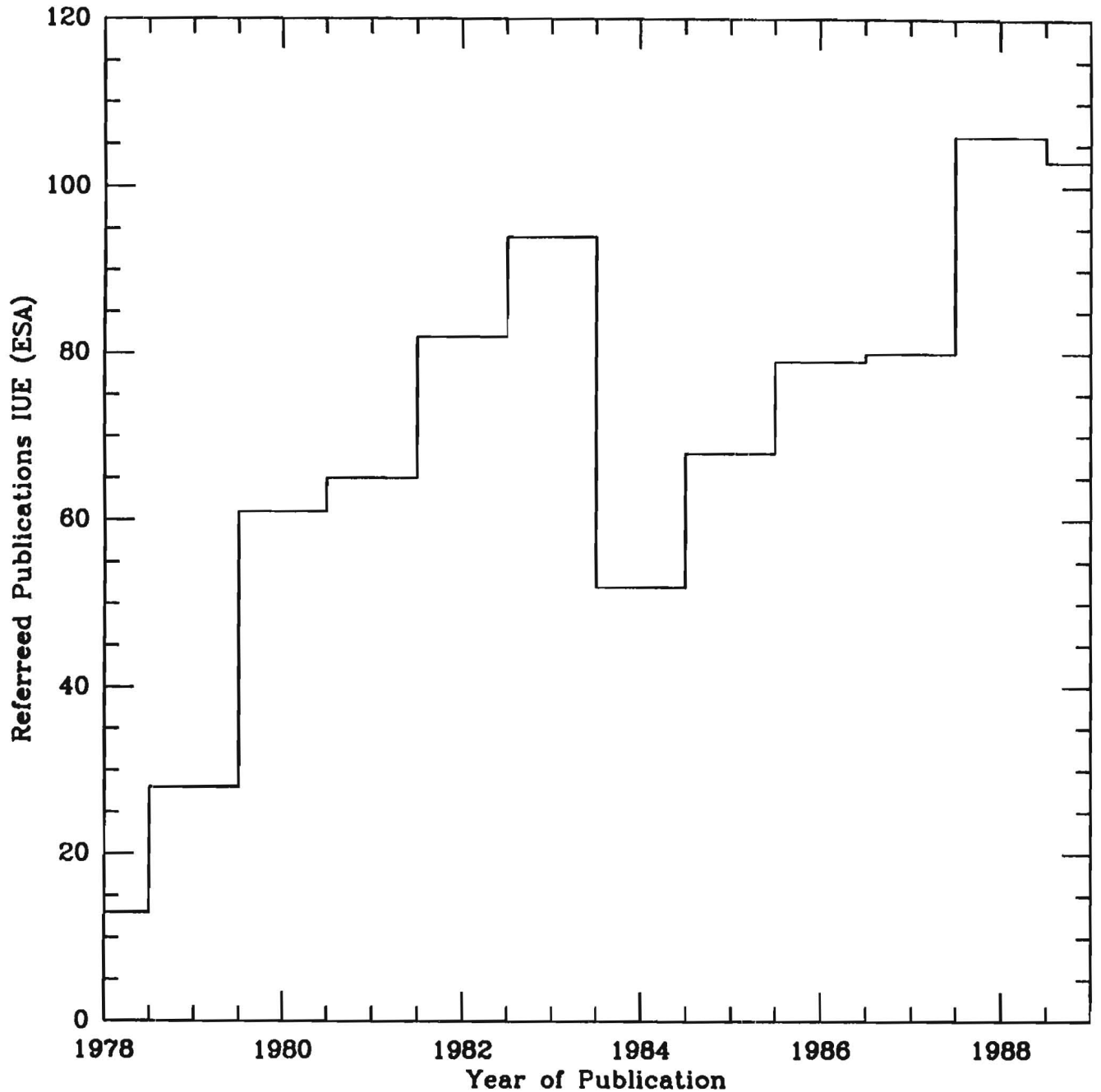


This figure illustrates the usage of the IUE Archive through the evolution of the distribution of the on-line Archive the IUE/ULDA. The countries and their national hosts are indicated in the small circles. The numbers correspond to the number of registered Users per Host Institute.

This system has been in operation now for 2 years and a total of 375 users have registered. The total content of ULDA version 2.0 contains 37 000 spectra.

The registered users have used this system to dearchive 46 000 spectra over the last two years.

Version 3.0 will be released in September 1990, at which time we expect that some of the indicated hosts will come on-line also.



One of the best measures of the scientific productiveness of any scientific endeavour is the production of scientific papers in the main refereed professional Journals. This diagram shows the number of publications per year (non-accumulative!) based on results obtained with the IUE S/C, for time allocated under the ESA part of the IUE orbit. Compared with other major astronomical facilities it is clear that now, even more than in the early phases of the orbital operations IUE is one of the major sources of observational data for the whole Astronomical Community. No other single telescope either ground-based or space-borne has been able to even approach the effective impact over such extended periods as shown in this figure.

Friday 1 June 1990. IUE Conference, Toulouse, France  
Panel Discussion: "*Role of IUE in the era of new space  
missions*"

Panel:

W. Wamsteker, ESA IUE Project scientist  
Y. Kondo, NASA IUE Project Scientist  
R.A. Fosbury, ESA ST-ECF, HST Instrument scientist  
S. Bowyer, Project Scientist EUVE  
H. Nussbaumer, ETH Zurich  
M. Malkan, CALTECH, Pasadena

Introductory comments by the panel

IUE Project Scientists summarized lifetime expectations of Project. Most aspects seem to suggest that 1994 appears to present a reasonable expectation. On the other hand critical items representing serious single point failure modes are increasing.

Future project representatives (Hubble Space Telescope & Extreme Ultraviolet Explorer) stressed the COMPLEMENTARY nature of the relation between IUE and other projects such as ROSAT, HST and EUVE. Variability studies on time scales of days to years are not foreseen with HST. This is just the domain in which the power spectra of many astrophysical processes reach their maximum values.

Users on panel stressed the CENTRAL ROLE played by the IUE project in the large efforts TO TACKLE MAJOR PROBLEMS in the various fields of Astrophysics and the support given to these IUE centred activities by ALL subfields of Astronomy. Importance of such activities is well illustrated by the subsequent joining of other observing facilities in these efforts. This creates a real added value, considerably beyond anything that would have been possible if IUE not had supplied the trigger to stimulate the community to collaborate in such effective ways.

Also the fact that through new data obtained the value of the IUE Archive increases much more than the proportionality in numbers of new data would suggest. This is related to the discoveries made through new variability modes in Astronomical objects, which REQUIRES FREQUENTLY a complete reanalysis of the already existing archival data.



Highlights of comments of the participating audience

The important capability to respond to fast developing astrophysical phenomena is not available in any other spacecraft foreseen in the near future. Therefore IUE is VITAL for the study of the UV of the more DRAMATIC EVENTS in Astronomy.

VARIABILITY STUDIES have always supplied the major progress in astrophysical understanding and NO OTHER MISSION can accomplish the work IUE is doing.

The present richness of the archive means it is vital to make the observation needed to complete it. It is the only reference system on which interpretation of HST UV spectroscopy will be made, since HST will not be able to create its own reference system for years to come.

The importance of the UV for MULTIWAVELENGTH STUDY is extremely large and no other project can support such activities.

IUE does not overlap with HST and is certainly not replaced by it.

The open nature of the project must be retained even if specific different objectives are sought with the IUE. In fact it was pointed out that the usage of IUE at present is DRAMATICALLY DIFFERENT from the original project definition, so much so that a renaming of the project or even competing in the call for proposals for new missions could be seriously considered.

Finally the capabilities of the PHOTOMETRIC MODE of observing with IUE supply an extremely important and unique contribution to the STELLAR SEISMOLOGY, a rapidly growing previously untraced field in stellar astrophysics and stellar evolution theory.

# IUE SPACECRAFT STATUS

JUNE 1990

D. Hermoso, VILSPA

## 1. GENERAL

The spacecraft continued to support science operations normally and effectively in its thirteenth year of highly successful in-orbit operations. At the end of June 1990, a total of 20685 images had been collected from 8951 celestial objects (VILSPA only).

## 2. BATTERIES.

Continue to perform well. IUE's 25th Eclipse Season ran from January 29 through February 24, 1990. The overall performance of the batteries was quite good despite their questionable health going into this shadow season. The maximum depths of discharge for the season were 48.21% for battery 1, and 49.43% for battery 2. Both batteries experienced reconditioning during the season which increased their capacity. Battery reconditioning occurs when a battery is drained close to its minimum capacity and then slowly recharged back to full capacity. The battery cells are rejuvenated during this process, thus, resulting in greater battery capacitance.

## 3. SOLAR ARRAYS

The solar arrays experienced a 9.7% reduction in power output capability. This was a result of high energy proton bombardment caused by the solar cycle maximum. Despite the solar events of the past year, the solar arrays are maintaining a power positive state at betas  $34^{\circ}$  -  $105^{\circ}$ . This range is based on a nominal spacecraft load of 160 watts.

#### 4. ATTITUDE CONTROL SYSTEM

The gyros are performing nominally; gyro 4's drift rate is holding fairly steady while the magnitude of gyro 5's is slowly increasing. An abrupt change in gyro 5's drift rate occurred on March 9, 1990. This occurred shortly after shadow season 25 and, like the abrupt change which occurred in August of 1989, is thought to be related to the larger than normal temperature changes the spacecraft experiences during the daily shadows.

Selecting the most favorable momentum-wheel unload jet firings to counteract the westward drift of the satellite has extended the duration of the IUE orbital drift period by approximately three months. The Delta-V or orbit adjustment, which would have normally been required in March was performed on June 6, 1990.

#### 5. THERMAL

The overall spacecraft temperatures are remaining relatively stable.

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

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

The HOT OBC Beta region has changed as follows:

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

\* For scheduling purposes only

## 6. ANOMALIES

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

- An FES command did not take effect.
- Two cases of corrupted FSS data.
- Two cases of the OBC software load processing code not executing properly.
- Gyro's 5 drift rate ramp abruptly increased from 197 counts/second to 212 counts/second.

THE IUE -ROSAT ALL SKY SURVEY (RIASS)

W. Wamsteker and D. de Martino

The opportunity of IUE observations coordinated with the All Sky Survey during the first 6 months of the ROSAT satellite mission, announced in the IUE Newsletter #33, has raised a large interest of the IUE Community. A total of 55 short proposals involving about 95 investigators have been submitted in response to the ESA and NASA calls, addressing a variety of astrophysical problems which range from late type stars to QSO's. The requested observations have been summarized in the RIASS program in three main subject areas, namely high energy phenomena in cool stars, accretion phenomena in interacting binaries and Active Galactic Nuclei. This has been submitted to the IUE review committee as a "large" or "heroical" program for the 13th year of IUE. Although the final method of treating the time applications has been different for NASA and ESA, it has fortunately been possible to maintain a homogeneous approach to the scheduling and RIASS program execution.

The IUE ESA committee allocated 57.5 shifts while 37 US1 and 15.5 US2 shifts were allocated by NASA, corresponding to a total of 94.5 low radiation and 15.5 high radiation shifts. This amounts to a total of nearly 900 hours of coordinated observations with ROSAT and IUE. In order to plan efficiently this large number of observations and to minimize the impact to the regular IUE programs an overall RIASS philosophy has been developed. Basically it consists in a collaboration of ESA and NASA on the scheduling and observations of common targets (integrated observations) following the proposed observing plans as indicated by the P.I.'s. The scheduling is done in a way that we hope will also allow adaption to unforeseen changes in the Sky Survey schedule. It is obviously unavoidable to have some perturbations if this occurs, but we expect to minimize the inconvenience for the regular Users. A considerable number of ground-based observations have been planned by many scientists to amplify the wavelength range for the simultaneous observations. The schedule for the observations in the RIASS program is conveyed to the participants as soon as it is available. However, if anyone else is interested in being informed on the detailed time line of the RIASS observations, please contact Domitilla de Martino at the ESA IUE Observatory (VILSPA::IUEOBS).

The first observations under RIASS have been made on August 2 and during the next 6 months an additional 110 shifts will be dedicated to this unique coordination between 2 satellite observatories.

In the following pages you will find the complete RIASS observing program.

PROJECT Principal Investigators (RIASS: Cool Stars)

ESA IUE P.I. : Charo Gonzalez  
 NASA IUE P.I. : Jerry Bonnell  
 ROSAT XRT P.I.: Juergen Schmitt  
 ROSAT WFC P.I.: John Pye

RIASS Program Cool Stars

R.A. P.I.'s	DEC.	Names T (exp) (Camera)	
00 17 28.0 Ayres	-65 10 07	HD 1581; Zeta Tuc	65 min (SWLO)
00 18 29.1 Ayres	37 41 30	HD 1671; Rho And	110 min (SWLO)
00 41 05.0 MONTESINOS;Haisch	-18 15 39	HD 4128; beta Cet; SAO 147420; BD -18 115	35+10 min (SWLO+LWHI)
00 44 41.0 LINSKY; Rodono	23 59 44	HD 4502; Zeta And; SAO 74267; BD +23 106	15 + 7 min (LWHI+SWLO) 2 exp
01 07 08.7 Ayres	19 23 30	HD 6903; Psi 3 Psc	30 min (SWLO)
02 50 07.5 Ayres	-12 58 20	HD 17925; HR 857	90 min (SWLO)
02 16 49.0 Karovska	-03 12 12	HD 14386; Mira Ceti	300 min (SW+LW) 2 times
02 32 28.4 Jordan	-44 00 39	HD 16157; CC Eri; SAO 215947; GJ 103	90+15 min (SWLO+LWHI)
02 42 46.1 Ayres	-18 47 03	HD 17206; Taul Eri	75 min (SWLO)
03 16 44.3 ROSSI;Ayres;	03 11 13	HD 20630; Kappal Cet	75 min (SWLO)
03 23 32.0 Guinan	28 32 32	HD 21242	100 min (SW+LW) times 2
03 30 34.4 ROSSI; Ayres;	-09 37 39	HD 22049; Eps Eri	30 min (SWLO)
03 34 13.1 Guinan	00 25 31	HD 22468	50 min (SW+LW) times 2
04 25 43.0 Ayres	15 51 04	HD 28307; Theta 1 Tau	70 min (SWLO)
04 53 44.0 Harper	33 05 20	HD 31398; i Aur;	120+25min (SWLO+LWHI)
04 58 58.1 Ayres	60 22 08	HD 31910; Beta Cam	50 min (SWLO)
05 04 39.2 Ayres	-57 32 27	HD 33262; Zeta Dor	40 min (SWLO)
05 12 59.6 Ayres	45 56 50	HD 34029; Alpha Aur	1 min (SWLO)
05 18 08.4 Ayres	-50 39 35	HD 35072; Zeta Pic	95 min (SWLO)
05 28 36.1 COLLIER;Rodono;Vilhu	-65 29 14	HD 36705; AB Dor; SAO 249286	24 hrs Continuous monitoring
05 51 04.5 JORDAN;Ayres;Guinan	20 16 03	HD 39587; chi01 Ori; 54 Ori; SAO 77705	75+25 min (SWLO+LWHI) times 2
06 30 36.7 LINSKY ;Rodono	82 18 46	HD 44982; SV Cam; SAO 1038	210+120 min (LWHI+SWLO)
06 42 28.9 Ayres	12 56 58	HD 48737; Xi Gem	20 min (SWLO)
07 34 47.4 Ayres	-03 59 57	HD 61064; 25 Mon	55 min (SWLO)
07 36 41.1 Ayres	05 21 11	HD 61421; Alpha C Mi	4 min (SWLO)
07 42 15.3 Ayres	28 08 49	HD 62509; Beta Gem	105 min (SWLO)
08 19 49.2 Haisch	-76 45 41	HD 71243 ; Alpha Cha	50 min (SWLO)

08 32 26.9	19	45	43	HD 72779; 35 Cnc
Ayres				70 min (SWLO)
08 34 45.4	65	11	37	HD 72905; Pi 1 U Ma
Ayres				65 min (SWLO)
08 57 34.0	-27	37	10.5	TY Pyx
RODONO;Linsky;Gimenez				100+50 min (SWLO+LWHI) 3.3 days monitor
09 30 03.8	70	03	00	HD 82210; 24 U Ma
Ayres				65 min (SWLO)
09 49 04.3	-14	36	43	HD 85444; Ups Hya
Haisch				90 min (SWLO)
10 44 36.8	-49	09	20	HD 93497; mu Vel; SAO 222321; HR 4216
MONTESINOS;Ayres				25+15 min (SWLO+LWHI)
11 48 05.3	02	02	47	HD 102870; Beta Vir
Ayres				65 min (SWLO)
12 13 21.4	72	49	45	HD 106677; DK Dra
LINSKY;Rodono				60+30 min (LWHI+SWLO)
12 22 31.9	25	50	15	HD 108102; IL Com; SAO 82295
LINSKY; Rodono;				210+120 min (LWHI+SWLO)
12 49 15.9	27	48	45	HD 111812; 31 Com
Haisch				20 min (SWLO)
13 09 32.3	28	07	53	HD 114710; Beta Com
Ayres				130 Min (SWLO)
13 28 24.7	24	29	24	HD 117555
Guinan				300 min (SW+LW) times 2
13 16 12.1	-22	54	28	HD 115659; Gamm Hya
Haisch				85 min (SWLO)
14 13 23.4	-05	45	43	HD 124850; Iota Vir
Ayres				35 min (SWLO)
14 23 29.6	52	04	55	HD 126660; Theta Boo
Ayres				25 min (SWLO)
14 35 46.8	-60	37	13	HD 128620; alfa Cen A; SAO 252838; HR 5459
JORDAN; Ayres;				20+2 min (SWLO+LWHI)
14 35 46.8	-60	37	13	HD 128621; alfa Cen B; HR 5460
JORDAN; Ayres				40+3 min (SWLO+LWHI)
14 37 56.3	64	30	25	HD 129333
Guinan				400 min (SW+LW) times 2
14 49 04.8	19	18	27	HD131156;xi Boo;SAO 101250;BD +19 2870
JORDAN;Ayres				90+25 min (SWLO+LWHI)
15 05 06.2	25	03	50	HD 134083; 45 Boo
Ayres				95 min (SWLO)
16 38 21.8	60	47	50	HD 150708; WW Dra; SAO 17176
LINSKY; Rodono;				200+100 min (LWHI+SWLO)
16 41 10.9	39	01	02	HD 150997; Eta Her
Ayres				185 min (SWLO)
16 43 21.0	-68	56	20	HD 150798; alfa TrA; SAO 253700
Harper;				70+10 min (SWLO+LWHI)
17 04 17.5	54	32	10	HD 154905; Mu Dra
Ayres				40 min (SWLO)
17 12 16.3	-26	31	41	HD 155885; 36 Oph
Ayres				155 min (SWLO)
17 29 18.0	52	20	16	HD 159181; Beta Dra; SAO 30429; HR 6536
HARPER;Ayres				20+10 min (SWLO+LWHI)
17 55 51.4	15	08	31	HD 163930; Z Her; SAO 103254
LINSKY; Rodono;				120+60 min (LWHI+SWLO)
18 02 55.7	02	30	40	HD 165341; 70 Oph
Ayres				45 min (SWLO)
18 32 44.7	51	41	01	HD 234677; BY Dra; SAO31048
BARSTOW;Rodono;				100+50 (SWLO+LWLO)6*8 HRS separated by 24 Hrs
18 43 30.5	20	29	50	HD 173667; 110 Her
Ayres				45 min (SWLO)
19 30 10.1	55	37	30	HD 184398; HR 7428; V1817 Cyg; SAO 31741
LINSKY; Rodono;				60+30 min (LWHI+SWLO)
21 19 28.0	-17	02	55	HD 203387; iot Cap; SAO 164346
MONTESINOS; Haisch				110+30 min (SWLO+LWHI)
21 04 39.3	38	30	12	HD 209100; Eps Ind
Ayres				170 min (SWLO)
22 06 39.5	45	29	45	HD 210334; AR Lac; SAO 51684
RODONO;Gimenez				60+30 min (LWHI+SWLO) 48 Hrs Continuous

22 23 51.2	-16	59	44	HD 212697; 53 Aqr
ROSSI;Ayres				100 min (SWLO)
23 04 40.3	25	11	53	HD 218356; 56 Peg; SAO 91019
Harper;				72+20 min (SWLO+LWHI)
23 22 53.0	23	07	44	HD 220657; Ups Peg
Haisch				20 min (SWLO)
23 35 06.5	46	11	14	HD 222107; lam And; SAO 53204
GUINAN;Rodono				5+10 min (SWLO+LWHI) times 3
				2 separated by 27 days and 1 coinciding with ROSAT
23 37 22.6	05	21	19	HD 222368; Iota Psc
Ayres				125 min (SWLO)
23 47 09.9	36	08	52	HD 223460; HR 9024
Ayres				105 min (SWLO)
23 52 26.0	28	23	00	HD 224085
Guinan				60 min (SW+LW) times 2

=====  
Total Time Involved in C Observations: 15255 min= 254.25 Hrs= 32 shifts



PROJECT Principal Investigators (RIASS: Interacting Stars)

ESA IUE P.I. : Domitilla de Martino  
 NASA IUE P.I : Jerry Bonnell  
 ROSAT XRT P.I.: Wolfgang Bunk  
 ROSAT WFC P.I.: Mike Watson

RIASS Program Interacting Stars

P.I.	R.A. (1950)	Dec. (1950)	Name	EXP TIME (min)	MODES	NOTES
Dwarf Novae in Outburst						
Naylor			32hrs SWP+LWP LOres		ToO	
	00 53 40.3	60 26 47	HD 5394; Gamma Cas;		X0053+604	
PETERS; de Martino;			0.14(=0.002hrs)SWP		HIres	
	01 39 37.5	-68 08 32	BL HYI; H0139-68			
de Martino			227+227(=8hrs) SWP+LWP		LOres	
	03 12 00.0	-22 46 47.1	EF ERI; 2A0311-227			
de Martino			120+120(=4hrs) SWP+LWP		LOres	
	03 27 47.0	43 44 02	HD 21629; GK Per; A0327+437			
de Martino			75+73(=2.5hrs) SWP+LWP		LOres	
	03 52 15.1	30 54 01	HD 24534; X Per; 4U0352+30			
de Martino			20(=0.3hrs) SWP		HIres	
	04 05 01.3	47 34 52	HD 25940; 48 Per; SAO 39336			
PETERS; de Martino;			2.5(=0.04hrs) SWP		HIres	
	05 06 44.9	-08 48 59	HD 33328; lambda ERI			
Peters			0.83(=0.01) SWP		HIres	
	05 08 14.0	-68 41 22	N LMC 88#2			
Krautter			8hrs*2 SWP		LOres	continuous
	05 35 50.0	-69 17 58	SN 1987A			
Sonneborn			8 hrs SWP+LWP		Low Res	
	05 35 42.8	-66 53 39	X0535-668			
Pakull			240m(=4hrs*4) SWP+LWP		LOres	each 1.5days
	05 43 48.0	-68 23 34	LHG 83; 1E 0543.8-6823			
Pakull			480(=8hrs*4) SWP		LOres	each 3 days
	06 09 15.9	-48 43 45	LB 1800			
Raymond			50 min (SW+LW)			
	06 24 24.4	14 55 15	HD 45314; SAO 95697			
de Martino			20(=0.3hrs) SWP		HIres	
	07 24 52.1	-22 59 02	HD 58978			
Henrichs			2.83(=0.05) SWP		HIres	
	07 48 25.0	-67 37 31	0748-67			
Penninx			8 hrs*3 times SWP		LOres	each 5 days
	07 52 07.7	22 08 03	HD 64511; U Gem; BD +22 1807			
de Martino			45+55(=2hrs) SWP+LWP		LOres	
	10 10 01.7	-57 48 47	HD 88661; QY Car			
PETERS; de Martino;			5(=0.08hrs) SWP		HIres	
	12 31 21.5	70 03 49	HD 109387; K Dra			
PETERS; de Martino;			1.5(=0.02hrs) SWP		HIres	
	12 35 59.8	-75 05 43	HD 109857; H1253-761			
de Martino			100(=2hrs) SWP		HIres	
	12 39 53.2	-62 47 05	HD 110432; HR 4830			
de Martino			9(=0.15) SWP		HIres	
	12 49 42.6	-28 58 40	EX HYA; H1249-289			
de Martino			40+30(=1.5hrs) SWP+LWP		LOres	
	12 51 39.6	-56 53 50	HD 112091; mu2 Cru			
de Martino			5(=0.08hrs) SWP		HIres	
	14 05 58.2	-45 03 06	V834 CEN; H1405-45			
de Martino			100+100(=3.5hrs)SWP+LWP		LOres	
	15 57 24.5	26 03 39	HD 143454; T Crb; SAO 84129			
SELVELLI; Stencel			60+30(=2hrs) SWP+LWP		LOres	
	16 01 23.0	66 56 25	AG Dra; SAO 16931; BD +67 922			
STENCEL; Nussbaumer; Viotti;			4hrs SWP+LWP		HI, LOres	
	17 57 47.1	04 22 11	HD 164284; 66 Oph			
Peters			2.17(=0.04HRS) SWP		HIres	
	18 14 58.7	49 50 55.1	AM Her, H1814+498			

BEUERMAN; de Martino	33+33(8hrs)	SWP+LWP LOres
19 23 13.4 50 08 32	CH Cyg	
CARDINI; Stencil	120+20(=3hrs)	SWP+LWP HI;LOres
19 39 41.4 16 37 33	HM Sge; PK 053-03 2	
NUSSBAUMER; Stencil	8hrs SWP	HI;LOres
19 45 35.1 24 11 18	CK Vul	
Krautter	8+8hrs SWP LORES	continuous
19 46 41.6 29 16 34	HD 187399; SAO 87754	
de Martino	210(=3.5hrs) SWP	HIres
20 03 30.7 22 31 28	QQ VUL; H2003+22	
de Martino	111+111(=4hrs) SWP+LWP LOres	
20 58 07.4 47 19 30	HD 200120; 59 Cyg	
Peters	1.25(=0.02hrs) SWP	HIres
22 22 43.4 01 07 23	HD 212571; Pi Aqr	
HENRICHS; Peters	1.5 SWP	HIres
23 41 14.3 -15 33 43	HD 222800; R AQR; SAO 165849	
VIOTTI; Stencil	6hrs	LOres

=====  
Total time I Observations: 12478 min= 208 Hrs = 26 shifts

PROJECT Principal Investigators (RIASS: Active Galactic Nuclei)

ESA IUE P.I. : Willem Wamsteker  
NASA IUE P.I : Jerry Bonnell  
ROSAT XRT P.I.: Wolfgang Brinkmann  
ROSAT WFC P.I.: Ken Pounds

RIASS Program Active Galactic Nuclei

R.A. (1950) P.I.	Dec. (1950)	Name T(exp) (Cameras)
00 03 45.2 ULRICH; Gaskell; Walter	19 55 29	Mrk 335; PG 0003+199; H0003+20; QSO 00033+199 240 min (SW+LW)
01 21 51.2 Walter;	-59 03 59	Fairall 9; ESO 113-45; QSO 0121-590 150 min (SW+ LW)
02 12 00.5 PETERSON ;Walter	-00 59 57	Mrk 590; NGC 863 240 min (SW+LW)
11 36 33.0 Gaskell;	-37 27 41	NGC 3783; H1136-37.5; ESO 378-14 150 min (SW+LW)
12 00 36.0 GREEN; Walter;	44 49 00	NGC 4051; Z 1200.6+4448 400 min (SW+LW)
12 08 00.4 Walter;	39 41 02	NGC 4151; H1208+39.7 150 min (SW+LW)
12 11 44.8 Ulrich;	14 19 53	PG 1211+143 200 min (SW+LW)
12 19 33.8 Ulrich;	75 35 18	Mrk 205; QSO 1219+756 500 min (SW+LW)
12 26 33.2 COURVOISIER; Urry;	02 19 43	3C 273; H1226+02.3; QSO 1226+023 150 min (SW+LW) 2 times
12 53 3.8 Urry;	-05 31 08	3C 279 300 min (SW+LW)
13 51 53.6 Gaskell;	69 33 13	MRK 279; PG 1351+695 300 min(SW+LW)
14 15 43.5 Walter	25 22 01	NGC 5548; H1416+25.6 150 min (SW+LW)
14 40 04.6 Gaskell;	35 39 07	Mrk 478; PG 1440+35; QSO 1440+356 200 min (SW+LW)
15 01 36.3 ULRICH;Walter;	10 37 56	Mrk 841; PG 1501+106; QSO 1501+106 240 min (SW+LW)
16 13 36.2 ULRICH;WILKES;	65 50 37	Mrk 876; PG 1613+658; QSO 1613+658 400 min (SW+LW) 4 times (delta 3 days)
16 15 18.2 Piro;	06 11 12	E1615+061 480 min (SWP)
16 41 17.5 URRY;Green ;	39 54 10	3C 345 400 min (SW+LW)
18 03 37.4 MALKAN;Wilkes;Ulrich;Maraschi;	67 37 54	KAZ 102; QSO 1803+676 480 min (SW) 7 times (delta 11 days) +(LW) 1 time
18 07 18.7 TREVES; ULRICH;Malkan;Urry;Courvoisier;	69 48 57	3C 371.0; QSO 1807+698 480 min (SW); 8 times (delta 5 days)
18 21 41.8 HALPERN;FINK;Malkan; Ulrich;	64 19 01	1821+64 480 min (SW+LW); 7 times (delta 5 days)
18 45 37.0 Courvoisier	79 43 05	3C 390.3; H1858+79.7; QSO 1845+796 480 min (SWP) 2 times
20 41 26.2 WESTERGAARD;Gaskell;	-10 54 17	Mrk 509; H2041-10.7 80 min (SW+LW) 5 times (delta 8 hrs)
21 55 58.0 Urry;	-30 27 54	PKS 2155-304 100 min (SW+LW) 3 times

Total Time Q Observations :18700 min= 312 Hrs= 39 shifts

VILSPA Database News  
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M. Barylak  
ESA IUE Observatory. Aug. 1990

SQL and the VILSPA database

As everybody knows the database management system (DBMS) of the VILSPA database was chosen to be ADABAS back in 1981. ADABAS uses a quasi-relational data model; quasi because it allows multi-valued fields and periodic groups. Modern DBMSs implement the relational data model (eg. SYBASE, INGRES, ORACLE, etc.). SQL, an acronym for "Structured Query Language", has almost completely taken over the world of relational database languages. Furthermore it has become an ISO standard. Hence and in view of the future a simple interactive SQL interface (SSQL) has also been implemented for the VILSPA database.

This new and versatile SSQL facility will be made available after the summer. New "VILSPA Database User's Guides" will duly be distributed.

ULDA VERSION 3.0

By the time you are reading this, ULDA Version 3.0 (see Talavera, 1990) should be available at your national host - for a list of ULDA/USSP national hosts see ESA IUE Newsletter No. 34, pag. 30.

DEARCHIVING OF LOW RESOLUTION SPECTRA

With the release of ULDA Version 3.0, the ULDA/USSP (at your national host) should be used as the normal and preferred vehicle for dearchiving low dispersion spectra.

Only in special cases (e.g. for people without an access to a national host etc.) dearchiving of extracted low resolution spectra will be performed for you here at VILSPA. The data will be made available in FITS format.

REFERENCES

Talavera, A.: 1990, Uniform Low Dispersion Archive V.3.0, ESA IUE Newsletter No. 34, pg. 27.

THE IUE FINAL ARCHIVE

Antonio TALAVERA  
VILSPA

IUE has been working already for more than twelve years. During that time more than 70000 spectra of several thousand different objects have been obtained. These data form the IUE Archive, an open facility accessible to all astronomers around the world.

This Archive is used very intensively by the astronomical community. At the present time the rate of retrieved spectra is greater than the production of new observations, and after twelve years of operations we can say that each spectrum obtained with IUE has been used at least twice, once by the original astronomer who proposed the observation and another time by another scientist taking the data from the Archive. The Uniform Low Dispersion Archive (ULDA), has even more stimulated the large usage of the IUE data.

Now the Three Agencies involved in the project (ESA, NASA and SERC) are planning a new milestone for IUE, the Final Archive.

The goal of this is to provide to the astronomical community a set of data processed in a completely homogeneous way, with the best available techniques and using the most recent calibrations. To achieve this ambitious goal, a new processing system will be applied to all spectra in the actual Archive, and also to the new data that we hope to obtain in the future.

The most important advance is made at the level of the Intensity Transfer Function (ITF) correction. Cross-correlation techniques developed originally at Lund Observatory are used to detect fixed patterns in the camera background and measure the displacement of the pixels with respect to the ITF allowing in this way an accurate correction of the pixel to pixel sensitivity variation. New ITF's and Absolute Calibrations are being derived as well. The time sensitivity variation of the cameras will also be corrected.

In addition to these techniques, all information of relevance for the scientific analysis of the data, such as exposure time, coordinates and other instrumental parameters will be carefully verified.

A system of homogeneous identifications, which has already been implemented in the vilspa IUE Database, will be included in the Final Archive too.

The Final Archive will be written on optical disks. The data will be written in FITS format to be easily accessible by most astronomical data reduction packages.

A Final Catalogue of the IUE Observations will be created to facilitate the access to the Final Archive. All relevant documentation will be included in the Final Archive in such a way that astronomers, now and in the next decades can analyse IUE data with full confidence.

At the present time the new processing system is being finalised at GSFC. Vilspa and GFSC will reprocess their respective data which will be merged to form the IUE Final Archive. Final reprocessing is foreseen to start in early 1991. We shall report more extensively about the IUEFA (the new acronym for the Final Archive) in future issues of this Newsletter.

### IUESIPS MODIFICATIONS

On May 22 1990, some modifications have been introduced in IUESIPS at VILSPA.

The most important is the modification of the ripple correction parameter K for the SWP camera. The rationale for this new parameterization can be found in Grady & Garhart (IUE NASA Newsletter No.37, p.102). In a few words, the reason for this change is the variation produced in the shape of the echelle blaze function as a consequence of the camera sensitivity degradation.

A. Talavera  
IUE Resident Astronomer

## THE OPTIMUM FILTER TECHNIQUE APPLIED TO IUE/HR SPECTRA

Deleuil, M. and Viton, M.

Laboratoire d'Astronomie Spatiale, Allée Peyresc, 13012 Marseille (France)

### 1. Introduction

It is well known that IUE high resolution spectra suffer essentially of a low signal to noise (S/N) ratio. In an attempt to improve the situation, we have used the data analysis and restoration method recommended by Brault and White (1971, hereafter BW), a detailed application of the classical "optimum filter" technique based on Fourier transforms. This method offers the advantage to smooth spectra while respecting the intrinsic line profiles as far as possible, and simultaneously to give direct information on the physical conditions under which the signal was emitted. Here, we shall describe shortly how we did apply the BW precepts, which particular cautions were taken, and through the results of further spectroscopic analysis involving curve of growth techniques, we show that the quality obtained is pretty good.

### 2. Procedure

The procedure described by BW can be summarized in the following way: let  $s(\lambda)$  be the true signal,  $p(\lambda)$  the instrumental profile,  $o(\lambda)$  the observed signal, and  $n(\lambda)$  a supposedly additive random noise. The observed signal can then be written:

$$o(\lambda) = s(\lambda) \otimes p(\lambda) + n(\lambda) \quad (1)$$

Note that the measured spectrum is the convolution of the instrumental profile (PSF) and the true flux spectrum. If we denote the Fourier transforms by respectively  $O(\nu)$ ,  $S(\nu)$ ,  $P(\nu)$ , and  $N(\nu)$ , the transform of equation (1) is:

$$O(\nu) = S(\nu) \times P(\nu) + N(\nu) \quad (2)$$

The unavoidable presence of noise forbids a trivial reconstruction of  $S(\nu)$  which would otherwise consist in dividing the transform of the observed signal by the PSF transform. Indeed, because the noise transform extends to such high frequencies where the instrumental profile transform becomes negligible for normally oversampled data, a direct consequence would be a dramatic amplification of high frequencies, that is of noise itself rather than a true deconvolution (see the displayed examples in BW).

In order to avoid this, it is necessary to apply a special filter that simultaneously removes the high frequencies and restores as far as possible the smeared signal. Thus, the reconstructed data transform may be written as:

$$R(\nu) = \frac{S(\nu)}{P(\nu)} \times \Phi(\nu) \quad (3)$$



The optimum filter  $\Phi(\nu)$  is then obtained by a least square root method applied to the difference between the true signal transform and the restored-filtered transform:

$$\int (S(\nu) - R(\nu))^2 d\nu = \text{minimum} \quad (4)$$

The result is:

$$\Phi(\nu) = \frac{|S(\nu)P(\nu)|^2}{|S(\nu)P(\nu)|^2 + |N(\nu)|^2} \quad (5)$$

Examination of a typical power spectrum (figure 1) shows a well defined low frequency core due to the convolution of spectral lines by the PSF, but that actually the theoretical "white" noise component is not at all constant over the whole power spectrum domain: in this particular case, it appears that the power spectrum is multiplied by a sinus bell (or Airy) function due to a preliminary smoothing (Cassatella, 1987) using a window of 3 pixels while rebinning the data at the constant step of 0.04 Å per pixel.

Consequently, the modelisation of power spectra has been made assuming (i) that all spectral lines might be represented by Voigt profiles and the instrumental profile by a pure Gaussian; (ii) that the original noise could be taken as an additive white component. Finally, and as mentioned above, a sinus bell has been adjusted so as to reproduce the effective power spectra distributions. This can be written *in the Fourier domain* as:

$$\text{Model} = [(A e^{-(\pi\sigma_{st} \nu)^2 - 2\pi\sigma_{st} \alpha|\nu|}) \times e^{-(\pi\sigma\nu)^2} + B] \times \left[ \frac{\sin(\pi\nu W)}{\pi\nu W} \right]^2 \quad (6)$$

with :

- $\sigma$  = width of the PSF,
- A = stellar signal amplitude,
- $\sigma_{st}$  = stellar Doppler width,
- $\alpha$  = damping parameter,
- B = noise level,
- W = width of the original data smoothing window

These parameters have to be determined iteratively by fitting the model to the observed power spectrum until a satisfactory simulation is achieved (figure 1). Note in connection that the FWHM values derived for the PSF (0.14Å around 1240Å and 0.13Å around 1390Å) are in good agreement with the values given by Cassatella and Martin (1982, their Figure 1) after spectra of  $\zeta$  Scorpii taken at optimum focussing.

Once we have determined all the parameters from modelisation of the power spectra, we can compute the restoration filter  $\Phi(\nu)$  (figure 2) as mentioned above. However, it is worth notice that we took several cautions to improve the results:

- before any transformation, we advise to remove carefully some reseau marks and strong cosmic ray flaws (by fitting Gauss profiles), since they behave like true signals at all frequencies, artificially increasing the contribution of noise at low frequencies where the signal is mainly located

- to avoid pernicious effects in the discrete Fourier transforms, the power spectra were only calculated after subtraction of the mean as recommended by BW, but instead of applying their “end region masking” we did prefer to extract carefully our 512-pixel windows in each order, so as the flux distribution at the end would reconnect smoothly with the distribution at the beginning of the window. Eventually, when less than 512 pixels were available in some orders, a given number of pixels with constant flux was added at the end of each concerned spectrum, so as to reconnect here again smoothly with the signal at the beginning of the window
- to improve the S/N ratio in the Fourier domain and so to optimize the determination of the filter parameters, we actually averaged the power spectra of three adjacent orders in each spectral region of interest: this is legitimate since the IUE FWHM varies very slowly with order number
- as the signal to noise ratio is not a constant all along a given order but varies from center to extremities in a ratio of  $\approx \sqrt{2}$ , we decided early to limit (whenever possible) our further spectroscopic investigations to small sub-domains of 7 to 10Å around that point in each order where the S/N ratio is a maximum (not much different from the order center). And consequently, we found that reducing the model amplitude of noise (as derived from fits to the observed power spectrum of 3 adjacent orders) by an amount of 20% was a better compromise when computing the restoration filter: so, we optimized the restoration of the central parts of each order where the S/N ratio is a maximum, at the expense of extremities, where anyway quite poor results may be expected
- a direct check of the optimum filtering was achieved by an eye inspection of the raw and filtered spectra (figure 3), so as to be sure that the profiles of the few interstellar lines present (both stars are little reddened) were satisfactorily filtered and not appreciably smeared: because they are expected to have Doppler widths much lower than stellar lines for the objects of concern, it is undoubtedly a securing test of the good quality of the restorations achieved.

### 3. Conclusion

As a final check of the satisfactory results that were obtained through application of the method described above, let us mention shortly the study that we have carried out recently, concerning a differential abundance determination between two very similar subdwarf OB stars with temperatures near 63000 K and gravities of  $\log g \simeq 5.5$ : CPD-71°172B (Viton et al., 1988) and LSII+18°9 (Schönberner and Drilling, 1985).

Due to the poor S/N ratios of their SWP spectra (reaching a maximum of 7 to 8 near the center of orders 100-110 where flux is a maximum, both stars being of 12th magnitude in the visible), the model parameters and consequently the optimum filter were somewhat inaccurate. But the preliminary results appear quite satisfactory as shown in figure 4, a typical curve of growth derived for a number of FeV transitions.

However, for spectra with better S/N ratios, this method would be powerful and in addition to a direct, global determination of physical parameters of high interest such as the Doppler width and damping parameter, one could also hope detecting the effects of macroturbulence or rotation if any, which are normally negligible in the hot, high gravity objects of concern here.

Also, if we have assumed the original noise to be white for simplicity, we found some evidence that it is only a crude approximation, and we suggest that a possible improvement of the method would be to take into account the fixed pattern due to the IUE detector itself that has often been invoked by many authors. (Note in this connection that, except in a few cases, no outstanding feature of this nature has been evidenced until present time in the spectra of both stars used: over a fraction of nearly 50% of lines that remain unidentified (i.e. most probably belonging to ions other than those of the iron group), some 80% of these appear in common to both stars. And hence, as their spectra were globally shifted by  $0.2\text{\AA}$  during the observations, we can crudely estimate the contribution of fixed pattern features to a maximum of  $\approx 10\%$  of the total number of sharp features found in so heavily line blanketed spectra, the overall line-blocking of which being at least 50%).

### Aknowledgements

We want to express our gratitude to A. Cassatella for his various contributions to present work, J. Clavel for the high resolution observations of CPD-71°172 and C. Gry for many usefull discussions and comments.

### References

- Brault, J.W., White, O.R.: 1971, *Astron. Astrophys.* **13**, 169 (BW)  
Cassatella, A.: 1987, private communication  
Cassatella, A., Martin, T.: 1982, *Report to the Three Agency Meeting* (The Point Spread Function for IUE High Dispersion Spectra)  
Schönberner, D., Drilling, J.S.: 1985, *Astrophys. J. Letters* **290**, L49  
Viton, M., Burgarella, D., Cassatella, A., Prévot, .L: 1988, *Astron. Astrophys.* **205**, 147

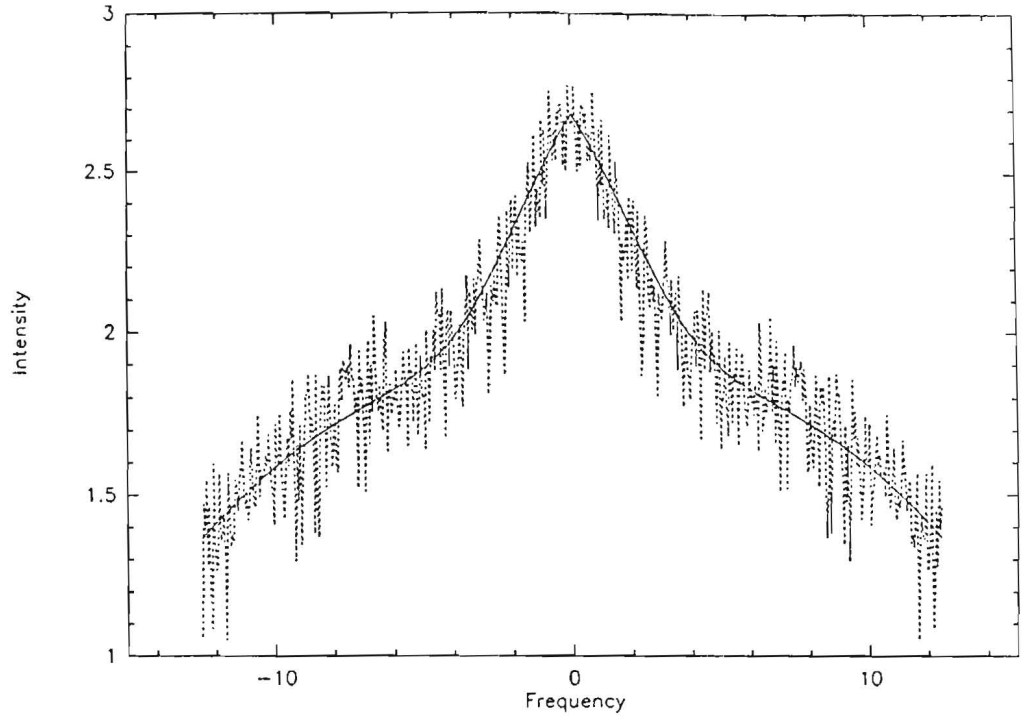


Figure 1: the cumulative power spectrum of three adjacent orders (110, 111 and 112) for LSII+18°9 near 1240Å. The abscissae are in cycle Å<sup>-1</sup>, and the ordinates on a logarithmic scale. The short dashed line is the observed signal, the continuous line representing the simulation according to equation 6.

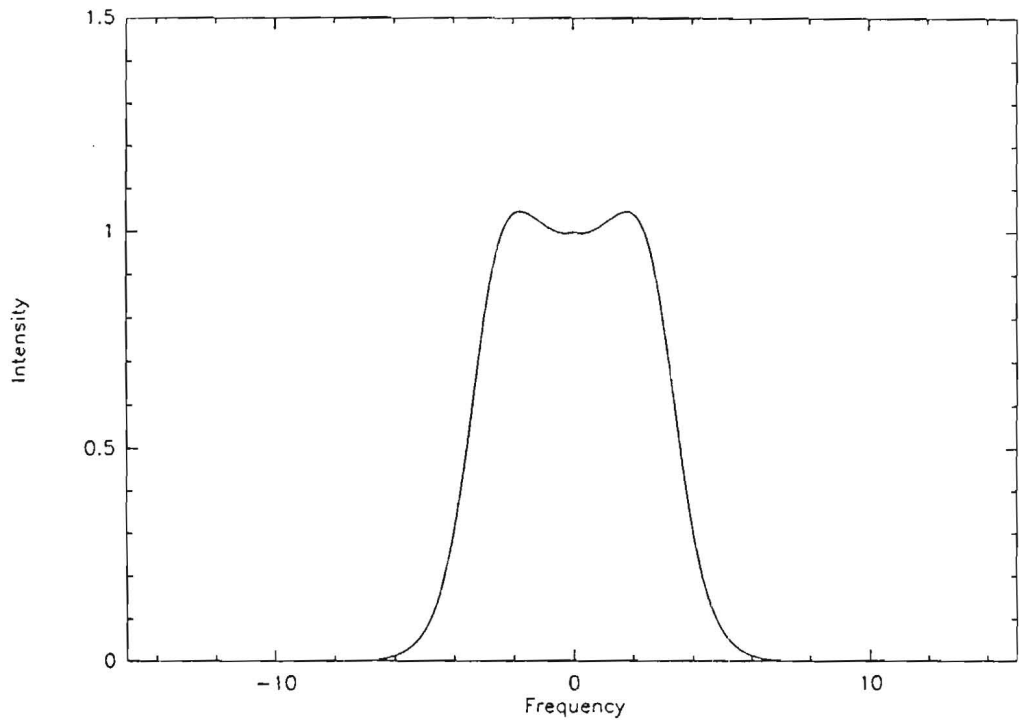


Figure 2: the derived restoration filter  $\Phi(\nu)$  as defined by equation 5, and normalized to unity at zero frequency, so as to preserve the intensity scale of the restored signal. Note that the amplification of intermediate frequencies is moderate here, because the original S/N ratio was so low.

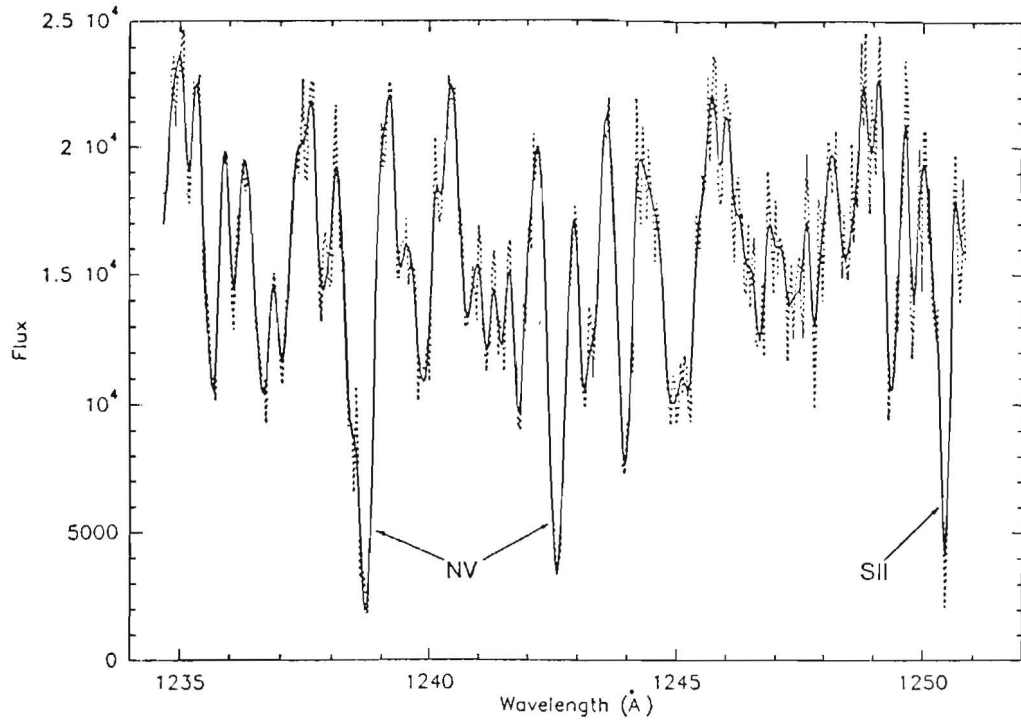


Figure 3: comparison of the observed and restored spectra in a sub-window around the NV doublet. Note that the interstellar SII line at 1250.6Å seems correctly filtered, though the noise level is higher above 1245Å where the IUE sensitivity decreases rapidly. Most of the strong stellar lines other than the NV doublet come from NiV in this domain.

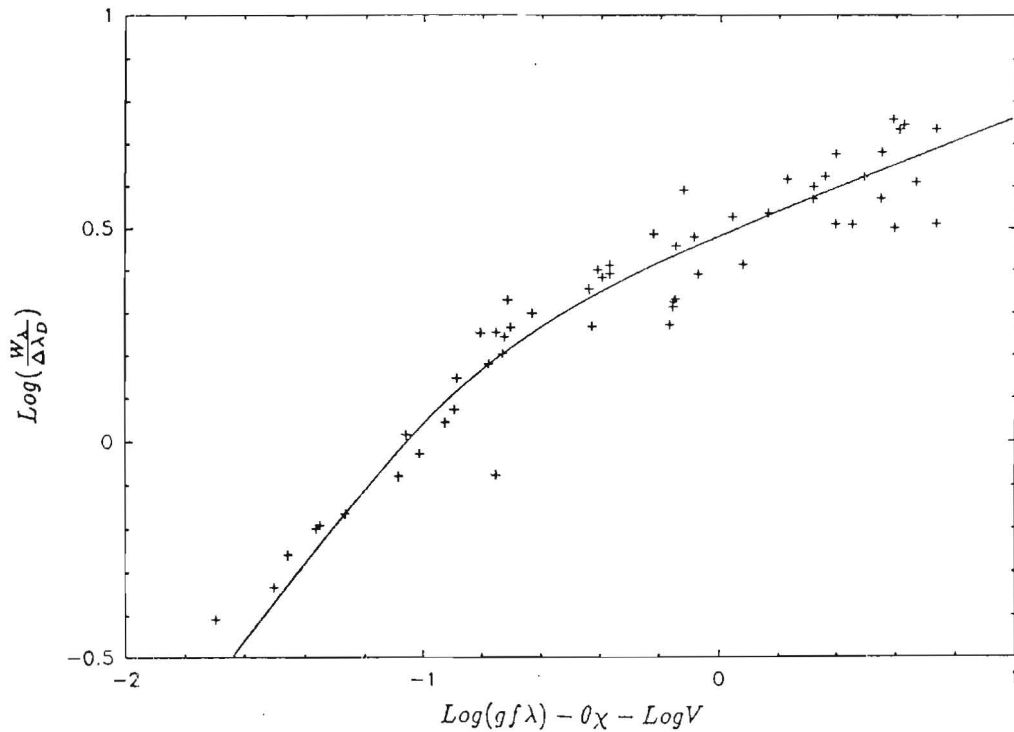


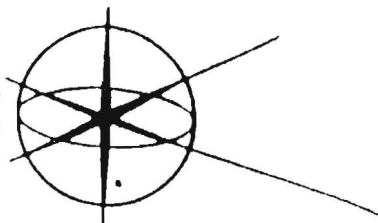
Figure 4: a curve of growth derived from FeV transitions for LSII+18°9, in 3 sub-windows around 1380Å where this ion has its bulk of line absorption, oppositely to NiV. The rms error in the ordinates is  $\approx 0.09$ , a quite satisfactory result given the somewhat lower S/N ratio here, as compared to Figure 3.



esa



serc



August 15. 1990

PROPOSALS FOR OBSERVATIONS WITH IUE IN 1991

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 13, 1990, the Science Program Committee of ESA approved the extension of IUE operation from Villafranca to the end of 1991.

The present observing programmes extend to June 1991. 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 1990. The recommendations of this committee will form the basis for the European observing programme starting June 1991.

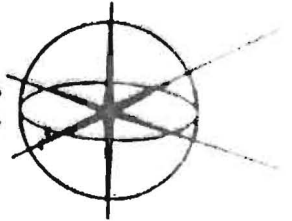
We therefore invite European astronomers to submit proposals for IUE observations in accordance with the procedures set out in the attached letter.

Yours sincerely,

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

Prof. V.E.M. Bowell  
Space Science Programme  
Board  
British National Space  
Centre

Att. (1)



24 August 1990

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 90 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 or her 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:

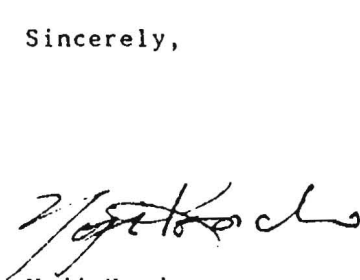
IUE Operations Scientist  
Code 684  
Goddard Space Flight Center  
Greenbelt, MD 20771  
U.S.A.

IUE Observatory Controller  
ESA Villafranca Satellite  
Tracking Station  
Apartado 54065  
28080 Madrid  
Spain

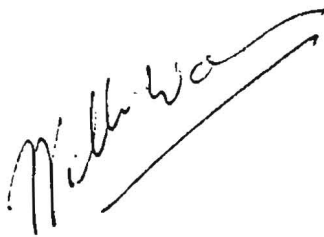
Note: SERC and ESA have agreed to combine their allocating procedures with the administrative aspects handled by ESA.

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

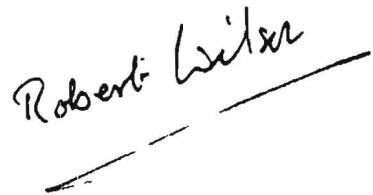
Sincerely,



Yoji Kondo  
NASA/IUE Project  
Scientist



Willem Wamsteker  
ESA/IUE Observatory  
Manager



Robert Wilson  
SERC/IUE Project  
Director



EUROPEAN IUE ALLOCATION 13TH YEAR: 1990-1991

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Approved Proposals Only.  
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Cyclic activity in the pre-main sequence Herbig Ae star AB Aur	Catala	Meudon	MA 001
	Praderie	Meudon	MA 001
	Tjin A D.	Amsterdam	MA 001
	The	Amsterdam	MA 001
	Talavera	VILSPA	MA 001
	Simon	Hawaii	MA 001
The mass of the sdB stars in HD 185510	Jeffery	St Andrews	MI 002
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	Simon	Hawaii	MI 002
Search for temporal variations in the UV spectra of possible B Pictoris-like stars	Lagrange	ESO (D)	MM 004
	Vidal-M.	IAP	MM 004
	Ferlet	IAP	MM 004
	Beust	IAP	MM 004
Searching for more cases of anisotropic UV radiation in Seyfert galaxies	Durret	IAP	MQ 005
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			MQ 005
Search for white dwarf companions of barium star progenitors	North	Lausanne	MC 006
	Lanz	Lausanne	MC 006
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UV spectra of the Be-X star 4U2206+54	Teodorani	Bologna	MI 009
	Guarnieri	Bologna	MI 009
	Bartolini	Bologna	MI 009
	Piccioni	Bologna	MI 009
The long-term variability of the Lyman alpha emission from Jupiter, Saturn and Uranus	Fricke	Bonn	MS 010
	von Zahn	Bonn	MS 010
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An investigation of transition WN-C stars	Willis	UCL	MA 011
	Smith	UCL	MA 011
	Stickland	RAL	MA 011
The WR binary system HD 211853 - A WN-C candidate	Willis	UCL	MA 012
	Smith	UCL	MA 012
	Stickland	RAL	MA 012
PN G327.7-05.5: A new planetary Nebula in the field of the open cluster NGC 6087	Schonberner	Kiel	MA 013
	Weidemann	Kiel	MA 013
	Jordan	Kiel	MA 013
	Napiwotzki	Kiel	MA 013
	Reimers	Hamburg	MA 013
	Koester	Louisiana	MA 013
Star formation in Shapley-Ames elliptical galaxies	Goudfrooij	Amsterdam	ME 014
	de Jong	Amsterdam	ME 014
	Norgaard	Denmark	ME 014
	Jorgensen	Copenhagen	ME 014
	Handen	Copenhagen	ME 014
IUE observations of Cygnus X-1 in the "high" state	Kaper	Amsterdam	MI 015
	Penninx	Amsterdam	MI 015
	Hammerschlag	Amsterdam	MI 015

	Kitamoto	Osaka	MI 015
IUE studies of faint planetary satellites	Festou	Besancon	MS 017 MS 017 MS 017
	Stern	Colorado	MS 017
	Buratti	Colorado	MS 017
IUE observations of IO's atmosphere and Torus	Festou	Besancon	MS 018
	Ballester	Oxford	MS 018
	Gremonese	Asiago	MS 018
	Bertaux	Verrieres	MS 018
	Moos	Baltimore	MS 018
IUE observations of AS 296 after outburst	Gonzalez	VILSPA	MI 019
	Munari	Asiago	MI 019
	Cassatella	VILSPA	MI 019
Orbital variations in the symbiotic star SY MUS	Gonzalez	VILSPA	MI 020
	Fernandez-C.	Madrid	MI 020
	Cassatella	VILSPA	MI 020
BF Cygni in outburst	Gonzalez	VILSPA	MI 021
	Fernandez-C.	Madrid	MI 021
	Cassatella	VILSPA	MI 021
New observations of liners; spatially resolved spectroscopy of the nuclear and extended regions	Mason	Mullard-UCLMQ	023
	Puchnarewicz	Mullard-UCLMQ	023
	Branduardi	Mullard-UCLMQ	023
		MQ	023
	Reichert	NASA GSFC	MQ 023
Hot horizontal branch stars in galactic globular clusters	Caloi	Frascati	MA 027
	Cassatella	VILSPA	MA 027
	Castellani	Pisa	MA 027
Massive stars in the young LMC cluster	Castellani	Pisa	ME 028
	Brocato	ESO (G)	ME 028
	Caloi	Frascati	ME 028
	Cassatella	VILSPA	ME 028
Study of the UV variability of the AGB star FG Sge	Montesinos	Oxford	MC 029
	Cassatella	VILSPA	MC 029
	Gonzalez	VILSPA	MC 029
	Fernandez	Madrid	MC 029
The stellar content of populous clusters of the Magellanic Clouds	Cassatella	VILSPA	ME 030
	Barbero	MADRID	ME 030
	Geyer	Bonn	ME 030
	Brocato	ESO (G)	ME 030
Observations of faint Classical Novae	Cassatella	VILSPA	MI 031
	Gonzalez	VILSPA	MI 031
	Krautter	Heidelberg	MI 031
	Shore	GSFC	MI 031
	Starrfield	Arizona	MI 031
	Sonneborn	GSFC	MI 031
	Williams	C. Tololo	MI 031
UV monitoring of the symbiotic star Z And	Cassatella	VILSPA	MI 032
	Fdz Castro	MADRID	MI 032
	Viotti	Frascati	MI 032
	Taylor	Toronto	MI 032
UV energy distributions of mildly-star-forming early-type galaxies	Bertola	Padova	ME 033
	Buson	Padova	ME 033

	Burstein	Arizona	ME 033
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V407 Cyg and its relation to the central stars of OH/IR sources	Munari Buson	Asiago Padova	MC 034 MC 034
Ultraviolet spectra of proto-planetary nebulae	Parthasarathy Pottasch	Bangalore Groningen	MA 035 MA 035
The evolution of the Lyman forest in quasars	Buson Cristiani Giallongo	Padova Padova Rome	MQ 036 MQ 036 MQ 036
Observations of five high-ionization symbiotic stars	Munari Buson	Asiago Padova	MI 037 MI 037
UV properties and age of accretion events in dust-lane ellipticals	Buson Rifatto Zeilinger	Padova Padova Padova	ME 038 ME 038 ME 038
Coordinated UV and IR observations of the Jovian Aurora	Ballester Prange	Oxford Verrieres	MS 039 MS 039
Study of the UV orbital variability in the Intermediate Polar h2215-086 (FO Aqr)	de Martino Mouchet Buckley Mukai	Capodimonte Meudon Cape Town Berkeley	MI 040 MI 040 MI 040 MI 040
The (UV-V, Mg2) correlation for early type galaxies	Capaccioli Longo	Padova Napoli	ME 042 ME 042
Observations of the Seyfert 1 nucleus of NGC 4151	Ulrich Altamore Perola Bromage Clavel Boksenberg Snijders Penston Elvius	ESO Garchin Rome Rome RAL VILSPA RGO RGO RGO Stockholm	MQ 043 MQ 043 MQ 043 MQ 043 MQ 043 MQ 043 MQ 043 MQ 043 MQ 043
UV variability of the quasar 3C 273	Ulrich Courvoisier Wamsteker	ESO Garchin Geneve VILSPA	MQ 044 MQ 044 MQ 044
IUE observations of the bright variable quasar 1821+64	Ulrich Wamsteker Brinkmann Fink Krautter	ESO Garchin VILSPA MPI Garchin MPI Garchin Heidelberg	MQ 045 MQ 045 MQ 045 MQ 045 MQ 045
IUE observations of quasars simultaneous with ROSAT pointed observations	Ulrich Fink Zimmermann Maraschi Molendi	ESO Garchin MPI Garchin MPI Garchin Milano Milano	MQ 046 MQ 046 MQ 046 MQ 046 MQ 046
Radii and bolometric luminosities of Pleiades Main Sequence Stars	Fernley Skillen Jameson	VILSPA Leicester Leicester	MA 047 MA 047 MA 047
Ultraviolet spectroscopy of young stellar population in interacting galaxies	Gondhalekar  Lamb	RAL  Illinois	ME 048 ME 048 ME 048 ME 048

Variability probing of the inner parts of the broad-line regions in Seyfert I nuclei	Wamsteker	VILSPA	MQ 049 MQ 049 MQ 049
Observations of the variable blue compact galaxy Tololo 1924-416	Gondhalekar	RAL	ME 051 ME 051
UV spectroscopy of LBV candidates in the Large Magellanic Cloud	Prinja Schild Howarth Willis Lortet	UCL UCL UCL UCL Meudon	MA 054 MA 054 MA 054 MA 054 MA 054
Variability in the wind-formed resonance lines of PG 1711+336	Prinja Rosen Supelli Mason	UCL Mullard Mullard Mullard	MI 055 MI 055 MI 055 MI 055
Velocity profiles for the eclipse spectrum of CV Serpentis	Willis Stickland Smith St-Louis	UCL RAL UCL UCL	MA 056 MA 056 MA 056 MA 056
The carbon abundance in planetary nebulae near the galactic centre	Barlow Clegg Walton	UCL RGO UCL	MM 057 MM 057 MM 057
UV observations of a very-low abundance planetary nebula in the Galactic Bulge	Clegg Barlow Walton	RGO UCL UCL	MM 058 MM 058 MM 058
Ultraviolet spectrophotometry of 21 Com, a unique object among Ap stars	Megessier Monier Gerbaldi Kreidl	Meudon VILSPA IAP Lowell	MA 059 MA 059 MA 059 MA 059
Nebular and central star parameters for five Galactic planetary nebulae	Barlow Kingsburgh	UCL UCL	MM 061 MM 061
Nebular shell parameters of the classical novae Sco 1989 and Scu 1989	Andreae Drechsel	Bamberg Bamberg	MI 062 MI 062 MI 062
Exploring the onset of cool stellar winds in the HR diagram	Hunsch Reimers	Hamburg Hamburg	MC 063 MC 063
Colliding winds and dust formation of the variable WC stars HD 192641 a continuation proposal	v. d. Hucht Williams Wamsteker Pollock	Utrecht Edinburgh VILSPA ESTEC	MA 064 MA 064 MA 064 MA 064
G-type symbiotic stars	Schmid Nussbaumer	Zurich Zurich	MI 066 MI 066
UV monitoring of post-AGB stars with variable extinction	Waelkens	Leuven	MI 067 MI 067
The nature of the dM(e) stars	Byrne Doyle	Armagh Armagh	MC 068 MC 068
Where is the interstellar matter towards the LMC ?	Dennefeld D'Odorico Molaro Monai Vladilo	IAP ESO Garchin Trieste Trieste Trieste	MM 071 MM 071 MM 071 MM 071 MM 071

UV observations of X ray binaries counterparts	Bianchi	Torino	MI 073
	Pakull	Besancon	MI 073
	Orio	Torino	MI 073
IUE and ROSAT observations of Noave	Bianchi	Torino	MI 074
	Orio	Torino	MI 074
	Bianchini	Padova	MI 074
	Krautter	Heidelberg	MI 074
	Ogelman	MPE Munich	MI 074
	Starrfield	Arizona	MI 074
	Ferland	Ohio	MI 074
	Wagner	Ohio	MI 074
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Study of Planetary Nebulae with IUE	Bianchi	Torino	MA 075
	de Francesco	Torino	MA 075
	Grewing	Tuebingen	MA 075
	Cascio	Torino	MA 075
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	Jurcsik	Konkoly	MA 075
First quantitative study of the hot corona and wind of a red giant with height resolution	Reimers	Hamburg	MC 076
	Schroder	Hamburg	MC 076
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Circumstellar matter in the inter-stellar binary star V822 Aquilae	Holmgren	Belfast	MI 077
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Deviation from the Wilson-Bappu relationship in faint red dwarf stars	Elgaroy	Oslo	MC 082
	Engvold	Oslo	MC 082
	Carlsson	Oslo	MC 082
The symbiotic nova HM Sge	Vogel	Zurich	MI 083
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The ultraviolet flux from the eclipsing binary PG1550+131	Wood	Cambridge	MI 084
	Marsh	Baltimore	MI 084
IUE echelle investigation of the evolutionary state of the peculiar hot degenerates GD323 and PG 1346+082	Vauclair	Toulouse	MA 085
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Chromospheric modelling of cool supergiants	Fernandez	Oxford	MC 087
	Jordan	Oxford	MC 087
Flux-flux and flux-rotation relations in G-type giants	Montesinos	Oxford	MC 088
	Jordan	Oxford	MC 088
Wind variability in the hybrid bright giant alpha TrA	Harper	Oxford	MC 089
	Jordan	Oxford	MC 089
Atmospheres of the hot components in symbiotic systems	Vogel	Zurich	MA 090
	Nussbaumer	Zurich	MA 090
Extended UV activity in M82	Courvoisier	Geneve	MQ 092
	Golay	Geneve	MQ 092
	Reichen	Geneve	MQ 092
Multifrequency observations of the outburst phase of the LMC-LBV R 127	Stahl	Heidelberg	MA 094
	Appenzeller	Heidelberg	MA 094
	Wolf	Heidelberg	MA 094
	Cassatella	VILSPA	MA 094

	Wamsteker	VILSPA	MA 094
	Viotti	Frascati	MA 094
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Chemical abundances from B stars in the Magellanic Clouds	Wolf	Heidelberg	MA 095
	Baschek	Heidelberg	MA 095
	Scholz	Heidelberg	MA 095
	Juttner	Heidelberg	MA 095
	Stahl	Heidelberg	MA 095
	Szeifert	Heidelberg	MA 095
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B[e] supergiants of the Magellanic Clouds	Wolf	Heidelberg	MA 096
	Stahl	Heidelberg	MA 096
	Klare	Heidelberg	MA 096
	Humphreys	Minnesota	MA 096
	Zickgraf	Minnesota	MA 096
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Study of early-type emission line stars with very large infrared excess	The	Amsterdam	MA 097
	Winter	Amsterdam	MA 097
	Hu	Amsterdam	MA 097
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Rotational modulation of plages on II Peg	Mathioudakis	Armagh	MC 098
	Doyle	Armagh	MC 098
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	Simon	USA	MC 098
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Chromosphere radiative losses in M dwarfs	Doyle	Armagh	MC 099
	Mathioudakis	Armagh	MC 099
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The extra-ordinary eclipsing star HR2680 = HD54031	Cuypers	Brussel	MA 100
	Balona	S. Africa	MA 100
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Ultraviolet observations of the new, very hot DA white dwarf HS 1234+4811	Jordan	Kiel	MA 103
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The photospheric composition of the central stars of planetary nebulae and their line of sight neutral hydrogen column densities	Barstow	Leicester	MA 105
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Effective temperatures and gravities for DA white dwarfs detected at soft X-ray wavelengths	Barstow	Leicester	MA 107
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The new Be phase of Pleione	Doazan	IAP	MA 109
	Golay	Geneve	MA 109
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Do chromospheres exist in fully convective dM stars ?	Byrne	Armagh	MC 110
	Doyle	Armagh	MC 110
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Simultaneous IUE/HST-GHRS observations of AU Mic	Byrne	Armagh	MC 111
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	Linsky	JILA	MC 111
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UV observations of WC 11 stars with nebulae He 2-113, CPD-56 8032 and M4-18	Rao	Bangalore	MI 112
	Giridhar	Bangalore	MI 112
	Nandy	Edinburgh	MI 112



Activity in the eclipsing binary flare star YY Gem	Bromage	RAL	MC 113	
	Pye	Leicester	MC 113	
	Schmitt	MPI Garchin	MC 113	
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Mass loss variability of Late-B Supergiants	Bates	Belfast	MA 114	
	Gilheany	Belfast	MA 114	
A study of the dwarf nova, DX And, in quiescence and in outburst	Drew	Oxford	MI 115	
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The structure of cataclysmic variable winds	Drew	Oxford	MI 116	
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Co-ordinated optical UV obser- vations of microvariability in QSO 0716+71	Wagner	Heidelberg	MQ 117	
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	The wind from the massive close binary EM Car. A test case for stellar wind theory	Henrichs	Munche	MI 120
		Pauldrach	Munche	MI 120
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A search for mass transfer binaries among the bright Be stars	Henrichs	Munche	MI 121	
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Coordinated HST and IUE obser- vations of 2 AGN	Ward	Cambridge	MQ 126	
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A search for the ultraviolet counterparts of globular cluster low mass X-ray binaries	Naylor Charles	Cambridge La Palma	MI 127 MI 127 MI 127
A search for orbital modulations in quiescent dwarf novae	Naylor Gonzalez Charles Hassall Mukai	Cambridge VILSPA La Palma Cambridge Berkeley	MI 128 MI 128 MI 128 MI 128 MI 128
Instabilities in radiatively driven winds: the central star of IC 418	Bianchi Heap Corcoran	Torino GSFC GSFC	MA 129 MA 129 MA 129 MA 129
Physical parameters of blue sub-dwarfs with peculiarities in the visual	de Boer Moehler Heber	Bonn Bonn Kiel	MA 130 MA 130 MA 130
Monitoring of the X-ray source HD 28052, an ultra short period cepheid of the Hyades cluster	Pastori Pasinetti	Milano Milano	MC 132 MC 132 MC 132
IUE observations of blazars coordinated with ROSAT pointed observations	Maraschi Falomo Treves	Milano Padova Milano	MQ 133 MQ 133 MQ 133
Ultraviolet observations of magnetic cataclysmic candidates	Mouchet Bonnet-B. Buckley	Meudon Saclay S. Africa	MI 135 MI 135 MI 135
Coordinated UV, XUV and X-ray observations of the dMe flare star at Mic	Pye Bromage Petterson	Leicester RAL Oslo	MC 136 MC 136 MC 136
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UV and optical covariability of O star winds	Henrichs Kaper Voels Kudritzki McDavid Bohlin Gies Fulleton	Munche Amsterdam Munche Munche Texas NASA GSFC Atlanta Bartol	MA 138 MA 138 MA 138 MA 138 MA 138 MA 138 MA 138 MA 138
What is happening to AX Per ?	Evans Bode Roberts Iverson	Keele Lancashire Lancashire Lancashire	MI 141 MI 141 MI 141 MI 141
Interstellar extinction law in the Taurus dark cloud	Adamson Whittet Duley	Lancashire Lancashire Ontario	MM 142 MM 142 MM 142
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Heating of the white dwarf in AM Herculis	Beuermann	Berlin	MI 144
	Verbunt	Utrecht	MI 144
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Ultraviolet studies of the shells of Herbig Ae and Be stars	Tjin	Amsterdam	MA 145
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UV variability of the Sun, Uranus, and Neptune	Fricke	Bonn	MS 146
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Search for delimitation of the Lyman-alpha and chromospheric emission between A and F stars	Catalano	Catania	MC 149
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The origin of Balmer emission from stellar flares	Butler	Armagh	MC 151
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Time variable interstellar shocks: Herbig-Haro objects	Liseau	Frascati	MM 152
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Carbon star shell extension and past mass-loss deduced from the 2200 A feature	Querci, F.	Toulouse	MC 154
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Origin of peculiar very Li rich giant stars	de la Reza	Rio de J.	MC 157
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Stellar winds in A-type supergiants	Talavera	VILSPA	MA 173
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Intermediate polars: their UV pulsations and spectra of accretion columns	Czerny	Warsaw	MI 174
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RIASS: IUE observations in	Wamsteker	VILSPA	M	180
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PUBLICATIONS IN MAIN JOURNALS  
PUBLISHED 1 JANUARY - 30 APRIL 1990

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

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

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

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

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circumstellar matter in the Helium-weak stars HD  
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rapidly rotating M dwarf star Gliese 890  
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Model atmosphere analysis of the DZ white dwarf  
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- Huenemoerder, D.P., Ramsey, L.W., Buzasi, D.L.  
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IM Pegasi  
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modulation and flaring in UV lines on the most  
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MERGED LOG OF IUE OBSERVATIONS

1 DECEMBER 1989 - 31 MAY 1990

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

The programme reference codes (column 1) identifying the ESA and NASA programmes for the twelfth round can be found in ESA IUE Newsletter, 33, page 45.

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

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

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

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

## EXPOSURE CLASSIFICATION CODES

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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).

FPO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mmmsst	ECC	Comment
FHCAL NULL		99	99.99	000000	+000000	2	18349	00000		89121412	123000	000000		V IWR:4.5 KV. NULL IMA
IC090 NULL		99	99.99	000000	+000000	L 2	18391 L	00000		90011807	075000	000000	000	V
IC090 NULL		99	99.99	000000	+000000	L 2	18407	00000		90031003	034700	000000	000	V
IC090 NULL		99	99.99	000000	+000000	L 1	17506	00000		90031009	095400	000000	000	V
FHCAL NULL		99	99.99	000000	+000000	L 1	17515	00000		90031110	100300	000000	000	V
FHCAL NULL		99	99.99	000000	+000000	H 1	17609	00000		90032604	041800	000000	000	V
FHCAL 60% CALLV		99	99.99	000000	+000000	H 1	17610	00000		90032604	045345	000204	007	V
FHCAL 20% CALLV		99	99.99	000000	+000000	H 1	17611	00000		90032605	054154	000041	003	V
FHCAL 120% CALLV		99	99.99	000000	+000000	H 1	17612	00000		90032606	063624	000408	009	V
FHCAL 60% CALLV		99	99.99	000000	+000000	H 1	17613	00000		90032607	071339	000204	006	V
FHCAL 100% TEL00		99	99.99	000000	+000000	H 1	17614	00000		90032607	074512	000140	009	V
FHCAL 160% CALLV		99	99.99	000000	+000000	H 1	17615	00000		90032608	082354	000531	009	V
FHCAL 2ND READ		99	99.99	000000	+000000	H 1	17616	00000		90032608	084700	000000	003	V
FHCAL NULL		99	99.99	000000	+000000	H 1	17617	00000		90032609	091100	000000	009	V
FHCAL NULL		99	99.99	000000	+000000	H 1	17618	00000		90032609	093800	000000	000	V
IC090 NULL		99	99.99	000000	+000000	L 2	18417	00000		90032803	032600	000000	00	V
IC090 NULL		99	99.99	000000	+000000	L 1	17630	00000		90032807	073000	000000	000	V
FHCAL NULL		99	99.99	000000	+000000	H 1	17662	00000		90033104	045600	000000		V HIGH GAIN READ
FHCAL 60% CALLV		99	99.99	000000	+000000	H 1	17663	00000		90033105	053420	000204		V HIGH GAIN READ
FHCAL 20% CALLV		99	99.99	000000	+000000	H 1	17664	00000		90033106	061958	000041		V
FHCAL 120% CALLV		99	99.99	000000	+000000	H 1	17665	00000		90033107	070435	000408		V
FHCAL 60% CALLV		99	99.99	000000	+000000	H 1	17666	00000		90033107	075508	000204		V
FHCAL 100% TEL00		99	99.99	000000	+000000	H 1	17667	00000		90033108	084813	000140		V
FHCAL 160% CALLV		99	99.99	000000	+000000	H 1	17668	00000		90033109	092448	000531		V
FHCAL NULL		99	99.99	000000	+000000	H 1	17669	00000		90033109	101500	000000		V
LS082 NULL IMAGE		99	99.99	000000	+000000	L 1	17750 L	00000	ED	90041506	065500	000000	000	V NULL IMAGE AFTER HEA
FHCAL NULL		99	99.99	000000	+000000	L 2	18424	00000		90041702	021905	000000	001	V 4.5 KV
FHCAL NULL		99	99.99	000000	+000000	L 2	18425	00000		90041704	042900	000000	005	V 4.5 KV HI GAIN READ
FHCAL NULL		99	99.99	000000	+000000	L 2	18426	00000		90041705	052200	052200	001	V IWR 4.5 KV
FHCAL 60%CALLV		99	99.99	000000	+000000	L 2	18427	00000		90041705	054529	000234	005	V 4.5 KV
FHCAL 20%CALLV		99	99.99	000000	+000000	L 2	18428	00000		90041706	063709	000051	002	V 4.5 KV
FHCAL 120%CALLV		99	99.99	000000	+000000	L 2	18429	00000		90041707	071821	000509	009	V 4.5 KV
FHCAL 60% CALLV		99	99.99	000000	+000000	L 2	18430	00000		90041708	081212	000234	005	V 4.5 KV
FHCAL NULL		99	99.99	000000	+000000	L 1	17760	00000		90041708	084500	000000	002	V
FHCAL NULL		99	99.99	000000	+000000	L 2	18440	00000		90050200	003416	000000	006	V
FHCAL 60% CALLV		99	99.99	000000	+000000	L 2	18441	00000		90050201	010749	000234	005	V FINAL UMF TEMP=39
FHCAL 100% CALLV		99	99.99	000000	+000000	L 2	18442	00000		90050201	013922	000030	009	V
FHCAL 160% CALLV		99	99.99	000000	+000000	L 2	18443	00000		90050202	021413	000652	009	V FINAL UMF TEMP=52
FHCAL 2ND READ		99	99.99	000000	+000000	L 2	18444	00000		90050202	023800	000000	001	V
FHCAL NULL		99	99.99	000000	+000000	L 2	18445	00000		90050203	030500	000000	006	V
FHCAL NULL		99	99.99	000000	+000000	L 2	18446	00000		90050203	034000	000000	001	V
FHCAL NULL		99	99.99	000000	+000000	L 1	17848	00000		90050206	062400	000000	001	V
FHCAL NULL		99	99.99	000000	+000000	L 3	38754	00000		90051000	003000	000000	003	V
FHCAL 60%CALLV		99	99.99	000000	+000000	L 3	38755	00000		90051001	012025	000149	006	V FINAL UMF TEMP=34
FHCAL 20% CALLV		99	99.99	000000	+000000	L 3	38756	00000		90051001	015009	000036	002	V FINAL UMF TEMP=32
FHCAL 120% CALLV		99	99.99	000000	+000000	L 3	38757	00000		90051002	022953	000338	009	V FINAL UMF TEMP = 39
FHCAL 60% UVCAL		99	99.99	000000	+000000	L 3	38758	00000		90051003	031100	000149	006	V FINAL UMF TEMP=36
FHCAL 100% CALLV		99	99.99	000000	+000000	L 3	38759	00000		90051003	035504	000016	000	V
FHCAL 160% CALLV		99	99.99	000000	+000000	L 3	38760	00000		90051004	042513	000451	000	V
FHCAL 2ND READ		99	99.99	000000	+000000	L 3	38761	00000		90051004	044530	000000	000	V

FPO	Object	CL	MAG	R.A.	DEC	D C Image A	FES	MD	Obs.date	Exptim	mmssstt	ECC	Comment	
PHCAL	NULL	99	99.99	000000	+000000	L 3 38762	00000		90051005	051543	000000	004	V	
PHCAL	NULL	99	99.99	000000	+000000	L 3 38763	00000		90051005	055530	000000	000	V	
IA175	NULL	99	99.99	000000	+000000	L 3 38822	00000		90051723	234200	000000	000	V	
PHCAL	NULL	99	0.0	0002166	+533718	H 2 18398			90021019	195900	000000	02	G B=40	
IA154	GD408	29	14.00	0002296	+725625	L 3 38319 S	00000	EO	90030804	043459	031000	301	V R.P.USED =(-28,-208)	
AGIWS	MKN 335	84	13.8	0003452	+195529	L 3 37876 L	37	SD	89122218	180300	008000	3x2	G E=1.5X,G=86,B=31	
AGIWS	MKN 335	84	13.8	0003452	+195529	L 1 16982 L	42	SD	89122219	193000	004500	302	G G=135,B=38	
AGIWS	MKN 335	84	13.8	0003452	+195529	L 3 37877 L	40	SD	89122220	202200	003000	341	G E=163,G=46,B=21	
AGIWS	MKN 335	84	13.8	0003452	+195529	L 3 38051 L	36	SD	90011916	160200	008000	3x2	G E=1.5X,G=86,B=33	
AGIWS	MKN 335	84	13.8	0003452	+195529	L 1 17182 L	38	SD	90011917	173000	004500	342	G E=182,G=127,B=39	
AGIWS	MKN 335	84	13.8	0003452	+195529	L 3 38052 L	34	SD	90011918	182000	003000	351	G E=186,G=48,B=21	
LC117	HD483	45	07.54	0006448	+171526	H 1 17097 L	03566	FO	90010707	074711	010000	431	V	
LC117	HD483	45	07.58	0006448	+171526	L 3 37965 L	03419	FO	90010709	093827	031000	401	V	
LC147	HD774	46	08.11	0009417	+623654	L 1 17273 L	02146	FO	90020110	103640	002000	301	V	
OK69K	HD	2151	44	2.8	0023089	-773200	L 3 38286 L	1505	FU	90030222	222500	001200	531	G E=70,G=208,B=26
OK69K	HD	2151	44	2.8	0023089	-773200	H 1 17457 L	1497	FU	90030222	224300	001200	X47	G E=204,G=3X,B=82
LS101	SKY	07	99.99	0029139	-532338	L 3 37918 L	00000		89122912	125005	001000	030	V	
LS101	COMET AUST	06	13.45	0030042	-534111	L 1 17035 L	00073	SD	89122913	134236	004000	231	V HEAD	
LS101	COMET AUST	06	13.45	0030042	-534111	L 3 37919 L	00000		89122914	141937	001000	030	V NUCLEUS IN IWA // P	
LS101	COMET AUST	06	13.45	0030042	-534111	E 9 02287 2	00000		89122916	160000	016000		V	
SCIMA	CTI989CI	06	10	0033350	-564241	D 9 02284 2			89122205	055800	002000		G	
SCIMA	CTI989CI	06	10	0033350	-564241	L 1 16977 L	68	SD	89122206	062100	009500	243	G E=165,G=64,B=45	
SCIMA	CTI989CI	06	10	0033350	-564241	L 1 16977 L	68	SD	89122206	064300	009500	243	G E=165,G=64,B=45	
PHCAL	HD	3360	21	3.68	0034102	+533718	H 3 37716 L	804	FU	89120203	034200	000024	402	G G=180,B=32
PHCAL	HD	3360	21	3.68	0034102	+533718	H 1 16875 L	805	FU	89120203	034700	000021	503	G G=212,B=42
PHCAL	HD	3360	21	3.68	0034102	+533718	L 1 17121 L	795	FU	90011005	052200	000001	502	G G=195,B=32
PHCAL	HD	3360	21	3.68	0034102	+533718	L 3 37984 L	786	FU	90011005	053200	000001	500	G G=198,B=18
PHCAL	HD	3360	21	3.68	0034102	+533718	H 1 17122 L	791	FU	90011006	063400	000021	503	G G=220,B=42
PHCAL	HD	3360	20	3.7	0034103	+533719	H 3 38143 L	881	FU	90020520	200300	000024	502	G G=187,B=34
PHCAL	HD	3360	20	3.7	0034103	+533719	H 1 17298 L	877	FU	90020520	200900	000021	503	G G=224,B=41
PHCAL	HD	3360	20	3.7	0034103	+533719	H 2 18399 L	895	FU	90021020	204200	000029	502	G G=205,B=32
IA160	AV172	25	13.69	0054098	-722512	L 1 17684 L	00059	SD	90040202	025154	006000	332	V	
IA160	AV172	25	13.71	0054098	-722512	L 3 38491 L	00058	SD	90040203	035850	012000	302	V	
RNLAW	IC 59	73		0054117	+605116	L 3 38087 L		EO	90012715	153400	043500	309	G G=172,B=132	
RNLAW	IC 59	73		0054117	+605116	L 3 38087 L		EO	90012715	153500	043500	309	G G=172,B=132	
RNLAW	IC 59	73		0054117	+605116	L 1 17252 L		EO	90012819	190000	019000	306	G G=107,B=73	
RNLAW	IC 59	73		0054117	+605116	L 1 17252 L		EO	90012819	190100	019000	306	G G=107,B=73	
IA053	NCC330/B21	24	14.30	0054244	-724349	L 1 16899 L	00000	EO	89120713	130946	007000	503	V	
IA053	NCC330/B21	24	14.30	0054244	-724349	L 3 37767 L	00000	EO	89120714	142648	010000	400	V	
IA053	NCC330/B22	24	14.30	0054278	-724345	L 1 16900 L	00000	EO	89120716	161101	003900	403	V	
IA053	NCC330/B22	24	14.23	0054278	-724345	L 1 16901 L	00000	EO	89120810	101631	007000	401	V	
IA053	NCC330/B22	24	14.23	0054278	-724345	L 3 37774 L	00000	EO	89120811	113222	010000	300	V	
IA053	NCC330-B37	24	13.25	0054386	-724446	L 3 38462 L	00000	EO	90032907	075749	012000	500	V	
IA053	NCC330-B37	24	13.25	0054386	-724446	L 1 17642 L	00000	EO	90032910	102224	003000	501	V HEAD	
IA053	NCC330/B38	32	12.61	0054406	-724448	L 1 16898 L	00155	SD	89120710	102231	006000	302	V B38 FAINT/B37 BRIGHT	
IA053	NCC330/B38	32	12.56	0054406	-724448	L 3 37766 L	00162	SD	89120711	113036	008000	100	V ONLY B37	
IA053	NCC330/B38	32	12.60	0054406	-724448	E 9 02271 2	00000		89120712	121400	004000		V	
IA053	NCC 330-A2	24	12.95	0054427	-724354	L 1 17651 L	00114	SD	90033004	043037	004000	501	V	
IA053	NCC 330-A2	24	12.99	0054428	-724354	L 3 38470 L	00110	SD	90033005	053726	017000	500	V	
IA053	NCC330/A1	24	14.62	0054439	-724405	L 1 16902 L	00000	EO	89120813	131844	007500	401	V	

FRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mmrestt	ECC	Comment	
LA053	NGC330/A1	24	14.62	0054439	-724405	L 3	37775 L	00000	EO	89120814	144053	012700	500 V		
LA053	NGC 330-B5	24	15.40	0054491	-724410	L 1	17652 L	00000	EO	90033008	084310	012500	301 V	FREED	
LA053	NGC330/B5	25	15.40	0054492	-724410	L 1	16907 L	00000	EO	89120910	100731	012000	303 V		
LA053	NGC330/B5	25	15.40	0054492	-724410	L 3	37780 L	00000	EO	89120912	121138	027600	401 V		
LA053	NGC330-B6	24	15.30	0054503	-724402	L 3	37787 L	00000	EO	89121010	100824	039800	502 V		
LA053	NGC-330-B6	25	15.30	0054503	-724402	L 1	17641 L	00000	EO	90032904	043057	020000	502 V		
LA160	AV175	23	13.70	0054564	-725247	L 1	17693 L	00000	EO	90040303	031714	005000	502 V		
LA160	AV175	23	13.70	0054564	-725247	L 3	38496 L	00000	EO	90040304	041145	009000	501 V		
RNLAW	IC 63	73		0055580	+603707	L 1	17444 L		EO	90030111	114900	042000	309 G	G=210, B=150	
RNLAW	SKY BGD	07		0055580	+603707	L 3	38280 L			90030111	115000	040000	309 G	G=158, B=114	
CELEM	H45-06	12	14.9	0056504	-722710	L 3	38408 L		EO	90032120	203700	009000	501 G	G=195, B=25	
CELEM	H45-03	12	14.0	0057164	-722645	L 3	38405 L		SO	90032112	125800	004000	451 G	E=194, G=172, B=24	
CELEM	H45-03	12	14.0	0057164	-722645	L 1	17577 L		EO	90032215	152300	004000	503 G	G=246, B=44	
CELEM	H45-167	12	15.2	0057177	-722703	L 3	38415 L		EO	90032219	190700	012000	503 G	G=225, B=50	
CELEM	H45-01	12	13.5	0057198	-722640	L 1	17572 L		EO	90032122	222600	002000	502 G	G=220, B=40	
CELEM	H45-01	12	13.5	0057198	-722640	L 3	38413 L		EO	90032214	143700	002500	551 G	E=238, G=190, B=23	
CELEM	H45-04	12	14.2	0057209	-722643	L 3	38407 L		EO	90032117	170800	004500	501 G	G=238, B=22	
CELEM	H45-04	12	14.2	0057209	-722643	L 1	17571 L		EO	90032118	180000	004000	X02 G	G=1.5X, B=38	
CELEM	H45-159	12	12.7	0057236	-722637	L 1	17578 L		EO	90032221	212600	001000	504 G	G=240, B=55	
CELEM	H45-159	12	12.7	0057236	-722637	L 3	38416 L		EO	90032222	220300	001200	552 G	E=214, G=224, B=38	
CELEM	H45-016	12	15.3	0057239	-722715	L 3	38406 L		EO	90032114	141900	013000	302 G	G=116, B=35	
CELEM	H45-165	12	14.5	0057259	-722653	L 3	38412 L		EO	90032212	122100	006300	501 G	G=185, B=27	
CELEM	H45-165	12	14.5	0057259	-722653	L 1	17576 L		EO	90032213	132900	005500	503 G	G=229, B=47	
CELEM	H45-183	12	15.2	0057268	-722700	L 3	38414 L		EO	90032216	161800	013200	502 G	G=210, B=32	
WRLIA	HD	5980	11	11.9	0057416	-722546	H 3	37759 L	324	SO	89120617	175900	033000	4X6 G	E=2X, G=190, B=80
WRLIA	HD	5980	11	11.9	0057416	-722546	L 3	37760 L	362	SO	89120700	001200	001509	4X1 G	E=2X, G=154, B=23
WRLIA	HD	5980	11	11.9	0057416	-722546	H 3	37768 L	344	SO	89120717	175500	033000	4X7 G	E=2X, G=210, B=82
WRLIA	HD	5980	11	11.9	0057416	-722546	L 3	37769 L	374	SO	89120800	000800	001509	4X1 G	E=2X, G=162, B=23
WRLIA	HD	5980	11	11.9	0057416	-722546	H 3	37781 L	358	SO	89120918	180900	033000	4X6 G	E=3X, G=217, B=80
WRLIA	HD	5980	11	11.9	0057416	-722546	L 3	37782 L	375	SO	89121000	001700	001509	5X0 G	E=3X, G=191, B=18
WRLIA	HD	5980	11	11.9	0057416	-722546	H 3	37788 L	372	SO	89121017	174600	030000	4X6 G	E=2X, G=211, B=71
WRLIA	HD	5980	11	11.9	0057416	-722546	L 3	37789 L	386	SO	89121023	232900	001500	5X1 G	E=3X, G=190, B=28
WRLIA	HD	5980	11	11.9	0057416	-722546	L 3	37790 L	330	SO	89121100	004400	000300	4X0 G	E=1.5X, G=124, B=19
ENLIR	S 8	75		0102280	+015239	L 3	37804 L		EO	89121217	175700	041000	34 G	E=84, B=52	
SALOW	HD	7312	33	5.9	0110273	-380715	L 3	37955 L	11054	FO	90010601	012400	006000	302 G	G=60X, B=34
SALOW	HD	7312	33	5.9	0110273	-380715	L 3	37955 S	9045	FO	90010601	014800	002000	X02 G	G=5X, B=36
SALOW	HD	7312	33	5.9	0110273	-380715	L 1	17090 L	8956	FO	90010603	033900	000220	X01 G	G=4X, B=28
SALOW	HD	7312	33	5.9	0110273	-380715	L 1	17090 S	10221	FO	90010603	034900	000220	X01 G	G=2X, B=25
SALOW	HD	7312	33	5.9	0110273	-380715	L 3	37956 L	8985	FO	90010604	045600	000205	501 G	G=203, B=21
SALOW	HD	7312	33	5.9	0110273	-380715	L 3	37956 S	10882	FO	90010605	050600	000205	301 G	G=107, B=24
SALOW	HD	7312	33	5.9	0110273	-380715	L 1	17091 L	8828	FO	90010606	060000	000100	402 G	G=157, B=37
SALOW	HD	9053	47	3.4	0126118	-433425	L 1	17089 L	906	FU	90010523	235100	000418	472 G	E=12X, G=180, B=37
SALOW	HD	9053	47	3.4	0126118	-433425	L 1	17089 S	830	FU	90010600	000300	000418	352 G	E=194, G=72, B=34
CD57Y	N90 #08	12	13.0	0128236	-734851	L 3	38420 L		53	SO	90032311	115200	002000	500 G	G=177, B=18
CD57Y	N90 #08	12	14.0	0128236	-734851	L 1	17582 L		EO	90032314	145400	003000	503 G	G=221, B=44	
CD57Y	N90 #1,3	12	15.0	0128301	-734910	L 3	38423 L		EO	90032317	174400	006700	301 G	G=118, B=22	
CD57Y	N90 #2,4	12	14.0	0128307	-734915	L 3	38422 L		EO	90032315	153900	009000	X01 G	G=2X, B=30	
CD57Y	N90 #05	12	14.0	0128329	-734921	L 3	38421 L		EO	90032313	134700	006000	502 G	G=190, B=39	
IA001	MO130-196	17	15.10	0130148	-193703	L 3	37994 S	00000	EO	90011212	123627	013100	300 V		
LQ068	1E0132-411	85	17.00	0132468	-411142	L 3	37944 L	00000	EO	90010311	112822	020000	221 V		



FPO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mmstt	ECC	Comment
PHCAL	HD	10144	21	0.5	0135512	-572925	H 1 16919 L	12176	FU	89121401	012300	000001	402	G G=190,B=40
PHCAL	HD	10144	21	0.5	0135512	-572925	H 3 37806 L	12155	FU	89121401	012800	000002	402	G G=170,B=32
NPLFD	NGC	650-1	71	9.8	0139075	+511857	L 3 38257 L		EO	90022517	175000	024000	344	G E=195,G=73,B=52
NPLFD	NGC	650-1	71	9.8	0139120	+511900	L 1 17427 L		EO	90022620	204200	013000	337	G E=117,G=120,B=85
PHCAL	HD	11636	31	2.6	0151523	+203352	H 3 37807 L	1720	FU	89121402	024600	000305	501	G G=210,B=30
PHCAL	HD	11636	31	2.6	0151523	+203352	H 1 16920 L	1635	FU	89121402	025300	000110	502	G G=220,B=40
PHCAL	HD	11636	31	2.6	0151523	+203352	L 3 37808 L	1646	FU	89121403	035900	000003	500	G G=174,B=18
PHCAL	HD	11636	31	2.6	0151523	+203352	L 1 16921 L	1633	FU	89121404	040400	000001	502	G G=200,B=35
RSLEB	HD	12545	46	8.2	0200493	+352107	L 1 17365 L	1334	FO	90021413	135000	000400	342	G E=174,G=65,B=35
RSLEB	HD	12545	46	8.2	0200493	+352107	L 3 38192 L	1333	FO	90021414	140200	027000	343	G E=189,G=78,B=48
RSLEB	HD	12545	46	8.2	0200493	+352107	H 1 17366 L	1316	FO	90021418	184100	024000	382	G E=1.5X,G=110,B=38
PHCAL	WAVCAL		98	0.0	0215379	-170153	L 1 17265 S			90013119	195900	000025	?	G E=10X,B=101
PHCAL	WAVCAL		98	0.0	0215379	-170153	L 1 17265			90013119	195900	000025		G
PHCAL	WAVCAL		98	0.0	0215379	-170153	L 1 17265			90013120	200200	000001		G
PHCAL	WAVCAL		98	0.0	0215379	-170153	H 1 17266 S			90013120	203100	000025	?	G E=60X,B=110
PHCAL	WAVCAL		98	0.0	0215379	-170153	H 1 17266			90013120	203100	000025		G
PHCAL	WAVCAL		98	0.0	0215379	-170153	H 1 17266			90013120	203300	000016		G
PHCAL	WAVCAL		98	0.0	0215379	-170153	H 1 17267			90013121	211300	000025		G
PHCAL	WAVCAL		98	0.0	0215379	-170153	H 1 17267 S			90013121	211300	000025	?	G E=60X,B=104
PHCAL	WAVCAL		98	0.0	0215379	-170153	H 1 17267			90013121	211500	000016		G
PHCAL	WAVCAL		98	0.0	0215379	-170153	H 2 18395 S			90013121	212500	000000	300	G G=39,B=16
PHCAL	WAVCAL		98	0.0	0215379	-170153	L 3 38103			90013122	221500	000005		G
PHCAL	WAVCAL		98	0.0	0215379	-170153	L 3 38103 S			90013122	221500	000005	?	G E=10X,B=104
PHCAL	WAVCAL		98	0.0	0215379	-170153	H 3 38104 S			90013122	224100	000005	?	G E=60X,B=121
PHCAL	WAVCAL		98	0.0	0215379	-170153	H 3 38104			90013122	224100	000005		G
PHCAL	WAVCAL		98	0.0	0215379	-170153	H 3 38104			90013122	224300	000200		G
PHCAL	WAVCAL		98	0.0	0215379	-170153	L 2 18396			90013123	230200	000010		G
PHCAL	WAVCAL		98	0.0	0215379	-170153	L 2 18396 S			90013123	230200	000010	?	G E=10X,B=81
PHCAL	WAVCAL		98	0.0	0215379	-170153	L 2 18396 S			90013123	230200	000010	?	G E=10X,B=81
PHCAL	WAVCAL		98	0.0	0215379	-170153	L 2 18396			90013123	230400	000001		G
PHCAL	WAVCAL		98	0.0	0215379	-170153	L 2 18396			90013123	230400	000001		G
PHCAL	WAVCAL		98	0.0	0215379	-170153	H 2 18397 S			90013123	233300	000010	?	G E=60X,B=120
PHCAL	WAVCAL		98	0.0	0215379	-170153	H 2 18397			90013123	233300	000010		G
PHCAL	WAVCAL		98	0.0	0215379	-170153	H 2 18397			90013123	233500	000022		G
IGLSD	HD	15233	40	5.4	0223300	-603209	L 3 37978 L	14423	FO	90010917	172500	006000	201	G G=45X,B=27
IQ087	PHL1377		85	16.00	0232364	-041510	L 3 37831 L	00000	EO	89121610	103437	037300	302	V
IQ087	PHL1377		85	16.00	0232364	-041510	L 1 16935 L	00000	EO	89121710	100317	040400	454	V
EGLEB	NEC	1068	84		0240064	-001408	L 3 37849 L		EO	89121918	181700	039000	334	G E=127,G=98,B=58
EGLEB	SKY BKGD		07		0240064	-001408	L 1 16953 L		EO	89121918	184000	033000	307	G G=117,B=81
EGLEB	NEC	1068	84		0240068	-001339	L 1 16944 L		EO	89121818	182200	038500	307	G G=180,B=85
EGLEB	SKY BKGD		07		0240068	-001339	L 3 37844 L		EO	89121818	184500	033000	35	G E=91,B=62
EGLEB	NEC	1068	65	11.0	0240070	-001330	L 3 37883 S		EO	89122318	181300	007500		G E=153
EGLEB	SKY BKGD		07		0240070	-001330	L 1 16986 L			89122318	181600	007000	03	G B=41
EGLEB	NEC CT APR 2		84	11.0	0240070	-001330	L 9 02285			89122319	195300	002000		G
EGLEB	NEC	1068	84	11.0	0240070	-001330	L 3 37884 L		EO	89122320	202300	026800	333	G E=92,G=70,B=42
EGLEB	SKY BKGD		07		0240070	-001330	L 1 16987 L			89122321	210100	019000	06	G B=74
EGLEB	NEC	1068	84		0240072	-001347	L 3 37857 L		EO	89122018	180800	040000	334	G E=96,G=110,B=60
EGLEB	SKY BKGD		07		0240072	-001347	L 1 16967 L		EO	89122018	180900	036500	07	G B=81
USSES	HD	17918	41	6.3	0250243	+161650	H 1 17065 L	6668	FO	90010123	233500	008400	503	G G=243,B=50
ICL12	IKH264		58	12.97	0253475	+195333	L 1 16942 L	00112	SO	89121810	105103	001500	351	V

FPO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	numrestt	ECC	Comment
IC112	IKH264	58	12.86	0253475	+195333	L 3	37842 L	00124	SO	89121811	111629	010000	230	V
IC112	IKH264	58	12.96	0253475	+195333	L 1	16943 L	00113	SO	89121813	131026	001500	341	V
IC112	IKH 264	58	12.98	0253475	+195333	L 3	37843 L	00111	SO	89121813	134340	018600	331	V PREP
USSES	HD	18925	45	2.9	0301095	+531843	H 3 37933 L	1259	FU	90010201	014400	001500	503	G G=235,B=41
USSES	HD	18925	45	2.9	0301095	+531843	H 1 17066 L	1249	FU	90010202	021500	000500	503	G G=210,B=43
IGLSD	HD	19319	40	5.1	0302261	-595554	L 3 37977 L	16763	FO	90010915	153300	005000	330	G B=61,G=45X,B=19
USSES	HD	19445	43	8.1	0305286	+260907	L 1 17068 L	1533	FO	90010205	052900	000156	502	G G=195,B=32
USSES	HD	19445	43	8.1	0305286	+260907	L 3 37935 L	1470	FO	90010205	053800	002500	400	G G=142,B=19
USSES	HD	19445	43	8.1	0305286	+260907	L 1 17069 L	1530	FO	90010206	062300	000548	X02	G G=3X,B=33
FRIDY	X ARI	53	9.4	0305480	+101523	H 1	17064 L	397	FO	90010116	161700	039000	309	G G=195,B=105
FRIDY	X ARI	53	9.4	0305480	+101523	H 1	17071 L	270	FO	90010216	161700	039000	308	G G=162,B=92
FRIDY	X ARI	53	9.4	0305480	+101523	H 1	17085 L	258	FO	90010416	161600	039500	307	G G=167,B=88
FRIDY	X ARI	53	9.4	0305480	+101523	H 1	17088 L	508	FO	90010516	162500	038000	307	G G=160,B=84
CD74Y	EF ERI	63		0312001	-224648	L 3	38225 L		EO	90022212	124700	023000	3X5	G B=3X,G=144,B=66
CD74Y	EF ERI	63		0312001	-224648	L 1	17410 L	EO	SO	90022216	164200	011500	455	G B=247,G=184,B=69
EGLAC	NGC 1275	84		0316283	+411956	L 3	37899 L		EO	89122518	180900	040000	206	G G=92,B=78
EGLAC	SKY BKGD	07		0316283	+411956	L 1	17005 L			89122518	181100	006000	03	G B=46
EGLAC	SKY BKGD	07		0316283	+411956	L 1	17006 L			89122519	194100	029000	07	G B=81
EGLAC	NGC 1275	84		0316293	+411951	L 9	02286			89122417	174200	002000		G
EGLAC	NGC 1275	84		0316293	+411951	L 3	37893 L		EO	89122418	180800	057500	08	G B=100
EGLAC	SKY BKGD	07		0316293	+411951	L 1	16995 L			89122418	181000	057000	09	G B=122
EGLAC	T FLOOD	99		0316293	+411951	L 3	37894 L			89122504	042600	000007	09	G B=142
COLIS	AP 97	46	12.0	0317104	+481347	L 1	17507 L	174	SO	90031011	115300	013500	303	G G=133,B=50
ACIFB	HD	20888	31	6.1	0317247	-670630	H 3 38371 L	10929	FO	90031712	121400	006000	543	G B=149,G=200,B=43
ACIFB	HD	20888	31	6.1	0317247	-670630	H 3 38372 L	10515	FO	90031713	135100	009000	X54	G B=210,G=1.5X,B=52
ACIFB	HD	20888	31	6.1	0317247	-670630	H 3 38373 L	10156	FO	90031715	155600	009000	X54	G B=217,G=1.5X,B=52
COLIS	AP 98	46	12.8	0317349	+481524	L 1	17499 L	89	SO	90030815	155900	017000	324	G B=76,G=96,B=59
COLIS	AP 110	46	12.3	0321204	+496117	L 1	17516 L		SO	90031112	121100	022500	305	G G=135,B=65
HCLSP	HD	21224	39	7.6	0324251	+594402	L 1 16945 L	2345	FO	89121901	015300	000600	402	G G=140,B=32
HCLSP	HD	21224	39	7.6	0324251	+594402	L 3 37845 L	2460	FO	89121902	020900	004800	401	G G=160,B=25
HCLSP	HD	21224	39	7.6	0324251	+594402	L 1 17306 L	2535	FO	90020619	194800	001800	X03	G G=1.5X,B=42
LS101	SKY	07	99.99	0325283	-823613	L 3	37916 L	00000		89122910	100839	001000	030	V
IMUIS	HD	21483	24	7.1	0325421	+301212	H 3 38298 L	4455	FO	90030412	124600	018000	506	G G=240,B=73
IMUIS	HD	21483	24	7.1	0325421	+301212	L 3 38312 L	4185	FO	90030700	002000	000150	400	G G=168,B=18
IMUIS	HD	21483	24	7.1	0325421	+301212	L 1 17485 L	4250	FO	90030700	002600	000145	X02	G G=3X,B=36
FM017	GK PER	55	99.99	0327476	+434406	L 3	38091 L	00000	EO	90012808	081156	035600	102	V NEBULA IN SWIA
PHCAL	HD	22049	07	3.73	0330343	-093734	L 1 17312 L	676	FU	90020720	202500	018000	5X4	G B=1.5X,G=230,B=55
PHCAL	HD	22049	46	3.73	0330343	-093734	L 1 17313 L	655	FU	90020800	001200	000010	442	G B=180,G=142,B=32
PHCAL	HD	22049	46	3.73	0330343	-093734	L 1 17314 L	654	FU	90020800	005000	000015	452	G B=226,G=170,B=35
PHCAL	HD	22049	46	3.73	0330343	-093734	L 1 17315 L	659	FU	90020801	012800	000056	442	G B=189,G=150,B=39
CSLTA	HD	22049	46	3.8	0330344	-093735	L 3 37827 L	608	FU	89121602	022100	004000	341	G B=134,G=60,B=22
CSLTA	HD	22049	46	3.8	0330344	-093735	L 3 37833 L	597	FU	89121702	022000	004000	340	G B=138,G=70,B=18
CSLTA	HD	22049	46	3.8	0330344	-093735	L 3 38109 L	664	FU	90020122	222400	007500	352	G B=228,G=99,B=34
CSLTA	HD	22468	46	6.1	0334132	+002533	H 1 16928 L	9548	FO	89121603	034500	004500	4X4	G B=4X,G=165,B=52
CSLTA	HD	22468	46	6.1	0334132	+002533	H 1 16928 L	9548	FO	89121603	034500	004500	4X4	G B=4X,G=165,B=52
CSLTA	HD	22468	46	6.1	0334132	+002533	L 3 37828 L	11455	FO	89121604	044100	003000	341	G B=129,G=58,B=22
CSLTA	HD	22468	46	6.1	0334132	+002533	L 3 37828 L	11455	FO	89121604	044100	003000	341	G B=129,G=58,B=22
CSLTA	HD	22468	46	6.1	0334132	+002533	H 1 16929 L	11810	FO	89121605	054000	002000	353	G B=232,G=70,B=41
CSLTA	HD	22468	46	6.1	0334132	+002533	L 3 37829 L	11951	FO	89121606	063400	003000	330	G B=85,G=55,B=20
CSLTA	HD	22468	46	6.1	0334132	+002533	H 1 16930 L	11219	FO	89121607	073900	002000	342	G B=187,G=72,B=38



FPO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mm:ss:tt	ECC	Comment
CSLTA HD	22468	46	6.1	03341.32	+002533	L 3	37830 L	11194	FO	89121608	082900	001500	330	G E=96,G=48,B=17
CSLTA HD	22468	46	6.1	03341.32	+002533	H 1	16931 L	11072	FO	89121703	032700	004500	4X4	G E=4X,G=158,B=52
CSLTA HD	22468	46	6.1	03341.32	+002533	L 3	37834 L	10158	FO	89121704	042000	003000	31	G E=88,B=22
CSLTA HD	22468	46	6.1	03341.32	+002533	H 1	16932 L	11491	FO	89121705	051800	002000	343	G E=149,G=75,B=45
CSLTA HD	22468	46	6.1	03341.32	+002533	L 3	37835 L	11732	FO	89121706	060800	003000	330	G E=98,G=50,B=19
CSLTA HD	22468	46	6.1	03341.32	+002533	H 1	16933 L	11793	FO	89121707	070800	002000	342	G E=146,G=75,B=38
CSLTA HD	22468	46	6.1	03341.32	+002533	H 1	16934 L	12285	FO	89121708	081200	003600	3X2	G E=3.5X,G=125,B=38
CSLTA HD	22468	46	6.1	03341.32	+002533	H 1	17287 L	10563	FO	90020319	194500	001000	343	G E=163,G=61,B=41
CSLTA HD	22468	46	6.1	03341.32	+002533	H 1	17287 L			90020320	200100	001000		G
CSLTA HD	22468	46	6.1	03341.32	+002533	H 1	17288 L	11133	FO	90020320	204800	001000	352	G E=203,G=82,B=37
CSLTA HD	22468	46	6.1	03341.32	+002533	H 1	17288 L			90020321	210400	001000		G
CSLTA HD	22468	46	6.1	03341.32	+002533	H 1	17289 L	11668	FO	90020321	215400	006700	4X3	G E=3X,G=195,B=45
LS101 COMET ORAZ	06	13.94	0337202	-830806	L 3	37917	S	00047	SO	89122911	113627	000500	020	V FFEAD
LS101 COMET ORAZ	06	13.92	0337202	-830806	L 1	17034	L	00048	SO	89122911	110318	002000	031	V
MSLHU HR	1105	50	5.1	0337477	+630325	H 1	17014 L	20538	FO	89122718	180300	054000	3X8	G E=4X,G=172,B=96
MSLHU HR	1105	50	5.1	0337477	+630325	L 3	37910 L	23473	FO	89122804	042300	004500	201	G G=47,B=28
MSLHU HR	1105	50	5.1	0337477	+630325	H 1	17015 L	20961	FO	89122805	051300	003500	33	G E=101,B=42
IA084 SAC093557	25	06.06	0339250	+193229	L 3	38030	L	12546	FO	90011514	143945	000045	800	V
IA084 SAC093557	25	06.06	0339250	+193229	L 1	17159	L	12546	FO	90011514	144541	000005	501	V FFEAD
CCLIS HZ357	46	13.3	0341295	+240055	L 1	17491	L	85	SO	90030712	123400	024000	336	G E=104,G=99,B=73
CCLIS HZ885	46	12.1	0343082	+244247	L 1	17492	L	177	SO	90030717	173200	009000	333	G E=68,G=90,B=43
CCLIS HZ1100	46	12.3	0343385	+241122	L 1	17498	L	153	SO	90030812	120400	013500	334	G E=101,G=82,B=55
IA023 HD23630	26	03.27	0344304	+235708	H 3	37875	L	01388	FU	89122216	165112	000050	500	V FFEAD
IA023 HD23630	27	03.20	0344304	+235708	H 3	38277	L	01476	FU	90030106	064214	000050	500	V
IA150 IWL	70	16.60	0345257	+495107	L 3	37803	L	00000	BO	89121214	144303	012700	400	V FFEAD
IA150 IWL	70	16.60	0345260	+495107	L 1	16915	L	00000	BO	89121212	122404	013000	301	V
IA023 HD23862	26	05.51	0346123	+235907	H 3	37873	L	18662	FO	89122214	142659	001000	500	V
IA023 HD23862	26	05.29	0346123	+235907	H 1	16980	L	21470	FO	89122214	144825	000415	601	V
IA023 HD23862	26	05.43	0346124	+235907	L 3	37874	L	19708	FO	89122215	155809	000005	500	V
IA023 HD23862	26	05.48	0346124	+235907	L 1	16981	L	19137	FO	89122216	161053	000003	500	V FFEAD
IA023 HD23862	26	05.48	0346124	+235907	H 3	38151	L	19100	FO	90020608	085146	001000	600	V
IA023 HD23862	26	05.52	0346124	+235907	H 1	17305	L	18602	FO	90020610	100621	000415	501	V
IA023 HD23862	26	05.53	0346124	+235907	L 3	38152	L	18487	FO	90020610	104332	000005	500	V
IA023 HD23862	26	05.46	0346124	+235907	H 3	38275	L	19372	FO	90030104	041906	001000	600	V
IA023 HD23862	26	05.45	0346124	+235907	H 1	17441	L	19458	FO	90030104	043727	000445	601	V
IA023 HD23862	26	00.12	0346124	+235907	L 3	38276	L	19477	FU	90030105	054237	000005	500	V
IA023 HD23862	26	05.45	0346124	+235907	L 1	17442	L	19500	FO	90030105	054804	000003	500	V
EELES V471 TAU	37	9.80	0347339	+170623	H 1	17043	L	344	FO	89123018	185200	009700	333	G E=101,G=78,B=44
EELES V471 TAU	37	9.80	0347339	+170623	H 1	17044	L	386	FO	89123021	212000	006000	332	G E=74,G=70,B=40
EELES V471 TAU	37	9.80	0347339	+170623	H 1	17045	L	386	FO	89123022	225800	011000	333	G E=79,G=83,B=43
EELES V471 TAU	37	9.80	0347339	+170623	H 1	17057	L	374	FO	89123117	172200	015000	334	G E=127,G=110,B=60
EELES V471 TAU	37	9.80	0347339	+170623	H 3	37928	L	369	FO	89123120	200100	025000	304	G G=110,B=52
PHCAL TIFLOOD	99		0350181	+171046	L 1	17058	L			90010100	005400	000025		G
PHCAL TIFLOOD	99		0350181	+171046	H 1	17059	L			90010101	012400	000025		G
PHCAL NULL	99	0.0	0350181	+171046	L 2	18372	L			90010101	014500	000000	00	G B=18
PHCAL TIFLOOD	98		0350181	+171046	L 3	37929	L			90010102	021000	000005		G
PHCAL TIFLOOD	99		0350181	+171046	H 3	37930	L			90010102	023800	000005		G
PHCAL TIFLOOD	99		0350181	+171046	L 2	18373	L			90010102	024400	000010		G
PHCAL TIFLOOD	99		0350181	+171046	H 2	18374	L			90010103	031100	000010		G
ISLRF HD	24817	30	6.1	0354219	+055350	H 3	37963 L	7975	FO	90010619	191900	002800	504	G G=243,B=57

PRO	Object	CL	MAG	R.A.	DEC	D C Image A	FES	MD	Obs.date	Exptim	mm	mm	sec	ECC	Comment
ISLFF HD	24817	30	6.1	0354219	+055350	H 1 17096 L	8922	FO	90010621	210000	000730			403 G C=170,B=45	
ISLFF HD	24817	30	6.1	0354219	+055350	H 3 37964 L	8789	FO	90010621	215900	002500			503 G C=209,B=41	
PHCAL HD	24760	20	2.9	0354295	+395202	H 1 16988 L	1838	FU	89122401	015700	000007			503 G C=200,B=41	
PHCAL HD	24760	20	2.9	0354295	+395202	H 3 37885 L	1822	FU	89122402	020200	000012			502 G C=208,B=36	
USSBS HD	26015	41	6.01	0404519	+150149	H 1 17476 L	9901	FO	90030519	195800	003000			503 G C=215,B=42	
USSBS HD	26015	41	6.0	0404520	+150150	H 1 17033 L	8306	FO	89122908	080200	004700			X03 G C=1.5X,B=48	
KIL00 VW HXI		54	13.20	0409320	-712528	L 3 38324 L	00000	EO	90030909	093353	005000			440 V	
KIL00 VW HXI		54	13.20	0409320	-712528	L 1 17504 L	00000	EO	90030910	102924	002100			441 V	
KIL00 VW HXI		54	13.81	0409322	-712528	L 3 38283 L	00053	SO	90030204	041457	010100			440 V TWO SEGMENTS WITH RP	
KIL00 VW HXI		54	14.02	0409322	-712528	L 3 38304 L	00044	SO	90030504	043828	005000			441 V	
KIL00 VW HXI		54	14.34	0409322	-712528	L 1 17473 L	00033	SO	90030505	053627	003000			452 V	
KIL00 VW HXI		54	11.25	0409323	-712529	L 3 38223 L	00130	FO	90022210	100521	000300			401 V	
KIL00 VW HXI		54	11.15	0409323	-712529	L 3 38224 L	00143	FO	90022210	105351	000400			501 V	
KIL00 VW HXI		54	13.71	0409323	-712529	L 3 38251 L	00058	SO	90022506	060203	004500			500 V	
KIL00 VW HXI		54	13.75	0409323	-712529	L 1 17419 L	00056	SO	90022506	065535	002800			552 V	
KIL00 VW HXI		54	13.69	0409323	-712529	L 3 38252 L	00059	SO	90022507	074357	004500			500 V	
KIL00 VW HXI		54	14.04	0409323	-712529	L 3 38263 L	00043	SO	90022709	095137	007640			500 V	
KIL00 VW HXI		54	13.99	0409323	-712529	L 1 17432 L	00045	SO	90022711	112052	004100			560 V	
KIL00 VW HXI		54	13.90	0409323	-712529	L 3 38264 L	00049	SO	90022712	121540	003800			450 V	
KIL00 VW HXI		54	14.04	0409323	-712529	L 1 17452 L	00043	SO	90030206	062145	003000			561 V	
KIL00 VW HXI		54	14.24	0409323	-712529	L 3 38305 L	00036	SO	90030506	061441	005000			441 V	
IQ068 VW HXI		54	13.87	0409329	-712527	L 3 37943 L	00050	SO	90010308	080700	001500			330 V	
IQ068 VW HXI		54	14.07	0409330	-712527	L 1 17076 L	00042	SO	90010308	083456	003000			453 V	
TILGB BP TAU		58	12.6	0416085	+285902	L 1 17185 L	161	SO	90012000	000900	009000			4X3 G E=3X,C=189,B=45	
USSBS HD	27397	40	5.6	0417085	+135458	H 3 37974 L	12029	FO	90010901	012500	011000			504 G C=240,B=52	
USSBS HD	27397	40	5.6	0417085	+135458	H 1 17115 L	12693	FO	90010903	032100	002000			503 G C=212,B=41	
USSBS HD	27524	41	6.9	0418342	+205521	H 1 17137 L		FO	90011305	055700	005000			403 G C=148,B=42	
USSBS HD	27524	41	6.9	0418342	+205521	H 1 17477 L	5196	FO	90030521	214200	007500			505 G C=230,B=70	
USSBS HD	27524	41	6.9	0418343	+205522	H 1 17060 L	4452	FO	90010105	055700	005000			403 G C=148,B=42	
TILGB DE TAU		58	12.9	0418498	+274805	L 1 17188 L	91	SO	90012005	053500	007500			303 G E=2X,C=112,B=44	
TILGB FV TAU		58	10.4	0418508	+281935	L 1 17186 L	257	FO	90012002	023600	003000			3X3 G E=2X,C=137,B=41	
TILGB DG TAU		58	12.7	0424010	+255935	L 1 17191 L	180	SO	90012018	182100	008000			4X3 G E=2X,C=166,B=42	
USSBS HD	28307	47	3.9	0425428	+155110	H 1 17067 L	534	FU	90010203	031300	002500			504 G C=228,B=59	
USSBS HD	28319	31	3.41	0425481	+154540	H 3 38003 L	851	FU	90011304	045700	000900			502 G C=190,B=32	
USSBS HD	28319	31	3.4	0425482	+154541	H 3 37934 L	843	FU	90010204	040000	000900			503 G C=224,B=41	
USSBS HD	28319	31	3.4	0425482	+154541	H 3 37942 L	862	FU	90010305	054200	002600			X04 G C=3X,B=58	
COLIS HD	28344	44	7.9	0425550	+171036	H 1 17518 L	2094	FO	90031123	234800	018000			435 G E=142,C=215,B=67	
TILGB DI TAU		58	12.6	0426380	+262620	L 1 17190 L	92	SO	90012016	160700	009000			33 G E=80,B=42	
COLIS HD	285805	46	10.3	0426388	+160811	L 1 17508 L	202	FO	90031015	152100	001500			232 G E=61,C=50,B=36	
FDLIS HD	28485	40	5.58	0427172	+153149	L 3 38335 L	14861	FO	90031121	215900	007000			231 G E=71,C=30X,B=25	
TILGB DK TAU		58	12.2	0427405	+255459	L 1 17192 L	50	SO	90012020	204600	006000			43 G E=150,B=41	
TILGB GG TAU		58	12.3	0429371	+172522	L 1 17197 L	145	SO	90012106	061000	004000			3X2 G E=2X,C=77,B=39	
TILGB DL TAU		58	13.1	0430360	+251424	L 1 17193 L	87	SO	90012022	223500	009000			353 G E=222,C=108,B=45	
COLIS HD	28992	44	7.9	0431440	+152408	H 1 17521 L	1815	FO	90031300	000100	000000			434 G E=115,C=169,B=51	
IAL74 HD29248		23	04.23	0433490	-032711	L 3 37958 S	00586	FU	90010608	084514	000002			700 V	
IAL74 HD29248		23	04.23	0433490	-032711	L 3 37958 L	00586	FU	90010608	085005	000000			500 V 1 CBC TICK	
IAL74 HD29248		23	04.08	0433490	-032711	L 3 37962 S	00675	FU	90010614	142856	000001			100 V	
IAL74 HD29248		23	04.08	0433490	-032711	L 3 37962 L	00675	FU	90010614	143324	000000			600 V 1 CBC TICK	
IAL74 HD 29248		23	04.15	0433491	-032711	L 3 37950 S	00632	FU	90010508	081535	000001			200 V	
IAL74 HD 29248		23	04.07	0433491	-032711	L 3 37951 S	00680	FU	90010508	085603	000001			300 V	

FEO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Cbs.	date	Exptim	min	max	stt	ECC	Comment
IA174 HD 29248		23	04.04	0433491	-032711	L 3	37952 S	00699	FU	90010509	094541	000001				300	V
IA174 HD 29248		23	04.19	0433491	-032711	L 3	37953 S	00609	FU	90010510	104334	000002				500	V
IA174 HD29248		23	04.22	0433491	-032711	L 3	37957 S	00591	FU	90010608	080158	000002				500	V
IA174 HD29248		23	04.22	0433491	-032711	L 3	37957 L	00591	FU	90010608	080630	000001				700	V
IA174 HD29248		23	04.22	0433491	-032711	L 3	37959 S	00594	FU	90010609	094024	000002				500	V
IA174 HD29248		23	04.22	0433491	-032711	L 3	37959 L	00594	FU	90010609	094617	000000				500	V
IA174 HD29248		23	04.06	0433491	-032711	L 3	37960 S	00685	FU	90010610	102722	000002				800	V 1 CBC TICK
IA174 HD29248		23	04.06	0433491	-032711	L 3	37960 L	00685	FU	90010610	103214	000000				500	V 1 CBC TICK
IA174 HD29248		23	04.10	0433491	-032712	L 3	37961 S	00661	FU	90010611	110453	000002				800	V
IA174 HD29248		23	04.10	0433491	-032712	L 3	37961 L	00661	FU	90010611	111009	000000				500	V 1 CBC TICK
TILGB DR TAU		58	12.0	0444132	+165324	L 1	17196 L	145	SD	90012105	050400	001500				332	G E=101,G=69,B=36
TILGB DS TAU		58	12.5	0444391	+291956	L 1	17194 L	128	SD	90012101	010600	006000				353	G E=215,G=103,B=46
IMEF HD 30739		30	4.4	0447530	+084858	H 1	17093 L	374	FU	90010615	153300	000220				503	G G=213,B=49
IMEF HD 30739		30	4.4	0447530	+084858	H 1	17095 L	385	FU	90010617	173900	000245				503	G G=244,B=50
TILGB UY AUR		58	12.6	0448357	+304214	L 1	17195 L		SD	90012102	025300	007000				344	G E=1.5X,G=132,B=51
SALOW HD 30614		13	4.31	0449038	+661538	L 3	38431 L	481	FU	90032421	214800	000006				551	G E=237,G=225,B=30
SALOW HD 30614		13	4.31	0449038	+661538	L 1	17592 L	490	FU	90032421	215700	000003				504	G G=238,B=55
MSHU HD 30959		50	4.7	0449420	+141008	H 1	17200 L	34	FU	90012116	160200	064700				349	G E=5X,G=200,B=137
NOLSS IMC 1990		55	13.7	0449420	+141008	L 3	38058 L			90012203	035400	004000					G
NOLSS IMC 1990		55	13.7	0449420	+141008	L 3	38059 L	52	SD	90012205	051800	006000				350	G E=211,G=99,B=20
NOLSS IMC 1990		55	13.7	0449420	+141008	L 1	17202 L	52	SD	90012206	062300	003000				343	G E=1.5X,G=110,B=50
L1126 AB 14		59	17.00	0449530	-692542	L 3	38696 L	00000	BD	90042908	080644	004300				230	V PARTIAL READ - CNIS
L1126 AB14		11	17.00	0449530	-692542	L 3	38779 L	00000	BD	90051303	031234	021700				351	V
WNFC ER 3		11	14.8	0452523	-664604	L 1	17628 L		BD	90032719	192300	008000				445	G E=1.5X,G=172,B=68
CEMG SK-67 15		25	11.6	0454437	-671932	L 1	17962 L	313	SD	90052120	200000	001348				502	G G=196,B=37
CEMG SK-67 15		25	11.6	0454437	-671932	L 3	38848 L	312	SD	90052120	203200	005418				500	G G=191,B=17
GLAC NEC 1754		83	11.4	0454480	-703109	L 1	17695 L	105	SD	90040410	100200	041000				307	G G=175,B=85
GLAC NEC 1754		83	11.4	0454480	-703109	L 3	38531 L			90040510	100100	040500					G
WNFC HD 32109		11	13.8	0455321	-673411	L 3	38449 L	68	SD	90032721	210700	000500					G
CEMG SK-66 36		23	11.4	0457026	-662757	L 1	17961 L	103	FO	90052117	173500	000748				402	G G=184,B=40
CEMG SK-66 36		23	11.4	0457026	-662757	L 3	38847 L	104	FO	90052118	181100	002630				402	G G=170,B=38
IBLSS S9/TMC		26	12.7	0457364	-663716	L 1	17635 L	111	SD	90032817	170600	002000				502	G G=197,B=39
IBLSS S9/TMC		26	12.7	0457364	-663716	L 3	38457 L	111	SD	90032817	173900	004000				402	G G=166,B=31
IBLSS S12/TMC		26	12.6	0457400	-675208	L 3	38454 L	141	SD	90032812	121800	003000				301	G G=108,B=25
IBLSS S12/TMC		26	12.6	0457400	-675208	L 1	17633 L	144	SD	90032812	125500	002000				503	G G=210,B=45
IBLSS S12/TMC		26	12.6	0457400	-675208	L 3	38455 L	144	SD	90032813	133100	005000				403	G G=163,B=41
IC132 HD32918		47	08.65	0459503	-752058	L 3	38049 L	01324	FO	90011907	073337	012000				130	V
IC132 HD32918		47	08.73	0459503	-752058	H 1	17179 L	01236	FO	90011909	095145	005000				120	V
IC132 HD32918		47	08.76	0459503	-752058	L 3	38050 L	01202	FO	90011910	105735	011300				130	V TWO SEGMENTS (33+80)
IC132 HD32918		47	08.77	0459503	-752058	L 1	17180 L	01186	FO	90011911	113533	000700				350	V
IC132 HD32918		47	08.77	0459503	-752058	H 1	17181 L	01194	FO	90011913	131935	009000				341	V
IC132 HD 32918		47	08.57	0459503	-752058	L 3	38060 L	01426	FO	90012208	080457	015000				232	V
IC132 HD32918		47	08.47	0459503	-752058	H 1	17203 L	01553	FO	90012210	104421	009000				341	V
IC132 HD 32918		47	08.55	0459503	-752058	L 3	38061 L	01447	FO	90012212	122137	002800				232	V
IC132 HD 32918		47	08.55	0459503	-752058	L 1	17204 L	01444	FO	90012213	131339	000700				351	V
IC132 HD 32918		47	08.55	0459503	-752058	H 1	17205 L	01444	FO	90012214	141413	003300				132	V
IC132 HD32918		47	08.39	0459504	-752059	H 1	17224 L	01674	FO	90012507	072835	009000				142	V
IC132 HD32918		47	08.39	0459504	-752059	L 3	38074 L	01674	FO	90012509	090545	014000				232	V
IC132 HD32918		47	08.39	0459504	-752059	L 1	17225 L	01674	FO	90012510	103257	000700				452	V
IC132 HD32918		47	08.39	0459504	-752059	H 1	17226 L	01674	FO	90012511	114709	008000				142	V



FRO	Object	CL	MAG	R.A.	DEC	D C Image A	FES	MD	Obs.date	Exptim	nummsst	ECC	Comment
LAI50 A7		70	15.40	0500524	-154024	L 3 37796 L	00000	BD	89121110	102016	003000		300 V
LAI50 A7		70	15.40	0500524	-154024	L 1 16909 L	00000	BD	89121111	110655	005000		301 V
FOLIS HD	32743	40	5.4	0501301	-491317	L 3 38375 L	16490	FO	90031719	193700	007000		X31 G E=72, G=1.5X, B=30
LIL26 SK-7036		59	13.20	0501386	-703808	L 3 38778 L	00000	BD	90051300	003257	006000		400 V
LIL26 SK-7036		59	13.20	0501387	-703809	L 3 38695 L	00000	BD	90042901	015936	006000		400 V
LIL26 SK-7036		59	13.20	0501387	-703808	L 1 17826 L	00000	BD	90042903	030533	004500		502 V
LIL26 SK7036		59	13.20	0501387	-703809	L 1 17898 L	00000	BD	90051301	013803	004500		500 V
PHCAL HD	293782	32	9.0	0502005	-035118	L 3 38105 L	179	FO	90020101	012500	003000		303 G G=85, B=42
GDAC NCC	1806	83	11.1	0502180	-680312	L 3 38498 L	88	SO	90040309	094800	042000		305 G G=105, B=64
PHCAL HD	32630	21	3.2	0503002	+411008	H 1 17324 L	1365	FU	90020900	000400	000015		502 G G=195, B=40
PHCAL HD	32630	21	3.2	0503002	+411008	H 3 38168 L		FU	90020900	000900	000019		402 G G=170, B=32
PHCAL HD	32630	21	3.2	0503002	+411008	L 1 17325 L	1362	FU	90020901	011200	000001		502 G G=200, B=36
PHCAL HD	32630	21	3.2	0503002	+411008	L 3 38169 L	1350	FU	90020901	012400	000001		500 G G=200, B=18
OBMG SK-66	50	25	10.6	0503077	-670141	L 1 17960 L	197	FO	90052116	161400	000442		402 G G=178, B=33
OBMG SK-66	50	25	10.6	0503077	-670141	L 3 38846 L	195	FO	90052116	163100	001706		500 G G=182, B=17
TILGB FW AUR		58	10.2	0504377	+302014	L 1 17187 L	130	FO	90012004	041400	001500		482 G E=4X, G=150, B=37
LELSS S78/IMC		26	12.5	0504493	-684856	L 3 38465 L	195	SO	90032916	161700	006000		302 G G=120, B=32
LELSS S78/IMC		26	12.5	0504493	-684856	L 1 17645 L	193	SO	90032917	172500	003000		403 G G=190, B=45
WNFC ERL5		11	14.9	0505440	-702558	L 3 38236 L		BD	90022403	033400	001400		331 G E=120, G=50, B=25
WNFC ERL5		11	14.9	0505440	-702558	L 1 17416 L	30	SO	90022422	221800	004500		453 G E=200, G=141, B=41
WNFC ERL5		11	14.9	0505440	-702558	H 3 38247 L	31	SO	90022423	231300	004500		3X3 G E=1.5X, G=121, B=46
SOLAD NCC	1808	81	11.0	0505584	-373446	L 3 38395 L		SO	90032011	115300	020000		203 G G=58, B=42
LAI52 IMC-R76		20	09.67	0506019	-675704	H 1 17123 L	00535	FO	90011008	080937	039700		505 V
LAI07 HD33328		26	04.40	0506449	-084859	H 3 38024 L	00503	FU	90011508	083234	000049		500 V
LAI07 HD33328		26	04.41	0506449	-084859	H 3 38025 L	00500	FU	90011509	090441	000049		500 V
LAI07 HD33328		26	04.42	0506449	-084859	H 3 38026 L	00498	FU	90011509	093623	000049		500 V
LAI07 HD33328		26	04.42	0506449	-084859	H 3 38027 L	00496	FU	90011510	100428	000049		500 V
LAI07 HD33328		26	04.42	0506449	-084859	H 3 38028 L	00498	FU	90011510	103918	000049		500 V
LAI07 HD 33328		26	04.39	0506450	-084900	H 3 38004 L	00512	FU	90011308	081447	000049		500 V
LAI07 HD 33328		26	04.39	0506450	-084900	H 3 38005 L	00509	FU	90011308	085603	000049		500 V
LAI07 HD33328		26	04.39	0506450	-084900	H 3 38006 L	00510	FU	90011309	092729	000049		500 V
LAI07 HD33328		26	04.38	0506450	-084900	H 3 38007 L	00513	FU	90011309	095939	000049		500 V
LAI07 HD 33328		26	04.39	0506450	-084900	H 3 38008 L	00510	FU	90011310	103207	000049		500 V
LAI07 HD 33328		26	04.41	0506451	-084900	H 3 38009 L	00501	FU	90011311	110200	000049		500 V
LAI07 HD 33328		26	04.47	0506451	-084900	H 3 38015 L	00474	FU	90011408	081430	000049		500 V
LAI07 HD 33328		26	04.49	0506451	-084900	H 3 38016 L	00467	FU	90011408	084457	000049		500 V
LAI07 HD 33328		26	04.47	0506451	-084900	H 3 38017 L	00474	FU	90011409	092312	000049		500 V
LAI07 HD33328		26	04.40	0506451	-084900	H 3 38018 L	00503	FU	90011409	095126	000049		500 V
LAI07 HD 33328		26	04.35	0506451	-084900	H 3 38019 L	00529	FU	90011410	102017	000049		500 V
LAI07 HD33328		26	04.33	0506451	-084900	H 3 38020 L	00538	FU	90011410	105345	000049		500 V
OBMG SK-70	80	23	12.6	0508223	-702950	L 3 38795 L	143	SO	90051515	155000	006000		401 G G=148, B=26
OBMG SK-70	80	23	12.6	0508223	-702950	L 1 17912 L	149	SO	90051517	170000	003000		403 G G=180, B=50
WNFC HD	34187	11	13.9	0509560	-685649	H 3 38232 L	71	SO	90022319	195300	000600		231 G E=91, G=42, B=24
LII049 N IMC 90#2		55	16.00	0510417	-714326	L 1 17625 L	00000	BD	90032704	040920	039800		315 V
NOLSS IMC 90-2		55	12.7	0510417	-714326	L 3 38199 L	115	SO	90021600	000900	001500		341 G E=142, G=47, B=22
NOLSS IMC 90-2		55	12.7	0510417	-714326	L 1 17374 L	115	SO	90021601	011100	000500		302 G G=70, B=36
NOLSS IMC 90-2		55	12.7	0510417	-714326	L 3 38200 L	111	SO	90021601	012100	002300		351 G E=204, G=60, B=23
NOLSS IMC 90-2		55	13.1	0510417	-714327	L 3 38202 L	102	SO	90021612	120600	002800		350 G E=243, G=80, B=19
NOLSS IMC 90-2		55	13.0	0510417	-714327	L 1 17379 L	100	SO	90021617	171700	004000		X02 G G=1.5X, B=40
NOLSS IMC 90-2		55	13.0	0510417	-714327	L 3 38204 L	97	SO	90021618	180700	002000		351 G E=205, G=69, B=21

FRO	Object	CL	MAG	R.A.	DEC	D C Image A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
NOLSS IMC 90-2		55	13.0	0510417	-714327	L 1 17380 L	94	SD	90021618	184100	001800	402 G	G=162, B=35
NOLSS IMC 90-2		55	13.6	0510417	-714326	L 3 38209 L	57	SD	90021722	222300	003500	351 G	B=212, G=89, B=26
NOLSS IMC 90-2		55	13.6	0510417	-714326	L 1 17390 L	59	SD	90021723	230600	004000	408 G	G=205, B=95
NOLSS IMC 90-2		55	14.2	0510417	-714326	L 3 38214 L	33	SD	90021919	193600	008000	351 G	B=244, G=78, B=25
NOLSS N IMC #2		55	14.0	0510417	-714327	L 3 38229 L		EO	90022223	232900	000500	334 G	B=111, G=78, B=57
NOLSS IMC 90-2		55	14.0	0510417	-714326	L 3 38231 L	16	SD	90022317	170100	012000	332 G	B=112, G=65, B=39
L1049 N IMC90#2		55	14.00	0510418	-714327	L 3 38284 L	00000	EO	90030207	074006	018700	331 V	
L1049 NIMC 90#2		55	16.00	0510418	-714327	L 3 38394 L	00000	EO	90032007	070724	022000	202 V	
L1049 N IMC 90#2		55	16.00	0510418	-714327	L 3 38439 L	00000	EO	90032604	040750	039900	212 V	
CSUTA HD	34029	45	0.2	0512595	+455658	L 3 38111 L	15634	FU	90020202	022100	000320	X50 G	B=206, G=5X, B=18
IBLSS S22/IMC		26	11.8	0513574	-673012	L 1 17753 L	321	SD	90041516	165300	001500	452 G	B=205, G=182, B=35
IBLSS S22/IMC		26	11.8	0513574	-673012	L 3 38609 L	320	SD	90041517	172300	003000	401 G	G=125, B=25
IBLSS S22/IMC		26	11.8	0513574	-673012	L 3 38667 L	330	SD	90042322	224100	003000	330 G	B=82, G=78, B=18
IBLSS S22/IMC		26	11.8	0513574	-673012	L 1 17803 L	334	SD	90042323	232000	001500	402 G	G=154, B=40
IBLSS S22/IMC		26	11.8	0513574	-673012	L 3 38668 L	326	SD	90042400	001100	004000	330 G	B=95, G=86, B=18
IBLSS S93/IMC		26	12.7	0516439	-682520	L 1 17634 L	124	SD	90032814	144400	003000	303 G	G=112, B=45
IBLSS S93/IMC		26	12.7	0516439	-682520	L 3 38456 L	123	SD	90032815	152200	008000	302 G	G=73, B=40
GLAC NGC	1898	83	11.4	0517060	-694000	L 3 38487 L		EO	90040112	120900	028000	303 G	G=90, B=42
GLAC SKYKND		07		0517060	-694000	L 1 17686 L		EO	90040210	100400	001000	02 G	B=32
PHCAL WAVCAL		98	0.0	0517161	-131336	L 1 16864 S			89120103	030500	000001	28 G	B=10X, B=99
PHCAL WAVCAL		98	0.0	0517161	-131336	H 1 16865 S			89120103	033500	000016	29 G	B=60X, B=103
PHCAL NULL		99		0517161	-131336	L 2 18369			89120103	035400	000000	00 G	B=10
PHCAL T-FLOOD		98		0517161	-131336	L 3 37709 S			89120104	042100	000005	29 G	B=10X, B=103
PHCAL WAVCAL		98		0517161	-131336	L 3 37709 S			89120104	042200	000002	29 G	B=10X, B=103
PHCAL T-FLOOD		98		0517161	-131336	H 3 37710 S			89120104	044900	000005	29 G	B=60X, B=123
PHCAL WAVCAL		98		0517161	-131336	H 3 37710 S			89120104	045000	000200	29 G	B=60X, B=123
PHCAL TFLOOD		98		0517161	-131336	L 2 18370 S			89120104	045400	000010	27 G	B=10X, B=89
PHCAL TFLOOD		98		0517161	-131336	H 2 18371 S			89120105	052500	000010	29 G	B=50X, B=130
PHCAL TFLOOD		98		0517161	-131336	H 3 37711 S			89120106	065700	000005	09 G	B=105, PING
PHCAL TFLOOD		98	0.0	0517161	-131336	H 1 16866 S			89120107	070000	000025	08 G	B=100
PHCAL HD	34816	20	4.29	0517161	-131336	H 1 16874 L	490	FU	89120202	021900	000022	503 G	G=197, B=42
PHCAL HD	34816	20	4.29	0517161	-131336	H 3 37715 L	481	FU	89120202	022400	000022	402 G	G=167, B=32
PHCAL NULL		99		0517161	-131336	L 3 37858			89122101	012700	000000	01 G	B=22
PHCAL TFLOOD		99		0517161	-131336	L 3 37859 L			89122101	015200	000005	09 G	B=106
PHCAL TFLOOD		99		0517161	-131336	L 3 37860 L			89122102	022000	000016		G B=1.5X
PHCAL NULL		99		0517161	-131336	L 3 37863			89122103	034500	000000	01 G	B=22
PHCAL TFLOOD		99		0517161	-131336	L 3 37864 L			89122104	040800	000005	09 G	B=104
PHCAL TFLOOD		99		0517161	-131336	L 3 37865 L			89122104	043900	000016		G B=1.5X
PHCAL NULL		99		0517161	-131336	L 1 17016			89122806	064700	000000	02 G	B=35
PHCAL TFLOOD		99		0517161	-131336	L 1 17017 L			89122807	071300	000030	09 G	B=112
PHCAL TFLOOD		99		0517161	-131336	L 1 17018 L			89122807	074000	000140		G B=1.5X
PHCAL HD	34816	20	4.3	0517161	-131336	L 1 17019 L	478	FO	89122808	081400	000000	501 G	G=232, B=30
PHCAL NULL		99		0517161	-131336	L 1 17020			89122808	084800	000000	02 G	B=39
PHCAL WAVCAL		98	0.0	0517161	-131337	L 2 18375 L			90010423	235800	000000	X01 G	G=3X, B=23
PHCAL WAVCAL		98	0.0	0517161	-131337	L 2 18376 S			90010500	002700	000001	X1 G	B=8X, B=22
PHCAL WAVCAL		98	0.0	0517161	-131337	L 2 18377 L			90010500	005500	000002	?1 G	B=20X, B=25
PHCAL WAVCAL		98	0.0	0517161	-131337	H 2 18378 L			90010501	012400	000005	?1 G	B=15X, B=24
PHCAL WAVCAL		98	0.0	0517161	-131337	H 2 18379 L			90010501	015100	000011	21 G	B=30X, B=26
PHCAL WAVCAL		98	0.0	0517161	-131337	H 2 18380 L			90010502	021800	000022	31 G	B=60X, B=26
PHCAL WAVCAL		98	0.0	0517161	-131337	H 2 18381 L			90010502	024500	000044	32 G	B=120X, B=33

PFO	Object	CL	MAG	R.A.	DEC	D C Image A	FES	MD	Obs.date	Exptim	nummstt	ECC	Comment
PHCAL HD	34816 20	4.29	051.7161	-131.336	H 1	17458 L	538	FU	90030300	001000	000022	503	G G=210, B=44
PHCAL HD	348 20	4.29	051.7161	-131.336	H 3	38287 L	537	FU	90030300	001500	000022	402	G G=170, B=35
PHCAL HD	34816 20	4.3	051.7162	-131.337	H 3	37712 L	499	FU	89120108	084200	000022	402	G G=165, B=32
PHCAL HD	34816 20	4.3	051.7162	-131.337	L 3	37861 L	486	FU	89122102	025100	000000	500	G G=219, B=20
PHCAL HD	34816 20	4.3	051.7162	-131.337	L 3	37862 L	476	FU	89122103	032000	000000	500	G G=215, B=20
PHCAL HD	34816 20	4.3	051.7162	-131.337	H 1	17072 L	475	FU	90010223	234600	000022	503	G G=206, B=41
PHCAL HD	34816 20	4.3	051.7162	-131.337	H 3	37938 L	477	FU	90010223	235100	000022	402	G G=169, B=34
PHCAL HD	34816 20	4.3	051.7162	-131.337	H 2	18384 L	495	FU	90010700	000500	000035	502	G G=194, B=34
PHCAL HD	34816 20	4.3	051.7162	-131.337	H 3	38144 L	532	FU	90020521	212900	000022	502	G G=194, B=34
PHCAL HD	34816 20	4.3	051.7162	-131.337	H 1	17299 L	532	FU	90020521	213500	000022	503	G G=210, B=41
GCLAC NGC	1898 83	11.4	051.7256	-693809	L 3	38492 L	97	SO	90040210	103700	024000	302	G G=75, B=32
GCLAC NGC	1898 83	11.4	051.7256	-693809	L 1	17687 L	95	SO	90040214	144200	012800	303	G G=95, B=49
USSES HD	34759 21	5.09	051.8157	+414524	H 3	38022 L	19837	FO	90011504	045200	000300	402	G G=169, B=35
USSES HD	34759 21	5.09	051.8157	+414524	H 3	38023 L		FO	90011505	053200	000900	X05	G G=3X, B=68
USSES HD	34759 21	5.09	051.8157	+414524	H 3	38308 L	21036	FO	90030523	234100	000400	502	G G=218, B=40
IA069 S DCR	23	09.67	051.8352	-691802	L 1	17236 L	00531	FO	90012610	104523	001500	401	V TWO SPECIFIA
IA069 S DCR	23	09.69	051.8352	-691802	L 3	38090 L	00525	FO	90012611	113838	001500	340	V HEAD, TWO SPECIFIA
IA069 S DCR	23	09.70	051.8352	-691802	L 1	17237 L	00520	FO	90012612	123056	001500	701	V S DCR IN CENTER
IA069 S DCR	23	09.70	051.8352	-691802	H 1	17238 L	00520	FO	90012613	133504	007300	301	V S DCR IN CENTER
IA069 S DCR	23	09.70	051.8352	-691802	L 3	38081 L	00520	FO	90012613	130236	002500	100	V NO SPECTIFUM
IA069 S DCR	23	09.42	051.8352	-691802	L 3	38222 L	00656	FO	90022208	080656	003500	661	V
IA069 S DCR	23	09.62	051.8352	-691802	L 1	17409 L	00556	FO	90022209	090638	001000	661	V
IA069 S DCR	23	09.68	051.8352	-691835	H 1	17424 L	00529	FO	90022606	064042	030000	472	V
IA069 S DCR	23	09.65	051.8352	-691835	H 1	17708 L	00542	FO	90040705	051317	021400	502	V
IMPF HD	34904 30	5.5	051.9193	+405855	H 1	17206 L	15095	FO	90012215	155900	000400	303	G G=132, B=41
IMPF HD	34904 30	5.5	051.9193	+405855	H 1	17207 L	15243	FO	90012217	170800	003000	534	G B=107, G=208, B=51
IMPF HD	34904 30	5.5	051.9193	+405855	H 1	17207 L	15243	FO	90012217	170900	003000	534	G B=107, G=208, B=51
IMPF HD	34904 30	5.5	051.9193	+405855	H 1	17207 L	15243	FO	90012217	170900	003000	534	G B=107, G=208, B=51
IMPF HD	34904 30	5.5	051.9193	+405855	H 1	17208 L	15454	FO	90012218	183000	001800	X35	G B=157, G=2X, B=66
IMPF HD	34904 30	5.5	051.9193	+405855	H 1	17209 L			90012220	201900	002500	G	
IMPF HD	34904 30	5.5	051.9193	+405855	H 1	17209 L	15531	FO	90012220	205000	002500	X46	G B=197, G=2.5X, B=73
IMPF HD	34904 30	5.5	051.9193	+405855	H 1	17210 L	15463	FO	90012222	222700	002000	533	G B=121, G=240, B=45
PHCAL WAVCAL	98	0.0	0521127	-135821	L 3	37995 S			90011223	233200	000000	40	G B=147, B=18
PHCAL WAVCAL	98	0.0	0521127	-135821	L 3	37996 S			90011223	235800	000001	X0	G B=1.5X, B=19
PHCAL WAVCAL	98	0.0	0521127	-135821	L 3	37997 S			90011300	002200	000002	X1	G B=3.5X, B=21
PHCAL WAVCAL	98	0.0	0521127	-135821	L 3	37998 S			90011300	004600	000004	X1	G B=9X, B=21
PHCAL WAVCAL	98	0.0	0521127	-135821	H 3	37999 S			90011301	011100	000030	21	G B=15X, B=25
PHCAL WAVCAL	98	0.0	0521127	-135821	H 3	38000 S			90011301	013500	000100	21	G B=30X, B=30
PHCAL WAVCAL	98	0.0	0521127	-135821	H 3	38001 S			90011301	015800	000200	32	G B=60X, B=32
PHCAL WAVCAL	98	0.0	0521127	-135821	H 3	38002 S			90011302	022300	000400	32	G B=120X, B=38
PHCAL HD	35580 22	6.1	0521268	-561051	H 3	37809 L	8898	FO	89121405	054900	001400	502	G G=190, B=38
PHCAL HD	35580 22	6.1	0521268	-561051	H 1	16922 L	8911	FO	89121406	064100	000800	503	G G=210, B=45
PHCAL HD	35580 22	6.1	0521268	-561051	L 3	37810 L	8874	FO	89121407	075900	000010	500	G G=170, B=18
PHCAL HD	35580 22	6.1	0521268	-561051	L 1	16923 L	8848	FO	89121408	080400	000007	502	G G=220, B=32
PHCAL HD	35580 22	6.1	0521268	-561051	9	02299			90042209	095400	000000	G	
PHCAL HD	35580 22	6.1	0521268	-561051	H 1	17796 L	10857	FO	90042310	100600	000800	503	G G=216, B=43
PHCAL HD	35580 22	6.1	0521268	-561051	H 3	38661 L	10826	FO	90042310	102300	001400	502	G G=200, B=40
PHCAL HD	35580 22	6.1	0521268	-561051	L 3	38662 L	10662	FO	90042311	112300	000010	500	G G=178, B=17
PHCAL HD	35580 22	6.1	0521268	-561051	L 1	17797 L	10807	FO	90042311	113000	000007	502	G G=240, B=35
PHCAL HD	35580 22	6.1	0521268	-561051	L 1	17996 L	11011	FO	90052615	154200	000026	502	G G=200, B=38



FDO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mmmsst	ECC	Comment
FHCAL HD	35580	22	6.1	0521268	-561051	L 3	38873 L	11010	FO	90052616	162100	000037	500 G	G=178, B=18
FHCAL HD	35580	22	6.1	0521268	-561051	L 3	38875 L	11016	FO	90052618	183500	000042	500 G	G=193, B=18
WNPEC	FR 24	11	13.3	0521460	-655137	L 3	38382 L	79	SO	90031900	003800	000500	331 G	E=96, G=47, B=23
WNPEC	FR 24	11	13.3	0521460	-655137	L 1	17556 L	78	SO	90031900	005100	001500	442 G	E=189, G=153, B=39
WNPEC	FR25	11	15.6	0522138	-680152	L 1	17629 L		EO	90032800	001300	015500	354 G	E=217, G=139, B=52
WNPEC HD	36063	11	12.7	0523100	-713821	L 3	38235 L	141	SO	90022401	011400	000500	341 G	E=160, G=65, B=26
OK72K	S30/IMC	26	4.5*	0523120	-680426	L 1	17755 L			90041520	200200	001000	X09 G	G=2X, B=140
WNPEC	SK-65 57	11	14.9	0523130	-655920	L 3	38250 L	25	SO	90022504	042500	000800	231 G	E=82, G=43, B=24
LI049 N	IMC 90#1	55	15.00	0523446	-693226	L 3	38221 L	00000	EO	90022204	041122	012000	331 V	
NOLSS	IMC 1990	55	12.8	0523446	-693227	L 1	17172 S	80	SO	90011815	155200	002500	302 G	G=86, B=35
NOLSS	IMC 1990	55	12.8	0523446	-693227	L 1	17172 S	80	SO	90011815	155200	002500	302 G	G=86, B=35
NOLSS	IMC 1990	55	12.8	0523446	-693227	L 1	17172 L	76	SO	90011816	162500	000500	342 G	E=158, G=63, B=38
NOLSS	IMC 1990	55	12.8	0523446	-693227	L 1	17172 L	76	SO	90011816	162500	000500	342 G	E=158, G=63, B=38
NOLSS	IMC 1990	55	12.8	0523446	-693227	L 1	17172 L	76	SO	90011816	162500	000500	342 G	E=158, G=63, B=38
NOLSS	IMC 1990	55	12.8	0523446	-693227	L 3	38044 L	78	SO	90011816	163800	002500	351 G	E=180, G=73, B=28
NOLSS	IMC 1990	55	12.8	0523446	-693227	L 1	17173 L	77	SO	90011817	171300	004000	5X2 G	E=1.5X, G=190, B=39
NOLSS	IMC 1990	55	12.8	0523446	-693227	L 3	38045 L	71	SO	90011818	180000	005000	3X2 G	E=2X, G=130, B=32
NOLSS	IMC 1990	55	12.8	0523446	-693226	H 1	17178 L	70	SO	90011903	034100	019000	304 G	G=110, B=59
NOLSS	NOVA IMC	55	13.0	0523446	-693226	L 1	17183 L	63	SO	90011919	195600	000800	352 G	E=203, G=74, B=36
NOLSS	NOVA IMC	55	13.0	0523446	-693226	L 1	17183 S	63	SO	90011920	201200	002000	342 G	E=170, G=67, B=36
NOLSS	NOVA IMC	55	13.0	0523446	-693226	L 3	38053 L	66	SO	90011920	204200	003000	350 G	E=197, G=85, B=18
NOLSS	NOVA IMC	55	13.0	0523446	-693226	L 1	17184 L	65	SO	90011921	212000	002000	3X2 G	E=2X, G=122, B=36
NOLSS	NOVA IMC	55	13.0	0523446	-693226	L 3	38054 L	68	SO	90011921	215100	006000	5X1 G	E=1.5X, G=198, B=26
NOLSS	IMC 1990	55	13.5	0523446	-693226	L 1	17222 L	56	SO	90012503	031900	002000	353 G	E=243, G=96, B=41
NOLSS	IMC 1990	55	13.5	0523446	-693226	L 3	38072 L	56	SO	90012503	035800	008000	4X1 G	E=1.5X, G=129, B=26
NOLSS	IMC 1990	55	13.5	0523446	-693226	L 1	17223 L	54	SO	90012505	052800	002500	3X2 G	E=1.5X, G=112, B=36
NOLSS	IMC 1990	55	13.5	0523446	-693226	L 3	38073 L	55	SO	90012506	060200	004800	351 G	E=227, G=96, B=27
NOLSS	IMC 1990	55	13.6	0523446	-693227	L 1	17249 L	52	SO	90012803	035100	003000	354 G	E=243, G=112, B=57
NOLSS	IMC 1990	55	13.6	0523446	-693227	L 3	38090 L	47	SO	90012804	043100	009000	352 G	E=238, G=96, B=31
NOLSS	IMC 1990	55	13.6	0523446	-693227	L 1	17250 L	44	SO	90012806	061000	004000	3X2 G	E=1.5X, G=104, B=39
NOLSS	N IMC 90	55	14.0	0523446	-693227	L 3	38101 L	40	SO	90013023	235100	011000	343 G	E=160, G=105, B=41
NOLSS	N IMC 90	55	14.0	0523446	-693227	L 3	38101 L	40	SO	90013023	235100	011000	343 G	E=160, G=105, B=41
NOLSS	N IMC 90	55	14.0	0523446	-693227	L 3	38101 L	40	SO	90013023	235100	011000	343 G	E=160, G=105, B=41
NOLSS	N IMC 90	55	14.0	0523446	-693227	L 1	17264 L	41	SO	90013101	014600	003800	353 G	E=224, G=108, B=49
NOLSS	N IMC 90	55	14.0	0523446	-693227	L 1	17264 L	41	SO	90013101	014600	003800	353 G	E=224, G=108, B=49
NOLSS	N IMC 90	55	14.0	0523446	-693227	L 1	17264 L	41	SO	90013101	014600	003800	353 G	E=224, G=108, B=49
NOLSS	IMC 1990	55	14.5	0523446	-693227	L 3	38181 L		EO	90021119	194600	009000	341 G	E=163, G=65, B=22
NOLSS	IMC 1990	55	14.5	0523446	-693227	L 1	17342 L		EO	90021121	213300	018000	4X5 G	E=3X, G=190, B=70
NOLSS	IMC 1990	55	14.5	0523446	-693227	L 1	17343 L		EO	90021201	010500	003500	343 G	E=145, G=80, B=45
LI049 N	IMC 90#1	55	13.50	0523447	-693227	L 1	17198 L	00070	SO	90012108	084814	001000	432 V	FFRFD
NOLSS	IMC 1990	55	12.8	0523447	-693227	L 1	17168 L	78	SO	90011723	235000	002000	3X2 G	E=3X, G=116, B=34
LI049 N	IMC 90#1	55	13.50	0523447	-693227	H 3	38056 L	00070	SO	90012109	091638	023000	332 V	
NOLSS	IMC 1990	55	12.8	0523447	-693227	L 3	38041 L	83	SO	90011800	002000	003000	350 G	E=191, G=85, B=20
LI049 N	IMC 90#1	55	13.50	0523447	-693227	L 1	17199 L	00070	SO	90012113	133745	003500	552 V	FFRFD
NOLSS	IMC 1990	55	12.8	0523447	-693227	L 1	17169 L	78	SO	90011801	010300	000800	352 G	E=224, G=80, B=34
LI049	NOVA IMC	55	13.50	0523447	-693227	L 1	17235 L	00070	SO	90012607	073907	002000	350 V	
NOLSS	IMC 1990	55	12.8	0523447	-693227	L 3	38042 L	79	SO	90011801	014000	004500	4X1 G	E=1.5X, G=170, B=23
LI049	NOVA IMC	55	13.50	0523447	-693227	L 3	38078 L	00070	SO	90012607	070916	002000	330 V	

FEO	Object	CL	MAG	R.A.	DEC	D C Image A	FES	MD	Obs.date	Exptim	numinst	BCC	Comment
NOLSS IMC 1990		55	13.7	0523447	-693227	L 1 17201 L	51	SO	90012204	044400	001000	372	G B=165,G=64,B=36
LHO49 NOVA IMC		55	13.50	0523447	-693227	L 3 38079 L	00070	SO	90012608	080842	012000	470	V
NOLSS IMC 1990		55	13.8	0523447	-693227	L 1 17211 L	55	SO	90012301	010100	001500	352	G B=207,G=80,B=39
LHO49 N IMC 90#1		55	15.00	0523447	-693227	L 1 17408 L	00000	EO	90022206	061720	007500	332	V
NOLSS IMC 1990		55	13.8	0523447	-693227	L 3 38062 L	57	SO	90012301	012300	006000	351	G B=196,G=107,B=30
LHO49 N IMC 90#1		55	17.00	0523447	-693227	L 1 17528 L	00000	EO	90031404	043148	037500	332	V
NOLSS IMC 1990		55	13.8	0523447	-693227	L 1 17212 L	59	SO	90012302	023200	003000	343	G B=2X,G=123,B=44
LHO49 N IMC 90#1		55	17.00	0523447	-693227	L 3 38062 L	00000	EO	90031503	035138	041500	332	V
NOLSS IMC 1990		55	13.7	0523447	-693227	L 3 38076 L	50	SO	90012603	033000	003000	340	G B=123,G=46,B=16
LHO49 NIMC1990#1		55	16.00	0523447	-693227	L 1 17768 L	00000	EO	90041902	024724	036000	303	V
NOLSS IMC 1990		55	13.7	0523447	-693227	L 1 17233 L	47	SO	90012604	040800	001200	332	G B=136,G=59,B=37
LHO49 NIMC1990#1		55	16.00	0523447	-693227	L 3 38634 L	00000	EO	90042002	021830	036500	302	V
NOLSS IMC 1990		55	13.7	0523447	-693227	L 3 38077 L	45	SO	90012604	044100	006000	351	G B=246,G=97,B=28
NOLSS IMC 1990		55	13.7	0523447	-693227	L 1 17234 L	50	SO	90012606	062300	002500	352	G B=218,G=86,B=37
NOLSS N IMC 90		55	14.0	0523447	-693227	L 3 38135 L	36	SO	90020420	203800	018000	443	G B=2X,G=159,B=42
NOLSS N IMC 90		55	14.0	0523447	-693227	L 1 17293 L	40	SO	90020423	234400	004500	353	G B=208,G=106,B=41
NOLSS N IMC 90		55	14.0	0523447	-693227	L 3 38136 L	41	SO	90020500	003600	008500	352	G B=213,G=90,B=38
NOLSS IMC 90-2		55	13.1	0523447	-693227	L 1 17378 L	99	SO	90021612	124200	001400	302	G G=130,B=35
NOLSS IMC 1990		55	14.5	0523447	-693227	L 3 38203 L		EO	90021613	134400	018000	352	G B=237,G=75,B=35
NOLSS IMC 90-1		55	14.6	0523447	-693227	L 1 17399 L	24	SO	90021921	212300	009000	343	G B=165,G=82,B=47
NOLSS IMC 90-1		55	14.6	0523447	-693227	L 3 38215 L		EO	90021923	230200	003500	337	G B=134,G=102,B=61
NOLSS N IMC #1		55	15.0	0523447	-693227	L 3 38291 L		EO	90030312	121300	030000	336	G B=170,G=115,B=77
NOLSS N IMC #1		55	15.0	0523447	-693227	L 1 17461 L		EO	90030317	171800	027000	347	G B=226,G=160,B=90
NOLSS IMC 90-1		55		0523447	-693227	L 3 38607 L		EO	90041509	095600	030000	309	G G=140,B=108
HCAL NULL		99		0524026	-693251	L 3 38057			90012116	160700	002000	30	G B=50,B=20
HSLHB IC 418		70	9.0	0525120	-124415	H 3 37763 L	846	FO	89120705	053500	005000	354	G B=242,G=123,B=59
HSLHB IC 418		70	9.0	0525120	-124415	H 3 37764 L	842	FO	89120707	070100	004000	352	G B=194,G=80,B=34
HSLHB IC 418		70	9.0	0525120	-124415	H 3 37765 L	850	FO	89120708	081200	003700	352	G B=189,G=76,B=31
HSLHB IC 418		70	9.2	0525120	-124415	H 3 37770 L	823	FO	89120801	013800	009000	342	G B=2X,G=135,B=40
HSLHB IC 418		70	9.2	0525120	-124415	H 3 37771 L	837	FO	89120803	034100	007900	344	G B=2X,G=150,B=57
HSLHB IC 418		70	9.2	0525120	-124415	H 3 37772 L	863	FO	89120805	053400	007900	344	G B=2X,G=148,B=59
HSLHB IC 418		70	9.2	0525120	-124415	H 3 37773 L	857	FO	89120807	072800	007900	342	G B=2X,G=125,B=40
HSLHB IC 418		70	9.2	0525120	-124415	H 3 37776 L	841	FO	89120901	010800	009000	442	G B=2X,G=144,B=40
HSLHB IC 418		70	9.2	0525120	-124415	H 3 37777 L	863	FO	89120903	031200	009000	444	G B=2X,G=157,B=57
HSLHB IC 418		70	9.2	0525120	-124415	H 3 37778 L	884	FO	89120905	053000	008200	345	G B=2X,G=153,B=65
HSLHB IC 418		70	9.2	0525120	-124415	H 3 37779 L	890	FO	89120907	073400	007200	342	G B=2X,G=112,B=38
HSLHB IC 418		70	9.2	0525120	-124415	H 3 37783 L	836	FO	89121002	020300	007400	342	G B=2X,G=126,B=40
HSLHB IC 418		70	9.2	0525120	-124415	H 3 37784 L	833	FO	89121003	035300	007400	345	G B=2X,G=160,B=66
HSLHB IC 418		70	9.2	0525120	-124415	H 3 37785 L	861	FO	89121005	054400	007400	345	G B=2X,G=150,B=61
HSLHB IC 418		70	9.2	0525120	-124415	H 3 37786 L	863	FO	89121007	073600	006900	342	G B=2X,G=109,B=37
HSLHB IC 418		70	9.2	0525120	-124415	H 3 37791 L	827	FO	89121101	013900	007600	343	G B=2X,G=125,B=41
HSLHB IC 418		70	9.2	0525120	-124415	H 3 37792 L	836	FO	89121103	032900	008000	345	G B=2X,G=150,B=61
SNDWB N 49-S		75		0525549	-660750	L 3 38676 L		EO	90042510	100300	040500	335	G B=146,G=106,B=68
SNDWB SKYEKGD		07		0525549	-660750	L 1 17805 L			90042510	100900	037500	07	G B=84
SNDWB N 49-S		75		0525549	-660750	L 1 17810 L			90042609	094800	042000		G
SNDWB SKYEKGD		07		0525549	-660750	L 3 38680			90042609	095400	038000		G
SNDWB SKYEKGD		07		0525550	-660750	L 3 38680 L		EO	90042609	095400	038000	307	G G=103,B=61
NR4WB N49 - N		75		0525568	-660703	L 1 17388 L		EO	90021712	121400	040500	339	G B=189,G=157,B=132
NR4WB SKYEKGD		07		0525568	-660703	L 3 38207 L		EO	90021714	140200	027500	306	G G=96,B=72
SNDWB N49		75		0525568	-660729	L 3 38186 L		EO	90021312	120300	041500	355	G B=236,G=112,B=61



FPO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	min	max	stt	EQ	Comment
SNWB SKY BKGD	07		0525593	-660729	L 1	17357	L			90021312	120700	039500			307	G G=110, B=85
SNWB N49	75		0525593	-660729	L 1	17372	L	EO		90021512	121000	041000			357	G E=236, G=141, B=82
SNWB SKY BKGD	07		0525593	-660729	L 3	38195	L			90021512	123100	037000			303	G G=86, B=41
SNWB N49-SE	75		0525596	-660745	L 1	18013	L	EO		90053008	081400	039500			4X3	G E=1.5X, G=150, B=42
SNWB N49-SE	75		0525596	-660745	L 3	38922	L			90053008	081500	036500			06	G B=72
SNWB N49-N	75		0525598	-660739	L 3	38183	L	EO		90021212	122400	039600			334	G E=103, G=88, B=55
SNWB SKY BKGD	07		0525598	-660739	L 1	17352	L			90021212	122500	037500			307	G G=140, B=90
CD69Y CERES	05	7.2	0526248	+270123	L 1	17155	L			90011416	160200	044000				G
CD69Y CERES	05	7.2	0526248	+270123	L 1	17155	L	2297	FO	90011416	160200	011000			500	G G=178, B=18
CD69Y CERES	05	7.2	0526248	+270123	L 1	17156	L	2681	FO	90011502	020600	001000			X04	G G=3X, B=55
CD69Y CERES	05	7.2	0526248	+270123	L 1	17157	L	2751	FO	90011503	033200	000500			402	G G=165, B=38
WNFC HD 269549	11	14.8	0527025	-690923	L 3	38451	L		EO	90032723	232800	001000			231	G E=100, G=37, B=26
WNFC ER 35	11	14.8	0527030	-690905	L 3	38383	L	60	SO	90031902	021300	001000			301	G G=48, B=24
OK68K HD 36485	20	6.9	0529269	-001910	L 1	17356	L	5987	FO	90021301	012300	000005			502	G G=202, B=32
OK68K HD 36485	20	6.9	0529269	-001910	L 3	38185	L	6022	FO	90021301	012900	000008			500	G G=198, B=18
WNFC HD 269624	11	14.9	0529476	-685653	L 3	38450	L		EO	90032722	222600	001000			03	G B=42
LIL26 SK-7L34	59	13.58	0530123	-710150	L 3	38700	L	00065	SO	90043002	020707	004500			560	V
LIL26 SK-7L34	11	13.51	0530123	-710150	L 3	38701	L	00069	SO	90043003	035313	003500			560	V
LIL26 SK-7L34	11	13.60	0530123	-710150	L 1	17834	L	00064	SO	90043003	030207	003500			601	V
LIL26 SK-7L34	11	13.51	0530123	-710151	L 1	17835	L	00069	SO	90043004	044042	002000			401	V
USBS HD 36673	40	2.6	0530314	-175124	H 3	37975	L	1695	FU	90010904	042200	003500			X04	G G=3X, B=52
USBS HD 36673	41	2.59	0530314	-175124	H 1	17566	L	1884	FU	90032021	210100	000100			332	G E=134, G=110, B=35
USBS HD 36673	41	2.59	0530314	-175124	H 3	38399	L	1888	FU	90032021	211100	001100			501	G G=185, B=30
USBS HD 36673	41	2.6	0530314	-175124	H 3	38446	L	1887	FU	90032715	152200	001400			502	G G=234, B=37
IAL52 NGC2004EIS	23	14.20	0530416	-671951	L 1	17154	L	00000	EO	90011411	115851	005000			503	V DOUBLE SPECTRUM : 2
IAL52 NGC2004EIS	23	14.20	0530416	-671951	L 3	38021	L	00000	EO	90011413	130942	009800			501	V DOUBLE SPECTRUM: 2 S
LIL26 EMO 0531-6	59	14.60	0531096	-660915	L 1	17827	L	00000	EO	90042904	045339	016000			603	V PARTIAL READ - CNIS
LIL26 EMO 0531-6	59	14.60	0531096	-660915	L 3	38702	L	00000	EO	90043005	055059	013700			500	V FREAD
IAL60 R110	40	10.51	0531124	-690459	L 1	17694	L	00251	FO	90040306	062147	003000			502	V
IAL60 R110	40	10.43	0531124	-690459	L 3	38497	L	00270	FO	90040306	065834	007500			501	V
WNFC HD 269692	11	14.8	0531460	-674302	L 1	17418	L	34	SO	90022502	022200	004500			352	G E=208, G=123, B=38
WNFC HD 269692	11	14.8	0531460	-674302	L 3	38249	L	34	SO	90022503	031400	001500			341	G E=159, G=49, B=25
CEMCG SK-66L32	23	11.5	0532170	-662614	L 1	17963	L	363	SO	90052121	215800	000948			402	G G=162, B=33
CEMCG SK-66L32	23	11.5	0532170	-662614	L 3	38849	L	362	SO	90052122	223300	001700			400	G G=149, B=18
LED54 N2014/1	83	10.56	0532279	-674323	L 3	38393	L	00240	FO	90032004	043458	003000			301	V FREAD
LED54 N2014/1	83	10.51	0532280	-674324	L 1	17564	L	00252	FO	90032005	051812	004000			302	V
HLEB HH-34	69	16.0	0533053	-063031	L 3	37992	L			90011116	160500	078000			309	G G=140, B=105
HLEB HH-34	69	16.0	0533053	-063031	L 1	17136	L		EO	90011215	154600	042000			07	G B=90
HLEB HH-34	69	16.0	0533053	-063031	L 3	38217	L		EO	90022112	124500	037500			306	G G=100, B=77
HCLSP HD 37269	39	5.4	0535253	+302753	L 1	17638	L	16402	FO	90032822	222500	000016			502	G G=223, B=36
HCLSP HD 37269	39	5.4	0535253	+302753	L 3	38459	L	16505	FO	90032822	223000	000048			501	G G=194, B=28
LELSS S124/IMC	26	10.7	0535409	-694226	L 3	38608	L	199	FO	90041516	160300	000700			500	G G=200, B=18
WNFC ER56	11	13.8	0535410	-691453	L 1	17415	L	45	SO	90022322	222900	003000			202	G G=60, B=40
WNFC ER56	11	13.8	0535410	-691453	L 3	38234	L	44	SO	90022323	230600	003500			03	G B=41
SUIRK SN 1987A	56	14.5	0535499	-691758	L 3	37798	L		EO	89121118	181900	030000			503	G G=222, B=50
SUIRK SN 1987A	56	14.5	0535499	-691758	L 1	16911	L	287	EO	89121123	232100	009000			502	G G=200, B=40
SUIRK SN 1987A	56	15.0	0535499	-691758	L 1	16917	L	46	SO	89121306	060000	012000			X03	G G=1.5X, B=45
SUIRK SN 1987A	56	15.0	0535499	-691758	H 3	37805	L		EO	89121308	081600	097000			39	G E=139, B=105
SUIRK SKY BKGD	07		0535499	-691758	L 1	16918	L			89121308	085200	088500			309	G G=180, B=122
SUIRK SN 1987A	56	15	0535499	-691758	L 1	17046	L		EO	89123101	014800	018000			X09	G G=2X, B=124

FPO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	nummsst	ECC	Comment
SUIRK SN 1987A		56	15.0	0535499	-691758	L 3	37973 L		EO	90010816	161100	028500	503 G	G=208,B=50
SUIRK SN 1987A		56	15.0	0535499	-691758	L 1	17113 L		EO	90010821	210100	011000	503 G	G=201,B=46
SUIRK SN 1987A		56	15.0	0535499	-691758	L 3	38172 L		EO	90020912	122400	028500	405 G	G=196,B=66
SUIRK SN 1987A		56	15.0	0535499	-691758	L 1	17329 L		EO	90020917	171500	010500	404 G	G=185,B=55
SUIRK SN 1987A		56	0.0	0535499	-691758	L 9	02295 O			90022303	032500	016000		G
SUIRK SKY BKG		07	0.0	0535499	-691758	L 1	17412 L			90022304	040300	009000	308 G	G=138,B=95
SUIRK SN 1987A		56	0.0	0535499	-691758	H 3	38230 L		EO	90022311	112300	017000	309 G	G=140,B=104
SUIRK SN 1987A		56	15.0	0535499	-691758	L 1	17413 L		EO	90022314	143300	012000	405 G	G=196,B=63
SUIRK SN 1987A		56	15.0	0535499	-691758	L 3	38307 L		EO	90030512	121700	028500	403 G	G=182,B=41
SUIRK SN 1987A		56	15.0	0535499	-691758	L 1	17475 L		EO	90030517	170500	010500	403 G	G=170,B=45
SUIRK SN 1987A		56	15	0535499	-691758	L 3	38536 L			90040610	100600	028500		G
SUIRK SN 1987A		56	15	0535499	-691758	L 1	17702 L		EO	90040614	145800	011200	404 G	G=180,B=52
SUIRK SN 1987A		56	15.0	0535500	-691758	L 1	17543 L		EO	90031700	001900	015000	403 G	G=196,B=49
SUIRK SN 1987A		56	0.0	0535500	-691758	L 1	17783 L		EO	90042122	222600	014000	504 G	G=225,B=52
SUIRK SN 1987A		56	15.0	0535500	-691758	L 3	38866 L		EO	90052508	081900	028500	X08 G	G=1.5X,B=100
SUIRK SN 1987A		56	15.0	0535500	-691758	L 1	17987 L		EO	90052513	131000	010000	409 G	G=230,B=103
LED41 SN1987A		56	15.00	0535501	-691758	H 1	17011 L	00000	EO	89122610	102815	038000	203 V	
LED41 SN1987A		56	15.00	0535501	-691758	L 3	38055 L	00000	EO	90012008	082328	028000	442 V	
LED41 SN1987A		56	15.00	0535501	-691758	L 1	17189 L	00000	EO	90012013	131321	009400	402 V	
LED41 SN1987A		56	15.00	0535501	-691758	L 1	17519 L	00000	EO	90031204	043250	009000	401 V	
LED41 SN1987A		56	15.00	0535501	-691758	L 3	38336 L	00000	EO	90031206	060843	027500	401 V	
LED41 SN 1987A		56	15.00	0535501	-691758	L 1	17714 L	00000	EO	90040902	021207	012000	401 V	
LED41 SN1987A		56	15.00	0535501	-691758	L 3	38555 L	00000	EO	90040904	041729	027000	401 V	
WN1FC	FR57	11	13.6	0535590	-691253	L 1	17414 S	70	SD	90022320	204200	003000	302 G	G=60,B=34
WN1FC	FR57	11	13.6	0535590	-691253	L 1	17414 L	70	SD	90022320	204200	003000	302 G	G=100,B=38
WN1FC	FR57	11	13.6	0535590	-691253	H 3	38233 L	67	SD	90022321	212000	004000	300 G	G=45,B=18
WN1FC	FR57	11	13.6	0535590	-691253	H 3	38233 S	67	SD	90022321	212000	004000	300 G	G=46,B=18
WN1FC	FR57	11	13.6	0535590	-691253	H 3	38233 S	67	SD	90022321	212100	004000	300 G	G=46,B=18
WN1FC	FR64	11	13.3	0536160	-690052	L 1	17417 L	94	SD	90022500	003600	001000	302 G	G=90,B=38
WN1FC	FR64	11	13.3	0536160	-690052	H 3	38248 L	93	SD	90022501	011000	001500	300 G	G=50,B=20
LE1SS SL27/1MC		26	10.9	0536475	-692438	L 3	38466 L	149	FO	90032918	181800	001800	501 G	G=200,B=22
LE1SS SL27/1MC		26	10.9	0536475	-692438	L 1	17752 L	167	FO	90041515	151700	000800	402 G	G=153,B=32
LA152 1MC-R127		20	09.34	0537060	-693150	H 1	17117 L	00714	FO	90010911	113846	018900	403 V	
LA160 R127		23	09.34	0537060	-693150	H 1	17685 L	00716	FO	90040206	063638	011500	333 V	
HALSS HD	37806	21	7.80	0538316	-024428	L 3	38173 L	2014	FO	90020919	194700	000400	500 G	G=205,B=18
HALSS HD	37806	21	7.80	0538316	-024428	H 1	17330 L	2018	FO	90020919	195600	007000	5X4 G	E=255,G=215,B=52
HALSS HD	37806	21	7.80	0538316	-024428	L 3	38174 L	2026	FO	90020921	214000	000400	500 G	G=200,B=18
HALSS HD	37806	21	7.80	0538316	-024428	H 1	17331 L	2021	FO	90020921	214900	006500	454 G	E=238,G=190,B=55
HALSS HD	37806	21	7.80	0538316	-024428	L 3	38175 L	2059	FO	90020923	232700	000400	200 G	G=22,B=18
HALSS HD	37806	21	7.80	0538316	-024428	H 1	17332 L	2074	FO	90020923	233500	006000	449 G	E=241,G=210,B=105
HALSS HD	37806	21	7.80	0538316	-024428	L 3	38176 L	2106	FO	90021001	010900	000400	501 G	G=210,B=21
HALSS HD	37806	21	7.80	0538316	-024428	H 1	17333 L	2081	FO	90021001	011700	003300	346 G	E=184,G=165,B=75
HALSS HD	37806	22	7.9	0538317	-024429	L 1	17213 L	2165	FO	90012304	041100	000400	X02 G	G=3X,B=35
HALSS HD	37806	22	7.9	0538317	-024429	L 3	38063 L	2178	FO	90012304	042300	000800	X00 G	G=2X,B=20
HALSS HD	37806	22	7.9	0538317	-024429	H 1	17214 L	2213	FO	90012305	051700	005000	443 G	E=162,G=160,B=46
HALSS HD	37806	22	7.9	0538317	-024429	L 3	38064 L	2197	FO	90012306	061200	000400	500 G	G=193,B=20
HALSS HD	37806	22	7.9	0538317	-024429	L 1	17215 L	2179	FO	90012306	064400	000100	552 G	E=237,G=200,B=36
HALSS HD	37806	22	7.9	0538317	-024429	H 1	17217 L	2116	FO	90012323	235200	007000	553 G	E=218,G=208,B=48
HALSS HD	37806	22	7.9	0538317	-024429	L 3	38066 L	2187	FO	90012401	013800	000400	501 G	G=194,B=21
HALSS HD	37806	22	7.9	0538317	-024429	H 1	17218 L	2188	FO	90012401	014900	007000	455 G	E=216,G=202,B=65

FRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mmmsst	ETC	Comment
HALSS HD	37806	22	7.9	053831.7	-024429	L 3	38067 L		FO	90012403	033400	000500	501 G	G=229, B=21
HALSS HD	37806	22	7.9	053831.7	-024429	H 1	17219 L	2224	FO	90012403	034600	007000	553 G	E=221, G=205, B=50
HALSS HD	37806	22	7.9	053831.7	-024429	L 3	38068 L	2197	FO	90012405	053600	000500	500 G	G=225, B=19
HALSS HD	37806	22	7.9	053831.7	-024429	H 1	17220 L	2191	FO	90012405	054600	006500	453 G	E=212, G=185, B=48
HALSS HD	37806	22	7.9	053831.7	-024429	H 1	17231 L	2117	FO	90012523	235400	007000	448 G	E=243, G=240, B=93
HALSS HD	37806	22	7.9	053831.7	-024429	L 3	38075 L	2125	FO	90012601	014000	000500	502 G	G=240, B=32
HALSS HD	37806	22	7.9	053831.7	-024429	H 1	17232 L	2119	FO	90012601	015200	004000	439 G	E=200, G=218, B=114
HALSS HD	37806	22	7.9	053831.7	-024429	L 3	38085 L	2005	FO	90012703	034600	000500	500 G	G=236, B=20
HALSS HD	37806	22	7.9	053831.7	-024429	H 1	17242 L	2028	FO	90012703	035900	007000	554 G	E=240, G=218, B=51 MD
HALSS HD	37806	22	7.9	053831.7	-024429	H 1	17242 L	2028	FO	90012703	035900	007000	554 G	E=240, G=218, B=51 MD
HALSS HD	37806	22	7.9	053831.7	-024429	H 1	17242 L	2028	FO	90012703	035900	007000	554 G	E=240, G=218, B=51 MD
HALSS HD	37806	22	7.9	053831.7	-024429	L 3	38086 L	2170	FO	90012705	054500	000500	500 G	G=238, B=18
HALSS HD	37806	22	7.9	053831.7	-024429	H 1	17243 L	2179	FO	90012705	055500	005500	443 G	E=186, G=174, B=46
HALSS HD	37806	22	7.9	053831.7	-024429	L 3	38093 L	2083	FO	90012823	230300	000500	501 G	G=239, B=21
HALSS HD	37806	22	7.9	053831.7	-024429	H 1	17253 L	2080	FO	90012823	231500	007000	554 G	E=214, G=207, B=51
HALSS HD	37806	22	7.9	053831.7	-024429	L 3	38094 L	2141	FO	90012900	005900	000500	51 G	E=235, B=21
HALSS HD	37806	22	7.9	053831.7	-024429	H 1	17254 L	2139	FO	90012901	011300	007000	545 G	E=218, G=223, B=70
HALSS HD	37806	22	7.9	053831.7	-024429	L 3	38095 L		FO	90012902	022900	000500	501 G	G=244, B=21
HALSS HD	37806	22	7.9	053831.7	-024429	L 3	38098 L	2144	FO	90012923	233300	000500	500 G	G=235, B=20
HALSS HD	37806	22	7.9	053831.7	-024429	H 1	17257 L	2168	FO	90012923	234600	007000	554 G	E=216, G=209, B=52
HALSS HD	37806	22	7.9	053831.7	-024429	L 3	38099 L	2093	FO	90013001	013000	000500	500 G	G=238, B=19
HALSS HD	37806	22	7.9	053831.7	-024429	H 1	17258 L	2086	FO	90013001	014000	006000	445 G	E=205, G=208, B=67
HALSS HD	37806	22	7.9	053831.7	-024429	H 1	17353 L	2060	FO	90021219	195900	007000	553 G	E=239, G=197, B=45
HALSS HD	37806	22	7.9	053831.7	-024429	H 1	17354 L	2020	FO	90021221	214400	007000	453 G	E=243, G=190, B=50
HALSS HD	37806	22	7.9	053831.7	-024429	L 3	38184 L	2080	FO	90021223	233000	000400	500 G	G=195, B=20
HALSS HD	37806	22	7.9	053831.7	-024429	H 1	17355 L	2040	FO	90021223	233800	006000	456 G	E=243, G=198, B=75
KIL81 SKY		99	99.99	0538401	-640636	L 1	16867 L	00000	BO	89120110	102233	003000	002 V	
KIL81 IMC X-3		59	00.17	0538401	-640636	L 3	37713 L	00000	BO	89120110	102020	024000	402 V	HIGH RADIATION
KIL81 SKY		99	99.99	0538401	-640636	L 1	16868 L	00000	BO	89120112	120011	003000	002 V	
KIL81 SKY		99	99.99	0538401	-640636	L 1	16869 L	00000	BO	89120113	131028	003000	002 V	
KIL81 IMC X-3		59	17.00	0538401	-640636	L 3	37909 L	00000	BO	89122710	101913	038800	302 V	
KIL81 IMC X-3		59	17.00	0538401	-640636	L 3	38211 L	00000	BO	90021804	044023	037700	302 V	
KIL81 IMC X-3		59	17.00	0538401	-640636	L 3	38379 L	00000	BO	90031804	041740	039000	303 V	
LELSS SL31/IMC		26	13.2	0538490	-693059	L 3	38463 L	104	SO	90032911	114900	009000	343 G	E=175, G=143, B=46
LELSS SL31/IMC		26	13.2	0538490	-693059	L 1	17643 L	109	SO	90032913	132600	006000	505 G	G=222, B=68
IMLAW NEC	2023	73		0539059	-021814	L 3	38083 L		BO	90012619	194600	018500	303 G	G=82, B=48
IMLAW NEC	202	73		0539059	-021814	L 1	17240 L			90012620	202100	012000	305 G	G=112, B=65
IMLAW NEC	2023	73		0539125	-021630	L 3	38082 L		BO	90012615	155900	018000	335 G	E=108, G=112, B=65
IMLAW NEC	2023	73		0539136	-021633	L 3	38092 L		BO	90012815	151000	018000	304 G	G=95, B=52
IMLAW NEC	2023	73		0539136	-021633	L 1	17251 L			90012815	151200	016000	307 G	G=120, B=84
PPLTB NEC	2022	71	12.3	0539216	+090345	L 1	17500 L		BO	90030820	200900	012000	235 G	E=116, G=84, B=65
PPLTB NEC	2022	71	12.3	0539219	+090334	L 3	38320 L		BO	90030822	223200	003200	241 G	E=129, G=42, B=27
PPLTB NEC	2022	71	12.3	0539219	+090334	L 1	17502 L		BO	90030901	013600	007300	333 G	E=129, G=68, B=43
PPLTB NEC	2022	71	12.3	0539224	+090348	L 1	17501 L		BO	90030823	233200	005500	335 G	E=149, G=124, B=64
PPLTB NEC	2022	71	12.3	0539224	+090348	L 3	38321 L		BO	90030900	003500	004500	341 G	E=146, G=62, B=22
LELSS SL34/IMC		26	12.1	0540352	-692412	L 3	38464 L	289	SO	90032914	144900	002000	351 G	E=227, G=95, B=23
LELSS SL34/IMC		26	12.1	0540352	-692412	L 1	17644 L	289	SO	90032915	152700	001500	503 G	G=228, B=41
ISMV SK-69276		23	12.4	0541588	-693503	H 3	38777 L	179	SO	90051216	161400	013500	307 G	G=165, B=87
ISMV SK-69276		23	12.4	0541588	-693502	L 1	17897 L	176	FO	90051218	183600	003200	X09 G	G=2X, B=105
RMSK FU ORI		40	9.5	0542380	+090310	L 1	17228 L	499	FO	90012516	160000	012000	5X6 G	E=3X, G=240, B=74



FEO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
EMLSK	FU CRT	40	9.5	0542380	+090310	L 1	17229 L	500	FO	90012518	183600	018000		XX7 G B=5X, G=2X, B=6
EMLSK	FU CRT	40	9.5	0542380	+090310	L 1	17230 L	496	FO	90012522	221000	004000		3X3 G B=1.5X, G=128, B=41
IM156	HH 24 A	69	16.00	0543356	-001132	E 9	02289 2	00000	EO	90011608	081200	016000		V FES FOR SWP38033
HHLKB	HH24A	69	16.3	0543356	-001132	L 3	38033 L		EO	90011608	085800	068000		308 G G=121, B=92
IM156	HH24A	69	16.00	0543356	-001132	E 9	02292 2	00000	EO	90013104	044000	004000		V FES FOR SWP38102
HHLKB	CT APR 2	69	16.3	0543356	-001132		9 02290			90011621	211500	000000		G
HHLKB	HH24A	69	16.3	0543356	-001132	L 3	38102 L		EO	90013105	053300	058500		307 G G=105, B=81
HHLKB	HH24A	69	16.3	0543356	-001132	L 3	38102 L			90013115	150500	023500		G
PHCAL	HD 38666	12	5.16	0544083	-321927	H 1	17386 L	23474	FO	90021700	003000	000045		503 G G=211, B=43
PHCAL	HD 38666	12	5.16	0544083	-321927	H 3	38205 L	23558	FO	90021700	003500	000040		402 G G=170, B=34
PHCAL	HD 38666	12	5.16	0544083	-321927	L 1	17387 L	23173	FO	90021701	013400	000002		402 G G=182, B=36
PHCAL	HD 38666	12	5.16	0544083	-321926	H 3	38571 L	23137	FO	90041118	182400	000051		502 G G=208, B=40
PHCAL	HD 38666	12	5.16	0544084	-321926	H 3	38570 L	23059	FO	90041117	175100	000051		502 G G=205, B=38
PHCAL	HD 38666	12	5.16	0544084	-321926	H 3	38572 L	23118	FO	90041118	185800	000051		502 G G=208, B=38
PHCAL	HD 38666	12	5.16	0544084	-321926	H 3	38573 L	23169	FO	90041119	193200	000051		502 G G=210, B=38
PHCAL	HD 38666	12	5.16	0544084	-321926	H 3	38574 L	23154	FO	90041120	201300	000051		502 G G=210, B=37
PHCAL	HD 38666	12	5.16	0544084	-321926	H 3	38575 L	23347	FO	90041120	204200	000051		502 G G=208, B=40
PHCAL	HD 38666	12	5.16	0544084	-321926	H 3	38576 L	22765	FO	90041121	211600	000051		502 G G=200, B=38
PHCAL	HD 38666	12	5.16	0544084	-321926	H 3	38577 L	22770	FO	90041121	214500	000051		502 G G=190, B=35
PHCAL	HD 38666	12	5.16	0544084	-321926	H 3	38578 L	23062	FO	90041122	221500	000051		502 G G=210, B=33
PHCAL	HD 38666	12	5.16	0544084	-321926	H 3	38579 L	22940	FO	90041122	224500	000051		502 G G=210, B=38
PHCAL	HD 38666	12	5.16	0544084	-321926	H 1	17729 L	22910	FO	90041123	231700	000112		X03 G G=1.5X, B=47
PHCAL	HD 38666	12	5.16	0544084	-321926	H 1	17730 L	22998	FO	90041123	235000	000112		X03 G G=1.5X, B=48
PHCAL	HD 38666	12	5.16	0544084	-321926	H 1	17731 L	22909	FO	90041200	002300	000112		X03 G G=1.5X, B=46
ACIEB	HD 39014	31	4.35	0544409	-654515	H 3	38624 L	398	FU	90041721	210200	001800		402 G G=170, B=36
LEISS	S61/TMC	26	11.3	0545561	-671526	L 1	17754 L	223	SD	90041518	182900	001000		503 G G=240, B=41
LEISS	S61/TMC	26	11.3	0545561	-671526	L 3	38610 L	227	SD	90041519	190000	001000		401 G G=164, B=25
LA001	EG289	37	15.10	0548037	+000505	L 3	37993 S	00000	EO	90011208	081023	012512		300 V 2 SEGMENTS 2 (B.O.)
ELICU	PKS 0548-322	87	15.5	0548488	-321707	L 3	38040 L	24	SD	90011715	155700	030000		04 G B=51
ELICU	PKS 0548-322	87	15.5	0548488	-321707	L 1	17167 L		EO	90011721	210400	010500		03 G B=46
LA061	HD 39421	30	06.47	0549446	-090311	L 3	38240 S	09014	FO	90022407	074110	000230		600 V
LA061	HD 39421	30	06.47	0549446	-090311	L 3	38240 L	09014	FO	90022407	075137	000230		700 V
LC090	STAR 34E	20	11.22	0550339	+073727	L 2	18393 L	00134	FO	90011813	131019	003000		401 V
OBMG	SK-68171	23	12.0	0550362	-681207	L 3	38796 L	225	SD	90051519	193500	002000		501 G G=199, B=23
OBMG	SK-68171	23	12.0	0550362	-681207	L 1	17913 L	220	SD	90051520	202100	000830		502 G G=196, B=37
CSLTA	HD 39587	44	4.6	0551252	+201607	L 3	38108 L	365	FU	90020120	200500	009000		X31 G B=91, G=5X, B=25
LC090	SPO 113256	22	07.58	0551454	+080245	L 2	18394 L	03428	FO	90011814	142405	000100		501 V
LC090	STAR 25-E	30	11.77	0552146	+071536	L 2	18392 L	00326	SD	90011810	103201	009000		503 V
OBMG	SK-68173	13	12.1	0552147	-680700	L 3	38797 L	206	SD	90051521	211700	006600		501 G G=217, B=22
OBMG	SK-68173	13	12.1	0552147	-680700	L 1	17914 L	211	SD	90051522	223200	001700		502 G G=200, B=35
LSLAD	HD 39801	49	0.5	0552280	+072358	H 1	17174 L	11164	FU	90011819	194900	000245		351 G B=185, G=60, B=28
LSLAD	HD 39801	49	0.5	0552280	+072358	H 1	17174 L	11164	FU	90011819	194900	000245		351 G B=185, G=60, B=28
LSLAD	HD 39801	49	0.5	0552280	+072358	H 1	17174 L	11164	FU	90011819	194900	000245		351 G B=185, G=60, B=28
LSLAD	HD 39801	49	0.5	0552280	+072358	L 3	38046 L	11110	FU	90011820	200300	005000		302 G G=105, B=32
LSLAD	HD 39801	49	0.5	0552280	+072358	L 1	17175 L		FU	90011820	203600	000005		342 G B=148, G=67, B=32
LSLAD	HD 39801	49	0.5	0552280	+072358	L 1	17175 L		FU	90011820	203600	000005		342 G B=148, G=67, B=32
LSLAD	HD 39801	49	0.5	0552280	+072358	L 1	17175 L		FU	90011820	203600	000005		342 G B=148, G=67, B=32
LSLAD	HD 39801	49	0.5	0552280	+072358	H 1	17176 L	11109	FU	90011821	212400	006500		X23 G B=18X, G=1.5X, B=50
LSLAD	HD 39801	49	0.5	0552280	+072358	L 3	38047 L		FU	90011822	224000	001230		341 G B=164, G=49, B=25
LSLAD	HD 39801	49	0.5	0552280	+072358	H 1	17246 L	11839	FU	90012723	234000	005000		X28 G B=12X, G=1.5X, B=100

FOO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mmunsst	FOO	Comment
LSLAD HD	39801	49	0.5	0552280	+072358	L 3	38088 L	11674	FU	90012800	004100	003000	3X5	G E=3X, G=167, B=69
LSLAD HD	39801	49	0.5	0552280	+072358	H 1	17247 L	11503	FU	90012801	013300	000245	343	G E=174, G=74, B=41
LSLAD HD	39801	49	0.5	0552280	+072358	L 3	38089 L	11657	FU	90012802	020800	001200	343	G E=160, G=90, B=47
LSLAD HD	39801	49	0.5	0552280	+072358	L 1	17248 L	11685	FU	90012802	024200	000007	352	G E=196, G=73, B=32
LSLAD HD	39801	49	0.5	0552280	+072358	L 3	38166 L	11990	FU	90020819	196900	002500	4X1	G E=4X, G=130, B=25
LSLAD HD	39801	49	0.5	0552280	+072358	H 1	17322 L	11938	FU	90020820	203000	000245	242	G E=183, G=47, B=34
LSLAD HD	39801	49	0.5	0552280	+072358	H 1	17323 L	11900		90020821	211900	007000	4?4	G E=16X, G=190, B=55
LSLAD HD	39801	49	0.5	0552280	+072358	L 3	38167 L	11882	FU	90020821	215500	001230	340	G E=153, G=70, B=18
LSLAD HD	39801	49	0.5	0552280	+072358	H 1	17403 L	12314	FU	90022119	194000	000245	352	G E=191, G=83, B=36
LSLAD HD	39801	49	0.5	0552280	+072358	L 3	38218 L	12285	FU	90022119	194900	005000	3X2	G E=4X, G=126, B=35
LSLAD HD	39801	49	0.5	0552280	+072358	L 1	17404 L	12167	FU	90022120	202500	000005	342	G E=168, G=75, B=34
LSLAD HD	39801	49	0.5	0552280	+072358	H 1	17405 L	12171	FU	90022121	210800	007500	X06	G E=18X, G=6X, B=73
LSLAD HD	39801	49	0.5	0552280	+072358	L 3	38219 L	12024	FU	90022122	223000	001230	341	G E=157, G=82, B=30
LSLAD HD	39801	49	0.5	0552280	+072358	L 3	38329 L	12154	FU	90031019	194000	001230	340	G E=154, G=44, B=19
LSLAD HD	39801	49	0.5	0552280	+072358	H 1	17510 L	12190	FU	90031020	203200	000245	342	G E=174, G=67, B=32
LSLAD HD	39801	49	0.5	0552280	+072358	L 3	38330 L		FU	90031020	204200	005000	3X1	G E=4X, G=124, B=28
LSLAD HD	39801	49	0.5	0552280	+072358	L 1	17511 L	12058	FU	90031021	211600	000007	352	G E=233, G=85, B=32
LSLAD HD	39801	49	0.5	0552280	+072358	H 1	17512 L	12109	FU	90031021	215900	006000	X?7	G E=15X, G=1.5X, B=83
LSLAD HD	39801	49	0.5	0552280	+072358	H 1	17579 L	12568	FU	90032223	234900	000245	352	G E=188, G=65, B=35
LSLAD HD	39801	49	0.5	0552280	+072358	L 3	38417 L	12622	FU	90032223	235900	002500	5X1	G E=4X, G=190, B=25
LSLAD HD	39801	49	0.5	0552280	+072358	L 1	17580 L	12565	FU	90032300	003400	000005	352	G E=187, G=70, B=35
LSLAD HD	39801	49	0.5	0552280	+072358	H 1	17581 L	12150	FU	90032301	011900	003500	4?4	G E=18X, G=200, B=55
LSLAD HD	39801	49	0.5	0552280	+072358	L 3	38418 L	12258	FU	90032301	015900	001230	340	G E=156, G=46, B=18
LSLAD HD	39801	49	0.5	0552280	+072358	H 3	38471 L	12332	FU	90033011	114300	019000	252	G E=232, G=60, B=40
LSLAD HD	39801	49	0.5	0552280	+072358	H 1	17680 L	12122	FO	90040117	173200	000245	352	G E=192, G=80, B=36
LSLAD HD	39801	49	0.5	0552280	+072358	L 3	38488 L	12186	FU	90040117	174700	002500	4X1	G E=2X, G=155, B=22
LSLAD HD	39801	49	0.5	0552280	+072358	L 1	17681 L	12016	FU	90040118	181900	000005	352	G E=190, G=72, B=32
LSLAD HD	39801	49	0.5	0552280	+072358	H 1	17682 L	12253	FU	90040119	190300	008500	??3	G E=25X, G=10X, B=50
LSLAD HD	39801	49	0.5	0552280	+072358	L 3	38489 L	12114	FU	90040120	203500	001230	341	G E=154, G=53, B=27
LSLAD HD	39801	49	0.5	0552280	+072358	H 1	17698 L			90040517	173700	000300	G	
LSLAD HD	39801	49	0.5	0552280	+072358	L 3	38532 L			90040517	174700	003000	G	
LSLAD HD	39801	49	0.5	0552280	+072358	L 1	17699 L			90040518	182300	000005	G	
LSLAD HD	39801	49	0.5	0552280	+072358	L 3	38532 L			90040518	183000	002000	G	
LSLAD HD	39801	49	0.5	0552280	+072358	H 1	17700 L			90040519	190900	007500	G	
LSLAD HD	39801	49	0.5	0552280	+072358	L 3	38533 L			90040520	203200	001230	G	
LSLKC HD	40239	49	4.3	0556134	+455604	L 3	38065 L	525	FU	90012316	162000	039000	353	G E=208, G=122, B=50
USSES HD	40932	20	4.20	0559379	+093857	H 3	38400 L	475	FU	90032022	222400	000830	401	G G=140, B=28
USSES HD	40932	20	4.2	0559379	+093857	H 1	17626 L	480	FU	90032716	162100	000400	503	G G=224, B=41
SALGW HD	41117	23	4.63	0600570	+200828	L 3	38433 L	27632	FO	90032501	010800	000030	500	G G=182, B=18
SALGW HD	41117	23	4.63	0600570	+200828	L 1	17594 L	304	FU	90032501	012000	000009	502	G G=210, B=35
CEJGP HD	41335	26	5.2	0601476	-064219	H 3	37795 L	18136	FO	89121108	082300	000330	502	G G=204, B=40
CEJGP HD	41335	26	5.2	0601476	-064219	H 3	38198 L	21154	FO	90021523	230300	000330	503	G G=210, B=42
CEJGP HD	41335	26	5.2	0601476	-064219	H 3	38227 L	20722	FO	90022221	215100	000330	503	G G=222, B=41
CEJGP HD	41335	26	5.2	0601476	-064219	H 1	17411 L	20627	FO	90022221	215900	000130	503	G G=197, B=41
CEJGP HD	41335	26	5.2	0601476	-064219	L 3	38228 L	20978	FO	90022222	223100	000002	500	G G=242, B=18
JULJC JUPITER		03	-2.5	0603007	+232457	H 3	38163 S			90020812	120000	006000	31	G E=55, B=22
JULJC JUPITER		03	-2.5	0603007	+232457	H 3	38164 S			90020813	133400	014600	333	G E=119, G=95, B=46
JULJC JUPITER		03	-2.5	0603007	+232457	H 3	38165 S			90020816	163100	015000	333	G E=89, G=98, B=48
IM072 SAO113507		30	06.13	0606212	+023033	H 1	17158 L	11878	FO	90011511	115548	002000	401	V
IM072 SAO113507		30	06.07	0606212	+023033	H 3	38029 L	12452	FO	90011512	122540	004000	400	V

FPO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	nummsst	ECC	Comment
USSES HD	42401	20	7.7	060811.2	+120023	H 3	38448 L	3243	FO	90032717	173100	002500		402 G G=164,B=36
USSES HD	42401	20	7.7	060811.2	+120023	H 1	17627 L	3243	FO	90032718	180400	001300		403 G G=181,B=41
SJLWM SKY BKGD		07		061051.2	+232951	L 3	38507 L			90040400	001500	003000		30 G E=97,B=18
SJLWM SKY BKGD		07		061051.5	+232951	L 3	38499 L			90040317	173900	001500		20 G E=35,B=18
SJLWM JUPITER		03	-2.2	061051.5	+232951	L 3	38500 L			90040318	182700	001500		X50 G E=178,G=5X,B=18
SJLWM JUPITER		03	-2.2	061051.5	+232915	L 3	38501 L			90040319	191400	001500		X40 G E=168,G=5X,B=18
SJLWM JUPITER		03	-2.2	061051.5	+232951	L 3	38502 L			90040320	200900	001500		X50 G E=180,G=5X,B=18
SJLWM JUPITER		03	-2.2	061051.5	+232951	L 3	38503 L			90040320	205900	001500		X50 G E=179,G=5X,B=18
SJLWM JUPITER		03	-2.2	061051.5	+232951	L 3	38504 L			90040321	214600	001500		X50 G E=169,G=5X,B=18
SJLWM JUPITER		03	-2.2	061051.5	+232951	L 3	38505 L			90040322	223300	001500		X40 G E=159,G=5X,B=18
SJLWM JUPITER		03	-2.2	061051.5	+232951	L 3	38506 L			90040323	232300	002500		X50 G E=209,G=8X,B=20
SJLWM JUPITER		03	-2.2	061121.3	+232949	L 3	38515 L			90040417	174500	001500		X40 G E=136,G=2X,B=18
SJLWM JUPITER		03	-2.2	061121.3	+232949	L 3	38516 L			90040418	183200	001500		X40 G E=144,G=2X,B=18
SJLWM JUPITER		03	-2.2	061121.3	+232949	L 3	38517 L			90040419	192100	001500		X40 G E=139,G=2X,B=19
SJLWM JUPITER		03	-2.2	061121.3	+232949	L 3	38518 L			90040420	200900	001500		X40 G E=129,G=2X,B=20
SJLWM JUPITER		03	-2.2	061121.3	+232949	L 3	38519 L			90040420	205600	001500		X41 G E=127,G=2X,B=22
SJLWM JUPITER		03	-2.2	061121.3	+232949	L 3	38520 L			90040421	214300	001500		X41 G E=127,G=2X,B=21
SJLWM JUPITER		03	-2.2	061121.3	+232949	L 3	38521 L			90040422	223000	001500		X40 G E=127,G=2X,B=18
SJLWM JUPITER		03	-2.2	061121.3	+232949	L 3	38522 L			90040423	231700	001500		X40 G E=135,G=2X,B=18
SJLWM JUPITER		03	-2.2	061121.3	+232949	L 3	38523 L			90040500	000400	001500		X40 G E=125,G=2X,B=18
SJLWM IO TORUS		07		061243.9	+232940	L 3	38544 L			90040709	094400	054000		45 G E=176,B=66
SJLWM JUPITER		03	-2.1	061254.6	+232940	L 3	38545 L			90040720	204100	001500		X30 G E=67,G=2X,B=18
SJLWM JUPITER		03	-2.1	061254.6	+232940	L 3	38546 L			90040721	213700	001500		X30 G E=71,G=2X,B=20
SJLWM JUPITER		03	-2.1	061254.6	+232940	L 3	38547 L			90040722	224600	001500		X30 G E=66,G=2X,B=19
SJLWM JUPITER		03	-2.1	061254.6	+232940	L 3	38548 L			90040723	233000	001500		X30 G E=62,G=2X,B=18
SJLWM JUPITER		03	-2.1	061254.6	+232939	L 3	38549 L			90040800	001900	001500		X00 G G=2X,B=18
HCLSP HD	43282	45	7.7	061312.5	+190423	L 1	17308 L	2078	FO	90020623	232800	001800		304 G G=145,B=54
SCLGW HD	43818	23	6.92	061616.5	+232926	L 3	38495 L	5122	FO	90040300	001500	000340		500 G G=215,B=17
SCLGW HD	43818	23	6.92	061616.5	+232926	L 1	17692 L	5176	FO	90040300	003200	000115		502 G G=225,B=37
LIO74 H0551-819		59	13.38	061653.9	-814823	L 3	38644 L	00078	SO	90042201	013540	002400		330 V
LIO74 H0551-819		59	13.32	061653.9	-814823	L 1	17784 L	00082	SO	90042202	021210	002400		403 V
LIO74 H0551-819		59	13.42	061653.9	-814823	L 3	38645 L	00075	SO	90042202	024549	002400		330 V
LIO74 H0551-819		59	13.42	061653.9	-814823	L 1	17785 L	00075	SO	90042203	033545	002400		403 V
LIO74 H0551-819		59	13.50	061653.9	-814823	L 3	38646 L	00070	SO	90042204	041311	002400		330 V
LIO74 H0551-819		59	13.38	061653.9	-814823	L 1	17786 L	00078	SO	90042204	044744	002400		403 V
LIO74 H0551-819		59	13.33	061653.9	-814823	L 3	38647 L	00081	SO	90042205	052011	004800		330 V
LIO74 H0551-819		59	13.38	061653.9	-814823	L 1	17787 L	00078	SO	90042206	061656	002400		403 V
LIO74 H0551-819		59	13.44	061653.9	-814823	L 3	38648 L	00074	SO	90042206	065956	004600		330 V
LIO74 H0551-819		59	13.47	061653.9	-814823	L 1	17788 L	00072	SO	90042207	075249	002300		303 V
LIO74 H0551-819		59	13.36	061653.9	-814823	L 3	38649 L	00079	SO	90042208	082438	002200		330 V
IA097 HD44179		25	09.35	061736.9	-103651	L 1	17360 L	00706	FO	90021405	050742	002000		601 V
IA097 HD44179		25	09.30	061737.0	-103652	L 3	38188 L	00743	FO	90021405	053602	006000		400 V
SALCW HD	44506	23	5.5	061847.6	-340713	L 3	38493 L	16899	FO	90040219	190100	000007		500 G G=220,B=17
SALCW HD	44506	23	5.5	061847.6	-340713	L 1	17689 L	17094	FO	90040219	191200	000006		502 G G=212,B=34
SALCW HD	44537	47	4.90	062102.9	+491856	L 1	17591 L	24474	FO	90032420	204500	000800		3X4 G E=1.5X,G=115,B=55
SALCW HD	44537	47	4.90	062102.9	+491856	L 1	17595 L	25066	FO	90032502	021300	000600		352 G E=220,G=85,B=35
PHCAL HD	45057	24	6.9	062114.5	-531831	H 1	16937 L	4434	FO	89121801	014300	000920		503 G G=200,B=45
PHCAL HD	45057	24	6.9	062114.5	-531831	H 3	37837 L	4429	FO	89121802	021200	001800		502 G G=208,B=40
PHCAL HD	45057	24	6.9	062114.5	-531831	L 3	37838 L	4485	FO	89121803	033100	000013		500 G G=202,B=18
PHCAL HD	45057	24	6.9	062114.5	-531831	L 1	16938 L	4498	FO	89121803	033500	000008		502 G G=210,B=32



FRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	numresst	ECC	Comment
PHCAL HD	45057	24	6.9	0621145	-531831	L 3	38032 L	5888	FO	90011604	040700	000013	500 G	C=190,B=18
PHCAL HD	45057	24	6.9	0621145	-531831	L 1	17161 L	5938	FO	90011604	041800	000007	502 G	C=190,B=32
PHCAL HD	45057	24	6.86	0621145	-531831	H 1	17881 L	5826	FO	90050917	174000	000920	503 G	C=200,B=42
PHCAL HD	45057	24	6.86	0621145	-531831	H 3	38752 L	5905	FO	90050918	181300	001800	503 G	C=215,B=41
PHCAL HD	45057	24	6.9	0621145	-531831	H 1	17886 L			90051016	161100	000008	G	
PHCAL HD	45057	24	6.9	0621145	-531831	L 3	38765 L			90051016	161600	000013	G	
PHCAL HD	45057	24	6.9	0621145	-531831	L 1	17996 L	5896	FO	90052617	171400	000030	502 G	C=191,B=38
PHCAL HD	45057	24	6.9	0621145	-531831	L 3	38874 L	5900	FO	90052617	172300	000048	500 G	C=214,B=18
PHCAL HD	45557	30	5.8	0623366	-601510	L 1	17098 L	10858	FO	90010801	015200	000010	502 G	C=234,B=34
PHCAL HD	45557	30	5.8	0623366	-601510	L 3	37968 L	11157	FO	90010801	015700	000035	500 G	C=244,B=18
PHCAL HD	45557	30	5.8	0623366	-601510	H 3	38766 L			90051017	170500	002900	G	
PHCAL HD	45557	30	5.8	0623366	-601510	L 1	17888 L			90051018	184600	000010	G	
PHCAL HD	45557	30	5.8	0623366	-601510	L 3	38767 L			90051018	185000	000035	G	
CD70Y HR AUR	66	11.4	0627595	+305828	L 1	17529 L		371	SD	90031412	121200	039500	XX7 G	E=2X,C=2X,B=85
CD70Y HR AUR	66	11.4	0627595	+305828	L 1	17538 L		344	SD	90031523	235100	009000	334 G	E=149,C=95,B=54
CD70Y HR AUR	66	11.4	0627595	+305828	L 3	38364 L		362	SD	90031601	012600	008000	00 G	B=18
CD70Y HR AUR	66	11.4	0627595	+305828	L 1	17588 L		381	SD	90032407	072300	012000	353 G	E=200,C=128,B=45
LIL39 IR GEM	54	12.63	0644257	+280942	L 1	17696 L		00152	SD	90040501	012825	002000	701 V	2400-2890 SAT
LIL39 IR GEM	54	12.57	0644257	+280942	L 3	38524 L		00160	SD	90040502	020321	001748	500 V	
LIL39 IR GEM	54	12.63	0644257	+280942	L 3	38525 L		00152	SD	90040503	030932	001500	500 V	
LIL39 IR GEM	54	12.59	0644257	+280942	L 3	38526 L		00158	SD	90040504	040142	001500	500 V	
LIL39 IR GEM	54	12.61	0644257	+280942	L 3	38527 L		00154	SD	90040505	050030	001500	500 V	
LIL39 IR GEM	54	12.66	0644257	+280942	L 3	38528 L		00148	SD	90040505	055749	001500	500 V	
LIL39 IR GEM	54	12.66	0644257	+280942	L 3	38529 L		00148	SD	90040507	075400	001500	500 V	
LIL39 IR GEM	54	12.54	0644257	+280942	L 1	17697 L		00164	SD	90040507	071818	001300	500 V	
LIL39 IR GEM	54	12.64	0644257	+280942	L 3	38530 L		00150	SD	90040508	083733	001500	500 V	FRPAD
SALOW HD	49331	49	5.1	0645138	-085632	L 1	17823 L	21441	FO	90042817	175000	002000	5X8 G	E=2X,C=254,B=99
SALOW HD	49331	49	5.1	0645138	-085632	L 1	17823 S	20790	FO	90042818	181900	002000	347 G	E=189,C=128,B=88
ACIFB HD	50241	31	3.3	0647407	-615314	H 3	38374 L	1080	FU	90031718	181400	003500	X05 G	C=4X,B=66
ACIFB HD	50241	31	3.3	0647407	-615314	H 3	38625 L	1056	FU	90041722	221000	000700	402 G	C=167,B=34
FELTS HD	49933	40	5.8	0648167	-002843	L 3	38355 L	12042	FO	90031319	191400	009000	231 G	E=55,C=35X,B=26
IC145 HD050337	31	04.93	0648461	-533347	H 3	37976 L		00314	FU	90010907	072050	021900	601 V	
SALOW HD	50019	32	3.61	0649297	+340124	L 1	17593 L	779	FU	90032423	233100	000011	502 G	C=218,B=40
SALOW HD	50019	32	3.61	0649297	+340124	L 3	38432 L	771	FU	90032423	234700	000035	500 G	C=230,B=20
NPLRD MI-	8	70	14	0650562	+031212	L 3	38259 L		BO	90022618	180500	010000	01 G	B=26
LIT048 DN GEM	55	15.00	0651398	+321219	L 3	38213 L		00000	BO	90021905	050049	030000	302 V	
LIT048 DN GEM	55	15.00	0651398	+321219	L 1	17402 L		00000	BO	90022104	043215	033000	402 V	
CELGP HD	50846	66	8.4	0652225	-011841	H 3	37761 L	1069	FO	89120702	020600	009000	503 G	C=198,B=44
CELGP HD	50846	66	8.4	0652225	-011841	L 3	37762 L	1084	FO	89120704	040700	000115	500 G	C=206,B=18
CELGP HD	50846	66	8.4	0652225	-011841	L 1	16897 L	1059	FO	89120704	041200	000040	502 G	C=198,B=36
CELGP HD	50846	66	8.4	0652225	-011841	L 3	37793 L	1172	FO	89121105	053200	000115	500 G	C=202,B=18
CELGP HD	50846	66	8.4	0652225	-011841	L 1	16908 L	1149	FO	89121105	053700	000040	402 G	C=180,B=35
CELGP HD	50846	66	8.4	0652225	-011841	H 3	37794 L	1163	FO	89121106	061300	009000	404 G	C=208,B=59
CELGP HD	50846	66	8.5	0652225	-011841	H 3	38196 L	1354	FO	90021520	200600	008000	403 G	C=180,B=42
CELGP HD	50846	66	8.5	0652225	-011841	L 3	38197 L		FO	90021521	215900	000110	500 G	C=203,B=18
CELGP HD	50846	66	8.5	0652225	-011841	L 1	17373 L	1390	FO	90021522	220500	000040	502 G	C=200,B=33
CELGP HD	50846	66	8.5	0652225	-011841	H 3	38226 L	1394	FO	90022219	195100	008000	404 G	C=198,B=51
CELGP HD	50846	66	8.5	0652225	-011841	H 3	38631 L	1491	FO	90041917	173300	008000	503 G	C=203,B=50
CELGP HD	50846	66	8.5	0652225	-011841	L 3	38653 L	1519	FO	90042221	212700	000055	500 G	C=187,B=18
CELGP HD	50846	66	8.5	0652225	-011841	L 1	17792 L	1543	FO	90042221	213600	000035	502 G	C=219,B=33



FRO	Object	CL	MAG	R.A.	DEC	D C Image A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
HCLSP HD	50846	66	8.5	0652225	-011841	H 3 38654 L	1513	FO	90042222	221500	008000		503 G C=210, B=45
HCLSP HD	51956	41	7.5	0656569	+005912	L 1 17307 L	2573	FO	90020621	211800	001500		X02 G C=2X, B=38
HCLSP HD	51956	41	7.5	0656569	+005912	L 3 38155 L	2595	FO	90020621	213900	006500		301 G C=120, B=30
HCLSP HD	51956	41	7.5	0656569	+005912	L 1 17636 L	2719	FO	90032819	190600	003000		44 G E=196, B=51
HCLSP HD	51956	41	7.5	0656569	+005912	L 3 38458 L	2704	FO	90032819	194400	006300		306 G C=152, B=78
HCLSP HD	51956	41	7.5	0656569	+005912	L 1 17637 L	2710	FO	90032820	205500	001030		X46 G E=203, C=1.5, B=78
HCLSP HD	51956	41	7.5	0656569	+005912	L 3 38461 L	2801	FO	90032902	021800	003100		300 G C=60, B=18
IA097 HD53300		32	08.61	0701516	-051347	L 1 17361 L	01370	FO	90021407	070616	001000		701 V
IA097 HD53300		32	08.46	0701516	-051347	L 3 38189 L	01565	FO	90021407	074436	005000		600 V
IA097 HD53300		32	08.46	0701516	-051347	L 1 17368 L	01568	FO	90021504	044908	000600		501 V PREAD
IMLIS HD	53367	20	7.0	0702036	-102244	H 3 38685 L			90042710	102100	012000		G
IMLIS HD	53367	20	7.0	0702036	-102244	H 1 17816 L	3865	FO	90042712	123000	004000		504 G C=245, B=51
IMLIS HD	53367	20	7.0	0702036	-102244	H 3 38686 L	3763	FO	90042713	131900	010000		503 G C=218, B=50
USSBS HD	54605	41	1.84	0706213	-261844	H 3 38245 L	3520	FU	90022413	135800	013500		X06 G C=2X, B=71
USSBS HD	54605	41	1.8	0706214	-261845	H 3 38445 L	3492	FU	90032712	124600	011000		X04 G C=2X, B=60
IC090 ED+69	412	21	12.07	0709089	+693732	L 2 18418 L	00251	SO	90032804	041714	001800		112 V
L1012 HD56014		26	04.70	0712129	-261554	H 3 38150 L	00385	FU	90020607	075109	000130		600 V
CSLIW L2 FUP		51	3.1	0712130	-443326	H 1 16894 L	548	FU	89120601	012100	021000		37 G E=140, B=90
CSLIW L2 FUP		49	3.1	0712130	-443326	H 1 16968 L			89122105	052900	020000		35 G E=137, B=65
CSLIW L2 FUP		49	5.0	0712130	-443326	H 1 17128 L	581	FU	90011023	234300	019000		35 G E=123, B=65
CSLIW L2 FUP		49	5.0	0712130	-443326	H 1 17162 L	574	FU	90011623	234400	036000		39 G E=169, B=108
CSLIW L2 FUP		49	5.0	0712130	-443326	L 1 17163 L	601	FU	90011706	061600	003000		332 G E=83, C=90, B=37
CSLIW L2 FUP		51	3.1	0712130	-443326	L 1 17255 L	648	FU	90012919	194800	006000		433 G E=119, C=152, B=41
CSLIW L2 FUP		49	5.0	0712130	-443326	L 1 17340 L	657	FU	90021111	114300	007500		443 G E=145, C=190, B=41
CSLIW L2 FUP		49	5.0	0712130	-443326	H 1 17341 L	648	FU	90021113	133600	032400		37 G E=118, B=89
IC090 SPO	14135	30	09.37	0712406	+684955	L 2 18420 L	00697	FO	90032806	063048	000700		502 V
IC090 SPO	14138	30	10.67	0712581	+684954	L 2 18412 L	00218	FO	90031106	065520	004000		502 V
IA097 SPO	173329	41	11.16	0714019	-232139	L 1 17375 L	00141	FO	90021605	051705	004500		301 V
SCLW HD	56855	47	2.7	0715226	-370023	L 1 17688 L	1803	FU	90040217	174200	000230		X03 G C=4X, B=45
SCLW HD	56855	47	2.7	0715226	-370023	L 1 17688 S	1800	FU	90040218	180400	000600		03 G B=41
SCLW HD	56855	47	2.7	0715226	-370023	L 1 17690 L	1813	FU	90040220	203100	000120		X02 G C=2X, B=38
DOLIT HD	56167	53	8.5	0716203	+694554	L 1 16887 L	829	FO	89120401	012200	003500		502 G C=219, B=35
DOLIT HD	56167	53	8.5	0716203	+694554	L 1 16888 L	859	FO	89120402	023600	010000		X03 G C=3X, B=44
SCLW HD	57118	40	6.1	0716502	-191115	L 3 38494 L	9542	FO	90040221	214700	001200		300 G C=50, B=17
SCLW HD	57118	40	6.1	0716502	-191115	L 3 38494 S	9542	FO	90040221	215600	000400		200 G C=36, B=18
SCLW HD	57118	40	6.1	0716502	-191115	L 1 17691 S		FO	90040222	223100	000300		402 G C=156, B=33
SCLW HD	57118	40	6.1	0716502	-191115	L 1 17691 L	9547	FO	90040222	223900	000240		502 G C=251, B=36
SALOW HD	57118	40	6.1	0716502	-191115	L 3 38694 L	8798	FO	90042819	194800	009000		X01 G C=1.5X, B=27
LGLSD HD	56986	40	3.5	0717081	+220428	L 3 38356 L	837	FU	90031321	212000	002000		330 G E=77, C=80X, B=18
IC090 SPO	6175	30	08.60	0719007	+704702	L 2 18411 L	01386	FO	90031105	054518	000700		702 V
RSLEB HD	57853	44	6.6	0719091	-521254	L 1 17367 L	12141	FO	90021423	234900	000100		502 G C=243, B=32
RSLEB HD	57853	44	6.6	0719091	-521254	L 3 38193 L	12147	FO	90021500	002000	007000		501 G C=198, B=26
HCLSP HD	58134	45	7.7	0720599	-293913	L 1 17640 L	2393	FO	90032901	012800	001800		502 G C=243, B=36
NPLFD NEC	2371 - 2	71	13.0	0722249	+293523	L 3 38258 L		BO	90022601	012400	020000		3X3 G E=2X, C=79, B=42
NPLFD SKY	HKD	07	13.0	0722249	+293523	L 1 17423 L			90022601	015000	015500		04 G B=52
NPLFD NEC	2371-2	71	13.0	0722249	+293523	L 3 38260 L		BO	90022700	001500	006000		252 G E=194, C=50, B=34
NPLFD NEC	2371-2	71	13.0	0722249	+293523	L 1 17428 L		BO	90022701	012100	020700		3X4 G E=5X, C=112, B=60
NPLFD NEC	2371-2	71		0722249	+293523	L 1 17435 L		BO	90022803	034600	006000		242 G E=165, C=57, B=40
CD72Y MWC	560	57	10.1	0723278	-073734	L 3 38130 L	346	FO	90020323	235500	002000		501 G C=200, B=21
CD72Y MWC	560	57	10.1	0723278	-073734	L 1 17290 L	356	FO	90020400	002200	000800		X02 G C=1.5X, B=37

FRO	Object	CL	MAG	R.A.	DEC	D C Image A	FES	MD	Obs.date	Exptim	rauresst	ECC	Comment
CD72Y	MWC 560	57	10.1	0723278	-073734	L 3 38131 L	380	FO	90020400	005700	004000	X03	G C=2X, B=41
CD72Y	MWC 560	57	10.1	0723278	-073734	L 1 17291 L	372	FO	90020401	014700	001500	X03	G C=3X, B=42
CD72Y	MWC 560	57	9.8	0723278	-073734	L 1 17495 L		FO	90030800	001900	000400	502	G C=243, B=32
CD72Y	MWC 560	57	9.8	0723278	-073734	L 1 17495 L		FO	90030800	001900	000400	502	G C=243, B=32
CD72Y	MWC 560	57	9.8	0723278	-073734	L 3 38317 L	465	FO	90030800	002800	001800	500	G C=240, B=18
CD72Y	MWC 560	57	9.8	0723278	-073734	L 1 17496 L		FO	90030801	010900	001200	X02	G C=3X, B=35
CD72Y	MWC 560	57	9.8	0723278	-073734	L 3 38318 L	465	FO	90030801	014400	003500	X00	G C=2X, B=18
CD72Y	MWC 560	57	9.8	0723278	-073734	L 1 17497 L	44	FO	90030802	022400	000400	X02	G C=1.5X, B=32
CD72Y	MWC 560	57	9.7	0723278	-073734	H 1 17833 L	512	FO	90042922	223600	011000	304	G C=132, B=52
CD72Y	MWC 560	57	9.9	0723279	-073735	L 1 17534 L	412	FO	90031423	232900	000430	X02	G C=1.5X, B=38
CD72Y	MWC 560	57	9.9	0723279	-073735	L 3 38361 L	410	FO	90031423	234000	001800	501	G C=217, B=22
CD72Y	MWC 560	57	9.9	0723279	-073735	H 1 17535 L	426	FO	90031500	001600	015000	404	G C=174, B=60
CD72Y	MWC 560	57	9.7	0723279	-073735	L 1 17649 L	510	FO	90032923	233600	000330	502	G C=194, B=36
CD72Y	MWC 560	57	9.7	0723279	-073735	L 3 38469 L	503	FO	90032923	234700	001500	500	G C=173, B=18
CD72Y	MWC 560	57	9.7	0723279	-073735	H 1 17650 L	466	FO	90033000	002100	014700	304	G C=145, B=58
CD72Y	MWC 560	57	9.7	0723279	-073735	L 3 38698 L	509	FO	90042921	213900	001600	500	G C=203, B=18
CD72Y	MWC 560	57	9.7	0723279	-073735	L 1 17832 L	518	FO	90042922	220000	000330	402	G C=181, B=36
CD72Y	MWC 560	57	9.7	0723279	-073735	L 3 38699 L		FO	90043000	003100	001600	500	G C=213, B=18
LI049	GI MON	55	15.00	0724206	-063424	L 3 38419 L	00000	EO	90032304	040412	034000	301	V
LI049	GI MON	55	15.00	0724206	-063424	L 1 17709 L	00000	EO	90040801	014752	039000	402	V
LI012	HD58978	26	05.93	0724521	-225902	H 3 38034 L	13848	FO	90011707	075741	000250	500	V
HMK8	HD 58978	26	5.5	0724521	-225902	H 1 17765 L	16125	FO	90041723	231900	000130	503	G C=200, B=41
LI012	HD58978	26	05.92	0724521	-225902	L 1 17164 L	13965	FO	90011708	083019	000001	500	V DURATION 3 SEC TICKS
LI012	HD58978	26	05.92	0724521	-225902	L 3 38035 L	13965	FO	90011708	083519	000002	500	V
LI012	HD58978	26	05.97	0724521	-225902	H 3 38148 L	13463	FO	90020605	052403	000250	500	V
LI012	HD58978	26	05.97	0724521	-225902	H 1 17303 L	13414	FO	90020605	053651	000135	501	V
LI012	HD58978	26	05.97	0724521	-225902	L 3 38149 L	13450	FO	90020606	064718	000002	500	V
LI012	HD58978	26	05.96	0724521	-225902	L 1 17304 L	13562	FO	90020606	065317	000001	500	V THREE SEC TICKS
HMK8	HD 58978	26	5.5	0724522	-225900	H 3 38626 L	16113	FO	90041723	231100	000250	502	G C=212, B=37
CELEP	HD 58978	26	5.5	0724522	-225903	H 3 38655 L	16178	FO	90042300	001500	000250	502	G C=240, B=40
CELEP	HD 58978	26	5.5	0724522	-225903	L 3 38656 L	16234	FO	90042300	004700	000002	500	G C=225, B=18
IC090	SAC 6219	25	10.22	0725475	+712026	L 2 18408 L	00327	FO	90031008	082324	001400	501	V
IC090	SAC6219	25	10.12	0725476	+712027	L 3 38328 L	00357	FO	90031008	085235	003300	500	V
CD73Y	NGC 2392	70	10.5	0726131	+210050	L 3 38292 L	324	FO	90030323	230600	000200	500	G C=205, B=19
CD73Y	NGC 2392	70	10.5	0726131	+210050	L 1 17462 L	325	FO	90030323	231200	000200	503	G C=245, B=42
CD73Y	NGC 2392	70	10.5	0726131	+210050	L 3 38293 L	326	FO	90030400	001400	000200	500	G C=208, B=18
CD73Y	NGC 2392	70	10.5	0726131	+210050	L 1 17463 L	335	FO	90030400	002100	000140	502	G C=220, B=38
CD73Y	NGC 2392	70	10.5	0726131	+210050	L 3 38294 L	341	FO	90030401	012400	000200	500	G C=195, B=16
CD73Y	NGC 2392	70	10.5	0726131	+210050	L 1 17464 L	336	FO	90030401	013000	000140	502	G C=212, B=36
CD73Y	NGC 2392	70	10.5	0726131	+210050	L 3 38295 L	340	FO	90030402	022300	000200	500	G C=180, B=18
IC090	SAC6232	24	10.21	0727361	+703132	L 2 18409 L	00330	FO	90031009	095152	001200	702	V
IC090	SAC6232	21	10.37	0727361	+703132	L 2 18419 L	00285	FO	90032805	052819	000600	702	V
IC090	SAC6236	25	10.69	0728176	+701047	L 2 18410 L	00214	FO	90031104	041835	001400	402	V
IC090	SAC 6236	25	10.73	0728177	+701048	L 3 38334 L	00207	FO	90031104	045152	002000	300	V
RVLEB	U MON	52	6.3	0728210	-094000	L 1 16905 L	9673	FO	89120821	210600	000500	552	G E=215, C=220, B=31
RVLEB	U MON	52	6.3	0728210	-094000	H 1 16906 L	10008	FO	89120821	214900	014000	343	G E=170, C=148, B=50
RVLEB	U MON	52	6.0	0728210	-094000	H 1 17127 L	7854	FO	90011020	201200	016000	54	G E=213, B=55
RVLEB	U MON	52	6.0	0728210	-094000	L 1 17397 L	4421	FO	90021915	153100	000300	342	G E=163, C=114, B=32
RVLEB	U MON	52	6.0	0728210	-094000	H 1 17398 L	4461	FO	90021916	161000	015000	345	G E=190, C=124, B=61
RVLEB	U MON	52	6.0	0728210	-094000	L 1 17552 L	13540	FO	90031815	152900	000200	542	G E=136, C=190, B=32

PRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mm:ss:tt	ECC	Comment
RMLEB	U MCN	52	6.3	0728210	-094000	H 1	17553 L	13563	FO	90031816	160900	016000	544 G	E=193,C=210,B=53
RMLEB	U MCN	52	6.0	0728210	-094000	L 1	17599 L	11754	FO	90032512	122700	000300	442 G	E=164,C=172,B=38
RMLEB	U MCN	52	6.0	0728210	-094000	H 1	17600 L	11718	FO	90032513	130500	016000	347 G	E=222,C=179,B=81
RMLEB	U MCN	52	6.0	0728210	-094000	H 1	17763 L	10250	FO	90041715	151300	009800	443 G	E=146,C=160,B=42
RMLEB	U MCN	52	6.0	0728210	-094000	L 1	17829 L	12139	FO	90042917	174300	000300	552 G	E=197,C=211,B=36
RMLEB	U MCN	52	6.0	0728210	-094000	H 1	17830 L	12307	FO	90042918	182000	007000	344 G	E=158,C=127,B=51
LS082	MOON	02	00.00	0729392	+211643	L 1	17487 S	00000	EO	90030704	044015	000000	100 V	ICEC TICK,WRONG COOR
LS082	MOON	02	00.00	0729392	+211643	H 3	38314 S	00000	EO	90030704	043830	012000	100 V	WRONG COORDINATES
LS082	MOON	02	00.00	0730460	+192053	L 1	17488 S	00000	EO	90030706	063026	000010	100 V	WRONG COORDINATES
PHCAL	HD60753	21	07.11	0732079	-502828	L 1	16870 S	05171	FO	89120115	153803	000012	501 V	HIGH RADIATION
PHCAL	HD60753	21	07.11	0732079	-502828	L 1	16870 L	05171	FO	89120115	153250	000006	501 V	HIGH RADIATION
PHCAL	HD60753	21	07.11	0732079	-502828	L 1	16871 S	05174	FO	89120116	163348	000012	501 V	
PHCAL	HD60753	21	07.11	0732079	-502828	L 1	16871 L	05174	FO	89120116	162809	000006	501 V	
PHCAL	HD 60753	21	07.07	0732079	-502828	L 1	16891 S	05348	FO	89120410	101545	000012	501 V	
PHCAL	HD 60753	21	07.07	0732079	-502828	L 1	16891 L	05348	FO	89120410	100955	000006	501 V	
PHCAL	HD60753	21	07.09	0732079	-502828	H 3	38261 L	05277	FO	90022706	060011	001300	500 V	
PHCAL	HD60753	21	07.08	0732079	-502828	H 1	17429 L	05337	FO	90022706	062259	001800	701 V	
PHCAL	HD60753	21	07.08	0732079	-502828	L 3	38262 L	05304	FO	90022706	065723	000010	400 V	
PHCAL	HD60753	21	07.08	0732079	-502828	L 3	38262 S	05304	FO	90022707	070400	000030	300 V	
PHCAL	HD60753	21	07.07	0732079	-502828	L 1	17430 L	05350	FO	90022708	081224	000006	500 V	
PHCAL	HD 60753	21	07.07	0732079	-502828	L 3	38541 L	05389	FO	90040701	015341	000010	500 V	
PHCAL	HD 60753	21	07.03	0732079	-502828	L 3	38542 L	05547	FO	90040702	022911	000012	400 V	24 X 0.5 SEC EXPOSUR
PHCAL	HD60753	21	07.04	0732079	-502828	L 3	38673 L	05503	FO	90042501	015734	000012	400 V	24 TIMES 0.5 SEC EXP
PHCAL	HD60753	21	07.08	0732079	-502828	L 1	17964 L	05331	FO	90052123	235925	000007	501 V	
PHCAL	HD60753	21	07.08	0732079	-502828	L 1	17965 L	05306	FO	90052200	004836	000008	400 V	17 X 0.5 SECOND EXPO
PHCAL	HD60753	21	07.05	0732080	-502828	L 1	17268 S	05467	FO	90020105	051103	000012	400 V	REF.PNT. @ -28,-208
PHCAL	HD 60753	21	6.69	0732080	-502828	L 3	38288 L	6686	FO	90030301	014300	000041	500 G	G=190,B=18
PHCAL	HD60753	21	07.05	0732080	-502828	L 1	17268 L	05467	FO	90020105	051620	000006	500 V	REF.PNT. @ -28,-208
PHCAL	HD 60753	21	6.69	0732080	-502828	L 1	17459 L	6650	FO	90030301	015500	000026	502 G	G=190,B=35
PHCAL	HD60753	21	07.07	0732080	-502828	L 3	38106 S	05359	FO	90020105	052103	000030	500 V	REF.PNT. @ -28,-208
PHCAL	HD 60753	21	6.69	0732080	-502828	L 3	38289 L	6711	FO	90030302	024000	000010	500 G	G=175,B=18
PHCAL	HD60753	21	07.07	0732080	-502828	L 3	38106 L	05359	FO	90020105	052540	000010	500 V	REF.PNT. @ -28,-208
PHCAL	HD 60753	21	6.69	0732080	-502828	L 1	17853 L			90050417	175700	000006	G	
PHCAL	HD60753	21	07.13	0732080	-502828	L 1	17269 L	05076	FO	90020106	065350	000006	500 V	REF.PNT. @ -32,-208
PHCAL	HD 60753	21	6.69	0732080	-502828	L 1	17853 S			90050418	180300	000016	G	
PHCAL	HD60753	21	07.04	0732080	-502828	H 1	17294 L	05527	FO	90020505	050008	000900	501 V	
PHCAL	HD 60753	21	6.69	0732080	-502828	L 3	38727 L			90050418	180800	000010	G	
PHCAL	HD60753	21	07.08	0732080	-502828	H 3	38137 L	05322	FO	90020505	053512	001300	401 V	
PHCAL	HD 60753	21	6.69	0732080	-502828	L 3	38727 S			90050418	181200	000027	G	
PHCAL	HD60753	21	07.09	0732080	-502828	H 1	17295 L	05288	FO	90020506	061314	001800	701 V	
PHCAL	HD 60753	21	6.69	0732080	-502828	L 1	17854 L			90050419	191400	000026	G	
PHCAL	HD60753	21	07.07	0732080	-502828	L 1	17334 S	05373	FO	90021105	051240	000012	501 V	
PHCAL	HD 60753	21	6.69	0732080	-502828	L 3	38728 L			90050419	193100	000041	G	
PHCAL	HD60753	21	07.07	0732080	-502828	L 1	17334 L	05373	FO	90021105	050858	000006	501 V	
PHCAL	HD60753	21	07.03	0732080	-502828	L 1	17335 S	05560	FO	90021105	055100	000012	501 V	
PHCAL	HD60753	21	07.03	0732080	-502828	L 1	17335 L	05560	FO	90021105	054616	000006	501 V	
PHCAL	HD60753	21	07.13	0732080	-502828	L 1	17336 L	05099	FO	90021106	062741	000015	701 V	
PHCAL	HD60753	21	07.12	0732080	-502828	L 1	17337 L	05149	FO	90021106	065843	000015	701 V	
PHCAL	HD60753	21	07.14	0732080	-502828	L 3	38178 S	05053	FO	90021107	073535	000030	500 V	
PHCAL	HD60753	21	07.14	0732080	-502828	L 3	38178 L	05053	FO	90021107	073136	000010	500 V	



PRO	Object	CL	MAG	R.A.	DEC	D	C	Image A	FES	MD	Obs.date	Exptim	mmmsst	ECC	Comment
PHCAL	HD60753	21	07.12	0732080	-502828	L	3	38179 S	05148	FO	90021108	080741	000070	500	V
PHCAL	HD60753	21	07.12	0732080	-502828	L	3	38179 L	05148	FO	90021108	080409	000010	500	V
PHCAL	HD60753	21	07.11	0732080	-502828	H	1	17338 L	05186	FO	90021108	085909	000900	501	V
PHCAL	HD60753	21	07.13	0732080	-502828	H	3	38180 L	05100	FO	90021108	083701	001300	400	V
PHCAL	HD60753	21	07.10	0732080	-502828	H	1	17339 L	05218	FO	90021110	101853	001800	701	V
PHCAL	HD 60753	21	07.10	0732080	-502829	L	1	17362 L	05211	FO	90021409	093823	000006	501	V
PHCAL	HD 60753	21	07.10	0732080	-502829	L	1	17362 S	05211	FO	90021410	100020	000012	501	V
PHCAL	HD 60753	21	07.14	0732080	-502829	L	3	38190 S	05074	FO	90021410	100808	000030	500	V
PHCAL	HD 60753	21	07.14	0732080	-502829	L	3	38190 L	05074	FO	90021410	101334	000010	500	V
PHCAL	HD 60753	21	07.12	0732080	-502829	L	1	17363 L	05120	FO	90021410	105842	000015	701	V HEAD
PHCAL	HD60753	21	07.11	0732080	-502829	H	1	17425 L	05199	FO	90022612	124136	000900	501	V
PHCAL	HD60753	21	07.06	0732080	-502829	L	1	17431 L	05395	FO	90022708	085008	000015	701	V
PHCAL	HD 60753	21	07.03	0732080	-502829	L	3	38543 L	05543	FO	90040703	035041	000010	500	V
PHCAL	HD60753	21	07.02	0732080	-502829	L	3	38674 L	05593	FO	90042504	040743	000010	500	V
PHCAL	HD60753	21	07.08	0732080	-502829	L	1	17953 L	05324	FO	90052023	234921	000007	501	V
PHCAL	HD60753	21	07.06	0732080	-502829	L	1	17954 L	05424	FO	90052100	002828	000008	500	V 17 EXPOSURES OF 0.5
PHCAL	HD60753	21	07.10	0732080	-502829	L	1	17955 L	05235	FO	90052101	013419	000007	501	V
PHCAL	HD60753	21	07.10	0732080	-502829	L	1	17966 L	05250	FO	90052201	015449	000007	500	V
PHCAL	HD 60753	21	07.06	0732081	-502829	H	3	37732 L	05398	FO	89120409	093151	002000	600	V
PHCAL	HD 60753	21	6.7	0732081	-502829	L	3	37730 L	5226	FO	89120406	061500	000010	500	G G=180,B=18
PHCAL	HD60753	21	07.12	0732081	-502829	L	1	16892 L	05159	FO	89120410	105639	000006	500	V
PHCAL	HD 60753	21	6.7	0732081	-502829	L	1	16889 L	5217	FO	89120406	062000	000006	502	G G=200,B=31
PHCAL	HD60753	21	07.12	0732081	-502829	L	1	16892 S	05159	FO	89120411	110620	000012	500	V
PHCAL	HD 60753	21	6.7	0732081	-502829	L	3	37731 L	5347	FO	89120407	073000	000041	500	G G=200,B=18
PHCAL	HD 60753	21	07.21	0732081	-502829	H	3	37812 L	04761	FO	89121416	161142	001300	500	V
PHCAL	HD 60753	21	6.7	0732081	-502829	L	1	16890 L	5392	FO	89120407	074100	000026	502	G G=195,B=32
PHCAL	HD60753	24	07.13	0732081	-502828	L	1	17004 L	05095	FO	89122516	164106	000006	501	V HEAD
PHCAL	HD 60753	21	6.7	0732081	-502829	L	1	17073 L	5363	FO	90010301	011000	000006	402	G G=183,B=36
PHCAL	HD60753	21	07.11	0732081	-502829	H	3	38107 L	05166	FO	90020107	070059	001300	400	V REF.FNT. @ -32,-208
PHCAL	HD 60753	21	6.7	0732081	-502829	L	1	17073 S	5387	FO	90010301	011500	000018	502	G G=241,B=34
PHCAL	HD60753	21	07.11	0732081	-502829	L	1	17270 L	05176	FO	90020107	073803	000015	700	V REF.FNT. @-32,-208
PHCAL	HD 60753	21	6.7	0732081	-502829	L	3	37939 L		FO	90010301	012000	000010	401	G G=178,B=28
PHCAL	HD60753	21	07.11	0732081	-502829	L	3	38138 S	05172	FO	90020507	074019	000030	600	V
PHCAL	HD 60753	21	6.7	0732081	-502829	L	3	37939 S	5367	FO	90010301	012500	000030	500	G G=232,B=18
PHCAL	HD60753	21	07.11	0732081	-502829	L	3	38138 L	05172	FO	90020507	073603	000010	500	V
PHCAL	HD 60753	21	6.7	0732081	-502829	L	1	17074 L	5370	FO	90010302	022600	000026	502	G G=189,B=38
PHCAL	HD60753	21	07.10	0732081	-502829	L	1	17296 S	05212	FO	90020507	073140	000012	500	V
PHCAL	HD60753	21	6.7	0732081	-502829	L	3	37940 L	5400	FO	90010302	023600	000040	500	G G=192,B=18
PHCAL	HD60753	21	07.10	0732081	-502829	L	1	17296 L	05212	FO	90020507	072658	000006	500	V
PHCAL	HD 60753	21	6.7	0732081	-502829	L	2	18385 L	5563	FU	90010701	011400	000009	401	G G=162,B=27
PHCAL	HD60753	21	07.06	0732081	-502828	L	1	17983 L	05425	FO	90052423	235143	000007	503	V
PHCAL	HD 60753	21	6.7	0732081	-502829	L	2	18385 S	5622	FO	90010701	011900	000029	501	G G=231,B=22
PHCAL	HD60753	21	07.05	0732081	-502828	L	1	17984 L	05465	FO	90052500	005031	000008	403	V 17 EXPOSURES 0.5
PHCAL	HD 60753	21	6.7	0732081	-502829	L	2	18386 L	5588	FO	90010701	015600	000043	501	G G=200,B=25
PHCAL	HD60753	21	07.05	0732081	-502829	L	1	17985 L	05471	FO	90052502	021513	000007	503	V
PHCAL	HD 60753	21	6.7	0732081	-502829	L	1	17140 L	4941	FO	90011316	162500	000026	502	G G=197,B=32
PHCAL	HD 60753	21	6.7	0732081	-502829	L	1	17141 L	5005	FO	90011317	170200	000010	302	G G=120,B=35
PHCAL	HD 60753	21	6.7	0732081	-502829	L	1	17142 L	5123	FO	90011317	174000	000031	502	G G=208,B=36
PHCAL	HD 60753	21	6.7	0732081	-502829	L	1	17143 L	5176	FO	90011318	181900	000041	X02	G G=1.25X,B=36
PHCAL	HD 60753	21	6.7	0732081	-502829	L	1	17144 L	5227	FO	90011318	185700	000026	502	G G=194,B=36

PRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
PHCAL HD	60753 21		6.7	0732081	-502829	L 1	17146 L	5419	FO	90011319	195900	000028	502 G	G=206,B=34
PHCAL HD	60753 21		6.7	0732081	-502829	L 1	17147 L	5315	FO	90011320	203900	000028	402 G	G=132,B=32
PHCAL HD	60753 21		6.7	0732081	-502829	L 1	17148 L	5261	FO	90011322	224300	000028	502 G	G=205,B=32
PHCAL SKYBKND	07			0732081	-502829	L 1	17149 L	5279	FO	90011323	232400	002500	02 G	B=34
PHCAL HD	60753 21		6.7	0732081	-502829	L 1	17300 L	6691	FO	90020522	225100	000006	502 G	G=191,B=34
PHCAL HD	60753 21		6.7	0732081	-502829	L 1	17300 L	6612	FO	90020522	225100	000006	501 G	G=247,B=30
PHCAL HD	60753 21		6.7	0732081	-502829	L 1	17300 L	6691	FO	90020522	225100	000006	502 G	G=191,B=34
PHCAL HD	60753 21		6.7	0732081	-502829	L 1	17300 S	6612	FO	90020522	225700	000018	501 G	G=247,B=30
PHCAL HD	60753 21		6.7	0732081	-502829	L 1	17300 S	6612	FO	90020522	225700	000018	501 G	G=247,B=30
PHCAL HD	60753 21		6.7	0732081	-502829	L 3	38145 L	6610	FO	90020523	230300	000010	500 G	G=179,B=17
PHCAL HD	60753 21		6.7	0732081	-502829	L 3	38145 S		FO	90020523	230800	000030	500 G	G=188,B=18
PHCAL HD	60753 21		6.7	0732081	-502829	L 1	17301 L	6507	FO	90020600	000800	000026	502 G	G=193,B=36
PHCAL HD	60753 21		6.7	0732081	-502829	L 3	38146 L	6495	FO	90020600	001800	000040	500 G	G=189,B=18
PHCAL HD	60753 21		6.7	0732081	-502829	L 2	18400 L	6396	FO	90021022	222200	000009	501 G	G=190,B=25
PHCAL HD	60753 21		6.7	0732081	-502829	L 2	18400 S	6423	FO	90021022	222700	000029	501 G	G=230,B=25
PHCAL HD	60753 21		6.7	0732081	-502829	L 2	18401 L	6414	FO	90021023	231000	000043	501 G	G=190,B=25
PHCAL HD	60753 21		6.7	0732081	-502829	L 1	17406 L	6693	FO	90022200	001300	000006	502 G	G=207,B=36
PHCAL HD	60753 21		6.7	0732081	-502829	L 3	38220 L	6621	FO	90022200	004700	000010	500 G	G=194,B=18
PHCAL HD	60753 21		6.7	0732081	-502829	L 3	38220 S	6617	FO	90022200	005200	000030	500 G	G=242,B=18
PHCAL HD	60753 21		6.7	0732081	-502829	L 1	17407 L	6644	FO	90022200	005600	000006	502 G	G=204,B=34
PHCAL HD	60753 21		6.7	0732081	-502829	L 1	17407 S	6640	FO	90022201	010200	000018	X02 G	G=1.5X,B=31
PHCAL HD	60753 21		6.69	0732081	-502829	L 3	38337 L	6457	FO	90031211	114400	000041	500 G	G=182,B=19
PHCAL HD	60753 21		6.69	0732081	-502829	L 3	38338 L	6486	FO	90031212	122000	000016	300 G	G=100,B=18
PHCAL HD	60753 21		6.69	0732081	-502829	L 3	38339 L	6499	FO	90031213	130300	000049	500 G	G=220,B=18
PHCAL HD	60753 21		6.69	0732081	-502829	L 3	38340 L	6534	FO	90031213	134000	000105	X00 G	G=1.5X,B=19
PHCAL	NULL	99		0732081	-502829	L 3	38341 L			90031214	141200	000000	00 G	B=18
PHCAL HD	60753 21		6.69	0732081	-502829	L 3	38342 L	6535	FO	90031214	144200	000045	500 G	G=205,B=19
PHCAL HD	60753 21		6.69	0732081	-502829	L 3	38343 L	6539		90031215	152000	000018	300 G	G=108,B=18
PHCAL HD	60753 21		6.69	0732081	-502829	L 3	38344 L	6579	FO	90031215	155900	000053	500 G	G=225,B=19
PHCAL HD	60753 21		6.69	0732081	-502829	L 3	38345 L	6544	FO	90031216	164300	000041	500 G	G=190,B=18
PHCAL HD	60753 21		6.69	0732081	-502829	L 3	38346 L	6583	FO	90031217	171900	000011	500 G	G=210,B=18
PHCAL HD	60753 21		6.69	0732081	-502829	L 3	38347 L	6607	FO	90031217	174900	000005	300 G	G=110,B=18
PHCAL HD	60753 21		6.69	0732081	-502829	L 3	38348 L	6594	FO	90031218	181800	000014	500 G	G=235,B=18
PHCAL HD	60753 21		6.69	0732081	-502829	L 3	38349 L	6586	FO	90031218	184900	000011	G	
PHCAL HD	60753 21		6.7	0732081	-502829	L 3	38598 L	6957	FO	90041315	154800	000010	400 G	G=160,B=18
PHCAL HD	60753 21		6.7	0732081	-502829	L 3	38598 S	6937	FO	90041315	155200	000030	500 G	G=215,B=18
PHCAL HD	60753 21		6.7	0732081	-502829	L 1	17739 L	6914	FO	90041315	155700	000006	402 G	G=174,B=32
PHCAL HD	60753 21		6.7	0732081	-502829	L 1	17739 S	6927	FO	90041316	160200	000018	502 G	G=233,B=31
PHCAL HD	60753 21		6.7	0732081	-502829	L 3	38630 L	6749	FO	90041909	094800	000040	500 G	G=201,B=18
PHCAL HD	60753 21		6.7	0732081	-502829	L 2	18431 L	6766	FO	90041909	095700	000009	501 G	G=182,B=24
PHCAL HD	60753 21		6.69	0732081	-502829	H 1	17798 L	6634	FO	90042313	130500	000900	503 G	G=215,B=45
PHCAL HD	60753 21		6.69	0732081	-502829	H 3	38663 L	6601	FO	90042313	134900	001300	402 G	G=180,B=37
PHCAL	NULL	99		0732081	-502829	L 2	18449			90051415	153100	000000	00 G	B=12
PHCAL HD	60753 21		6.7	0732081	-502829	L 2	18450 L	6674	FO	90051416	160300	000009	501 G	G=182,B=25
PHCAL HD	60753 21		6.7	0732081	-502829	L 2	18450 S	6694	FO	90051416	160800	000029	501 G	G=244,B=24
PHCAL HD	60753 21		6.7	0732081	-502829	L 2	18451 L	6720	FO	90051416	164500	000043	501 G	G=180,B=27
PHCAL HD	60753 21		6.7	0732081	-502829	L 1	17934 S	7103	FO	90051814	142900	000015	502 G	G=183,B=32
PHCAL HD	60753 21		6.7	0732081	-502829	L 1	17934 L	7103	FO	90051814	143400	000006	402 G	G=162,B=32
PHCAL HD	60753 21		6.7	0732081	-502829	L 3	38828 S	7090	FO	90051814	143900	000028	500 G	G=200,B=18
PHCAL HD	60753 21		6.7	0732081	-502829	L 3	38828 L	7067	FO	90051814	144400	000010	400 G	G=163,B=18

FO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	nummsst	ECC	Comment
PHCAL HD	60753	21	6.7	0732081	-502829	L 3	38829 L	6992	FO	90051815	154300	000041	500	G G=196,B=18
PHCAL HD	60753	21	6.7	0732081	-502829	L 1	17935 L	7028	FO	90051815	155300	000026	502	G G=188,B=37
LI012 HD60855		26	06.05	0733459	-142251	L 1	17165 L	12596	FO	90011710	100431	000003	500	V FREAD
LI012 HD60855		26	06.06	0733459	-142251	H 3	38036 L	12515	FO	90011710	101149	000630	500	V
LI012 HD60855		26	06.08	0733459	-142251	L 3	38037 L	12371	FO	90011710	105610	000004	500	V
PHCAL -31 4800		16	10.5	0734343	-320545	L 3	38396 L	231	FO	90032016	163600	000046	500	G G=231,B=18
PHCAL -31 4800		16	10.5	0734343	-320545	H 1	17565 L	228	FO	90032016	165700	004500	504	G G=230,B=51
PHCAL -31 4800		16	10.5	0734344	-320546	L 1	17099 L	186	FO	90010803	031600	000051	502	G G=186,B=34
PHCAL -31 4800		16	10.5	0734344	-320546	L 3	37969 L	189	FO	90010803	032100	000046	500	G G=212,B=18
PHCAL -31 4800		16	10.5	0734344	-320546	H 3	38397 L	224	FO	90032017	174800	006200	402	G G=180,B=40
PHCAL -31 4800		16	10.5	0734344	-320546	L 3	38611 L	233	FO	90041522	220300	000046	500	G G=215,B=18
PHCAL -31 4800		16	10.5	0734344	-320546	L 1	17756 L	232	FO	90041522	220800	000051	502	G G=192,B=38
PHCAL -31 4800		16	10.5	0734344	-320546	L 1	17876 L	230	FO	90050819	195800	000051		G
PHCAL -31 4800		16	10.5	0734344	-320546	L 3	38746 L	232	FO	90050820	200400	000046	500	G G=215,B=18
PHCAL -31 4800		16	10.5	0734344	-320546	L 3	38842 L	238	FO	90052021	215000	000046	500	G G=223,B=18
PHCAL -31 4800		16	10.5	0734344	-320546	L 1	17952 L	234	FO	90052021	215500	000051	500	G G=203,B=18
AGLH PKS 0735+178	87	15.0	0735141	-174911	L 3	38556 L		EO	90040914	140200	017000	301	G G=57,B=29	
AGLH PKS 0735+178	87	15.0	0735141	+174910	L 1	17721 L			90041014	140300	016600		G	
AGLH PKS 0735+178	87	15.0	0735141	+174911	L 3	38693 L		EO	90042813	133800	019000	303	G G=68,B=41	
AGLH PKS 0735+178	87	15.0	0735141	+174911	L 1	17828 L		EO	90042913	135800	017000	304	G G=99,B=51	
PHCAL HD	61421	41	0.3	0736411	+052116	H 3	37839 L	11851	FU	89121804	045400	000214	401	G G=170,B=30
PHCAL HD	61421	41	0.3	0736411	+052116	H 1	16939 L	11560	FU	89121805	050100	000009	402	G G=185,B=38
LS082 MOON		02	00.00	0743071	+180942	L 1	17489 S	00000	EO	90030708	085219	000000	201	V 10CB TICK, GOOD COORD
USSES HD	63700	45	3.3	0747114	-244359	H 1	16882 L	914	FU	89120303	031000	001700	442	G E=163,G=135,B=32
USSES HD	63700	45	3.3	0747114	-244359	H 1	17114 L	811	FU	90010823	234300	002000	442	G E=179,G=150,B=37
USSES HD	63700	45	3.3	0747114	-244359	H 1	17116 L	915	FU	90010905	052800	002800	452	G E=219,G=180,B=37
LS082 MOON		02	00.00	0748284	+181440	H 1	17490 S	00000	EO	90030709	094521	001500	700	V GOOD COORDINATES
NPLFD NEC	2474-5	71	13	0753509	+533436	L 1	17421 L		EO	90022513	135700	012000	04	G B=56
NPLFD NEC	2474-5	71	13	0753509	+533436	L 3	38255 L		EO	90022514	143200	006000	01	G B=25
NPLFD NEC	2474-5	71	13	0753509	+533436	L 3	38255		EO	90022514	143200	006000	01	G B=25
NPLFD NEC	2474-5	71	13	0753509	+533436	L 3	38256 L		EO	90022516	161500	004000	00	G B=18
USSES HD	65228	41	4.2	0754425	-224443	H 1	16881 L	386	FU	89120302	020800	001500	502	G G=200,B=36
ACFB HD	65810	30	4.6	0757375	-181539	H 3	38627 L	317	FU	90041800	001800	001200	402	G G=165,B=33
PHCAL HD	66811	13	2.3	0801496	-395141	H 1	16989 L	3175	FU	89122403	035200	000003	503	G G=202,B=41
PHCAL HD	66811	13	2.3	0801496	-395141	H 3	37886 L	3177	FU	89122403	035600	000003	502	G G=195,B=36
PHCAL HD	66811	13	2.3	0801496	-395141	H 3	38768 L			90051019	195800	000003		G
PHCAL HD	66811	13	2.3	0801496	-395141	H 1	17889 L			90051020	200300	000003		G
PHCAL ED+75/325		16	09.87	0804430	+750648	L 3	37972 S	00446	FO	90010808	081613	000042	501	V
PHCAL ED+75/325		16	09.87	0804430	+750648	L 3	37972 L	00446	FO	90010808	080700	000014	501	V
PHCAL ED+75/325		16	09.87	0804430	+750648	L 1	17102 L	00447	FO	90010808	082039	000045	801	V
PHCAL ED+75/325		16	09.85	0804430	+750648	L 1	17104 L	00453	FO	90010809	094505	000020	501	V
PHCAL ED+75/325		16	09.87	0804430	+750648	L 1	17103 L	00447	FO	90010809	091319	000045	801	V
PHCAL ED +75 325		16	09.88	0804430	+750648	L 3	38160 S	00440	FO	90020805	051756	000042	500	V
PHCAL ED +75 325		16	09.88	0804430	+750648	L 3	38160 L	00440	FO	90020805	052248	000014	500	V
PHCAL ED +75 325		16	09.89	0804430	+750648	L 1	17316 L	00438	FO	90020805	052724	000020	501	V
PHCAL ED +75 325		16	09.89	0804430	+750648	L 1	17317 L	00437	FO	90020806	063106	000020	501	V
PHCAL ED +75 325		16	09.90	0804430	+750648	H 3	38161 L	00435	FO	90020806	063909	002500	400	V
PHCAL ED +75 325		16	09.90	0804430	+750648	L 1	17318 L	00433	FO	90020807	071729	000045	601	V
PHCAL ED +75 325		16	09.92	0804430	+750648	H 3	38162 L	00427	FO	90020807	074743	002500	400	V
PHCAL ED+75 325		16	09.90	0804430	+750648	L 1	17319 L	00433	FO	90020808	082822	000045	601	V

FPO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mmmsst	ECC	Comment
PHCAL ED +75 325	16	09.89	0804430	+750648	H 1	17320	L	00437	FO	90020809	091549	004500	601	V
PHCAL ED+75 325	16	09.88	0804430	+750648	H 1	17321	L	00440	FO	90020810	103249	002500	501	V
PHCAL ED+75 325	16	09.92	0804430	+750648	H 1	17327	L	00428	FO	90020908	082515	004000	401	V
PHCAL ED+75 325	16	09.93	0804430	+750648	H 3	38171	L	00422	FO	90020909	091214	003500	500	V
PHCAL ED+75 325	16	09.91	0804430	+750648	H 1	17328	L	00429	FO	90020909	095535	006200	701	V
PHCAL ED+75325	16	09.89	0804430	+750648	H 3	38182	L	00437	FO	90021208	084102	002500	400	V
PHCAL ED+75325	16	09.90	0804430	+750648	L 1	17349	L	00435	FO	90021209	091850	000020	501	V
PHCAL ED+75325	16	09.97	0804430	+750648	L 1	17351	L	00406	FO	90021210	105732	000045	701	V
PHCAL ED+75325	16	09.91	0804430	+750648	L 1	17350	L	00430	FO	90021210	100146	000020	501	V
PHCAL ED+75 325	16	09.88	0804430	+750648	H 1	17394	L	00440	FO	90021910	103311	002500	401	V
PHCAL ED+75325	16	09.87	0804430	+750648	H 3	38216	L	00445	FO	90022110	103307	002500	402	V
PHCAL ED+75325	16	09.86	0804430	+750648	L 2	18413	L	00451	FO	90031108	082515	000032	502	V
PHCAL ED+75325	16	09.88	0804430	+750648	L 2	18414	L	00442	FO	90031108	085641	000032	502	V
PHCAL ED+75325	16	09.96	0804430	+750648	L 2	18415	L	00412	FO	90031109	092409	000032	502	V
PHCAL ED+75325	16	09.86	0804430	+750648	H 2	18416	L	00450	FO	90031109	095549	004500	402	V
PHCAL ED+75325	16	09.84	0804430	+750648	L 1	17544	L	00460	FO	90031704	040859	000020	500	V
PHCAL ED+75325	16	09.82	0804430	+750648	H 3	38367	L	00465	FO	90031704	041611	002500	500	V
PHCAL ED+75325	16	09.85	0804430	+750648	L 1	17545	L	00452	FO	90031705	052003	000020	500	V
PHCAL ED+75325	16	09.84	0804430	+750648	L 3	38368	S	00460	FO	90031705	053402	000042	500	V
PHCAL ED+75325	16	09.84	0804430	+750648	L 3	38368	L	00460	FO	90031705	052508	000014	500	V
PHCAL ED+75325	16	09.86	0804430	+750648	L 1	17546	L	00450	FO	90031706	061137	000045	700	V
PHCAL ED+75325	16	09.85	0804430	+750648	H 1	17547	L	00455	FO	90031706	064855	003000	402	V
PHCAL ED +75/325	16	09.86	0804430	+750648	H 1	17570	L	00450	FO	90032107	073235	003000	501	V
PHCAL ED +75/325	16	09.86	0804430	+750648	L 3	38403	L	00450	FO	90032108	082910	000015	500	V
PHCAL ED +75/325	16	09.85	0804430	+750648	L 3	38404	L	00452	FO	90032109	090627	000017	400	V 34 X 0.5 SEC EXP. FO
PHCAL ED +750325	16	9.54	0804431	+750647	L 1	17119	L	471	FO	90011002	021100	000140	502	G G=200,B=38
PHCAL ED +750325	16	9.54	0804431	+750647	L 3	37982	L	473	FO	90011002	022500	000043	400	G G=150,B=18
PHCAL ED +75 0325	16	9.54	0804431	+750647	L 3	38315	L	528	FO	90030720	201200	000014	500	G G=195,B=18
PHCAL ED +75 0325	16	9.54	0804431	+750647	L 3	38315	S	533	FO	90030720	201700	000042	500	G G=244,B=18
PHCAL ED +75 0325	16	9.54	0804431	+750647	L 1	17493	L	528	FO	90030720	202200	000020	502	G G=224,B=32
PHCAL ED +75 0325	16	9.54	0804431	+750647	L 1	17493	S	531	FO	90030720	202800	000100	X02	G G=1.5X,B=31
PHCAL ED +75 0325	16	9.54	0804431	+750647	L 3	38316	L	566	FO	90030722	223100	000043	400	G G=153,B=18
PHCAL ED +75 0325	16	9.54	0804431	+750647	L 1	17494	L	576	FO	90030722	224100	000140	502	G G=200,B=35
PHCAL ED +75 0325	16	9.54	0804431	+750647	L 1	17656	S	556	FO	90033022	221700	000100	02	G 1.5X,B=32
PHCAL ED +75 0325	16	9.54	0804431	+750647	L 3	38475	L	558	FO	90033022	222300	000014	500	G G=182,B=18
PHCAL ED +75 0325	16	9.5	0804432	+750648	L 3	37753	L	455	FO	89120607	075300	000014	400	G G=165,B=18
PHCAL ED +75 0325	16	9.5	0804432	+750648	L 1	16896	L	455	FO	89120607	075700	000020	402	G G=183,B=33
PHCAL ED +75 0325	16	9.5	0804432	+750648	L 3	37850	L	439	FO	89122001	015200	000014	500	G G=183,B=20
PHCAL ED +75 0325	16	9.5	0804432	+750648	L 1	16954	L	438	FO	89122001	015800	000020	502	G G=191,B=34
PHCAL ED +75 0325	16	9.5	0804432	+750648	L 3	37851	S	433	FO	89122002	025400	000042	500	G G=224,B=19
PHCAL ED +75 0325	16	9.5	0804432	+750648	L 1	16955	S	436	FO	89122002	025800	000100	501	G G=250,B=30
PHCAL ED +75 0325	16	9.5	0804432	+750648	L 3	37852	L	452	FO	89122004	040800	000043	401	G G=158,B=22
PHCAL ED +75 0325	16	9.5	0804432	+750648	L 1	16956	L	459	FO	89122004	042100	000140	502	G G=209,B=40
PHCAL ED +75 0325	16	9.5	0804432	+750648	H 1	16994	L	426	FO	89122300	003400	002700	403	G G=182,B=42
PHCAL ED +75 0325	16	9.5	0804432	+750648	L 2	18382	S	452	FO	90010504	044100	000033	501	G G=194,B=22
PHCAL ED +75 0325	16	9.5	0804432	+750648	L 2	18382	L	465	FO	90010504	044200	000139	401	G G=166,B=24
PHCAL ED +75 0325	16	9.5	0804432	+750648	L 2	18383	L	469	FO	90010505	052400	000142	401	G G=160,B=26
PHCAL ED +75 0325	16	9.5	0804432	+750648	L 3	37949	S	549	FO	90010506	061900	000042	400	G G=132,B=18
PHCAL ED +75 0325	16	9.5	0804432	+750648	L 3	37949	L	481	FO	90010506	062400	000014	400	G G=166,B=18
PHCAL ED +75 0325	16	9.5	0804432	+750648	L 1	17086	S	477	FO	90010506	063000	000100	402	G G=140,B=31



FPO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	numresst	ECC	Comment
PHCAL	ED	+75 0325	16	9.5 0804432	+750648	L 1	17086 L	487	FO	90010506	063500	000020	402	G G=172,B=34
PHCAL	ED	+75 0325	16	9.5 0804432	+750648	L 2	18389 L	467	FO	90010705	052300	000033	501	G G=192,B=24
PHCAL	ED	+75 0325	16	9.5 0804432	+750648	L 2	18389 S	469	FO	90010705	052800	000138	501	G G=205,B=26
PHCAL	ED	+75 0325	16	9.5 0804432	+750648	L 2	18390 L		FO	90010706	060500	000142	401	G G=160,B=26
PHCAL	ED	+75 0325	16	9.5 0804432	+750648	H 3	37967 L	417	FO	90010723	231900	002500	402	G G=171,B=36
PHCAL	ED	+75 0325	16	9.5 0804432	+750648	L 2	18402 L	554	FO	90021100	003100	000033	501	G G=180,B=25
PHCAL	ED	+75 0325	16	9.5 0804432	+750648	L 2	18402 S		FO	90021100	003600	000138	501	G G=190,B=25
PHCAL	ED	+75 0325	16	9.5 0804432	+750648	L 2	18403 L	562	FO	90021101	011600	000142	401	G G=158,B=26
PHCAL	ED	+75 0325	16	9.54 0804432	+750648	H 3	38354 L	559	FO	90031317	171400	002500	402	G G=170,B=38
PHCAL	ED	+75 0325	16	9.54 0804432	+750648	H 1	17526 L	553	FO	90031317	174400	002700	403	G G=190,B=48
PHCAL	ED	+75 0325	16	9.54 0804432	+750648	L 1	17656 L	554	FO	90033022	221200	000020	502	G G=213,B=36
PHCAL	ED	+75 0325	16	9.54 0804432	+750648	L 3	38475 S	555	FO	90033022	222800	000042	500	G G=217,B=18
PHCAL	ED	+75 0325	16	9.5 0804432	+750648	L 2	18436 L	569	FO	90041915	152600	000033	500	G G=206,B=17
PHCAL	ED	+75 0325	16	9.5 0804432	+750648	L 1	17769 L	565	FO	90041916	162100	000140	502	G G=209,B=35
USSES	HD	69267	47	3.5 0813482	+092027	H 1	16883 L	768	FU	89120306	061800	002700	352	G E=196,G=95,B=40
HCLSP	HD	70442	39	5.6 0819074	-195508	L 3	37847 L	12994	FO	89121905	055800	000215	400	G G=160,B=18
HCLSP	HD	70442	39	5.6 0819074	-195508	L 1	16947 L	12762	FO	89121906	060400	000050	502	G G=190,B=32
SNMR	HD	72088	24	9.1 0827318	-444301	H 1	17846 L	712	FO	90050116	161400	007000	403	G G=170,B=50
SNMR	HD	72088	24	9.1 0827318	-444301	H 3	38714 L	713	FO	90050117	172900	014000	406	G G=210,B=72
SNMR	HD	72088	24	9.1 0827318	-444301	H 1	17847 L	706	FO	90050119	195900	007500	406	G G=200,B=75
SNMR	HD	72088	24	9.1 0827318	-444301	H 3	38715 L	714	FO	90050121	211900	008700	302	G G=130,B=35
SNMR	VELA	SNR	75	0827329	-444301	L 3	38718 L		FO	90050208	082200	044000	339	G E=170,G=160,B=105
IGLFD	TFLOOD	99		0827329	-444301	L 3	38719 L			90050219	193900	000007	09	G B=139
SNMR	SRNDIPTY	75		0827330	-444144	L 1	17845			90050109	090200	037000	306	G G=110,B=80
SNMR	VELA	SNR	75	0827346	-444158	L 1	17849 L			90050208	084500	000925	09	G B=121
IGLFD	UGC4483	82	13.8	0832007	695405	L 9	02301			90050221	214300	016000		G
IGLFD	UGC 4483	82	13.8	0832068	+695716	L 3	38721 L		FO	90050311	111500	030500	339	G E=190,G=185,B=130
IGLFD	UGC4483	82	13.8	0832069	+695713	L 3	38726 L			90050410	105900	034000		G
IGLFD	UGC4483	82	13.8	0832069	+695713	L 3	38729 L			90050507	072000	044000		G
IGLFD	UGC4483	82	13.8	0832070	+695714	L 3	38729 L		FO	90050423	233100	044000	338	G E=147,G=148,B=99
IGLFD	UGC4483	82	13.8	0832071	+695718	L 9	02302			90050222	221900	002000		G
IGLFD	UGC4483	82	13.8	0832071	+695718	L 9	02303			90050222	222000	016000		G
IGLFD	UGC4483	82	13.8	0832071	+695718	L 9	02304			90050323	233900	000000		G
CCLIS	KW 48	46	12.3	0834545	+194631	L 1	17509 L	147	SO	90031016	165000	012000	333	G E=77,G=89,B=49
IMFF	HD	73262	30	4.2 0835006	+055246	H 1	17603 L	509	FU	90032519	195200	000220	503	G G=220,B=50
IMFF	HD	73262	30	4.2 0835006	+055246	H 3	38438 L	497	FU	90032520	202500	000440	X03	G G=1.5X,B=50
IMFF	HD	73262	30	4.2 0835006	+055246	H 1	17604 L	495	FU	90032521	212700	000440	X06	G G=3X,B=80
CCLIS	KWL72	46	12.5	0836297	+200220	H 1	17517 L	125	SO	90031117	170500	024000	306	G G=117,B=71
IMLIS	HD	73882	12	7.2 0837188	-401428	H 3	38311 L	3544	FO	90030620	200500	012000	504	G G=216,B=52
IMLIS	HD	73882	12	7.2 0837188	-401428	H 1	17484 L	3777	FO	90030622	221600	005000	X05	G G=1.5X,B=67
IMLIS	HD	73882	12	7.2 0837195	-401432	H 1	17467 L	3805	FO	90030417	174500	005000	X04	G G=1.5X,B=58
IMLIS	HD	73882	12	7.2 0837195	-401432	H 3	38299 L	3807	FO	90030418	184200	012000	505	G G=220,B=62
IMLIS	HD	73882	12	7.2 0837195	-401432	H 1	17468 L	3839	FO	90030420	205300	004000	504	G G=225,B=60
IMLIS	HD	73882	12	7.2 0837195	-401432	L 3	38300 L	3834	FO	90030422	220900	000120	500	G G=170,B=18
IMLIS	HD	73882	12	7.2 0837195	-401432	L 1	17469 L	3842	FO	90030422	221500	000100	X02	G G=12X,B=36
CCLIS	KW474	46	12.1	0839513	+194815	L 1	17520 L	156	SO	90031220	200000	018000	334	G E=96,G=98,B=51
PHCAL	HD	74280	21	4.3 0840367	+033446	H 3	37840 L	448	FU	89121806	062300	000050	502	G G=190,B=32
PHCAL	HD	74280	21	4.3 0840367	+033446	H 1	16940 L	446	FU	89121806	062800	000130	X03	G G=2X,B=50
PHCAL	HD	74280	21	4.3 0840367	+033446	H 3	38769 L	501	FU	90051021	211300	000050		G
PHCAL	HD	74280	21	4.3 0840367	+033446	H 1	17890 L			90051021	211800	000040		G

FRO	Object	CL	MAG	R.A.	DEC	D C Image A	FES	MD	Obs.date	Exptim	numres	stt	ECC	Comment
PHCAL HD	74280	21	4.3	0840367	+033446	H 3 38770 L			90051022	221300	000056		G	
PHCAL HD	74280	21	4.3	0840367	+033446	H 3 38770 L	495	FU	90051022	221300	000056		502 G C=191,B=35	
PHCAL HD	74280	21	4.3	0840367	+033446	H 1 17891 L			90051022	221700	000040		G	
WNFC	WR 12	11	11.1	0843056	-454757	L 1 17554 L	148	FO	90031819	194100	001800		502 G C=197,B=38	
HCLSP HD	76072	39	6.4	0850411	-362121	L 1 16946 L	6576	FO	89121904	042400	000120		502 G C=195,B=35	
HCLSP HD	76072	39	6.4	0850411	-362121	L 3 37846 L	6454	FO	89121904	043100	000730		501 G C=188,B=22	
SALOW HD	76294	45	3.1	0852451	+060813	L 1 17824 L	1125	FU	90042821	211100	000112		502 G C=238,B=37	
IED66	NEC2768	81	13.12	0907449	+601430	L 1 17400 L	00098	SO	90022004	044229	037500		305 V	
PHCAL HD	80007	32	1.7	0912396	-693040	H 3 37841 L	4161	FU	89121807	075100	000100		502 G C=200,B=35	
PHCAL HD	80007	32	1.7	0912396	-693040	H 1 16941 L	4227	FU	89121807	075700	000023		502 G C=210,B=40	
PHCAL A+81	266	16	12.1	0913428	+815611	L 1 17101 L	215	SO	90010806	062000	000248		402 G C=174,B=37	
PHCAL A+81	266	16	12.1	0913428	+815611	L 3 37971 L	217	SO	90010806	062800	000216		500 G C=199,B=18	
QSIMD	149-6206	85	13.6	0914592	-620655	L 3 38640 L	57	SO	90042110	100300	018000		341 G E=162,C=75,B=30	
QSIMD	149-6206	85	13.6	0914592	-620655	L 1 17781 L	56	SO	90042113	130800	006000		333 G E=140,C=124,B=42	
QSIMD	0914-620	85	13.6	0914593	-620655	L 1 17771 L	57	SO	90042009	094000	009000		443 G E=185,C=155,B=43	
QSIMD	0914-620	85	13.6	0914593	-620655	L 3 38635 L	58	SO	90042011	111700	018000		342 G E=168,C=85,B=40	
QSIMD	0914-620	85	13.6	0914593	-620655	L 1 17772 L	58	SO	90042014	142500	014500		5X4 G E=1.5X,C=220,B=52	
QSIMD	I914-626	85	13.6	0914593	-620655	L 3 38641 L	58	SO	90042114	141400	015500		343 G E=152,C=72,B=41	
PHCAL ED	+48 1777	16	10.8	0927220	+482911	H 3 38472 L	188	FO	90033017	174300	007300		403 G C=165,B=42	
PHCAL ED	+48 1777	16	10.8	0927221	+482912	L 3 37887 L	159	FO	89122405	053600	000050		501 G C=210,B=23	
PHCAL ED	+48 1777	16	10.8	0927221	+482912	L 1 16990 L	153	FO	89122406	060600	000058		502 G C=187,B=34	
PHCAL ED	+48 1777	16	10.8	0927221	+482912	H 1 17653 L	191	FO	90033016	163000	006800		403 G C=170,B=45	
PHCAL ED	+48 1777	16	10.8	0927221	+482912	L 1 17654 L	186	FO	90033019	192800	000058		502 G C=215,B=32	
PHCAL ED	+48 1777	16	10.8	0927221	+482912	L 3 38473 L	190	FO	90033019	193300	000050		500 G C=243,B=17	
PHCAL ED	+48 1777	16	10.8	0927221	+482912	L 1 17757 L	198	FO	90041523	232900	000058		502 G C=190,B=35	
PHCAL ED	+48 1777	16	10.8	0927221	+482912	L 1 17877 L	196	FO	90050821	212400	000058		502 G C=201,B=34	
PHCAL ED	+48 1777	16	10.8	0927221	+482912	L 3 38747 L	196	FO	90050821	212900	000050		500 G C=215,B=17	
IGLSD HD	81937	40	3.7	0927353	+631650	L 3 38357 L	733	FU	90031322	222300	002000		330 G E=56,C=50X,B=18	
SALOW HD	82210	45	4.58	0930058	+700306	L 1 17590 L	27401	FO	90032419	194800	000135		452 G E=234,C=170,B=39	
RMLEB	R CAR	51	5.0	0930592	-623401	L 1 16876 L	432	FU	89120205	052000	000500		4X2 G E=3X,C=149,B=34	
RMLEB	R CAR	51	5.0	0930592	-623401	L 1 16877 L	432	FU	89120206	060000	000100		342 G E=154,C=60,B=34	
RMLEB	R CAR	51	5.0	0930592	-623401	H 1 16878 L	421	FU	89120206	063900	005000		353 G E=222,C=90,B=41	
RMLEB	R CAR	51	5.0	0930592	-623401	H 1 16879 L	420	FU	89120208	080500	004500		3X3 G E=22,C=88,B=41	
MGLIW	R CAR	51	5.7	0930592	-623401	L 1 17047 L	15783	FO	89123105	053200	000200		3X2 G E=2X,C=85,B=36	
MGLIW	R CAR	51	5.7	0930592	-623401	L 1 17048 L	16116	FO	89123106	061000	000100		3X2 G E=1.5X,C=56,B=32	
MGLIW	R CAR	51	5.7	0930592	-623401	H 1 17049 L	16433	FO	89123106	064600	003000		3X3 G E=2X,C=84,B=42	
MGLIW	R CAR	51	5.7	0930592	-623401	H 1 17050 L	15835	FO	89123107	075800	001000		341 G E=180,C=80,B=30	
MGLIW	R CAR	51	5.7	0930592	-623401	H 1 17051 L	16098	FO	89123108	084000	001000		351 G E=189,C=68,B=28	
MGLIW	R CAR	51	6.0	0930592	-623401	L 1 17260 L	5771	FO	90013019	195100	000100		X2 G E=1.5X,B=37	
MGLIW	R CAR	51	6.0	0930592	-623401	L 1 17261 L	5795	FO	90013020	203200	000020		42 G E=149,B=38	
MGLIW	R CAR	51	6.0	0930592	-623401	H 1 17262 L	5784	FO	90013021	211000	000900		42 G E=180,B=37	
MGLIW	R CAR	51	6.0	0930592	-623401	H 1 17263 L	5845	FO	90013021	215400	006600		3X3 G E=6X,C=100,B=41	
MGLIW	R CAR	51	6.0	0930592	-623401	L 1 17391 L	3231	FO	90021823	235100	000030		342 G E=171,C=59,B=35	
MGLIW	R CAR	51	6.0	0930592	-623401	H 1 17392 L	3279	FO	90021900	002900	001200		53 G E=219,B=43	
MGLIW	R CAR	51	6.0	0930592	-623401	H 1 17393 L	3277	FO	90021901	011500	002500		3X2 G E=1.8X,C=75,B=38	
MGLIW	R CAR	51	7.8	0930592	-623401	L 1 17479 L	2334	FO	90030612	121500	000040		242 G E=156,C=46,B=37	
MGLIW	R CAR	51	7.8	0930592	-623401	H 1 17480 L	2341	FO	90030612	125200	001000		42 G E=152,B=38	
MGLIW	R CAR	51	7.8	0930592	-623401	H 1 17481 L	2338	FO	90030613	133900	012000		3X4 G E=5X,C=89,B=60	
MGLIW	R CAR	51	8.2	0930592	-623401	L 1 17549 L	1958	FO	90031811	114400	000100		242 G E=164,C=46,B=35	
MGLIW	R CAR	51	8.2	0930592	-623401	H 1 17550 L	1961	FO	90031812	122100	002000		52 G E=250,B=38	

FEO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
MGLW	R CAR	51	8.2	0930592	-623401	H 1	17551 L	1972	FO	90031813	131900	000100	3X3	G E=3X, C=105, B=44
RULEB	R CAR	51	5.0	0930592	-623401	H 1	17831 L	1934	FO	90042920	202400	001800	43	G E=145, B=41
SCIMA	COM1989R	06	7	0943400	-835833	D 9	02281 L			89122118	180400	002000		G
SCIMA	COM1989R	06	7	0943400	-835833	L 1	16974 L	114	SO	89122118	182500	030000	3?6	G E=15X, C=116, B=78
SCIMA	COM1989R	06	7	0943400	-835833	D 9	02282 L			89122119	190900	002000		G
SCIMA	COM1989R	06	7	0943400	-835833	D 9	02283 L			89122119	193600	002000		G
SCIMA	COM1989R	06	7	0943400	-835833	L 1	16974 L	114	SO	89122200	001200	030000	3?6	G E=15X, C=116, B=78
SCIMA	COM1989R	06		0943400	-835833	L 1	16975 L	160	SO	89122203	033700	001000	52	G E=214, B=32
SCIMA	COM1989R	06		0943400	-835833	L 1	16975 L	160	SO	89122203	033800	001000	52	G E=214, B=32
SCIMA	COM1989R	06		0943400	-835833	L 1	16976 L	160	SO	89122204	042400	001000	52	G E=212, B=33
SCIMA	COM1989R	06		0943400	-835833	L 1	16976 L	160	SO	89122204	042500	001000	52	G E=212, B=33
USSES	HD 84937	43	8.2	0946129	+135848	L 1	17973 L	1347	FO	90052222	221400	000220	502	G C=249, B=34
USSES	HD 84937	43	8.2	0946129	+135848	L 3	38857 L	1343	FO	90052222	222400	002400	501	G C=199, B=21
USSES	HD 84937	43	8.2	0946129	+135848	L 1	18005 L	1371	FO	90052718	183600	000200	502	G C=202, B=36
LAD02	0947+857	17	16.30	0947425	+854355	L 3	38692 L	00000	EO	90042805	055519	017300	700	V
OK70K	ED +56 1411	23	10.2	0948313	+555738	H 3	38428 L	295	FO	90032411	114600	021000	X09	G C=1.5X, B=131
LAL50	LSSL632	70	12.78	0950478	-460243	L 3	37797 L	00133	SO	89121113	131754	000400	500	V
LAL50	LSSL632	70	12.75	0950478	-460243	L 1	16910 L	00136	SO	89121114	140524	000700	501	V
USSES	HD 86606	23	6.3	0955169	-710858	H 3	38636 L	8696	FO	90042017	175000	000515	402	G C=170, B=33
USSES	HD 86606	23	6.3	0955170	-710859	H 3	38784 L	9111	FO	90051422	222400	000600	402	G C=182, B=32
SALOW	HD 86606	23	6.3	0955179	-710902	L 3	38208 L	8750	FO	90021720	205500	000015	500	G C=183, B=18
SALOW	HD 86606	23	6.3	0955179	-710902	L 1	17389 L	8823	FO	90021721	212100	000013	502	G C=205, B=35
SALOW	HD 86663	49	4.7	0957343	+081705	L 1	17825 L	318	FU	90042823	233100	002000	5X3	G E=2X, C=226, B=41
IDLCA	HD 87901 B	46	8.1	1005328	+121430	H 1	17170 L	1516	FO	90011803	035500	009000	333	G E=106, C=84, B=43
IDLCA	HD 87901 B	46	8.1	1005328	+121430	L 3	38043 L	1358	FO	90011805	053500	003000	230	G E=57, C=30, B=20
IDLCA	HD 87901 B	46	8.1	1005328	+121430	L 1	17171 L	1370	FO	90011806	061300	003700	Xx2	G E=1.5X, C=2X, B=38
IDLCA	HD 87901 B	46	8.1	1005426	+121245	L 3	38048 L	1530	FO	90011900	002300	010400	243	G E=180, C=60, B=42
IDLCA	HD 87901 B	46	8.1	1005426	+121245	L 1	17177 L	1540	FO	90011902	021600	001500	452	G E=225, C=185, B=39
PHCAL	HD 87901	22	1.4	1005427	+121244	H 1	17100 L	5706	FU	90010804	044800	000006	403	G C=189, B=41
PHCAL	HD 87901	22	1.4	1005427	+121244	H 3	37970 L	5844	FU	90010804	045300	000012	402	G C=187, B=38
PHCAL	HD 87901	22	1.4	1005427	+121244	L 3	38012 L	5975	FU	90011402	025100	000001	00	G B=18
PHCAL	HD 87901	22	1.4	1005427	+121244	L 1	17151 L	6185	FU	90011403	030600	000000	502	G C=200, B=40
NPLRD	FB 6	70	12	1011185	-500507	L 1	17426 L		EO	90022613	135600	020000	3x9	G E=1.5X, C=163, B=107
XKQEW	FG1012+008	85	15.90	1012208	+004833	L 3	38562 L	00000	EO	90041002	023146	037500	332	V
IGLSD	HD 89254	40	5.2	1015087	-074909	L 3	38618 L	18680	FO	90041621	213500	002500	2?7	G E=134, C=23X, B=82
WNLPC	HD 89358	11	11.2	1015149	-573946	L 3	38381 L	169	FO	90031822	224900	000500	231	G E=102, C=38, B=25
LCL04	HD91793	50	05.67	1032594	-391813	L 1	17539 L	16768	FO	90031603	035318	002000	110	V
FELTS	HD 91752	41	6.3	1033296	+363512	L 3	38377 L	7587	FO	90031723	233200	011000	232	G E=65, C=33X, B=38
PHCAL	T-FLOOD	98		1040442	-585713	H 1	17674 S			90033119	191700	000025	29	G E=50X, B=105
PHCAL	WAVECAL	98		1040442	-585713	H 1	17674 S			90033119	191900	000016	29	G E=50X, B=105
PHCAL	NULL	99		1040442	-585713	H 2	18421			90033119	194300	000000	00	G B=10
PHCAL	WAVECAL	98		1040442	-585713	L 3	38480 S			90033120	202100	000005	29	G E=10X, B=102
PHCAL	WAVECAL	98		1040442	-585713	H 3	38481 S			90033120	204700	000005	29	G E=60X, B=124
PHCAL	WAVECAL	98		1040442	-585713	L 2	18422 S			90033120	205200	000010	29	G E=10X, B=146
PHCAL	WAVECAL	98		1040442	-585713	H 2	18423 S			90033121	212100	000010	29	G E=50X, B=142
PHCAL	T-FLOOD	99		1040442	-585713	H 1	17675			90033122	225900	000025	08	G B=100
PHCAL	T-FLOOD	99		1040442	-585713	H 3	38482			90033123	230100	000005	09	G B=105
PHCAL	T-FLOOD	99		1040442	-585713	H 1	17676 S			90040100	000600	000025	08	G B=100
PHCAL	T-FLOOD	99		1040442	-585713	H 3	38483			90040100	000800	000005	09	G B=105
PHCAL	T-FLOOD	98		1040443	-585713	L 1	17673 L			90033118	184500	000025	28	G E=10X, B=100

FPO	Object	CL	MAG	R.A.	DEC	D C Image A	FES	MD	Obs.date	Exptim	mmmsst	ECC	Comment
FHCAL	WAVCAL	98		1040443	-585713	L 1 17673 L			90033118	184700	000001		?8 G E=10K,B=100
CELM	TR16-13	20	10.8	1042386	-592414	L 3 38477 L	188	FO	90033113	134600	001600		500 G G=210,B=19
CELM	TR16-13	20	10.8	1042386	-592414	L 1 17671 L	187	FO	90033114	144300	000900		X02 G G=1.5K,B=38
CELM	TR16-14	20	11.5	1042433	-592350	L 3 37801 L	107	FO	89121206	065500	010000		502 G G=235,B=33
CELM	TR16-14	20	11.5	1042433	-592350	L 1 17670 L	116	FO	90033112	120400	002500		502 G G=245,B=40
CELM	TR16-25	21	11.7	1043024	-592758	L 3 38479 L	350	SO	90033117	171200	006000		500 G G=220,B=20
CELM	TR16-8	20	10.9	104308	-592416	L 3 38478 L	194	FO	90033115	153700	001500		500 G G=230,B=18
CELM	TR16-8	20	10.9	104308	-592416	L 1 17672 L	188	FO	90033116	163700	001000		X02 G G=1.5K,B=38
CELM	TR16-33	20	11.8	1043136	-592418	L 3 37799 L		SO	89121201	014900	008000		300 G G=116,B=20
CELM	TR16-33	20	11.8	1043136	-592418	L 1 16912 L	297	SO	89121203	032300	005800		503 G G=195,B=41
CELM	TR16-27	20	11.1	1043199	-592406	L 3 37800 L	142	FO	89121204	045000	003000		500 G G=199,B=18
CELM	TR16-27	20	11.1	1043199	-592406	L 1 16913 L	143	FO	89121205	054400	002700		X03 G G=1.5K,B=41
FHCAL HD	93521	12	7.04	1045335	+375003	L 1 17118 L	4173	FO	90011000	000700	000011		402 G G=178,B=36
FHCAL HD	93521	12	7.04	1045335	+375003	L 3 37981 L			90011000	001900	000012		G
FHCAL HD	93521	12	7.04	1045335	+375003	L 3 38722 L	5080	FO	90050317	171800	000003		500 G G=180,B=18
FHCAL HD	93521	12	7.0	1045336	+375004	L 3 37752 L	4209	FO	89120606	062500	000003		400 G G=162,B=18
FHCAL HD	93521	12	7.0	1045336	+375004	L 1 16895 L	4186	FO	89120606	063400	000003		502 G G=191,B=35
FHCAL HD	93521	12	7.0	1045336	+375004	L 3 37947 L	4144	FO	90010403	032600	000003		500 G G=172,B=18
FHCAL HD	93521	12	7.0	1045336	+375004	L 1 17081 L	4168	FO	90010403	033300	000003		502 G G=198,B=35
FHCAL HD	93521	12	7.0	1045336	+375004	L 2 18387 L	4286	FO	90010703	031200	000004		401 G G=172,B=25
FHCAL HD	93521	12	7.0	1045336	+375004	L 1 17150 L	4206	FO	90011401	012200	000003		502 G G=190,B=32
FHCAL HD	93521	12	7.0	1045336	+375004	L 3 38011 L	4150	FO	90011401	012700	000003		400 G G=160,B=15
FHCAL HD	93521	12	7.0	1045336	+375004	L 3 38331 L	5170	FO	90031100	000200	000003		500 G G=170,B=18
FHCAL HD	93521	12	7.0	1045336	+375004	L 1 17513 L	5192	FO	90031100	000600	000003		502 G G=205,B=32
FHCAL HD	93521	12	7.0	1045336	+375004	L 1 17647 L	5169	FO	90032921	211700	000003		502 G G=186,B=34
FHCAL HD	93521	12	7.0	1045336	+375004	L 3 38468 L	5213	FO	90032921	212200	000003		500 G G=169,B=17
FHCAL HD	93521	12	7.04	1045336	+375004	H 3 38474 L	4933	FO	90033020	204400	000430		402 G G=150,B=32
FHCAL HD	93521	12	7.04	1045336	+375004	H 1 17655 L	4969	FO	90033020	205300	000350		403 G G=188,B=43
FHCAL HD	93521	12	7.04	1045336	-375004	L 3 38594 L	5525	FO	90041310	102000	000003		530 G E=70,G=180,B=18
FHCAL HD	93521	12	7.04	1045336	-375004	L 1 17735 L	5501	FO	90041310	102400	000003		502 G G=194,B=35
FHCAL HD	93521	12	7.0	1045336	+375004	L 2 18432 L	5315	FO	90041910	105400	000004		401 G G=160,B=24
FHCAL HD	93521	12	7.04	1045336	+375004	L 1 17850 L	5035	FO	90050317	171200	000003		502 G G=210,B=37
FHCAL HD	93521	12	7.0	1045336	+375004	L 2 18452 L	5257	FO	90051417	174700	000004		501 G G=180,B=27
FHCAL HD	93521	12	7.0	1045336	+375004	L 2 18456 L	5305	FO	90051421	210900	000016		401 G G=165,B=24
FHCAL HD	93521	12	7.0	1045336	+375004	L 3 38830 L	5337	FO	90051817	171700	000003		400 G G=150,B=18
FHCAL HD	93521	12	7.0	1045336	+375004	L 1 17936 L	5327	FO	90051817	172200	000003		402 G G=177,B=34
LS101	COMET OZAK	06	12.37	1052326	-811135	E 9 02280 2	00192	SO	89121910	104700	004000		V
LS101	COMET OZAK	06	12.37	1052326	-811135	L 1 16950 L	00192	SO	89121911	110335	006000		070 V NUCLEUS
LS101	COMET OZAK	06	15.00	1052326	-811135	L 1 16951 L	00000	EO	89121914	143300	006500		071 V GUIDE ON NUCLEUS.REG
LS101	COMET OZAK	06	15.00	1052326	-811135	L 1 16952 L	00000	EO	89121915	152240	006800		071 V GUIDING ON NUCLEUS.E
LBMA HD	94910	27	7.2	1054105	-601111	L 1 17836 L	1961	FO	90043009	091000	000100		502 G G=248,B=32
IA042	AG CAR	23	08.31	1054106	-601111	H 1 16985 L	01786	FO	89122309	092351	004500		401 V
LBMA HD	94910	27	7.2	1054106	-601111	L 3 38703 L	1972	FO	90043009	091500	000400		500 G G=228,B=18
IA042	AG CAR	23	08.30	1054106	-601111	H 3 37882 L	01807	FO	89122310	101522	039000		602 V SATURATED BEYOND
LBMA HD	94910	73	7.2	1054106	-601111	L 3 38704 L	2041	FO	90043012	120800	012500		301 G G=90,B=27
LBMA HD	94910	73	7.2	1054106	-601111	L 1 17838 L	2080	FO	90043014	142300	011500		503 G G=200,B=47
FHCAL	WAVCAL	98	0.0	1054106	-601111	L 1 17839 S			90043017	170200	000025		?8 G E=10K,B=98
FHCAL	WAVCAL	98	0.0	1054106	-601111	H 1 17840 L			90043017	173500	000025		?9 G E=50K,B=107
FHCAL	NULL	99	0.0	1054106	-601111	H 2 18437			90043018	180500	000000		300 G G=32,B=11
FHCAL	WAVCAL	98	0.0	1054106	-601111	L 3 38705 S			90043018	183300	000005		?9 G E=10K,B=101



FRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mmmsst	ECC	Comment
PHCAL	WAVCAL	98	0.0	1054106	-601111	L 3	38705 L			90043018	183500	000002		29 G E=10X,B=101
PHCAL	WAVCAL	98	0.0	1054106	-601111	H 3	38706 S			90043019	190500	000005		29 G E=60X,B=107
PHCAL	WAVCAL	98	0.0	1054106	-601111	L 2	18438 S			90043019	192500	000010		28 G E=10X,B=91
PHCAL	WAVCAL	98	0.0	1054106	-601111	H 2	18439 S			90043019	195700	000010		29 G E=50X,B=105
PHCAL	TFLOOD	99	0.0	1054106	-601111	H 3	38707			90043022	220500	000005		09 G B=112
PHCAL	TFLOOD	99	0.0	1054106	-601111	H 1	17841 S			90043022	220800	000025		09 G B=102
LA097	HD95767	41	09.50	1100026	-615333	L 1	17371 L	00630	FO	90021510	103302	002400		501 V
LA097	HD 95767	41	09.32	1100026	-615333	L 1	17376 L	00731	FO	90021607	071346	003500		501 V
BLICU	MRK 421	87	13.5	1101405	+382845	L 1	17537 L	85	SD	90031521	211900	009000		X09 G G=2X,B=104
BLICU	MRK 421	87	13.5	1101405	+382843	L 1	17542 L	83	SD	90031621	212400	002500		303 G G=1.33,B=46
BLICU	MRK 421	87	13.5	1101405	+382845	L 3	38366 L	86	SD	90031621	215400	005700		302 G G=99,B=34
IGLSD	HD 96097	40	4.6	1102262	+073623	H 1	17759 L	27308	FO	90041620	200700	002000		X09 G G=3X,B=224
IGLSD	HD 96097	40	4.6	1102262	+073623	L 3	38617 L	27276	FO	90041620	203200	001730		?09 G G=20X,B=125
CD64Y	WFA 751	14	12.2	1106034	-602635	L 1	16916 L	171	SD	89121302	021000	016000		X34 G E=75,B=52,C=78
LI014	HD97484	12	09.24	1109563	-604922	H 3	38601 L	00785	FO	90041401	015923	040500		602 V 1800 SAT
LI014	HD 97484	12	08.77	1109563	-604923	H 3	38613 L	01187	FO	90041602	020330	040400		742 V
SCLW	HD 97534	40	4.6	1110268	-600243	L 3	38210 S	27698	FO	90021800	002300	000400		304 G G=118,B=51
SCLW	HD 97534	40	4.6	1110268	-600243	L 3	38210 L	311	FO	90021800	003400	000400		503 G G=208,B=46
IBLGP	HD 97528	66	7.5	1110457	-261135	H 3	38633 L	3584	FO	90041922	223900	010000		503 G G=205,B=47
IBLGP	HD 97528	66	7.5	1110457	-261135	L 1	17770 L	3866	FO	90042000	002400	000115		X02 G G=1.5X,B=33
IBLGP	HD 97528	66	7.5	1110457	-261135	H 3	38643 L	3343	FO	90042118	185700	010500		504 G G=210,B=58
IBLGP	HD 97528	66	7.5	1110457	-261135	L 1	17782 L	3282	FO	90042120	204700	000045		G
IBLGP	HD 97528	66	7.5	1110457	-261135	H 3	38651 L	3769	FO	90042217	175600	005000		504 G G=220,B=60
IBLGP	HD 97528	66	7.5	1110457	-261135	L 1	17791 L	3687	FO	90042218	185100	000045		502 G G=220,B=33
IBLGP	HD 97528	66	7.5	1110457	-261135	L 3	38652 L			90042220	202100	000110		G
IBLGP	HD 97528	66	7.5	1110457	-261135	H 3	38665 L	3590	FO	90042318	180100	005000		504 G G=220,B=53
IBLGP	HD 97528	66	7.5	1110457	-261135	L 1	17801 L	3494	FO	90042318	185700	000045		502 G G=223,B=33
IBLGP	HD 97528	66	7.5	1110457	-261135	H 1	17802 L	3513	FO	90042320	200800	002500		404 G G=177,B=51
IBLGP	HD 97528	66	7.5	1110457	-261135	L 3	38666 L	3504	FO	90042320	203800	000140		500 G G=177,B=18
WNLFC	WR44	11	13.0	1114453	-591009	L 1	17555 L	120	SD	90031820	205000	005000		453 G E=248,C=179,B=41
WNLFC	WR44	11	13.0	1114453	-591009	L 3	38380 L	119	SD	90031821	214700	001000		231 G E=89,C=39,B=24
IGLSD	HD 98991	41	5.1	1120531	-183019	L 3	37980 L	16820	FO	90010922	222000	004500		230 G E=71,C=20X,B=18
HCLSP	HD 99574	39	5.8	1124270	-525305	L 3	37848 L	10834	FO	89121907	071700	000154		400 G G=160,B=18
HCLSP	HD 99574	39	5.8	1124270	-525305	L 1	16948 L	10677	FO	89121907	072300	000048		502 G G=240,B=32
CD66Y	HD 100213	12	8.23	1128560	-652759	H 3	37879 L	929	FO	89122305	050500	006200		403 G G=185,B=41
CD66Y	HD 100213	12	8.23	1128560	-652759	H 3	37880 L	1076	FO	89122306	064200	009000		X04 G G=1.5X,B=55
CD66Y	HD 100213	12	8.23	1128560	-652759	L 3	37881 L	1191	FO	89122308	084500	000100		X00 G G=1.5X,B=20
CD66Y	HD 100213	12	8.2	1128561	-652759	H 3	37906 L	1175	FO	89122701	014100	006000		405 G G=210,B=62
CD66Y	HD 100213	12	8.2	1128561	-652759	H 3	37907 L	1100	FO	89122703	031400	006000		503 G G=210,B=50
LI045	SY MJS	57	10.74	1129550	-650836	L 3	37855 L	00205	FO	89122014	142655	000800		360 V
LI045	SY MJS	57	10.80	1129550	-650836	L 1	16966 L	00195	FO	89122014	144333	000800		351 V
LI045	SY MJS	57	10.88	1129550	-650836	L 3	37856 L	00181	FO	89122015	153406	007500		470 V
LI045	SY MJS	57	10.73	1129550	-650836	L 3	38436 L	00207	FO	90032508	081001	000800		360 V
LI045	SY MJS	57	10.76	1129550	-650836	L 1	17598 L	00201	FO	90032508	082606	000800		451 V
LI045	SY MJS	57	10.71	1129550	-650836	L 3	38437 L	00211	FO	90032508	085915	010800		471 V
IA148	HD100340	20	10.53	1130154	+053310	L 3	37813 L	00248	FO	89121510	100716	000218		700 V
IA148	HD100340	20	10.51	1130154	+053310	L 3	37814 L	00251	FO	89121510	103852	000218		700 V
IA148	HD100340	20	10.45	1130154	+053310	L 3	37816 L	00266	FO	89121511	114415	000218		700 V
IA148	HD100340	20	10.51	1130154	+053310	L 3	37815 L	00252	FO	89121511	111131	000218		700 V
IA148	HD100340	20	10.51	1130154	+053310	L 3	37817 L	00251	FO	89121512	121912	000218		700 V

FO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mmmsst	ECC	Comment
IA148	HD100340	20	10.50	1130154	+053310	L 3	37818 L	00255	FO	89121512	125315	000218	700 V	
IA148	HD100340	20	10.50	1130154	+053310	L 3	37819 L	00253	FO	89121513	132527	000218	700 V	
IA148	HD100340	20	10.51	1130154	+053310	L 3	37820 L	00250	FO	89121513	135747	000218	700 V	
IA148	HD100340	20	10.50	1130154	+053310	L 3	37821 L	00255	FO	89121514	142638	000218	700 V	
IA148	HD100340	20	10.50	1130154	+053310	L 3	37822 L	00253	FO	89121514	145518	000218	700 V	
IA148	HD100340	20	10.53	1130154	+053310	L 3	37823 L	00248	FO	89121515	152412	000218	700 V	
IA148	HD100340	20	10.52	1130154	+053310	L 3	37824 L	00250	FO	89121515	155540	000218	700 V	
IA148	HD100340	20	10.53	1130154	+053310	L 3	37825 L	00248	FO	89121516	162755	000218	700 V	
IQ115	NGC 3783	84	13.39	1136329	-372740	L 1	17310 L	00077	SO	90020705	051128	005000	561 V	
IQ115	NGC 3783	84	13.45	1136330	-372741	L 3	38158 L	00073	SO	90020706	060908	009000	450 V	
IA097	HD101584	40	07.35	1138339	-551748	H 1	17369 L	04095	FO	90021506	062043	014000	501 V	
IA097	HD101584	40	07.47	1138339	-551748	L 3	38194 L	03766	FO	90021508	084845	002500	500 V	
IA097	HD101584	40	07.48	1138339	-551748	L 1	17370 L	03750	FO	90021509	092546	000230	600 V	
IA001	PG1144+005	17	15.00	1144015	+002914	L 3	38675 S	00000	EO	90042506	064219	016000	300 V	
LC109	GL 447	48	11.35	1145106	+010511	L 3	38669 L	00119	FO	90042402	024542	003000	110 V	
LC109	GL 447	48	11.16	1145106	+010511	L 1	17804 L	00141	FO	90042403	032548	002000	111 V	
LC109	GL 447	48	11.22	1145107	+010512	L 3	38670 L	00134	FO	90042404	040956	026200	111 V	FFRFD
XQXEW	PKS 1146-037	85	16.9	1146239	-034730	L 3	38097 L		EO	90012912	121100	041000	06 G	B=76
SCIMA	CT AFR D	06		1153434	-725535	9	02273 2			89121418	180100	004000	G	
SCIMA	CT 1989R	06		1153434	-725535	H 1	16926 L	243	SO	89121418	182100	060000	X8 G	E=5X, B=95
SCIMA	CT AFR 2	06		1153434	-725535	9	02274			89121419	191700	004000	G	
SCIMA	CT AFR 2	06		1153434	-725535	9	02275			89121419	193600	004000	G	
SCIMA	CT AFR 2	06		1153434	-725535	9	02276			89121420	203200	004000	G	
SCIMA	CT AFR 2	06		1153434	-725535	9	02277			89121421	212200	004000	G	
SCIMA	CT AFR 2	06		1153434	-725535	9	02278			89121421	215600	004000	G	
SCIMA	CT AFR 2	06		1153434	-725535	9	02279			89121500	002700	004000	G	
IQ069	NGC3998	88	12.37	1155214	+554357	E 9	02294 2	00192	SO	90021005	050000	004000	V	FOR SWP38177
AGLGR	NGC 3998	88	11.6	1155214	+554357	L 3	38177 L	192	SO	90021005	051200	044000	339 G	E=1.85, G=1.60, B=105
LS101	COMET OKAZ	06	11.96	1156219	-721713	L 1	16924 L	00275	SO	89121410	102924	006000	071 V	CH SATURATED
LS101	COMET OKAZ	06	11.94	1156219	-721713	L 3	37811 L	00280	SO	89121412	120748	008500	030 V	
LS101	COMET OKAZ	06	12.04	1156219	-721713	H 1	16925 L	00258	SO	89121413	131640	005900	031 V	NUCLEUS IN SWIA
LS101	COMET OKAZ	06	11.96	1156219	-721713	E 9	02272 2	00275	SO	89121413	132500	016000	V	
IML39	SKY BRGD	07		1208003	+394101	L 1	17727 L			90041103	032300	064000	09 G	B=106
IQ094	NGC 4151	84	12.52	1208004	+394102	L 3	38253 L	00167	SO	90022510	102513	003000	230 V	
IML39	NGC 4151	84	11.9	1208004	+394102	H 3	38569 L	191	SO	90041110	102000	025500	339 G	E=1.77, G=200, B=115
IQ094	NGC 4151	84	12.52	1208004	+394102	L 1	17420 L	00166	SO	90022511	110342	005000	563 V	
IQ094	NGC4151	84	12.50	1208004	+394102	L 3	38254 L	00171	SO	90022512	120043	005300	350 V	FFRFD
IQ094	NGC4151	84	12.52	1208004	+394102	L 3	38278 L	00167	SO	90030108	081321	003000	350 V	
IQ094	NGC4151	84	12.54	1208004	+394102	L 1	17443 L	00164	SO	90030108	085710	003000	361 V	MG II SATURATED
IQ094	NGC4151	84	12.50	1208004	+394102	L 3	38279 L	00171	SO	90030109	093538	007200	570 V	
IQ094	NGC4151	84	12.46	1208004	+394102	L 1	17474 L	00176	SO	90030509	090327	003000	452 V	
IQ094	NGC4151	84	12.46	1208004	+394102	L 3	38306 L	00176	SO	90030510	100145	003000	350 V	
IQ094	NGC4151	84	12.54	1208004	+394101	L 3	38322 L	00165	SO	90030904	040205	003000	250 V	
IQ094	NGC4151	84	12.51	1208004	+394101	L 1	17503 L	00169	SO	90030904	044158	005000	561 V	MG II SATURATED
IQ094	NGC4151	84	12.53	1208004	+394102	L 3	38323 L	00166	SO	90030905	054321	007500	460 V	C N SATURATED
IQ094	NGC4151	84	12.49	1208004	+394101	L 3	38350 L	00172	SO	90031304	041632	002000	350 V	
IQ094	NGC4151	84	12.48	1208004	+394101	L 1	17522 L	00173	SO	90031305	050110	005000	570 V	MG II SATURATED
IQ094	NGC4151	84	12.48	1208004	+394102	L 3	38351 L	00174	SO	90031306	060515	005500	460 V	
IQ094	NGC4151	84	12.37	1208004	+394102	L 3	38369 L	00191	SO	90031708	081400	002500	350 V	
IQ094	NGC4151	84	12.42	1208004	+394102	L 1	17548 L	00183	SO	90031708	085617	003000	561 V	MG II SATURATED

PRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	nummstt	ECC	Comment
IQ094	NGC4151	84	12.40	1208004	+394102	L 3	38370 L	00186	SD	90031709	093705	007000	570 V	
IQ094	NGC 4151	84	12.39	1208004	+394102	L 3	38401 L	00188	SD	90032104	040643	003000	340 V	
IQ094	NGC 4151	84	12.42	1208004	+394102	L 1	17569 L	00184	SD	90032104	044507	002500	452 V	
IQ094	NGC 4151	84	12.43	1208004	+394102	L 3	38402 L	00181	SD	90032105	053358	008500	470 V	CIV, LY SATURATED
IQ094	NGC4151	84	12.42	1208004	+394102	L 3	38434 L	00183	SD	90032503	034646	003000	350 V	
IQ094	NGC4151	84	12.43	1208004	+394102	L 1	17596 L	00182	SD	90032504	043220	003000	561 V	MG II SATURATED
IQ094	NGC4151	84	12.41	1208004	+394102	L 3	38435 L	00185	SD	90032505	052454	006500	570 V	CIII, CIV, LY SATURATE
IQ094	NGC4151	84	12.40	1208004	+394102	L 1	17597 L	00187	SD	90032506	063744	002000	451 V	
IQ100	NGC4151	84	12.42	1208004	+394102	L 3	38452 L	00183	SD	90032807	075549	003000	350 V	
IQ100	NGC4151	84	12.41	1208004	+394102	L 1	17631 L	00185	SD	90032808	083606	003000	563 V	MG II SATURATED
IQ100	NGC4151	84	12.40	1208004	+394102	L 3	38453 L	00186	SD	90032809	092623	005500	460 V	CIV, LY SATURATED
IQ100	NGC4151	84	12.40	1208004	+394102	L 1	17632 L	00186	SD	90032810	102654	002500	552 V	FREAD
IQ100	N4151	84	12.42	1208004	+394102	H 3	38476 L	00184	SD	90033104	040859	035700	132 V	
IQ100	NGC4151	84	12.40	1208004	+394102	L 3	38485 L	00186	SD	90040106	062505	003000	351 V	
IQ100	NGC4151	84	12.41	1208004	+394102	L 1	17679 L	00185	SD	90040107	071623	003000	452 V	
IQ100	NGC4151	84	12.32	1208004	+394102	L 3	38486 L	00200	SD	90040108	080211	004500	361 V	LY ALF SAT
IM139	NGC4151	84	12.37	1208004	+394102	E 9	02297 2	00191	SD	90041102	022500	004000	V	
IQ100	NGC4151	84	12.45	1208004	+394102	L 3	38582 L	00178	SD	90041208	080839	003000	350 V	
IQ100	NGC4151	84	12.40	1208004	+394102	L 3	38620 L	00186	SD	90041702	021431	002500	140 V	
LA097	SAO 239853	40	09.95	1217338	-533853	L 3	38201 L	00415	FO	90021608	083612	010000	300 V	
LA097	SAO 239853	40	09.97	1217338	-533853	L 1	17377 L	00406	FO	90021610	102530	002000	401 V	
IQ060	SAO 100073	84	00.00	1220495	+125643	9	02298 L	00000	EO	90041801	015400	016000	V	FES FOR SWP38628, SW
IQ060	NGC 4388	80	12.2	1223146	+125619	L 3	38628 L		EO	90041802	024000	074000	309 G	G=152, B=104
SGMB	NGC 4388	84	11.0	1223147	+125615	L 3	38880 L	48	SD	90052708	080500	042000	308 G	G=145, B=99
RGLJS	NGC 4410	86	14.4	1223556	+091747	L 3	38100 L		EO	90013012	122600	038000	204 G	G=80, B=60
RGLJS	NGC 4410	86	14.4	1223556	+091704	L 1	17274 L		EO	90020112	121600	038000	308 G	G=140, B=96
USSBS	HD 108639	23	7.9	1226215	-603142	H 3	38444 L	2342	FO	90032711	112800	003500	402 G	G=157, B=37
IQ141	3C273	85	13.45	1226332	+021942	L 3	37871 L	00073	SD	89122209	095028	003000	350 V	
IQ141	3C273	85	13.47	1226332	+021942	L 3	37872 L	00072	SD	89122211	110604	005000	460 V	G4 SATURATED
IQ141	3C 273	85	13.25	1226332	+021942	L 3	37954 L	00087	SD	90010513	133216	003000	350 V	
IQ141	3C 273	85	13.24	1226332	+021942	L 1	17087 L	00088	SD	90010514	141554	003000	441 V	
IQ141	3C273	85	13.24	1226332	+021943	L 3	38708 L	00088	SD	90050100	001636	003000	350 V	
IQ141	3C273	85	13.20	1226332	+021943	L 1	17842 L	00091	SD	90050101	011122	003000	500 V	
IQ141	3C273	85	13.45	1226333	+021942	L 1	16978 L	00073	SD	89122210	102818	003000	451 V	
IQ141	3C273	85	13.38	1226333	+021942	L 1	16979 L	00078	SD	89122212	120630	004500	461 V	MG2 SATURATED
IQ141	3C273	85	13.39	1226333	+021942	L 3	38038 L	00077	SD	90011712	121130	003000	340 V	
IQ141	3C273	85	13.42	1226333	+021942	L 1	17166 L	00075	SD	90011713	130417	003000	501 V	
IQ141	3C273	85	13.44	1226333	+021942	L 3	38039 L	00074	SD	90011713	134217	006500	460 V	
IQ141	3C273	85	13.58	1226333	+021942	L 3	38139 L	00065	SD	90020508	084326	003000	350 V	
IQ141	3C273	85	13.55	1226333	+021942	L 1	17297 L	00067	SD	90020509	093208	003000	501 V	
IQ141	3C273	85	13.55	1226333	+021942	L 3	38140 L	00067	SD	90020510	101522	004200	350 V	
IQ141	3C273	85	13.14	1226333	+021942	L 3	38709 L	00096	SD	90050102	020405	005500	560 V	
IQ141	3C273	85	13.29	1226333	+021942	L 3	38825 L	00084	SD	90051805	054024	003000	350 V	
IQ141	3C273	85	13.20	1226333	+021942	L 1	17930 L	00091	SD	90051806	061909	003000	402 V	FREAD
IQ141	3C273	85	13.24	1226333	+021942	L 1	18018 L	00088	SD	90053123	233848	003000	350 V	
IDLCA	HD 108767	46	8.4	1227154	-161433	L 1	17453 L	1978	FO	90030212	122100	001500	433 G	B=134, C=161, B=42
IDLCA	HD 108767	46	8.4	1227154	-161433	L 3	38285 L	1988	FO	90030213	131000	003000	402 G	G=137, B=34
IDLCA	HD 108767	46	8.4	1227154	-161433	L 1	17454 L	2104	FO	90030213	135700	003000	X48 G	B=218, C=1.5X, B=94
IDLCA	HD 108767B	46	8.4	1227154	-161433	L 1	17456 L			90030220	204800	003000	552 G	B=208, C=225, B=40
IC147	EG CRU	53	06.10	1228518	-590852	L 1	17271 L	12132	FO	90020108	085306	000200	700 V	FREAD



FEO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mmmsst	ECC	Comment
IC147	EG CRU	53	06.10	1228518	-590852	L 1	17272 L	12105	FO	90020109	093452	000040	500	V
SNRFR	CT APR 2	56	14.5	1234015	+113103	S 9	02291 2			90012423	233600	000500		G
SNRFR	SN 1990B	56	14.5	1234015	+113103	L 1	17221 L		FO	90012500	001800	012000		08 G B=100
LEI00	SN 1990 B	56	15.00	1234020	+113054	L 1	17227 L	00000	FO	90012514	143736	001000		100 V NO SPECTRUM
LEI00	SN1990B	56	99.99	1234022	+113059	L 1	17244 L	00000	FO	90012708	081546	012000		102 V NO SPECTRUM
LE059	SN 1990B	56	14.00	1234022	+113059	L 1	17292 L	00000	FO	90020407	074757	018900		202 V
SCIEF	COM1989R	06		1234387	-484257	H 9	02268 2			89120518	181800	004000		G
SCIEF	COM1989R	06		1234387	-484257	H 9	02269 2			89120519	191100	004000		G
SCIEF	COM1989R	06	5.0	1234426	-483538	H 1	16893 L	210	FO	89120518	184900	015000		?4 G E=20X, B=55
SCIEF	COM1989R	06	5.0	1234426	-483538	H 9	02270 2			89120520	203800	004000		G
FELIS	HD 109799	40	5.4	1235028	-265146	L 3	37979 L		FO	90010920	201900	007500		231 G E=128, C=30X, B=29
IQ068	NGC4579	88	12.56	1235126	+120540	L 1	17084 L	00161	SO	90010408	082252	038500		466 V
USSES	HD 109867	23	6.3	1235532	-665505	H 1	17773 L	9044	FO	90042018	185100	000400		403 G C=173, B=41
USSES	HD 109867	23	6.3	1235532	-665505	H 3	38637 L	8998	FO	90042019	190300	001000		402 G C=182, B=35
USSES	HD 109867	23	6.3	1235532	-665505	H 3	38782 L	8738	FO	90051321	213200	001130		542 G E=152, C=190, B=32
USSES	HD 109867	23	6.3	1235532	-665505	H 1	17902 L	9057	FO	90051322	221000	000500		503 G C=198, B=42
HMIDL	HD 110073	27	4.6	1237096	-394245	L 3	38390 L	335	FU	90031921	212800	000014		501 G C=212, B=22
HMIDL	HD 110073	27	4.6	1237096	-394245	L 1	17561 L	333	FU	90031921	214000	000008		502 G C=231, B=39
SCIEF	COM1989R	06	6.0	1242527	-382103	L 1	16880 L	219	FO	89120219	190100	009500		3?3 G E=30X, C=84, B=49
IC131	HD110863	59	09.58	1242576	-601642	L 3	38385 L	00575	FO	90031905	055846	000630		500 V
IC131	HD110863	59	09.57	1242576	-601642	H 3	38386 L	00583	FO	90031906	064017	023300		302 V
IC131	HD110863	59	09.51	1242576	-601642	L 1	17558 L	00617	FO	90031907	074544	000200		501 V
LE066	NGC 4697	81	11.9	1246006	-053138	L 1	17401 L	213	SO	90022012	121600	036000		309 G C=190, B=135
LA061	HD111604	30	06.35	1247483	+374719	L 3	38239 S	09944	FO	90022406	063803	000300		500 V
LA061	HD111604	30	06.35	1247483	+374719	L 3	38239 L	09944	FO	90022406	060831	000300		700 V
LA061	HD 111893	31	06.78	1249583	+162331	L 3	38244 L	06891	FO	90022412	124038	000400		600 V EREAD
LA032	A35	70	10.28	1250529	-223606	L 3	37913 L	00308	FO	89122816	163152	001800		500 V EREAD
LA032	A35	70	10.26	1250529	-223606	L 3	37922 L	00315	FO	89123014	145751	001800		500 V
LA032	HD112313	70	09.56	1253080	+260942	L 1	17022 L	00588	FO	89122814	141526	001800		671 V EREAD
LA032	HD112313	70	09.54	1253080	+260942	L 3	37912 L	00596	FO	89122814	144735	001500		500 V EREAD
LA032	HD112313	70	09.54	1253080	+260942	L 3	37912 S	00596	FO	89122815	151517	002000		400 V EREAD
LA032	HD112313	70	09.52	1253080	+260942	L 1	17023 L	00611	FO	89122815	154840	000800		451 V
LA032	HD 112313	70	09.56	1253080	+260942	L 1	17042 L	00588	FO	89123015	155538	001200		561 V
LA032	HD112313	70	09.54	1253080	+260942	L 3	37923 L	00599	FO	89123016	162602	001500		500 V
LA003	HD112313	70	09.48	1253080	+260942	L 1	17063 L	00630	FO	90010114	140204	001000		452 V
LA003	HD112313	70	09.49	1253080	+260942	L 3	37932 L	00626	FO	90010114	143556	001500		500 V
LA003	HD112313	70	09.48	1253080	+260942	L 1	17063 S	00630	FO	90010114	142000	001000		342 V
LA003	HD112313	70	09.44	1253080	+260942	L 3	37936 L	00654	FO	90010207	075347	001500		500 V
LA003	HD112313	70	09.44	1253080	+260942	L 1	17070 S	00657	FO	90010208	084510	001000		332 V
LA003	HD112313	70	09.44	1253080	+260942	L 1	17070 L	00657	FO	90010208	082356	001200		562 V
LA003	HD112313	70	09.42	1253080	+260942	H 3	37937 L	00665	FO	90010209	091012	033800		342 V
USSES	HD 113139	41	4.9	1258354	+563808	H 3	37723 L	19908	FO	89120304	041100	008500		X04 G C=1.5X, B=57
FELIS	HD 113848	41	5.99	1303550	+212517	L 3	38619 L	10624	FO	90041623	230700	008500		?31 G E=59, C=18X, B=28
RSLEB	HD 114630	44	6.1	1309472	-593300	L 1	17364 L	7909	FO	90021412	120300	000100		X02 G C=1.5X, B=37
RSLEB	HD 114630	44	6.1	1309472	-593300	L 3	38191 L	8019	FO	90021412	121600	003500		301 G C=112, B=21
LA061	HD 114879	30	09.41	1310358	+343247	L 3	38243 L	00670	FO	90022410	104732	002500		500 V
LAL50	HZ43	37	13.10	1314000	+292150	L 1	16914 L	00100	SO	89121210	100904	000630		501 V
LAL50	HZ43	37	13.12	1314000	+292150	L 3	37802 L	00098	SO	89121210	102342	000510		500 V
LIT07	V803 CEN	66	13.97	1320499	-412851	L 3	38268 L	00046	SO	90022806	064714	002500		300 V
LIT07	V803 CEN	66	13.97	1320499	-412851	L 1	17436 L	00046	SO	90022807	071812	004000		500 V

FRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mmmsst	ECC	Comment
LI007	V803 CEN	66	13.97	1320499	-412851	L 3	38269 L	00046	SD	90022808	080644	009000	500	V
LI007	V803 CEN	66	14.02	1320499	-412851	L 1	17437 L	00044	SD	90022809	094558	004000	501	V
LI007	V803 CEN	66	14.02	1320499	-412851	L 3	38270 L	00044	SD	90022810	103221	009800	500	V
LQ006	NGC5128	86	99.99	1323083	-424128	L 3	38535 L	00000	EO	90040602	021029	040000	101	V SWIA 8 AFMIN FROM N
WNFC	HD 117688	11	10.9	1330071	-620336	L 1	17624 L	226	FO	90032702	024600	000500	442	G E=180,G=150,B=35
OD65Y	NGC 5252	84	14.3	1335470	+044815	L 3	37905 L		EO	89122617	175900	039000	04	G B=58
OD65Y	SKY BKGD	07	14.3	1335470	+044815	L 1	17012 L			89122621	211600	006200	03	G B=41
IA001	ABELL 36	70	11.87	1337578	-193733	H 3	38132 L	00298	SD	90020405	051202	011500	501	V
IA071	M3-I-III-87	19	18.00	1339428	+283831	L 3	38290 L	00000	EO	90030304	042847	024000	401	V
IA071	M3-I-III-87	19	18.00	1339428	+283831	L 1	17460 L	00000	EO	90030308	083306	013400	301	V
IA071	M3 I-V-37	19	18.10	1339474	+283411	L 3	38296 L	00000	EO	90030404	044150	014000	301	V
IA071	M3 I-V-37	19	18.10	1339475	+283411	L 1	17465 L	00000	EO	90030407	070710	014000	302	V
IA071	M3 I-II-57	19	15.00	1339586	+284107	L 3	38297 L	00000	EO	90030409	093854	003500	401	V
IA071	M3 I-II-57	19	15.00	1339586	+284107	L 1	17466 L	00000	EO	90030410	101828	003300	301	V HEAD
RSLEB	HD 119285	46	7.8	1340345	-610655	L 3	38187 L	2443	FO	90021319	194600	006000	233	G E=126,G=60,B=44
RSLEB	HD 119285	46	7.8	1340345	-610655	L 1	17358 L	2426	FO	90021320	205200	000500	3x2	G E=1.5X,G=104,B=32
RSLEB	HD 119285	46	7.8	1340345	-610655	H 1	17359 L	2434	FO	90021323	231300	015000	3x4	G E=2X,G=115,B=51
PHCAL	EIA UMA	21	1.84	1345342	+493343	H 1	17120 L	3921	FU	90011003	035100	000005	502	G G=210,B=40
PHCAL	EIA UMA	21	1.84	1345342	+493343	H 3	37983 L	3935	FU	90011003	035600	000006	401	G G=165,B=30
PHCAL	HD 120315	21	1.8	1345343	+493344	L 1	16957 L	3986	FU	89122005	054900	000005	503	G G=204,B=42
PHCAL	HD 120315	21	1.8	1345343	+493344	H 3	37853 L	3965	FU	89122005	055400	000006	402	G G=178,B=32
PHCAL	HD 120315	21	1.8	1345343	+493344	L 1	17130 L	3956	FU	90011105	055000	000000	502	G G=190,B=35
PHCAL	HD 120315	21	1.8	1345343	+493344	L 3	37986 L	4380	FU	90011106	060800	000000	500	G G=200,B=18
PHCAL	HD 120315	21	1.8	1345343	+493344	H 3	38147 L	4340	FU	90020601	014600	000006	402	G G=180,B=34
PHCAL	HD 120315	21	1.8	1345343	+493344	H 1	17302 L	4293	FO	90020601	015100	000005	503	G G=217,B=41
PHCAL	HD 120315	21	1.8	1345343	+493344	H 3	38332 L	4272	FU	90031101	011600	000006	402	G G=168,B=32
PHCAL	HD 120315	21	1.8	1345343	+493344	H 1	17514 L	4278	FU	90031101	012100	000005	503	G G=214,B=42
PHCAL	HD 120315	21	1.8	1345343	+493344	H 3	38595 L	4407	FU	90041311	114000	000006	402	G G=160,B=32
PHCAL	HD 120315	21	1.8	1345343	+493344	H 1	17736 L	4467	FU	90041311	114500	000005	503	G G=193,B=42
PHCAL	HD 120315	21	1.8	1345343	+493344	H 2	18433 L	4336	FU	90041911	114500	000008	502	G G=203,B=33
PHCAL	HD 120315	21	1.84	1345343	+493344	H 3	38723 L	4228	FU	90050318	183500	000006	402	G G=163,B=35
PHCAL	HD 120315	21	1.84	1345343	+493344	H 1	17851 L	4231	FU	90050318	184100	000005	403	G G=190,B=41
PHCAL	HD 120315	21	1.8	1345343	+493344	H 2	18453 L	4294	FU	90051418	183900	000008		G
PHCAL	HD 120315	21	1.8	1345343	+493344	H 1	17950 L	4316	FU	90052017	175600	000005	503	G G=220,B=41
PHCAL	HD 120315	21	1.8	1345343	+493344	H 3	38841 L	4369	FU	90052018	180200	000006	402	G G=181,B=33
IC103	HD 120539	47	05.44	1347209	+213042	L 3	38771 L	19641	FO	90051100	000304	020000	331	V
PHCAL	HD 121263	20	2.5	1352245	-470235	H 3	38013 L	2365	FU	90011404	043700	000008	502	G G=210,B=38
PHCAL	HD 121263	20	2.5	1352245	-470235	H 1	17152 L	2445	FU	90011404	044300	000006	503	G G=210,B=45
PHCAL	HD 121263	20	2.5	1352245	-470235	L 1	17153 L	2424	FU	90011405	055500	000000	502	G G=190,B=35
PHCAL	HD 121263	20	2.5	1352245	-470235	L 3	38014 L		FU	90011406	061900	000000	X00	G G=1.5X,B=18
OK70K	HD 121800	20	9.1	1353544	+662139	H 3	38430 L	810	FO	90032417	171200	009800	404	G G=198,B=54
IA148	HD121968	20	10.68	1356158	-024020	L 3	38118 L	00216	FO	90020304	045230	000254	600	V
IA148	HD121968	20	10.69	1356158	-024020	L 3	38119 L	00215	FO	90020305	053346	000254	600	V
IA148	HD121968	20	10.69	1356158	-024020	L 3	38120 L	00215	FO	90020306	060816	000254	600	V
IA148	HD121968	20	10.71	1356158	-024020	L 3	38121 L	00211	FO	90020306	064346	000254	600	V
IA148	HD121968	20	10.71	1356158	-024020	L 3	38122 L	00211	FO	90020307	071746	000254	600	V
IA148	HD121968	20	10.71	1356158	-024020	L 3	38123 L	00210	FO	90020307	075927	000254	600	V
IA148	HD121968	20	10.69	1356158	-024020	L 3	38124 L	00214	FO	90020308	083824	000254	600	V
IA148	HD121968	20	10.68	1356158	-024020	L 3	38125 L	00216	FO	90020309	091425	000254	600	V
IA148	HD121968	20	10.70	1356158	-024020	L 3	38126 L	00213	FO	90020309	094830	000254	600	V

FRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mmmsst	ECC	Comment
IA148	HD121968	20	10.69	1356158	-024020	L 3	38127 L	00215	FO	90020310	102506	000254	600	V
USSES	HD 122879	23	6.4	1402524	-592838	H 1	17774 L	7767	FO	90042020	201800	000600	503	G C=192,B=41
USSES	HD 122879	23	6.4	1402525	-592839	H 1	17901 L	7233	FO	90051320	205400	000700	405	G C=208,B=62
GHLID	HD 123884	20	9.4	1407485	-174520	H 3	38071 L	597	FO	90012419	195500	016000	303	G C=90,B=42
LC103	HD124547	47	05.40	1409006	+774658	L 3	38772 L	20142	FO	90051104	043329	013500	800	V SAT 1800
WNFC	WR 61	11	12.5	1409112	-651247	L 1	17623 L	179	SO	90032701	013200	002000		G
HCLSP	HD 124147	39	5.6	1409536	-532555	L 3	38156 L		FO	90020701	010600	000250	500	G C=180,B=18
HCLSP	HD 124147	39	5.6	1409536	-532555	L 1	17309 L	14806	FO	90020701	011300	000120	502	G C=215,B=36
HCLSP	HD 124147	39	5.6	1409536	-532555	L 3	38157 L	15035	FO	90020701	015300	000320	500	G C=205,B=19
IA002	WD1413+321	17	16.40	1413259	+231040	L 3	38691 L	00000	EO	90042802	021524	015000	300	V
IE163	MRK 673	84	15.00	1415061	+270518	L 1	17575 L	00000	EO	90032204	041758	039000	302	V DOUBLE SOURCE
MQ100	NGC5548	84	13.94	1415432	+252200	L 3	38865 L	00047	SO	90052504	041632	008000	341	V
MQ100	NGC5548	84	13.94	1415432	+252200	L 1	17986 L	00047	SO	90052505	054859	005800	533	V PHEAD
OK71K	NEC 5548	84	13.5	1415434	+252200	L 3	38490 L	42	SO	90040122	221600	009000	341	G F=138,C=60,B=27
OK71K	NEC 5548	84	13.5	1415434	+252200	L 1	17683 L	42	SO	90040123	235300	005500	342	G F=146,C=92,B=40
AGMW	NEC 5548	84	13.5	1415434	+252200	L 3	38534 L			90040522	222500	008000		G
AGMW	NEC 5548	84	13.5	1415434	+252200	L 1	17701 L			90040523	235600	005000		G
OD76Y	NEC 5548	84	13.5	1415434	+252200	L 1	17948 L	52	SO	90052011	113300	006200	343	G F=179,C=120,B=41
OD76Y	NEC 5548	84	13.5	1415435	+252201	L 3	38839 L	50	SO	90052010	100300	008000		G
PHCAL	NULL 99			1415435	+252201	L 1	17947			90052010	104900	000000	02	G B=35
OD76Y	NEC 5548	84	13.5	1415435	+252201	L 1	17990 L	49	SO	90052519	195700	006000	354	G F=238,C=153,B=60
OD76Y	NEC 5548	84	13.5	1415435	+252201	L 3	38870 L	50	SO	90052521	210600	008000	352	G F=192,C=70,B=33
OD76Y	NEC 5548	84	13.5	1415435	+252201	L 9	02327			90052522	223300	002000		G
OD76Y	NEC 5548	84	13.5	1415435	+252201	L 3	38881 L	51	SO	90052719	194100	007500	341	G F=156,C=72,B=26
OD76Y	NEC 5548	84	13.5	1415435	+252201	L 1	18006 L	51	SO	90052721	210300	005500	343	G F=174,C=120,B=41
OD76Y	NEC 5548	84	13.5	1415435	+252201	L 3	38882 L	50	SO	90052722	220500	004500	341	G F=137,C=47,B=21
OD76Y	NEC 5548	84	13.5	1415435	+252201	L 3	38903 L	49	SO	90052907	075900	008000	352	G F=212,C=83,B=35
OD76Y	NEC 5548	84	13.5	1415435	+252201	L 1	18009 L	52	SO	90052909	093000	006000	353	G F=214,C=140,B=50
LC103	HD125351	47	05.41	1415530	+354422	L 3	38775 L	19982	FO	90051205	052023	008700	230	V
IGLSD	HD 125442	40	4.8	1417309	-445723	L 3	38359 L	25930	FO	90031400	002900	003000	320	G F=38,C=48X,B=18
IGLSD	HD 125442	40	4.8	1417309	-445723	H 1	17527 L	25916	FO	90031401	010600	001200	503	G C=242,B=41
OK70K	HD 126138	21	7.5	1420184	+534453	H 3	38429 L	3053	FO	90032415	155900	003000	403	G C=183,B=41
LI062	N GEN 86	55	14.00	1432135	-572431	L 3	38679 L	00000	EO	90042606	064155	008000	130	V INCORRECT COORDS?
LI062	N GEN 86	55	14.00	1432135	-572431	L 1	17809 L	00000	EO	90042608	080748	003000	111	V INCORRECT COORDS?
LI062	N GEN 86	55	13.87	1432135	-572431	L 1	17815 L	00050	SO	90042706	063201	003500	300	V
LI062	N GEN 86	55	13.87	1432135	-572431	L 3	38684 L	00050	SO	90042707	071129	009500	200	V
IED91	NEC 5670	81	13.10	1432194	-454456	L 1	17216 L	00100	SO	90012309	092417	032500	306	V TRACK MODE: FESCOMP
IED91	NGC5670	81	13.01	1432194	-454456	L 3	38069 L	00108	SO	90012408	080449	040300	113	V
CSLTA	HD 128621	46	1.3	1436112	-603749	L 3	38115 L		EO	90020221	214800	004000	532	G F=108,C=219,B=34
CSLTA	HD 128620	44	0.1	1436112	-603749	L 3	38116 L		EO	90020223	231900	002000	X20	G F=10X,C=5X,B=20
CSLTA	HD 128620	44	0.1	1436112	-603749	L 3	38116 L		EO	90020223	231900	002000	X20	G F=10X,C=5X,B=20
CSLTA	HD 128620	44	0.1	1436112	-603749	L 3	38116 L		EO	90020223	231900	002000	X20	G F=10X,C=5X,B=20
PHCAL	HD 128801	28	8.8	1436203	+080739	L 1	17129 L	887	FO	90011104	041100	000140	502	G C=190,B=35
PHCAL	HD 128801	28	8.8	1436203	+080739	L 3	37985 L	830	FO	90011104	044800	000530	500	G C=210,B=18
HMIDL	HD 129174	27	4.9	1438225	+163754	L 3	38391 L	389	FU	90031923	232200	000005	400	G C=165,B=20
HMIDL	HD 129174	27	4.9	1438225	+163754	L 1	17562 L			90031923	234600	000002		G
HMIDL	HD 129174	27	4.9	1438225	+163754	L 1	17562 L	387	FU	90031923	234600	000002	502	G C=219,B=37
IA061	HD 130158	30	06.07	1444277	-252456	L 3	38241 S	12402	FO	90022409	091105	000200	800	V
IA061	HD 130158	30	06.07	1444277	-252456	L 3	38241 L	12402	FO	90022409	091843	000200	900	V
IA061	HD130158	30	06.06	1444277	-252456	L 3	38242 S	12518	FO	90022409	095401	000030	500	V PHEAD



FPO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	numinst	ECC	Comment
IA06L	HD130158	30	06.06	1444277	-252456	L 3	38242 L	12518	FO	90022409	095935	000030	700	V PHEAD
USBS	ED +26 2606	43	9.0	1446501	+255450	L 1	18004 L	371	FO	90052717	171900	000720	502	G C=210,B=38
CSLTA	HD 131156	44	4.6	1449048	+191827	L 3	38117 L	372	FO	90020300	003200	010500	557	G E=253,C=247,B=61
PHCAL	WAVCAL	98		1459541	-843544	L 1	17438 S			90022821	210100	000025	78	G E=10X,B=100
PHCAL	WAVCAL	98		1459541	-843544	H 1	17439 S			90022821	213300	000025	79	G E=50X,B=102
PHCAL	WAVCAL	98		1459541	-843544	H 1	17439 L			90022821	213500	000016	79	G E=50X,B=102
PHCAL	WAVCAL	98		1459541	-843544	L 3	38272 S			90022822	224100	000005	78	G E=10X,B=100
PHCAL	WAVCAL	98		1459541	-843544	L 3	38272 L			90022822	224300	000002	78	G E=10X,B=100
PHCAL	WAVCAL	98		1459541	-843544	H 3	38273 S			90022823	230900	000005	79	G E=60X,B=115
PHCAL	WAVCAL	98		1459541	-843544	H 3	38273 L			90022823	231100	000200	79	G E=60X,B=115
PHCAL	WAVCAL	98		1459541	-843544	L 2	18405 S			90022823	234700	000010	76	G E=10X,B=80
PHCAL	WAVCAL	98		1459541	-843544	L 2	18405 L			90022823	234900	000001	76	G E=10X,B=80
PHCAL	WAVCAL	98		1459541	-843544	H 2	18406 S			90030100	001800	000010	79	G E=50X,B=120
PHCAL	WAVCAL	98		1459541	-843544	H 2	18406 L			90030100	002000	000022	79	G E=50X,B=120
PHCAL	TFLOOD	99		1459541	-843544	H 1	17440 L			90030102	022100	000025	07	G B=90
PHCAL	TFLOOD	99		1459541	-843544	H 3	38274 L			90030102	022400	000005	07	G B=90
NPLRD	HE2- 114	71		1500111	-604138	L 1	17433 L		FO	90022721	215500	006000	06	G B=78
GHLID	ED +23 2769	20	10.4	1503010	+230913	H 3	38070 L	239	FO	90012416	160600	018000	304	G C=147,B=51
IM009	PGL510+635	38	14.34	1510148	+633253	L 3	38732 L	00033	SO	90050523	235340	001500	200	V
IM009	PGL510+635	38	14.24	1510148	+633253	E 9	02305 2	00036	SO	90050523	233000	016000		V FES IMAGE IWP17862
CD59Y	EG 1510+635	16	14.0	1510154	+633301	H 1	17862 L	36	SO	90050600	002400	042000	309	G C=180,B=121
CD59Y	EG 1510+635	16	14.0	1510154	+633301	H 1	17862			90050607	074500	042000		G
IM009	PGL519+646	28	12.77	1519416	+640216	L 3	38749 L	00134	SO	90050823	235709	001500	700	V SAT 1500
IM009	PGL519+646	28	12.75	1519416	+640216	H 1	17878 L	00137	SO	90050900	002410	038300	404	V
PHCAL	HD 137389	36	5.9	1521410	+621328	L 1	16991 L	9264	FO	89122406	065500	000009	502	G C=202,B=33
PHCAL	HD 137389	36	5.9	1521410	+621328	H 3	37888 L	9331	FO	89122407	070700	002055	402	G C=182,B=38
PHCAL	HD 137389	36	5.9	1521410	+621328	H 1	16992 L	9441	FO	89122407	075200	001300	503	G C=214,B=44
PHCAL	HD 137389	36	5.9	1521410	+621328	L 3	37889 L	9168	FO	89122408	082400	000027	500	G C=201,B=20
PHCAL	HD 137389	36	5.9	1521410	+621328	L 3	38904 L	11704	FO	90052911	112300	000140	500	G C=215,B=18
PHCAL	HD 137389	36	5.9	1521410	+621328	L 1	18010 L	11661	FO	90052911	113700	000033	402	G C=170,B=33
IGLSD	HD 137391	40	4.3	1522360	+373309	L 3	38358 L	402	FU	90031323	232500	002200	330	G E=46,C=40X,B=18
CEIDB	HD 139160	22	6.2	1534282	-260657	L 3	38557 L	9182	FO	90040917	175700	000020	500	G C=246,B=18
CEIDB	HD 139160	22	6.2	1534282	-260657	L 1	17716 L	9142	FO	90040918	180400	000008	X02	G C=1.5X,B=35
CEIDB	HD 139486	22	7.6	1536108	-193354	L 3	38559 L	2752	FO	90040920	204900	000140	500	G C=175,B=18
CEIDB	HD 139486	22	7.6	1536108	-193354	L 1	17718 L	2759	FO	90040920	205500	000045	502	G C=228,B=35
LS082	MOON	02	99.99	1537447	-281147	H 1	17734 S	00000	EO	90041302	021347	001000	731	V 2900 SAT
LS082	MOON	02	99.99	1537447	-281147	H 3	38593 S	00000	EO	90041302	021135	027500	432	V EXPOSURE IN FOUR SEG
USBS	HD 140283	43	7.20	1540198	-104628	H 1	17567 L	3649	FO	90032023	234800	008000	403	G C=200,B=50
USBS	HD 141003	30	3.67	1543526	+153436	H 3	38309 L	749	FU	90030600	003800	001600	X02	G C=3X,B=35
IMLFF	HD 141003	30	3.7	1543527	+153437	H 1	17605 L	740	FU	90032523	232700	000130	503	G C=220,B=45
IMLFF	HD 141003	30	3.7	1543527	+153437	H 1	17606 L	739	FU	90032600	002200	000300	X04	G C=2X,B=58
IMLFF	HD 141003	30	3.7	1543527	+153437	H 1	17607 L	740	FU	90032601	012000	000130	503	G C=210,B=45
IMLFF	HD 141003	30	3.7	1543527	+153437	H 1	17608 L	734	FU	90032602	021200	000300	X04	G C=2X,B=60
USBS	HD 141318	23	5.70	1547129	-545417	H 1	17775 L	13786	FO	90042021	213700	000300	403	G C=184,B=41
USBS	HD 141318	23	5.7	1547129	-545417	H 1	17933 L	14259	FO	90051813	132800	000345	403	G C=180,B=44
HMDL	HD 141556	27	3.9	1547465	-332835	L 3	38389 L	604	FU	90031919	194200	000012	500	G C=193,B=20
HMDL	HD 141556	27	3.9	1547465	-332835	L 1	17560 L			90031919	195900	000006		G
HMDL	HD 141556	27	3.9	1547465	-332835	L 1	17560 L	592	FU	90031919	195900	000006	502	G C=227,B=38
HMDL	HD 141556	27	3.9	1547465	-332835	L 1	17560 L	592	FU	90031920	200200	000006	302	G C=58,B=34
HMDL	HD 141556	27	3.9	1547465	-332835	L 3	38392 L	590	FU	90032001	010500	000013	501	G C=211,B=30

FRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	numscstt	ECC	Comment
HMIDL HD	141556	27	3.9	1547465	-332835	L 1	17563 L	589	FU	90032001	011600	000006	502	G C=191, B=37
LA06L HD141851	30	05.57	1548391	-025626	L 3	38237 S	17898	FO	90022404	044534	000100	200	V	
LA06L HD141851	30	05.57	1548391	-025626	L 3	38237 L	17898	FO	90022404	045101	000100	700	V	
LA06L HD 141851	30	05.53	1548391	-025626	L 3	38238 L	18456	FO	90022405	052325	000020	400	V	
PHCAL ED	+33 2642	20	10.8	155001	+330528	H 1	17524 L	160	FO	90031311	114300	024000	405	G C=215, B=65
PHCAL ED	+33 2642	20	10.8	1550019	+330528	H 1	17075 L	128	FO	90010304	041600	000310	502	G C=218, B=37
PHCAL ED	+33 2642	20	10.8	1550019	+330528	L 3	37941 L	129	FO	90010304	042400	000400	500	G C=179, B=18
PHCAL ED	+33 2642	20	10.8	1550019	+330528	L 2	18388 L	133	FO	90010704	041100	000420	401	G C=174, B=26
PHCAL ED	+33 2642	20	10.8	1550019	+330528	H 3	37966 L	128	FO	90010716	162700	034800	406	G C=220, B=75
PHCAL ED	+33 2642	20	10.8	1550019	+330528	L 3	38333 L		FO	90031102	024500	000400	500	G C=172, B=18
PHCAL ED	+33 2642	20	10.8	1550019	+330528	L 1	17525 L	163	FO	90031316	162000	000310	502	G C=222, B=35
PHCAL ED	+33 2642	20	10.8	1550019	+330528	L 3	38596 L	170	FO	90041313	130200	000400	400	G C=157, B=18
PHCAL ED	+33 2642	20	10.8	1550019	+330528	L 1	17737 L	170	FO	90041313	131100	000310	502	G C=156, B=33
PHCAL ED	+33 2642	20	10.8	1550019	+330528	L 2	18434 L	165	FO	90041913	130000	000420	501	G C=185, B=24
PHCAL ED	+33 2642	20	10.8	1550019	+330528	L 3	38724 L	169	FO	90050320	200300	000400	500	G C=180, B=19
PHCAL ED	+33 2642	20	10.8	1550019	+330528	L 1	17852 L	159	FO	90050320	201200	000310	502	G C=220, B=35
PHCAL ED	+33 2642	20	10.8	1550019	+330528	L 2	18454 L	164	FO	90051419	193000	000420	501	G C=190, B=28
PHCAL ED	+33 2642	20	10.8	1550019	+330528	L 3	38840 L	183	FO	90052015	151000	000400	500	G C=183, B=18
PHCAL ED	+33 2642	20	10.8	1550019	+330528	L 1	17951 L	168	FO	90052019	193200	000310	502	G C=218, B=37
CEIDB HD	142165	22	5.4	1550543	-242308	L 3	38558 L	17852	FO	90040919	192300	000007	500	G C=241, B=17
CEIDB HD	142165	22	5.4	1550543	-242308	L 1	17717 L	17933	FO	90040919	192900	000004	X02	G C=1.5X, B=36
SMDS	MOON	02	-8.7	1551590	-210051	H 1	17740 S			90041318	183100	001000	302	G C=80, B=36
SMDS	MOON	02	-8.7	1551590	-210051	H 3	38599 L		ED	90041318	183400	004000	?8	G E=80, B=100
SMDS	MOON	02	-8.7	1551590	-210051	H 1	17741 L			90041319	195200	003000	309	G C=190, B=150
SMDS	MOON	02	-8.7	1551590	-210051	H 1	17742 L			90041322	221400	006000	303	G C=115, B=48
SMDS	MOON	02	-8.7	1551590	-210051	H 3	38600 L			90041322	221600	005500	21	G E=40, B=30
PHCAL HD	142669	20	3.86	1553474	-290410	H 1	17573 L	735	FU	90032200	002000	000026	503	G C=225, B=42
PHCAL HD	142669	20	3.86	1553475	-290411	H 3	38409 L	729	FU	90032200	001500	000030	502	G C=190, B=35
USSBS HD	142860	41	3.85	1554083	+154923	H 3	38310 L	608	FU	90030601	013900	007000	502	G C=220, B=33
HSMXB HD	142983	26	4.87	1555230	-140812	H 3	38622 L	23425	FO	90041718	181000	000440	502	G C=225, B=38
HSMXB HD	142983	26	4.87	1555230	-140812	H 1	17764 L	23703	FO	90041718	181900	000330	X03	G C=2X, B=42
CEIDB HD	142990	21	5.2	1555346	-244120	H 1	17726 L	18161		90041100	002800	000245	503	G C=200, B=44
CEIDB HD	142990	21	5.2	1555346	-244120	H 3	38568 L	18158	FO	90041100	003500	000730	X03	G C=1.5X, B=47
LI046 T CRB	57	10.14	1557239	+260338	L 1	17326 L	00351	FO	90020905	054430	002000	350	V	
LI046 T CRB	57	10.26	1557240	+260339	H 3	38170 L	00316	FO	90020906	061418	009000	450	V	
LI047 T CRB	57	10.17	1557240	+260339	L 1	18007 L	00341	FO	90052800	000720	003000	472	V	
LI047 T CRB	57	10.17	1557240	+260339	L 3	38883 L	00341	FO	90052801	010707	009000	452	V HEAD	
WNLEP HD	143414	11	10.3	1559235	-623320	L 1	17622 L	314	FO	90032700	002700	000200	452	G E=248, G=170, B=35
PNWF NGC	6058	70	13.4	1602434	+404904	H 3	38780 L			90051308	081200	038300	G	
CD75Y HD	144432	60	8.20	1603536	-273508	L 1	17585 L	1537	FO	90032322	224300	001000	X08	G C=3X, B=92
CD75Y HD	144432	60	8.20	1603536	-273508	L 3	38425 L	1577	FO	90032323	232900	003000	502	G C=210, B=35
CD75Y HD	144432	60	8.20	1603536	-273508	L 1	17586 L	1573	FO	90032400	000500	000300	502	G C=200, B=35
PHCAL HD	145454	30	5.4	1606107	+675630	L 3	37900 L	14892	FO	89122602	021500	000014	500	G C=186, B=19
PHCAL HD	145454	30	5.4	1606107	+675630	H 1	17007 L	14724	FO	89122603	030600	000700	503	G C=200, B=45
PHCAL HD	145454	30	5.4	1606107	+675630	H 3	37901 L	14700	FO	89122603	032800	001700	503	G C=220, B=50
PHCAL HD	145454	30	5.4	1606107	+675630	L 1	17008 L	14622	FO	89122604	042400	000006	502	G C=213, B=32
PHCAL HD	145454	30	5.4	1606107	+675630	L 3	38905 L	17784	FO	90052912	125800	000052	500	G C=196, B=18
CEIDB HD	145554	22	7.6	1609270	-192704	L 3	38561 L	2682	FO	90040923	233200	000320	500	G C=239, B=18
CEIDB HD	145554	22	7.6	1609270	-192704	L 1	17720 L	2689	FO	90040923	234000	000130	02	G B=37
CEIDB HD	145554	22	7.6	1609270	-192704	L 1	17720 S	2674	FO	90040923	234800	000000	402	G C=164, B=32

FRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs. date	Exptim	numres	subt	ECC	Comment
SMDS	MOON	02	-8.7	1609454	-294353	H 1	17743 L			90041409	095800	007000		X44	G B=192, G=2X, B=60
SMDS	MOON	02	-8.7	1609454	-294353	H 1	17745 L			90041415	153200	006000		209	G G=150X, B=150X
SMDS	MOON	02	-8.7	1609454	-294353	H 3	38602 L			90041415	153300	019000		X36	G B=172, G=5X, B=75
CELD	HD	145631	22	7.6	1609494	-192232	L 1 17723 L	2736	FO	90041019	193400	000120		X02	G G=1.5X, B=36
CELD	HD	145631	22	7.6	1609494	-192232	L 3 38565 L	2743	FO	90041019	194100	000440		X00	G G=1.5X, B=18
SMDS	MOON	02	-8.7	1609523	-261712	H 1	17744 L			90041413	130100	006000		X34	G B=143, G=1.5X, B=58
IMLH	HD	146010	30	6.8	1610580	+214132	H 3 38650 L	5865	FO	90042209	095700	030000		X06	G G=4X, B=78
IMLH	HD	146010	30	6.8	1610580	+214132	H 1 17789 L	5976	FO	90042215	150200	003500		402	G G=190, B=40
CELD	HD	146001	22	6.0	1611514	-252106	L 3 38567 L	10846	FO	90041023	231500	000014		500	G G=200, B=17
CELD	HD	146029	22	7.2	1611551	-221518	L 1 17725 L	3448	FO	90041022	225900	000035		502	G G=185, B=33
CELD	HD	146285	22	7.9	1613236	-245155	L 3 38566 L			90041021	211800	000320			G
CELD	HD	146285	22	7.9	1613236	-245155	L 3 38566 S	2072	FO	90041021	213000	000500		500	G G=185, B=18
CELD	HD	146285	22	7.9	1613236	-245155	L 1 17724 L			90041021	213900	000100			G
CELD	HD	146285	22	7.9	1613236	-245155	L 1 17724 S	2094	FO	90041021	214400	000240		502	G G=216, B=33
CELD	HD	147196	22	7.0	1618189	-233523	L 3 38560 L	4594	FO	90040922	221100	000150		500	G G=225, B=18
CELD	HD	147196	22	7.0	1618189	-233523	L 1 17719 L	4578	FO	90040922	221700	000040		02	G B=36
USBS	HD	147547	31	3.74	1619427	-191609	H 1 17767 L	680	FU	90041900	002600	000600		503	G G=215, B=42
WALC	HD	147419	11	11.3	1620356	-512511	L 1 17621 L	159	FO	90032622	225300	003000		554	G B=251, G=210, B=55
IGMS	HR	6134	49	1.0	1626200	-261911	L 1 17383 L	9681	FU	90021621	214100	000002		502	G G=240, B=32
IGMS	HR	6134	49	1.0	1626200	-261911	H 1 17384 L	9553	FU	90021622	221700	000235		5X3	G B=1.5X, G=235, B=44
IGMS	HR	6134	49	1.0	1626200	-261911	H 1 17385 L	9499	FU	90021622	225400	000225		5X3	G B=1.5X, G=223, B=42
IGMS	HR	6134	49	1.0	1626200	-261911	H 1 17447 L	10871	FU	90030123	234000	000235		554	G B=208, G=240, B=56
IGMS	HR	6134	49	1.0	1626200	-261911	L 1 17448 L	10362	FU	90030200	001800	000002		502	G G=215, B=35
IGMS	HR	6134	49	1.0	1626200	-261911	H 1 17449 L	10052	FU	90030200	005300	000235		553	G B=209, G=240, B=45
IGMS	HR	6134	49	1.0	1626200	-261911	L 1 17533 L	9756	FU	90031422	221100	000002		552	G B=212, G=202, B=34
IGMS	HR	6134	49	0.96	1626201	-261910	L 1 17659 L	9390	FU	90033101	010500	000002		552	G B=188, G=191, B=33
IGMS	HR	6134	49	0.96	1626201	-261910	H 1 17661 L	9385	FU	90033102	021800	000235		553	G B=194, G=220, B=42
IGMS	HR	6134	49	1.0	1626202	-261911	H 1 17532 L	9849	FU	90031421	212500	000235		553	G B=198, G=242, B=46
IGMS	HR	6134	49	0.96	1626202	-261911	H 1 17660 L	9356	FU	90033101	014100	000235		553	G B=203, G=237, B=43
CELD	HD	148579	22	7.3	1626566	-250221	L 3 38564 L	3312	FO	90041017	175700	000410		X00	G G=1.5X, B=17
CELD	HD	148579	22	7.3	1626566	-250221	L 1 17722 L	3271	FO	90041018	180600	000100		502	G G=242, B=35
CELD	HD	148579	22	7.3	1626566	-250221	L 1 17722 S	3285	FO	90041018	181200	000400		X02	G G=2X, B=35
PHAL	HD	149438	20	2.8	1632459	-280651	H 3 38467 L	1958	FU	90032919	194200	000006		402	G G=185, B=36
PHAL	HD	149438	20	2.8	1632459	-280651	H 1 17646 L	1946	FU	90032919	194700	000006		503	G G=218, B=42
PHAL	HD	149438	20	2.8	1632459	-280651	H 3 38597 L	2092	FU	90041314	142500	000006		402	G G=176, B=35
PHAL	HD	149438	20	2.8	1632459	-280651	H 1 17738 L	2094	FU	90041314	143000	000006		503	G G=195, B=42
PHAL	HD	149438	20	2.8	1632459	-280651	H 2 18435 L	2041	FU	90041914	140800	000008		502	G G=192, B=33
PHAL	HD	149757	20	2.54	1634240	-102802	H 3 38410 L	2244	FU	90032201	013100	000018		402	G G=180, B=38
PHAL	HD	149757	20	2.54	1634240	-102802	H 1 17574 L	2240	FU	90032201	013600	000010		502	G G=205, B=40
LQ115	FG	1634+70	85	15.00	1634516	+703737	L 1 17311 L	00000	EO	90020708	085845	012000		561	V
ZWAF	CN	1-2	57	12.5	1640002	-623139	H 1 17871 L	283	SO	90050718	185300	006000		X8	G B=1.5X, B=100
ZWAF	CN	1-2	57	12.5	1640003	-623140	L 3 38740 L	275	SO	90050716	161600	002000		2X0	G B=1.5X, G=38, B=18
ZWAF	CN	1-2	57	12.5	1640003	-623140	L 1 17870 L	275	SO	90050716	164400	002000		3X3	G B=2X, G=135, B=42
ZWAF	CN	1-2	57	12.5	1640003	-623140	H 3 38741 L	280	SO	90050717	171600	009000		04	G B=60
ZWAF	CN	1-2	57	12.5	1640003	-623140	H 3 38742 L	288	SO	90050719	195900	017000		X5	G B=1.5X, B=65
IM09	FG	1648+536	28	14.27	1648514	+533646	E 9 02306 2	00035	SO	90050623	235300	016000			V FES IMAGE IWP17868
IM09	FG	1648+536	28	14.27	1648514	+533646	H 1 17868 L	00035	SO	90050700	004702	036000		303	V
IM09	FG	1648+536	28	14.27	1648514	+533646	L 3 38738 L	00035	SO	90050700	002401	001500		400	V
IM09	FG	1648+536	28	14.20	1648514	+533646	E 9 02309 2	00037	SO	90050723	234900	016000			V FES IMAGE IWP17872
CD59Y	FG	1648+536	28	14.1	1648523	+533636	H 1 17872 L	37	SO	90050800	001600	044000		309	G G=210, B=122

FRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mmunsstt	ECC	Comment
USSES HD	152424	13	6.5	1651318	-420039	H 1	17776 L	8241	FO	90042022	224600	001600	503	G G=219,B=41
SMDS	MOON	02	-8.7	1653599	-225840	H 3	38603 L			90041419	192500	001000	332	G E=63,G=130,B=38
IMLS HD	153919	15	6.51	1700319	-374627	L 1	17856 L			90050518	184100	000010		G
IM09	EGL705+537	38	13.44	1705099	+533911	L 3	38783 L	00074	SO	90051400	002954	001500	300	V
IM09	EGL705+537	38	13.33	1705099	+533911	L 1	17903 L	00081	SO	90051401	010558	034200	302	V
LC103	HD155410	47	05.58	1707560	+405019	L 3	38774 L	17842	FO	90051123	235107	024000	111	V
PHCAL	HD155763	25	03.48	1708380	+654634	L 1	17105 L	01153	FU	90010810	104634	000000	502	V 1 OBC TICK
PHCAL	HD155763	25	03.47	1708380	+654634	L 1	17106 L	01163	FU	90010811	111823	000000	502	V 1 OBC TICK
PHCAL	HD155763	25	03.43	1708380	+654634	L 1	17107 L	01197	FU	90010812	120004	000000	502	V 1 OBC TICK
PHCAL	HD155763	25	03.43	1708380	+654634	L 1	17108 L	01200	FU	90010812	123039	000000	502	V 1 OBC TICK
PHCAL	HD155763	25	03.48	1708380	+654634	L 1	17109 L	01143	FU	90010813	130422	000000	502	V 1 OBC TICK
PHCAL	HD155763	25	03.48	1708380	+654634	L 1	17110 L	01147	FU	90010813	133506	000000	502	V 1 OBC TICK
PHCAL	HD155763	25	03.49	1708380	+654634	L 1	17112 L	01141	FU	90010814	144231	000000	502	V 1 OBC TICK
PHCAL	HD155763	25	03.47	1708380	+654634	L 1	17111 L	01158	FU	90010814	140543	000000	502	V 1 OBC TICK
PHCAL	HD155763	25	03.37	1708381	+654634	L 1	17092 L	01270	FU	90010613	132601	000000	501	V 1 OBC TICK
PHCAL	HD155763	24	03.45	1708381	+654634	L 1	17275 L	01176	FU	90020204	045555	000000	500	V 1 OBC UNIT
PHCAL	HD155763	24	03.46	1708381	+654634	L 1	17276 L	01166	FU	90020205	054052	000000	500	V 1 OBC UNIT
PHCAL	HD155763	24	03.46	1708381	+654634	L 1	17277 L	01165	FU	90020206	061227	000000	500	V 1 OBC UNIT
PHCAL	HD155763	24	03.46	1708381	+654634	L 1	17278 L	01166	FU	90020207	070010	000000	500	V 1 OBC UNIT
PHCAL	HD155763	24	03.46	1708381	+654634	L 1	17279 L	01165	FU	90020207	073239	000000	500	V 1 OBC UNIT
PHCAL	HD155763	24	03.47	1708381	+654634	H 1	17280 L	01159	FU	90020208	082220	000025	500	V
PHCAL	HD155763	24	03.47	1708381	+654634	H 1	17281 L	01157	FU	90020208	085539	000025	500	V
PHCAL	HD155763	24	03.47	1708381	+654634	H 1	17282 L	01158	FU	90020209	093513	000050	700	V
PHCAL	HD155763	24	03.48	1708381	+654634	L 1	17284 L	01149	FU	90020210	104219	000000	500	V 1 OBC UNIT
PHCAL	HD155763	24	03.47	1708381	+654634	H 1	17283 L	01161	FU	90020210	101006	000050	700	V
PHCAL	HD 155763	25	03.35	1708381	+654634	L 1	17344 L	01291	FU	90021205	052242	000000	501	V 1 OBC UNIT
PHCAL	HD155763	25	03.46	1708381	+654634	L 1	17345 L	01164	FU	90021206	060814	000000	501	V 1 OBC UNIT
PHCAL	HD155763	25	03.38	1708381	+654634	L 1	17346 L	01250	FU	90021206	064939	000000	501	V 1 OBC UNIT
PHCAL	HD155763	25	03.48	1708381	+654634	L 1	17347 L	01143	FU	90021207	072734	000000	501	V 1 OBC UNIT
PHCAL	HD155763	25	03.53	1708381	+654634	L 1	17348 L	01097	FU	90021208	080113	000000	501	V 1 OBC UNIT
LI062	N OPH 88	55	15.00	1708508	-293358	L 3	38678 L	00000	EO	90042602	022209	012000	130	V INCORRECT COORDS?
LI062	N OPH 88	55	15.00	1708508	-293358	L 1	17808 L	00000	EO	90042604	042824	005000	141	V INCORRECT COORDS?
ZELJE	HD 155341	49	6.1	1709595	-564950	L 3	38540 L	10218	FO	90040623	234700	002000	301	G G=127,B=28
ZELJE	HD 155341	49	6.1	1709595	-564950	L 1	17707 L	10587	FO	90040700	002300	000400	452	G E=232,G=148,B=34
ZELJE	HD 155341	49	6.1	1709595	-564950	L 1	17867 L			90050621	215800	000400		G
ZELJE	HD 155341	49	6.1	1709595	-564950	L 3	38737 L			90050622	221000	002000		G
IGMS	HR 6406	49	3.5	1712220	+142650	H 1	17381 L	2598	FU	90021620	200800	000700	352	G E=210,G=75,B=32
IGMS	HR 6406	49	3.5	1712220	+142650	L 1	17382 L	2638	FU	90021620	205200	000035	552	G E=251,G=184,B=32
IGMS	HR 6406	49	3.5	1712220	+142650	H 1	17450 L	2463	FU	90030202	020300	000720	352	G E=218,G=70,B=35
IGMS	HR 6406	49	3.5	1712220	+142650	L 1	17451 L	2431	FU	90030202	024500	000030	452	G E=234,G=150,B=35
IGMS	HR 6406	49	3.5	1712220	+142650	H 1	17530 L	2359	FU	90031419	194600	000720	352	G E=210,G=80,B=38
IGMS	HR 6406	49	3.5	1712220	+142650	L 1	17531 L	2542	FU	90031420	202800	000030	5X2	G E=1.5X,G=197,B=34
IGMS	HR 6406	49	3.48	1712220	+142650	H 1	17657 L	2118	FU	90033023	232200	000720	352	G E=205,G=88,B=35
IGMS	HR 6406	49	3.48	1712220	+142650	L 1	17658 L	2108	FU	90033100	001600	000030	452	G E=236,G=172,B=32
IGMS	HR 6406	49	3.5	1712220	+142650	H 1	17857 L			90050519	195900	000720		G
IGMS	HR 6406	49	3.5	1712220	+142650	L 1	17858 L			90050520	204300	000030		G
IGMS	HR 6406	49	3.5	1712220	+142650	H 1	17859 L			90050521	212300	000720		G
IGMS	HR 6406	49	3.5	1712220	+142650	L 1	17860 L			90050522	220700	000030		G
IGMS	HR 6406	49	3.5	1712220	+142650	H 1	17861 L			90050522	224000	000720		G
USSES	HD 156283	47	3.2	1713182	+365151	H 1	17589 L	1092	FU	90032410	102600	001400	332	G E=120,G=76,B=37



PRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	num	inst	ECC	Comment
USBS HD	156283	47	3.15	1713182	-365151	H 1	17766 L	1125	FU	90041823	230300	002800		342 G	E=171,G=87,B=35
SMDS	MOON	02	-8.7	1718173	-255554	H 3	38604 L			90041422	222300	006000		01 G	B=30
LS082 MOON		02	99.99	1718498	-323520	L 1	17749 L	00000	EO	90041505	055624	000010		800 V	10X SAT
LS082 MOON		02	99.99	1718498	-323520	H 1	17751 S	00000	EO	90041507	073119	005800		772 V	2650+ SATURATED
GCLFR NGC	6356	83	8.2	1720400	-174601	L 3	38246 L	366	SD	90022417	172700	020000		02 G	B=40
ELLICU X	1722+119	87	16.0	1722444	+115452	L 1	17536 L		EO	90031511	115600	018000		305 G	G=115,B=61
ELLICU X	1722+119	87	16.0	1722444	+115452	L 3	38363 L		EO	90031515	150400	031500		205 G	G=82,B=62
ELLICU X	1722+119	87	16.0	1722444	+115451	L 3	38365 L		EO	90031611	112300	000820		305 G	G=100,B=66
PPLIB NGC	6369	71	12.5	1726176	-234306	L 3	38672 L		EO	90042417	174300	042000		06 G	B=74
PPLIB NGC	6369	70	12.5	1726180	-234301	L 3	38325 L	90	SD	90030912	122400	006000		00 G	B=20
PPLIB NGC	6369	70	12.5	1726180	-234301	L 3	38326 L		EO	90030914	141000	006000		00 G	B=20
AGLDH I ZW 187		87	16.0	1727042	+501530	L 1	17822 L		EO	90042809	095600	016500		304 G	G=95,B=58
AGLDH I ZW 187		87	16.0	1727043	+501531	L 1	17715 L		EO	90040910	100800	018000		333 G	E=91,G=83,B=50
AGLDH I ZW 187		87	16.0	1727043	+501531	L 3	38563 L		EO	90041010	101200	018000		302 G	G=61,B=33
AGLDH I ZW 187		87	16.0	1727043	+501531	L 3	38697 L		EO	90042910	100700	018000		302 G	G=62,B=32
CSLTA HD	159181	45	3.0	1729181	+522015	L 3	38114 L	1521	FU	90020219	193500	006000		X32 G	E=128,G=2.5X,B=36
DALDK WL735-31		37	18.1	1735357	-315115	L 3	38265 L		EO	90022714	142500	006000		201 G	G=42,B=23
DALDK WL735-31		37	18.1	1735357	-315115	L 3	38266 L		EO	90022715	155500	029200		305 G	G=100,B=64
DALDK WL735-31		37	18.1	1735357	-315115	L 3	38271 S		EO	90022813	131400	041500		306 G	G=125,B=80
USBS HD	160365	41	6.22	1736399	+132120	H 1	17568 L	9132	FO	90032101	014800	006000		503 G	G=200,B=45
USBS HD	160365	41	6.2	1736399	-132120	H 1	17728 L	9290	FO	90041115	153200	007000		503 G	G=208,B=48
LCL31 FK345-81		70	11.24	1741526	-460410	L 3	38384 L	00131	FO	90031904	043948	000500		400 V	HEAD
LCL31 FK345-81		70	11.26	1741526	-460410	L 1	17557 L	00129	FO	90031904	045219	000700		600 V	
IBLGP HD	161741	66	7.7	1745270	-350229	H 3	38632 L	3226	FO	90041920	202200	004500		405 G	G=193,B=66
NPLFD NGC	6445	71		1746168	-195932	L 9	02296			90022702	025100	002000		G	
NPLFD NGC	6445	71		1746168	-195932	L 1	17434 L		EO	90022800	001700	006000		07 G	B=85
NPLFD NGC	6445	71		1746168	-195932	L 3	38267 L		EO	90022801	012200	006000		01 G	B=22
LIO62 N SCO 89		55	14.00	1748340	-323116	L 1	17813 L	00000	EO	90042701	013518	003000		111 V	
LIO62 N SCO 89		55	14.00	1748340	-323116	L 3	38682 L	00000	EO	90042702	021200	007500		111 V	
IA108 HD162732		26	07.16	1748447	+482424	H 3	38786 L	04971	FO	90051500	005410	003000		501 V	
IA108 HD162732		26	07.17	1748447	+482424	H 1	17906 L	04916	FO	90051501	013131	002000		503 V	
FKLGA X	1751+705	46	9.7	1751028	+704617	H 1	17455 L	362	FO	90030216	161200	015000		35 G	E=109,B=68
IMLTS HD	162978	15	6.2	1751493	-245244	L 3	38301 L	9983	FO	90030423	234400	000008		500 G	G=230,B=18
IMLTS HD	162978	15	6.2	1751493	-245244	L 1	17470 L		FO	90030423	234900	000006		X02 G	G=1.5X,B=38
IMLTS HD	162978	15	6.2	1751493	-245244	H 1	17471 L	9895	FO	90030500	005000	000630		X03 G	G=1.5X,B=42
IMLTS HD	162978	15	6.2	1751493	-245244	H 3	38302 L	9942	FO	90030501	010500	001200		X03 G	G=2X,B=44
IMLTS HD	162978	15	6.2	1751493	-245244	H 1	17472 L	9809	FO	90030502	021300	000630		X03 G	G=1.5X,B=44
IMLTS HD	162978	15	6.2	1751493	-245244	H 3	38303 L	9704	FO	90030502	022800	001200		X03 G	G=2X,B=44
CSMAD HD	163506	40	5.46	1753240	+260324	L 1	17882 L	17181	FO	90050920	200900	000200		X02 G	G=1.5X,B=35
CSMAD HD	163506	40	5.46	1753240	+260324	L 3	38753 L	17242	FO	90050920	202000	002500		X00 G	G=1.5X,B=19
CSMAD HD	163506	40	5.46	1753240	+260324	H 1	17883 L	17215	FO	90050920	205700	009000		X04 G	G=1.5X,B=52
CSMAD HD	163506	40	5.5	1753240	+260324	L 1	17937 L	16257	FO	90051820	200700	000100		502 G	G=250,B=38
CSMAD HD	163506	40	5.5	1753240	+260324	L 1	17937 L	16043	FO	90051820	201500	000030		402 G	G=171,B=38
CSMAD HD	163506	40	5.5	1753240	+260324	L 3	38832 L	16210	FO	90051820	202600	001700		500 G	G=177,B=18
CSMAD HD	163506	40	5.5	1753240	+260324	H 1	17938 L	16053	FO	90051821	210200	008000		X03 G	G=1.5X,B=50
CSMAD HD	163506	40	5.5	1753240	+260324	L 1	17997 L	15584	FO	90052620	200900	000050		502 G	G=219,B=32
CSMAD HD	163506	40	5.5	1753240	+260324	L 3	38876 L	15685	FO	90052620	201700	002000		401 G	G=136,B=21
CSMAD HD	163506	40	5.5	1753240	+260324	H 1	17998 L	15632	FO	90052620	205800	008000		X05 G	G=1.5X,B=66
IBLGP HD	164284	26	4.6	1757471	+042211	H 3	38642 L	312	FU	90042117	174200	000210		503 G	G=224,B=41
IMLTS HD	164794	12	6.0	1800479	-242159	H 3	38730 L			90050516	165700	000630		G	

FO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	numms	stt	ECC	Comment
IMJIS HD	164794	12	6.0	1800479	-242159	H 3	38731 L			90050517	174200	000630		G	
IMJIS HD	164794	12	6.0	1800480	-242200	H 3	38313 L	11065	FO	90030702	020700	000700		503 G	G=248,B=42
IMJIS HD	164794	12	6.0	1800480	-242200	H 1	17486 L	11128	FO	90030702	022300	000500		X03 G	G=1.5X,B=44
WNJFC HD	E313846	11	10.1	1802235	-230038	L 3	38443 L	336	FO	90032620	204900	005000		334 G	E=1.22,G=1.21,B=57
WNJFC HD	E313846	11	10.1	1802235	-230038	L 1	17620 L	33	FO	90032621	214500	001800		X05 G	G=1.5X,B=70
WNJFC HD	165688	11	10.3	1804595	-192426	L 3	38442 L	400	FO	90032619	194200	000500		230 G	E=66,G=31,B=17
WNJFC HD	165688	11	10.3	1804595	-192426	L 1	17619 L	408	FO	90032619	195500	001500		453 G	E=250,G=180,B=43
SMDS	MOON	02	-8.4	1806277	-300225	H 3	38614 L			90041609	095100	021000		307 G	G=1.34,B=87
SMDS	MOON	02	-8.4	1808247	-300225	H 3	38615 L			90041616	161300	001500		402 G	G=1.60,B=32
SMDS	MOON	02	-8.4	1808247	-300225	H 1	17758 L			90041616	161600	000008		303 G	G=1.30,B=42
LI052 AS	296	57	10.65	1812329	-001953	L 3	38352 L	00223	FO	90031308	082252	002000		111 V	NO SPECTRUM
LI052 AS	296	57	10.64	1812329	-001953	L 1	17523 L	00225	FO	90031308	085128	003000		341 V	
LI052 AS	296	57	10.65	1812329	-001953	L 3	38353 L	00222	FO	90031309	093839	006900		300 V	
FDJIS HD	168151	40	5.0	1813365	+642248	L 3	38360 L	22190	FO	90031401	015800	005000		230 G	E=112,G=25X,B=20
IGIRD	TFLOOD	99		1815345	-684416	L 3	38725 L			90050321	211000	000007		09 G	B=138
IMMIM HD	168750	23	8.3	1816070	-262747	H 3	38629 L	2371	FO	90041816	161900	003000		01 G	B=23
USSES HD	169454	23	6.6	1822249	-140025	H 1	17777 L	6223	FO	90042023	235000	005000		G	
USSES HD	169454	23	6.6	1822249	-140025	H 1	17932 L	6458	FO	90051811	112900	006000		403 G	G=180,B=42
LI000 V3890	SGR	55	12.09	1827400	-240316	L 3	38788 L	00246	SO	90051504	041057	003000		350 V	
LI000 V3890	SGR	55	12.09	1827400	-240316	L 1	17907 L	00247	SO	90051504	045157	003000		462 V	
LI000 V3890	SGR	55	12.10	1827400	-240316	L 3	38789 L	00243	SO	90051505	053317	007400		360 V	
LI047 V3890SGR		55	13.51	1827400	-240316	L 3	38858 L	00069	SO	90052300	005432	006000		131 V	
LI047 V3890SGR		55	13.53	1827400	-240316	L 1	17974 L	00068	SO	90052302	021009	009000		463 V	
LI047 V3890SGR		55	13.53	1827400	-240316	L 3	38859 L	00068	SO	90052303	034941	018000		351 V	
SOLOW HD	171635	41	4.8	1831427	+570024	L 1	17040 S	22843	FO	89123008	083100	050000		502 G	G=244,B=32
SOLOW HD	171635	41	4.8	1831427	+570024	L 1	17040 L	21544	FO	89123008	083100	050000		502 G	G=212,B=36
PPLTB	6-81	70	16.7	1831474	-270848	L 3	38327 L		BO	90030916	161300	024000		234 G	E=80,G=66,B=52
PPLTB	6-81	70	16.7	1831474	-270848	L 1	17505 L		BO	90030920	202100	028500		309 G	G=152,B=105
PPLTB	6-81	70	16.7	1831474	-270848	L 3	38671 L		BO	90042410	103300	036000		234 G	E=112,G=76,B=56
PPLTB	6-81	70	16.7	1831474	-270848	L 3	38681			90042617	173600	010000		G	
PPLTB	6-81	70	16.7	1831474	-270848	L 3	38681 L		BO	90042617	173600	032500		338 G	E=118,G=117,B=91
PPLTB	6-81	70	16.7	1831474	-270848	L 3	38681 L			90042621	210300	022500		G	
PHCAL HD	172167	30	0.03	1835147	+384409	H 3	38411 L	16402	FU	90032202	024200	000009		502 G	G=205,B=38
PHCAL HD	172167	30	0.0	1835147	+384409	H 1	17648 L	16100	FU	90032922	221100	000004		503 G	G=210,B=42
PHCAL HD	172167	30	0.0	1835147	+384409	H 2	18455 L	16504	FU	90051420	201600	000003		401 G	G=150,B=28
SSJWM	UFANUS	03	5.6	1837105	-232856	L 3	38834 L	12324	FO	90051907	074400	018000		452 G	E=220,G=185,B=38
SSJWM	UFANUS	03	5.6	1837105	-232855	L 3	38835 L	11268	FO	90051911	112600	006000		G	
SSJWM	UFANUS	03	5.6	1837105	-232855	L 3	38835 L	11268	FO	90051911	112600	006000		G	
SSJWM	UFANUS	03	5.6	1837105	-232855	L 3	38835 L	11268	FO	90051914	145800	017000		G	
PHCAL HD	172883	36	6.0	1838438	+520854	H 1	16996 L	9991	FO	89122506	061900	001000		503 G	G=200,B=43
PHCAL HD	172883	36	6.0	1838438	+520854	H 3	37895 L	10065	FO	89122506	063700	002200		503 G	G=223,B=42
PHCAL HD	172883	36	6.0	1838438	+520854	L 1	16997 L	9780	FO	89122507	074300	000008		502 G	G=202,B=34
PHCAL HD	172883	36	6.0	1838438	+520854	L 3	37896 L	9704	FO	89122508	081800	000017		500 G	G=170,B=19
PHCAL HD	172883	36	6.0	1838438	+520854	H 9	02300			90042314	145500	016000		G	
PHCAL HD	172883	36	6.0	1838438	+520854	L 1	17799 L	11305	FO	90042315	151600	000008		502 G	G=235,B=35
PHCAL HD	172883	36	6.0	1838438	+520854	H 3	38664 L	11377	FO	90042315	153200	002200		503 G	G=225,B=41
PHCAL HD	172883	36	6.0	1838438	+520854	H 1	17800 L	11453	FO	90042316	160800	001000		503 G	G=215,B=44
PHCAL HD	172883	36	6.0	1838438	+520854	L 1	18012 L	11536	FO	90052914	142300	000030		502 G	G=190,B=38
PHCAL HD	172883	36	6.0	1838438	+520854	L 3	38906 L	11541	FO	90052914	143300	000103		500 G	G=200,B=18
LA175 V356SGR		25	07.55	1844544	-201949	H 3	38810 L	03507	FO	90051704	040440	006000		500 V	

FIO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
IBLRP	V356 SGR	66	7.0	1844544	-201949	H 1	17908 L	4672	FO	90051507	072300	003500	503 G	G=221,B=45
IAl75	V356SGR	25	07.54	1844544	-201949	H 1	17928 L	03549	FO	90051705	052622	003500	503 V	
IBLRP	V356 SGR	66	7.0	1844544	-201949	H 3	38790 L	4663	FO	90051508	080600	006000	503 G	G=210,B=42
IAl75	V356SGR	25	07.53	1844544	-201949	H 3	38811 L	03599	FO	90051706	061009	003700	400 V	
IBLRP	V356 SGR	66	7.0	1844544	-201949	H 1	17909 L	4794	FO	90051509	091500	003500	502 G	G=212,B=40
IAl75	V356 SGR	25	07.36	1844544	-201949	H 1	17929 L	04180	FO	90051723	233803	003500	503 V	
IBLRP	V356 SGR	66	7.0	1844544	-201949	H 3	38791 L	4864	FO	90051509	095700	006000	503 G	G=205,B=43
IAl75	V356 SGR	25	07.35	1844544	-201949	H 3	38823 L	04218	FO	90051800	003028	006000	501 V	
IBLRP	V356 SGR	66	7.0	1844544	-201949	H 1	17931 L	5162	FO	90051809	092100	003500	503 G	G=213,B=49
IAl75	V356 SGR	25	07.36	1844544	-201949	H 3	38824 L	04181	FO	90051801	015904	005000	401 V	
IBLRP	V356 SGR	66	7.0	1844544	-201949	H 3	38827 L	5419	FO	90051810	100700	006000	503 G	G=211,B=42
IAl75	V356 SGR	25	07.68	1844544	-201949	H 3	38843 L	03130	FO	90052102	024350	006000	500 V	
IAl75	V356 SGR	25	07.62	1844544	-201949	H 1	17956 L	03322	FO	90052103	035609	003500	501 V	
IAl75	V356 SGR	25	07.62	1844544	-201949	H 3	38844 L	03323	FO	90052104	044032	006000	500 V	
IAl75	V356 SGR	25	07.55	1844544	-201949	L 3	38845 L	03519	FO	90052106	061527	000040	500 V	
IAl75	V356 SGR	25	07.55	1844544	-201949	L 1	17957 L	03517	FO	90052106	061033	000025	500 V	
IAl75	V356 SGR	25	07.43	1844544	-201949	H 3	38850 L	03910	FO	90052202	025953	006000	601 V	
IAl75	V356 SGR	25	07.44	1844544	-201949	H 1	17967 L	03885	FO	90052204	040743	003500	704 V	FEM=0.40
IAl75	V356 SGR	25	07.42	1844544	-201949	H 3	38851 L	03935	FO	90052205	050509	006000	601 V	
IAl75	V356 SGR	25	07.37	1844544	-201949	L 3	38852 L	04121	FO	90052206	064526	000040	500 V	FREAD
IAl75	V356 SGR	25	07.37	1844544	-201949	L 1	17968 L	04116	FO	90052206	064109	000025	500 V	FREAD
IQ115	3C 390.3	84	14.40	1845375	+794306	L 3	38206 L	00000	BO	90021705	054327	031400	342 V	
IQ115	3C390.3	86	14.50	1845378	+794304	L 3	38096 L	00000	BO	90012905	055500	030500	351 V	FREAD
IQ115	3C390.3	86	14.50	1845378	+794304	L 1	17259 L	00000	BO	90013005	052156	034000	352 V	FREAD
IQ115	3C390.3	86	15.00	1845378	+794304	L 1	17478 L	00000	BO	90030604	042942	038000	351 V	FREAD
IQ115	3C3903	86	14.00	1845379	+794306	L 1	17245 L	00000	BO	90012711	115852	016800	341 V	
IQ115	3C 390.3	86	16.00	1845379	+794306	L 3	38621 L	00000	BO	90041704	042131	018000	220 V	FREAD
OD75Y	AS 325	57	9.5	1846573	-262745	L 1	17583 L	195	FO	90032319	193500	003000	X03 G	G=3X,B=42
OD75Y	AS 325	57	9.5	1846573	-262745	L 1	17811 L			90042619	193700	001300	G	
OD75Y	AS 325	57	9.5	1846573	-262745	L 1	17812 L			90042620	202700	001300	G	
OD75Y	AS 325	57	9.5	1846574	-262746	L 3	38424 L	194	FO	90032320	204100	001500	302 G	G=72,B=38
OD75Y	AS 325	57	9.5	1846574	-262746	L 1	17584 L	192	FO	90032321	210500	001000	406 G	G=200,B=72
OD75Y	AS 325	57	9.5	1846574	-262746	L 3	38426 L	207	FO	90032401	011500	005500	301 G	G=120,B=22
OD75Y	AS 325	57	9.5	1846574	-262746	L 1	17587 L	208	FO	90032402	021800	001300	502 G	G=195,B=35
OD75Y	AS 325	57	9.5	1846574	-262746	L 3	38427 L	207	FO	90032403	031500	010000	X01 G	G=1.5X,B=27
OD75Y	AS 325	57	9.5	1846574	-262746	L 1	17807 L	221	FO	90042520	205000	001300	454 G	B=237,G=186,B=56
LI062	N SCU 89	55	13.75	1846581	-061446	L 1	17814 L	00056	SD	90042704	040536	002500	130 V	
LI062	N SCU 89	55	13.75	1846581	-061446	L 3	38683 L	00056	SD	90042704	043625	006000	130 V	
IC104	HD174325	50	07.03	1847371	-075759	L 1	17540 L	05547	FO	90031606	061104	002000	110 V	
IC104	HD174325	50	07.09	1847371	-075759	L 1	17541 L	05255	FO	90031607	070514	019200	203 V	
PHCAL	HD 177724	30	2.9	1903065	+134714	L 3	38743 L	1429	FU	90050815	155800	000008	500 G	G=210,B=18
PHCAL	HD 177724	30	2.9	1903065	+134714	H 3	38744 L	1447	FU	90050817	172400	000308	503 G	G=240,B=42
PHCAL	HD 177724	30	2.9	1903066	+134715	L 1	17873 L	1442	FU	90050816	161000	000003	502 G	G=200,B=34
PHCAL	HD 177724	30	2.9	1903066	+134715	H 1	17874 L	1438	FU	90050817	171800	000103	503 G	G=218,B=41
PHCAL	HD 177724	30	2.98	1903066	+134715	H 3	38748 L	1424	FU	90050822	224400	000255	502 G	G=225,B=40
CVLJR	V1082SGR	63	14.5	1904236	-205134	L 1	17559 L			90031914	141200	002000	G	
CVLJR	V1082SGR	63	14.5	1904237	-205135	L 3	38387 L		BO	90031912	121400	006000	01 G	B=24
CVLJR	V1082SGR	63	14.5	1904237	-205135	L 1	17559 L		BO	90031913	132000	004000	03 G	B=41
CVLJR	V1082SGR	63	14.5	1904237	-205135	L 3	38388 L		BO	90031914	145000	024000	304 G	G=75,B=54
CELEFF	HD 179094	47	5.8	1907155	+522043	L 3	38441 L	10415	FO	90032616	165600	011500	341 G	B=151,G=79,B=28

FRO	Object	CL	MAG	R.A.	DEC	D C Image A	FES	MD	Obs.date	Exptim	nummsst	ECC	Comment
HCLSP HD	179002	39	6.8	1908192	-073036	L 1 17639 L	5204	FO	90032823	235500	000230	502 G	G=236,B=35
HCLSP	179002	39	6.8	1908192	-073036	L 3 38460 L	5227	FO	90032900	000800	002600	301 G	G=101,B=27
RCMEW	RY SGR	52	11.0	1913168	-333640	L 1 17959 L	144	FO	90052109	094000	030500	4X6 G	E=3X,G=200,B=80
RCMEW	RY SGR	52	10.0	1913169	-333641	L 1 17893 L	380	FO	90051116	160200	012000	X05 G	G=2.5X,B=66
RCMEW	RY SGR	52	10.0	1913169	-333641	L 1 17894 L	386	FO	90051119	190400	003000	G	
RCMEW	RY SGR	52	10.0	1913169	-333641	L 1 17895 L	380		90051120	201000	015500	G	
RCMEW	RY SGR	52	11.0	1913169	-333641	L 1 17958 L	142	FO	90052108	080000	006000	343 G	E=153,G=85,B=41
IGLSD HD	181623	40	4.7	1919364	-445338	L 3 38376 L	414	FU	90031721	213100	004000	332 G	E=134,G=70X,B=37
PHCAL SKY		07	99.99	1921552	+293434	L 2 18447	00000		90050204	044734	002000	001 V	5 KV FLARE
PHCAL SKY		07	99.99	1921552	+293434	L 2 18448	00000		90050205	055445	004800	002 V	4.5 KV FLARE
PHCAL HF CIG		57	10.18	1921552	+293434	H 3 38717 L	00339	FO	90050205	052030	004500	100 V	
BNWF	VY 2-2	70	12.9	1921593	+094759	L 3 38550 L	114	SO	90040810	100900	040000	305 G	G=85,B=64
MS100 AUSTIN		06	12.04	1922501	-031654	E 9 02328 2	00258	SO	90052700	005400	004000	V	
MS100 AUSTIN		06	12.04	1922501	-031654	L 1 17999 L	00258	SO	90052701	010904	004000	173 V	NUCLEUS
MS100 AUSTIN		06	12.06	1922501	-031654	L 3 38878 S	00252	SO	90052702	020412	002000	150 V	R.P. -42,-258
MS100 AUSTIN		06	12.04	1922501	-031654	L 1 18000 S	00257	SO	90052702	024608	002000	131 V	NUCLEUS-LARGE DRIFT
MS100 AUSTIN		06	12.02	1922501	-031654	L 1 18001 L	00262	SO	90052704	041622	001000	131 V	NUCLEUS X=48,Y=86
MS100 AUSTIN		06	12.00	1922501	-031654	L 1 18002 L	00267	SO	90052705	050018	002000	142 V	NUCLEUS X=116,Y=99
MS100 AUSTIN		06	12.07	1922501	-031654	L 3 38879 S	00250	SO	90052705	052747	002000	130 V	NUCLEUS X=218,Y=31
MS100 AUSTIN		06	12.06	1922501	-031654	L 1 18003 L	00253	SO	90052706	060517	002000	132 V	NUCLEUS X=166,Y=50
CEFF HD	182776	47	8.5	1924379	-405613	L 3 38440 L	1179	FO	90032611	114000	027000	,23 G	E=70,B=50
PELLB	46-31	70	11.0	1925223	+101812	L 3 38677 L		FO	90042518	181900	025500	05 G	E=70
MS100 SAO	143438	30	09.70	1925330	-030919	L 3 38877 L	00520	FO	90052623	235955	001000	500 V	
IA108 HD183656		26	06.48	1928029	+032019	H 3 38785 L	08886	FO	90051423	233942	002000	300 V	
IA108 HD183656ML		26	06.51	1928029	+032019	H 1 17905 L	08685	FO	90051500	000646	001300	503 V	
IA108 HD183656		26	06.51	1928030	+032019	H 3 38710 L	08664	FO	90050104	042318	002000	500 V	R.P. -20,-208
IA108 HD183656		26	06.49	1928030	+030219	H 1 17843 L	08863	FO	90050104	045223	001320	501 V	R.P. -20,-208
IA108 HD183656		26	06.49	1928030	+030219	L 3 38711 L	08841	FO	90050105	052309	000015	500 V	R.P. -20,-208
IA108 HD183656		26	06.46	1928030	+030219	L 1 17844 L	09080	FO	90050105	055701	000015	600 V	V HEAD,FP=-20,-208
IA108 HD183656		26	06.46	1928030	+030219	H 3 38712 L	09080	FO	90050106	064005	000800	300 V	R.P. -20,-208
MS100 AUSTIN		06	12.02	1939150	-000402	L 1 17991 L	00263	SO	90052600	001003	000800	142 V	
MS100 AUSTIN		06	12.01	1939150	-000402	L 3 38871 L	00265	SO	90052600	003517	023500	101 V	NUCLEUS
MS100 AUSTIN		06	12.01	1939150	-000402	H 1 17992 L	00265	SO	90052601	011619	012000	135 V	NUCLEUS IN SWIA
MS100 AUSTIN		06	12.05	1939150	-000402	L 1 17993 L	00258	SO	90052604	042440	002000	131 V	NUCLEUS IN SWIA
MS100 AUSTIN		06	12.03	1939150	-000402	L 1 17994 L	00261	SO	90052606	060059	001000	132 V	10" ANTTAIL
IGLSD HD	186155	41	5.1	1939176	+452423	L 3 38378 L	20836	FO	90031801	015900	004500	?31 G	E=56,G=20X,B=22
IGLSD HD	186155	41	5.1	1939176	+452423	L 3 38616 L	21029	FO	90041617	174600	007500	?33 G	E=92,G=34X,B=45
LI019 HM SGE		57	11.79	1939414	+163733	L 1 17778 L	00322	SO	90042102	020603	000800	250 V	
LI019 HM SGE		57	11.84	1939414	+163733	L 3 38638 L	00308	SO	90042102	022003	001000	050 V	
LI019 HM SGE		57	11.79	1939414	+163733	L 1 17779 L	00321	SO	90042102	025426	005500	372 V	
LI019 HMSG		57	11.75	1939414	+163733	L 3 38639 L	00332	SO	90042103	035704	012000	370 V	
LI019 HM SGE		57	11.87	1939414	+163733	H 1 17780 L	00299	SO	90042106	060328	016000	062 V	
LIL39 V3885 SGR		63	10.69	1944125	-420754	L 3 38508 S	00215	FO	90040402	022853	000900	500 V	
LIL39 V3885 SGR		63	10.69	1944125	-420754	L 3 38508 L	00215	FO	90040402	021236	000430	500 V	
LIL39 V3885 SGR		63	10.74	1944125	-420754	L 3 38509 S	00206	FO	90040403	032210	000800	500 V	
LIL39 V3885 SGR		63	10.74	1944125	-420754	L 3 38509 L	00206	FO	90040403	031030	000400	500 V	
LIL39 V3885 SGR		63	10.72	1944125	-420754	L 3 38510 S	00209	FO	90040404	041652	000800	500 V	
LIL39 V3885 SGR		63	10.72	1944125	-420754	L 3 38510 L	00209	FO	90040404	040511	000400	500 V	
LIL39 V3885 SGR		63	10.68	1944125	-420754	L 3 38511 S	00216	FO	90040405	052355	000800	500 V	
LIL39 V3885 SGR		63	10.68	1944125	-420754	L 3 38511 L	00216	FO	90040405	051402	000400	500 V	



PRO	Object	CL	MFG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	numscnt	ECC	Comment
LIL39	V3885	SCR	63	10.66	1944125	-420754	L 3 38512 S	00220	FO	90040406	064226	000800	500	V
LIL39	V3885	SCR	63	10.66	1944125	-420754	L 3 38512 L	00220	FO	90040406	063413	000400	500	V
LIL39	V3885	SCR	63	10.72	1944125	-420754	L 3 38513 L	00208	FO	90040406	062030	000400	500	V
LIL39	V3885	SCR	63	10.72	1944125	-420754	L 3 38513 S	00208	FO	90040407	073237	000800	500	V
LIL39	V3885	SCR	63	10.68	1944125	-420754	L 3 38514 S	00217	FO	90040408	081855	000800	500	V
LIL39	V3885	SCR	63	10.68	1944125	-420754	L 3 38514 L	00217	FO	90040408	083204	000400	500	V
SSIDS	SATURN	03	+0.6	1944420	-210359	L 3 38583				90041209	095500	004500		G
SSIDS	SATURN	03	+0.6	1944420	-210359	L 3 38584				90041211	111200	005500		G
SSIDS	SKY BKGD	07		1944563	-200358	L 3 38585				90041212	124100	005500		G
SSIDS	SATURN	03	0.6	1944571	-210356	L 3 38586				90041214	141400	005500		G
SSIDS	SKY BKGD	07	0.6	1944571	-210356	L 3 38587				90041215	154100	005500		G
SSIDS	SATURN	03	+0.6	1944583	-210354	L 3 38588				90041217	171200	004500		G
SSIDS	SATURN	03	0.2	1944593	-210352	L 3 38590				90041220	200600	008000		G
SSIDS	SATURN	03	0.2	1944593	-210352	L 3 38591				90041222	220100	006000		G
SSIDS	SATURN	03	0.2	1944593	-210352	L 3 38592				90041223	234200	004500		G
LC079	HD187076	49	04.07	1945093	+182434	H 1 17677 L		00677	FU	90040102	022740	001500		462 V MG2 SAT
LC079	HD187076	49	03.99	1945094	+182435	H 3 38484 L		00731	FU	90040103	032803	004500		502 V
ZELLE	HD 187076	49	3.8	1945094	+182435	H 3 38537 L		734	FU	90040617	174200	004500		503 G G=217,B=41
LC079	HD187076	49	04.07	1945094	+182435	H 1 17678 L		00680	FU	90040104	044326	003000		662 V
ZELLE	HD 187076	49	3.8	1945094	+182435	H 1 17703 L		740	FU	90040618	183600	002000		XX3 G E=2.5X,G=1.5X,B=41
LC079	DELTA SGE	49	04.01	1945094	+182435	L 1 17746 S		00715	FU	90041501	014033	000034		440 V
ZELLE	HD 187076	49	3.8	1945094	+182435	H 3 38538 L		756	FU	90040619	192300	002000		302 G G=128,B=35
LC079	DELTA SGE	49	04.01	1945094	+182435	L 1 17746 L		00715	FU	90041501	013550	000013		450 V
ZELLE	HD 187076	49	3.8	1945094	+182435	H 1 17704 L		760	FU	90040620	200400	000730		353 G E=192,G=137,B=41
LC079	DELTA SGE	49	04.01	1945094	+182435	L 3 38605 S		00716	FU	90041501	012944	000122		300 V
ZELLE	HD 187076	49	3.8	1945094	+182435	H 3 38733 L				90050615	151900	004500		G
LC079	DELTA SGE	49	04.01	1945094	+182435	L 3 38605 L		00716	FU	90041501	012503	000031		400 V
ZELLE	HD 187076	49	3.8	1945094	+182435	H 1 17863 L				90050616	161200	002000		G
LC079	DELTA SGE	49	04.02	1945094	+182435	H 1 17747 L		00712	FU	90041502	022121	002000		461 V
ZELLE	HD 187076	49	3.8	1945094	+182435	H 3 38734 L				90050616	164500	002000		G
LC079	DELTA SGE	49	04.03	1945094	+182435	H 3 38606 L		00705	FU	90041503	030733	005500		500 V
ZELLE	HD 187076	49	3.8	1945094	+182435	H 1 17864 L				90050617	172100	000730		G
LC079	DELTA SGE	49	04.02	1945094	+182435	H 1 17748 L		00711	FU	90041504	041114	002800		671 V
LC079	HD187076	28	04.02	1945094	+182435	H 3 38808 L		00709	FU	90051623	234753	005500		550 V 25+30MIN EXPOSURE
LC079	HD187076	28	04.02	1945094	+182435	L 1 17925 L		00709	FU	90051700	002629	000013		502 V
LC079	HD187076	28	04.04	1945094	+182435	L 3 38809 S		00699	FU	90051701	015751	000200		400 V
LC079	HD187076	28	04.04	1945094	+182435	L 3 38809 L		00699	FU	90051701	015131	000031		400 V
LC079	HD187076	28	04.06	1945094	+182435	H 1 17926 L		00686	FU	90051701	011646	002800		573 V
LC079	HD187076	28	04.07	1945094	+182435	H 1 17927 L		00680	FU	90051702	024157	001800		573 V
LI047	HD 187238	47	07.34	1946030	+223815	L 3 38885 L		04250	FO	90052806	060049	004600		001 V
SSIDW	SATURN	03	0.4	1946069	-210253	L 3 38820 L				90051721	213100	002500		X00 G G=1.5X,B=17
SSIDW	SATURN	03	0.4	1946069	-210253	L 3 38821 L				90051722	222700	001500		500 G G=232,B=17
SSIDW	SATURN	03	0.4	1946086	-210247	L 3 38817 L				90051717	173200	006000		X03 G G=2X,B=41
SSIDW	SATURN	03	0.4	1946086	-210247	L 3 38818 L				90051719	190400	004500		X02 G G=2X,B=32
SSIDW	SKY BKGD	07		1946086	-210247	L 3 38819 L				90051720	202400	003000		00 G B=17
SSIDW	SATURN	03	0.2	1946102	-210241	L 3 38812 L				90051707	074500	009000		X01 G G=2X,B=25
SSIDW	SATURN	03	0.2	1946102	-210241	L 3 38813 L				90051709	094800	009000		X01 G G=2X,B=22
SSIDW	SATURN	03	0.2	1946102	-210241	L 3 38814 L				90051711	115100	009000		X01 G G=2X,B=25
SSIDW	SATURN	03	0.2	1946102	-210241	L 3 38815 L				90051713	135500	009000		01 G 2X,B=22
SSIDW	SATURN	03	0.2	1946102	-210241	L 3 38816 L				90051715	155900	006000		X00 G G=2X,B=20



FPO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	numms	stt	ECC	Comment
IMLTS HD	187879	20	5.7	1948570	+402806	H 1	17710 L	14289	FO	90040818	183500	000530		X03	G G=2X,B=50
IMLTS HD	187879	20	5.7	1948570	+402806	H 3	38551 L	14256	FO	90040818	184800	001000		502	G G=235,B=38
IMLTS HD	187879	20	5.7	1948570	+402806	H 1	17711 L	14073	FO	90040819	193800	000430		503	G G=245,B=46
IMLTS HD	187879	20	5.7	1948570	+402806	H 3	38552 L	14045	FO	90040820	201400	001000		503	G G=243,B=41
IMLTS HD	187879	20	5.7	1948570	+402806	L 1	17712 L	14526	FO	90040822	222300	000004		X02	G G=1.5X,B=33
IMLTS HD	187879	20	5.7	1948570	+402806	L 3	38553 L	14562	FO	90040822	222700	000007		500	G G=238,B=18
USSES HD	188001	13	6.3	1950078	+183231	H 3	38751 L	9181	FO	90050916	161300	000600		402	G G=153,B=32
USSES HD	188001	13	6.3	1950079	+183232	H 1	17880 L	9213	FO	90050916	162700	000345		403	G G=190,B=41
USSES HD	188001	13	6.3	1950079	+183232	H 3	38838 L	9358	FO	90052008	083800	000800		552	G E=232,G=210,B=40
LIL64 V1016 CMG		57	11.18	1955200	+394139	H 3	38657 L	00139	FO	90042302	020200	002000		150	V
LIL64 V1016 CMG		57	11.18	1955200	+394139	L 1	17793 L	00139	FO	90042302	024242	002000		162	V
LIL64 V1016 CMG		57	11.18	1955200	+394139	L 3	38658 L	00139	FO	90042303	032047	000600		160	V
LIL64 V1016 CMG		57	11.14	1955200	+394139	H 1	17794 L	00143	FO	90042303	035931	001500		143	V
LIL64 V1016 CMG		57	11.15	1955200	+394139	H 3	38659 L	00142	FO	90042304	043346	005000		161	V
LIL64 V1016 CMG		57	11.21	1955200	+394139	H 1	17795 L	00135	FO	90042305	053256	005000		263	V
LIL64 V1016 CMG		57	11.20	1955200	+394139	H 3	38660 L	00136	FO	90042306	063102	013600		161	V
SCIEF AJUSTIN		06		2007027	+053521	9	02325			90052407	074000	016000			G
SCIEF AJUSTIN		06		2007027	+053521	L 1	17979 L	301	SD	90052407	074900	000700		42	G E=149,B=33
SCIEF AJUSTIN		06		2007027	+053521	L 1	17980 L	302	SD	90052408	083600	033000		379	G E=22X,G=172,B=102
SCIEF AJUSTIN		06		2007027	+053521	L 3	38864 L			90052408	083900	038000		?	G E=42X,B=43
SCIEF AJUSTIN		06		2007027	+053521	L 1	17980 L	307	SD	90052409	090500	033000		379	G E=22X,G=172,B=102
SCIEF AJUSTIN		06		2007027	+053521	L 9	02326			90052409	091400	002000			G
SCIEF AJUSTIN		06		2007027	+053521	H 1	17981 L			90052415	155800	006000		35	G E=119,B=65
SCIEF AJUSTIN		06		2007027	+053521	H 1	17982 L			90052420	204000	009000		36	G E=142,B=73
LA022 HD191765		11	08.41	2008215	+360139	H 3	37718 L	01633	FO	89120211	115127	004000		361	V
WRIFC HD 191765		11	8.31	2008215	+360139	H 3	37737 L	1676	FO	89120419	191400	004000		3X2	G E=1.5X,G=100,B=35
LA022 HD191765		11	08.43	2008215	+360134	H 3	37720 L	01610	FO	89120214	144218	004000		461	V
WRIFC HD 191765		11	8.31	2008215	+360139	H 3	37739 L	1690	FO	89120421	215500	004000		3X2	G E=1.5X,G=90,B=32
LA021 HD191765		11	08.44	2008215	+360139	H 3	37725 L	01596	FO	89120311	111255	004000		361	V
WRIFC HD 191765		11	8.31	2008215	+360139	H 3	37741 L	1635	FO	89120500	004100	004000		3X2	G E=1.5X,G=95,B=32
LA021 HD191765		11	08.43	2008215	+360139	H 3	37727 L	01618	FO	89120314	140012	004000		361	V
WRIFC HD 191765		11	8.3	2008215	+360139	H 3	37743 L	1650	FO	89120503	032200	004000		3X2	G E=1.5X,G=90,B=31
WRIFC HD 191765		11	8.3	2008215	+360139	H 3	37745 L	1650	FO	89120506	060100	004000		3X3	G E=1.5X,G=108,B=45
LA022 HD191765		11	08.38	2008216	+360140	H 3	37734 L	01689	FO	89120414	145601	004000		360	V HE2 SATURATED
LA022 HD191765		11	08.39	2008216	+360140	H 3	37735 L	01663	FO	89120416	160440	004000		360	V HE2 SATURATED
LA022 HD191765		11	08.42	2008216	+360140	H 3	37748 L	01629	FO	89120510	105937	004000		360	V HE2 SATURATED
LA022 HD191765		11	08.44	2008216	+360140	H 3	37750 L	01598	FO	89120513	135619	004000		360	V HE2 SATURATED
LA021 HD191765		11	08.41	2008216	+360140	H 3	37755 L	01641	FO	89120611	110525	004000		360	V HE2 SATURATED
LA021 HD191765		11	08.43	2008216	+360140	H 3	37757 L	01616	FO	89120614	140855	004000		360	V HE2 SATURATED
PHCAL FG SGE		41	09.64	2009430	+201054	L 1	17884 L	00546	FO	90051000	001523	012000		502	V
LA022 HD192163		11	07.86	2010170	+381214	H 3	37717 L	02680	FO	89120210	100709	004000		461	V
SCIEF COM1989R		06	6.0	2010170	+381214	H 9	02267 2			89120218	185000	000004			G
LA022 HD192163		11	07.85	2010170	+381214	H 3	37719 L	02710	FO	89120213	131616	004000		461	V
LA022 HD192163		11	07.82	2010170	+381214	H 3	37721 L	02784	FO	89120216	162859	002000		351	V
LA021 HD192163		11	07.85	2010170	+381214	H 3	37724 L	02700	FO	89120309	094046	004000		461	V
LA021 HD192163		11	07.82	2010170	+381214	H 3	37726 L	02781	FO	89120312	123637	004000		461	V
LA022 HD192163		11	07.75	2010170	+381214	H 3	37733 L	02951	FO	89120413	133357	004000		360	V HE2 SATURATED
LA021 HD192163		11	07.81	2010171	+381215	H 3	37728 L	02803	FO	89120315	153149	004000			V
WRIFC HD 192163		11	7.7	2010171	+381215	H 3	37736 L	2842	FO	89120417	174900	004000		4X2	G E=2X,G=160,B=35
LA022 HD192163		11	07.78	2010171	+381215	H 3	37747 L	02860	FO	89120509	093136	004000		360	V HE2 SATURATED

FDO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	raa	raa	raa	ECC	Comment
WRLEC HD	192163	11	7.7	2010171	+381215	H 3	37738 L	2923	FO	89120420	203500	004000				4X2 G E=2X, G=180, B=38
IA022 HD192163		11	07.83	2010171	+381215	H 3	37749 L	02756	FO	89120512	122606	004000				360 V HE2 SATURATED
WRLEC HD	192163	11	7.7	2010171	+381215	H 3	37740 L	2856	FO	89120423	231700	004000				4X2 G E=2X, G=165, B=35
IA022 HD192163		11	07.83	2010171	+381215	H 3	37751 L	02738	FO	89120515	153907	004000				360 V HE2 SATURATED
WRLEC HD	192163	11	7.7	2010171	+381215	H 3	37742 L	2823	FO	89120501	015800	004000				3X2 G E=2X, G=125, B=32
IA021 HD192163		11	07.76	2010171	+381215	H 3	37754 L	02929	FO	89120609	093959	004000				460 V HE2 SATURATED
WRLEC HD	192163	11	7.7	2010171	+381215	H 3	37744 L	2790	FO	89120504	043800	004000				4X4 G E=2X, G=165, B=52
IA021 HD192163		11	07.82	2010171	+381215	H 3	37756 L	02763	FO	89120612	124039	004000				460 V HE2 SATURATED
WRLEC HD	192163	11	7.7	2010171	+381215	H 3	37746 L	2812	FO	89120507	071900	004000				4X2 G E=2X, G=145, B=35
IA021 HD192163		11	07.85	2010171	+381215	H 3	37758 L	02687	FO	89120615	153958	004000				460 V HE2 SATURATED
IBLJE HD	192577	47	3.7	2012033	+463520	H 3	37945 L	616	FU	90010323	235500	000800				402 G G=182, B=37
IBLJE HD	192577	47	3.7	2012033	+463520	H 1	17078 L	605	FU	90010400	003300	000500				503 G G=203, B=41
IBLJE HD	192577	47	3.7	2012033	+463520	H 3	37946 L	662	FU	90010400	004500	001500				X03 G G=2X, B=46
IBLJE HD	192577	47	3.7	2012033	+463520	H 1	17079 L		FU	90010401	012200	001000				G
IBLJE HD	192577	47	3.7	2012033	+463520	H 1	17080 L	637	FU	90010401	012200	000000				X04 G G=2X, B=51
IBLJE HD	192577	47	3.7	2012033	+463520	H 1	17082 L	620	FU	90010404	044300	001000				X04 G G=2X, B=55
ZELJE HD	192577	47	3.7	2012033	+463520	H 1	17705 L	705	FU	90040621	212600	000500				503 G G=200, B=42
ZELJE HD	192577	47	3.7	2012033	+463520	H 3	38539 L	701	FU	90040621	214000	000800				402 G G=184, B=38
ZELJE HD	192577	47	3.7	2012033	+463520	H 1	17706 L	736	FU	90040622	224000	001000				XX4 G E=2X, G=2X, B=52
ZELJE HD	192577	47	3.7	2012033	+463520	H 3	38735 L			90050618	181400	000800				G
ZELJE HD	192577	47	3.7	2012033	+463520	H 1	17865 L			90050619	191600	000500				G
ZELJE HD	192577	47	3.7	2012033	+463520	H 3	38736 L			90050619	193100	001200				G
ZELJE HD	192577	47	3.7	2012033	+463520	H 1	17866 L			90050620	200700	001000				G
LAL65 HD192641		10	08.38	2012394	+363028	L 1	17732 L	01688	FO	90041202	020423	000040				551 V
LAL65 HD192641		10	08.38	2012394	+363028	H 3	38580 L	01688	FO	90041202	021151	016000				451 V
LAL65 HD192641		10	08.36	2012394	+363028	L 1	17916 L	01717	FO	90051602	025321	000040				452 V
LAL65 HD192641		10	08.35	2012394	+363028	H 3	38799 L	01732	FO	90051603	034010	018700				541 V
CD71Y HD	193237	23	4.8	2015564	+375235	H 1	17241 L	25845	FO	90012700	005400	000500				X54 G E=226, G=1.5X, B=52
CD71Y HD	193237	23	4.8	2015564	+375235	H 3	38084 L	25572	FO	90012701	010900	004000				X48 G E=205, G=2X, B=99
LIO47 HD	193237	23	05.32	2015565	+575236	H 3	38884 L	21118	FO	90052803	030715	003000				562 V
CEMIS HD	193237	23	4.8	2015565	+375236	H 3	38854 L	25806	FO	90052215	154400	003000				X02 G G=1.5X, B=40
LIO47 HD	193237	23	05.30	2015565	+575236	H 1	18008 L	21336	FO	90052804	043046	000400				552 V
CEMIS HD	193237	23	4.8	2015565	+375236	H 1	17969 L	25715	FO	90052216	161900	000430				X03 G G=1.5X, B=41
CEMIS HD	193237	23	4.8	2015565	+375236	H 3	38855 L	25603	FO	90052216	165900	003000				X03 G G=1.5X, B=42
CEMIS HD	193237	23	4.8	2015565	+375236	H 1	17970 L	25247	FO	90052217	173600	000430				X02 G G=1.5X, B=40
IMLIS HD	193322	12	5.8	2016206	+403431	L 3	38554 L	12523	FO	90040900	001000	000008				500 G G=225, B=18
IMLIS HD	193322	12	5.8	2016206	+403431	L 1	17713 L	12458	FO	90040900	001400	000006				X02 G G=1.5X, B=37
IMLIS HD	193443	12	7.24	2017012	+380719	L 1	17855 L			90050516	160100	000040				G
IMLIS HD	193443	12	7.2	2017013	+380720	H 1	17817 L	3450	FO	90042716	161200	006000				X04 G G=1.5X, B=51
IMLIS HD	193443	12	7.2	2017013	+380720	L 1	17820 L	3333	FO	90042721	211100	000050				X02 G G=1.5X, B=34
IMLIS HD	193443	12	7.2	2017013	+380720	H 3	38690 L	3297	FO	90042721	212100	015000				404 G G=199, B=51
IMLIS HD	193443	12	7.2	2017013	+380720	H 1	17821 L	3510	FO	90042723	235600	005000				503 G G=238, B=46
SC1FF AUSTIN		06		2017203	-074014	H 9	02321			90052315	153600	002000				G
SC1FF AUSTIN		06		2017203	074014	L 1	17975 L	318	SO	90052315	154700	000700				42 G E=152, B=36
SC1FF AUSTIN		06		2017203	+074014	L 3	38861 L	316	SO	90052316	160300	000500				40 G E=158, B=14
SC1FF AUSTIN		06		2017203	+074014	L 1	17976 S	320	SO	90052316	164800	009000				X6 G E=1.5X, B=80
SC1FF AUSTIN		06		2017203	+074014	L 1	17976 L	321	SO	90052317	170700	009000				?6 G E=6, B=80
SC1FF AUSTIN		06		2017203	+074014	L 9	02322			90052320	204800	004000				G
SC1FF AUSTIN		06		2017203	+074014	L 9	02323			90052321	211800	004000				G
SC1FF AUSTIN		06		2017203	074014	L 9	02324			90052321	215700	002000				G

FRO	Object	CL	MAG	P.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mmunsst	ECC	Comment
IA165	HD193793	10	07.31	2018467	+434143	H 3	38581 L	04349	FO	90041205	054846	009000	451 V	
IA165	HD193793	10	07.31	2018467	+434143	L 1	17733 L	04363	FO	90041205	053924	000022	450 V	
IA165	HD 193793	10	07.33	2018467	+434143	H 3	38798 L	04271	FO	90051600	000813	012000	551 V	2*60 MIN
IA165	HD193793	10	07.33	2018467	+434143	L 1	17915 L	04271	FO	90051601	011436	000022	452 V	
PHCAL	FU VUL	57	10.76	2019011	+212443	H 3	38716 L	00201	FO	90050200	002653	024000	361 V	
PHCAL	HD 197637	21	6.8	2038018	+791515	L 3	37902 L	4371	FO	89122605	055400	000008	500 G	G=206,B=19
PHCAL	HD 197637	21	6.8	2038018	+791515	L 1	17009 L	4378	FO	89122605	055900	000007	502 G	G=240,B=34
PHCAL	HD 197637	21	6.8	2038018	+791515	H 3	37903 L	4372	FO	89122606	064000	001300	402 G	G=184,B=38
PHCAL	HD 197637	21	6.8	2038018	+791515	H 1	17010 L	4581	FO	89122607	073500	000800	503 G	G=212,B=44
HCLSP	HD 197177	39	5.5	2039010	+320742	L 1	16949 L	12126	FO	89121908	084800	000110	502 G	G=215,B=32
USSES	HD 197051	31	3.42	2040283	-662305	H 3	38398 L	898	FU	90032019	195600	000812	502 G	G=190,B=34
IMTIS	HD 198478	24	4.8	2047140	+455540	H 3	38687 L	23650	FO	90042717	173500	003000	502 G	G=222,B=38
IMTIS	HD 198478	24	4.8	2047140	+455540	H 1	17818 L	23282	FO	90042718	183900	000700	X03 G	G=1.5X,B=48
IMTIS	HD 198478	24	4.8	2047140	+455540	H 3	38688 L	23260	FO	90042718	185300	003000	504 G	G=223,B=53
IMTIS	HD 198478	24	4.8	2047140	+455540	L 1	17819 L	22573	FO	90042719	195600	000005	502 G	G=248,B=37
IMTIS	HD 198478	24	4.8	2047140	+455540	L 3	38689 L	22883	FO	90042720	200200	000020	400 G	G=156,B=18
L1155	HD 198846	20	07.72	2050039	+342805	H 3	38895 L	03020	FO	90052823	234004	002500	511 V	
L1155	HD 198846	20	07.68	2050039	+342805	H 3	38896 L	03140	FO	90052900	003635	002500	511 V	
L1155	HD 198846	20	07.67	2050039	+342805	H 3	38897 L	03153	FO	90052901	014314	002400	511 V	
L1155	HD 198846	20	07.69	2050039	+342805	H 3	38898 L	03099	FO	90052902	024157	002400	510 V	
L1155	HD 198846	20	07.69	2050039	+342805	H 3	38899 L	03116	FO	90052903	033921	002400	510 V	
L1155	HD 198846	20	07.69	2050039	+342805	H 3	38900 L	03103	FO	90052904	043649	002400	510 V	
L1155	HD 198846	20	07.70	2050039	+342805	H 3	38901 L	03089	FO	90052905	053128	002400	511 V	
L1155	HD 198846	20	07.69	2050039	+342805	H 3	38902 L	03099	FO	90052906	063104	001900	510 V	
L1155	HD198846	20	07.58	2050040	+342806	H 3	38894 L	03427	FO	90052822	223949	002500	511 V	
IBLTK	HD 198846	20	7.0	2050040	+342806	H 3	38887 L	3872	FO	90052815	153600	002500	503 G	G=242,B=46
L1155	HD198846	20	07.97	2050040	+342806	H 3	38914 L	02418	FO	90052923	232126	002300	501 V	
IBLTK	HD 198846	20	7.0	2050040	+342806	H 3	38888 L	3565	FO	90052816	163700	002400	503 G	G=226,B=46
L1155	HD198846	20	08.19	2050040	+342806	H 3	38915 L	01988	FO	90053000	002438	002600	501 V	
IBLTK	HD 198846	20	7.0	2050040	+342806	H 3	38889 L	3118	FO	90052817	173600	002400	503 G	G=213,B=50
L1155	HD198846	20	08.30	2050040	+342806	H 3	38916 L	01814	FO	90053001	011957	003000	501 V	
IBLTK	HD 198846	20	7.0	2050040	+342806	H 3	38890 L	2600	FO	90052818	183500	002500	403 G	G=200,B=50
L1155	HD198846	20	08.14	2050040	+342806	H 3	38917 L	02089	FO	90053002	022725	002800	501 V	
IBLTK	HD 198846	20	7.0	2050040	+342806	H 3	38891 L	2251	FO	90052819	193500	002500	402 G	G=180,B=40
L1155	HD198846	20	07.93	2050040	+342806	H 3	38918 L	02504	FO	90053003	033543	002400	501 V	
IBLTK	HD 198846	20	7.0	2050040	+342806	H 3	38892 L	2438	FO	90052820	203500	002600	502 G	G=201,B=40
L1155	HD198846	20	07.81	2050040	+342806	H 3	38919 L	02799	FO	90053004	043244	002300	501 V	
IBLTK	HD 198846	20	7.0	2050040	+342806	H 3	38893 L	2931	FO	90052821	213400	002500	502 G	G=207,B=40
L1155	HD198846	20	07.54	2050040	+342806	H 3	38931 L	03552	FO	90053022	224705	002330	600 V	
IBLTK	HD 198846	20	7.0	2050040	+342806	H 9	02329			90052822	222900	016000	G	
L1155	HD198846	20	07.79	2050040	+342806	H 3	38940 L	02854	FO	90053106	061312	002330	501 V	
IBLTK	HD 198846	20	07.0	2050040	+342806	H 3	38907 L	3814	FO	90052915	152600	002400	503 G	G=240,B=45
IBLTK	HD 198846	20	07.0	2050040	+342806	H 3	38908 L	3766	FO	90052916	163900	002400	503 G	G=245,B=48
IBLTK	HD 198846	20	07.0	2050040	+342806	H 3	38909 L	3697	FO	90052917	174200	002130	504 G	G=240,B=52
IBLTK	HD 198846	20	07.0	2050040	+342806	H 3	38910 L	3717	FO	90052918	184200	002130	503 G	G=240,B=48
IBLTK	HD 198846	20	+07.	2050040	+342806	H 3	38912 L	3638	FO	90052921	210500	002300	502 G	G=230,B=40
IBLTK	HD 198846	20	+07.	2050040	+342806	H 3	38913 L	3419	FO	90052922	220800	002300	503 G	G=218,B=42
IBLTK	HD 198846	20	07.0	2050040	+342806	H 3	38923 L			90053015	155000	002400	503 G	G=235,B=43
IBLTK	HD 198846	20	07.0	2050040	+342806	H 3	38924 L	3846	FO	90053016	164800	002400	504 G	G=248,B=52
IBLTK	HD 209481	20	07.0	2050040	+342806	H 9	02330			90053022	223300	016000	G	

PRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mmunsstt	ECC	Comment
ENLR	SKYBGD	07		2053384	+314816	L 1	16927 L			89121518	180600	036000	06 G	B=80
ENLR	SKYBGD	07		2053388	+314810	L 1	16936 L	EO		89121717	175700	036000	08 G	B=91
ENLR	CMG LOOP	75		2053419	+314718	L 3	37836 L	EO		89121717	175600	039500	34 G	E=78,B=52
ENLR	CMG LOOP	75		2053428	+314726	L 3	37826 L	EO		89121517	174200	042500	336 G	E=107,G=120,B=75
ENLR	CMG LOOP	75		2053428	+314716	L 3	37832 L	EO		89121618	180200	041000	33 G	E=81,B=50
IMAW	NEC	7023	73	2100526	+675831	L 3	37714 L	EO		89120118	181600	039500	306 G	G=112,B=71
IMAW	SKYBGD	07		2100527	+675830	L 1	16872 L			89120118	184700	016500	05 G	B=64
IMAW	SKYBGD	07		2100527	+675830	L 1	16873 L			89120122	221200	014000	304 G	G=89,B=55
IMAW	SKYBGD	07		2100557	+675649	L 1	16886 L	EO		89120318	181300	036000	306 G	G=138,B=72
IMAW	SKYBGD	07		2100557	+675649	L 1	16886 L	EO		89120318	181300	036000	306 G	G=138,B=72
IMAW	NEC	7023	73	2100558	+675650	L 3	37729 L	EO		89120318	180800	040000	335 G	E=121,G=122,B=66
IMAW	NEC	7023	73	2100558	+675650	L 3	37729 L	EO		89120318	180900	040000	335 G	E=121,G=122,B=66
PHCAL	HD	201908	22	5.9	2106320	+775527	L 3 37904 L	10148	FO	89122608	084200	000013	501 G	G=185,B=21
PHCAL	HD	201908	22	5.9	2106320	+775527	L 1 17013 L	10257	FO	89122708	080600	000007	502 G	G=227,B=33
PHCAL	HD	201908	22	5.9	2106320	+775527	H 3 37908 L	10319	FO	89122708	081400	001600	503 G	G=210,B=42
PHCAL	HD	201908	22	5.9	2106320	+775527	H 1 17032 L	10040	FO	89122906	065300	000800	503 G	G=222,B=41
R/LEB	T CEP	51	7.1	2108528	+681711	H 1	17256 L	2443	FO	90012921	215600	004000	42 G	E=153,B=38
R/LEB	T CEP	51	7.1	2108529	+681712	L 1	16903 L	4146	FO	89120818	180800	000500	382 G	E=1.5X,G=68,B=33
R/LEB	T CEP	51	7.1	2108529	+681712	H 1	16904 L	4309	FO	89120818	185100	005000	53 G	E=193,B=41
R/LEB	T CEP	51	7.1	2108529	+681712	L 1	17124 L	2544	FO	90011016	160900	000100	332 G	E=87,G=54,B=31
R/LEB	T CEP	51	7.1	2108529	+681712	H 1	17125 L	2524	FO	90011016	165600	007000	X3 G	E=1.5X,B=43
R/LEB	T CEP	51	6.0	2108529	+681712	L 1	17395 L	2065	FO	90021912	120200	000200	32 G	E=81,B=35
R/LEB	T CEP	51	6.0	2108529	+681712	H 1	17396 L	2066	FO	90021912	123800	010000	54 G	E=241,B=56
R/LEB	T CEP	51	8.1	2108529	+681712	L 1	17482 L	2057	FO	90030616	164600	000400	32 G	E=110,B=37
R/LEB	T CEP	51	8.1	2108529	+681712	H 1	17483 L	2024	FO	90030617	172600	008000	53 G	E=198,B=45
R/LEB	T CEP	51	6.0	2108529	+681712	L 1	17601 L	2672	FO	90032516	165000	000500	32 G	E=93,B=37
R/LEB	T CEP	51	6.0	2108529	+681712	H 1	17602 L	2532	FO	90032517	172800	008200	43 G	E=149,B=48
R/LEB	T CEP	51	6.0	2108529	+681712	L 1	17761 L	4173	FO	90041710	100100	000800	32 G	E=109,B=34
R/LEB	T CEP	51	6.0	2108529	+681712	H 1	17762 L	4164	FO	90041711	110400	018000	45 G	E=197,B=62
MSIOD	AUSTIN	06	11.64	2114180	+175346	L 1	17946 S	00367	SO	90052000	000826	024000	174 V	NUCLEUS IN SAP
MSIOD	AUSTIN	06	11.64	2114180	+175346	L 3	38837 L	00366	SO	90052005	051349	007500	170 V	NUCLEUS IN IAP
IMPF	HD	202627	30	4.70	2114546	-322258	H 1 17790 L	27600	FO	90042216	163300	000500	X03 G	G=1.5X,B=50
IMPF	HD	202627	30	4.70	2114546	-322258	H 1 17790 L		FU	90042216	164400	000500	X03 G	G=1.5X,B=50
ACIFB	HD	202730	31	4.4	2116189	-533938	H 3 38623 L	438	FO	90041719	192400	003000	X04 G	G=2X,B=51
LAL08	HD203467	26	05.60	2118201	+643934	H 3	38787 L	17628	FO	90051502	023904	000800	500 V	
SCMA	AUSTIN	06		2118420	+184519	L 1	17944 S	415	SO	90051919	191800	001100	32 G	E=78,B=38
SCMA	AUSTIN	06		2118420	+184519	L 1	17945 S	395	SO	90051921	212200	001000	X2 G	E=2X,B=38
SCMA	AUSTIN	06		2118421	+184519	L 9	02319			90051916	161800	016000	G	
SCMA	AUSTIN	06		2118421	+184519	L 1	17942 L	410	SO	90051916	161800	016000	42 G	E=162,B=33
SCMA	AUSTIN	06		2118421	+184519	H 1	17943 L	405	SO	90051917	172800	001500	G	
SCMA	AUSTIN	06		2118421	+184519	H 1	17943 L	415	SO	90051917	175100	001000	3X3 G	E=3.5X,G=82,B=50
SCMA	AUSTIN	06		2118421	+184519	L 3	38836 L	422	SO	90051918	183200	003000	01 G	B=24
SCMA	AUSTIN	06		2118421	+184519	L 9	02320			90051920	205400	016000	G	
SCMA	AUSTIN	06		2118421	+184519	L 1	17945 S	403	SO	90051921	210300	004500	52 G	E=195,B=38
MSIOD	AUSTIN	06	11.55	2128033	+201145	L 1	17939 L	00400	SO	90051900	002502	000500	152 V	NUCLEUS
MSIOD	AUSTIN	06	11.54	2128033	+201145	L 3	38833 L	00401	SO	90051900	004341	000800	160 V	NUCLEUS
MSIOD	AUSTIN	06	11.52	2128033	+201145	L 1	17940 L	00408	SO	90051901	013117	012000	172 V	10" ANITAIL
MSIOD	AUSTIN	06	11.56	2128033	+201145	L 1	17941 L	00395	SO	90051904	044954	009000	173 V	10" TAIL DIRECTION
SRLE	HD	205730	49	5.5	2134081	+450859	L 1 17083 L	231.00	FO	90010405	054100	001000	352 G	E=210,G=60,B=37
R/MAF	NEC	7094	70	13.6	2134280	+123348	H 3 38853 L	74	SO	90052208	080900	040000	409 G	G=212,B=103



FRO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
IMIS HD	206267	12	5.6	2137244	+571545	L 1	17971 L	13023	FO	90052219	190100	000005	X02 G	G=1.5X,B=35
LIL58 SS C&GNI		54	12.54	2140444	+432121	L 1	16969 L	00165	SO	89122110	103108	001600	361 V	
LIL58 SS C&GNI		54	12.59	2140444	+432121	L 3	37866 L	00158	SO	89122110	105450	004000	351 V	
LIL58 SS C&GNI		54	12.75	2140444	+432121	L 1	16970 L	00136	SO	89122111	114226	001600	361 V	
LIL58 SS C&GNI		54	12.76	2140444	+432121	L 3	37867 L	00135	SO	89122112	122019	004000	360 V	
LIL58 SS C&GNI		54	12.53	2140444	+432121	L 1	16971 L	00166	SO	89122113	130909	001600	361 V	
LIL58 SS C&GNI		54	12.51	2140444	+432121	L 3	37868 L	00169	SO	89122113	134144	003500	350 V	
LIL58 SS C&GNI		54	12.64	2140444	+432121	L 1	16972 L	00150	SO	89122114	142444	001600	361 V	
LIL58 SS C&GNI		54	12.64	2140444	+432121	L 3	37869 L	00151	SO	89122114	145501	003500	360 V	
LIL58 SS C&GNI		54	12.65	2140444	+432121	L 1	16973 L	00149	SO	89122115	153719	001600	361 V	
LIL58 SS C&GNI		54	12.59	2140444	+432121	L 3	37870 L	00158	SO	89122116	161210	003500	350 V	
LIL58 SS C&GNI		54	11.37	2140444	+432120	L 1	17131 L	00117	FO	90011107	074330	000800	770 V	
LIL58 SS C&GNI		54	11.39	2140444	+432120	L 3	37987 L	00115	FO	90011108	080148	001200	870 V	
LIL58 SS C&G		54	11.53	2140444	+432120	L 1	17132 L	00101	FO	90011109	090604	000300	550 V	
LIL58 SS C&G		54	11.48	2140444	+432120	L 3	37988 L	00424	SO	90011109	091337	000500	540 V	
LIL58 SS C&G		54	11.53	2140444	+432120	L 1	17133 L	00101	FO	90011110	101316	000300	550 V	
LIL58 SS C&G		54	11.58	2140444	+432120	L 3	37989 L	00097	FO	90011110	102046	000500	540 V	
LIL58 SS C&G		54	11.56	2140444	+432120	L 1	17134 L	00099	FO	90011111	112129	000300	450 V	
LIL58 SS C&G		54	11.59	2140444	+432120	L 3	37990 L	00096	FO	90011111	112926	000500	450 V	
LIL58 SSC&G		54	12.59	2140445	+432121	L 1	17052 L	00158	SO	89123110	102120	001600	351 V	
DNI&P SS C&G		54	12.0	2140445	+432123	L 3	38792 L	1046	FO	90051511	115300	000040	500 G	G=202,B=18
LIL58 SSC&G		54	12.65	2140445	+432121	L 3	37924 L	00150	SO	89123110	104751	004000	350 V	
DNI&P SS C&G		54	12.0	2140445	+432123	L 1	17910 L	1046	FO	90051511	115800	000025	402 G	G=147,B=37
LIL58 SSC&G		54	12.71	2140445	+432121	L 1	17053 L	00142	SO	89123111	113621	001800	360 V	
DNI&P SS C&G		54	12.0	2140445	+432123	H 3	38793 L	1036	FO	90051512	123400	006500	504 G	G=208,B=51
LIL58 SSC&G		54	12.76	2140445	+432121	L 3	37925 L	00134	SO	89123112	120803	004200	350 V	
DNI&P SS C&G		54	12.0	2140445	+432123	L 3	38794 L	972	FO	90051514	141500	000045	X00 G	G=1.5X,B=18
LIL58 SSC&G		54	12.73	2140445	+432121	L 1	17054 L	17054	SO	89123112	125804	001800	360 V	
DNI&P SS C&G		54	12.0	2140445	+432123	L 1	17911 L	984	FO	90051514	141900	000032	502 G	G=212,B=35
LIL58 SSC&G		54	12.71	2140445	+432121	L 3	37926 L	00141	SO	89123113	132943	004000	350 V	
DNI&P SS C&G		54	12.0	2140445	+432123	L 1	17911 S	977	FO	90051514	142300	000300		G=3X
LIL58 SSC&G		54	12.59	2140445	+432121	L 1	17055 L	00159	SO	89123114	141831	001600	360 V	
DNI&P SS C&G		54	12.0	2140445	+432123	L 3	38867 L	425	SO	90052516	160100	001800	351 G	E=229,G=89,B=21
LIL58 SSC&G		54	12.65	2140445	+432121	L 3	37927 L	00151	SO	89123114	145156	004000	350 V	
DNI&P SS C&G		54	12.0	2140445	+432123	L 1	17988 L	304	SO	90052516	163000	001400	5X2 G	E=3X,G=208,B=40
LIL58 SSC&G		54	12.61	2140445	+432121	L 1	17056 L	00156	SO	89123115	154150	001600	361 V	
DNI&P SS C&G		54	12.0	2140445	+432123	L 3	38869 L	273	SO	90052518	182600	002500	3X2 G	E=1.5X,G=118,B=32
LIL58 SS C&G		54	11.64	2140445	+432121	L 1	17135 L	00092	FO	90011112	122951	000330	550 V	
LIL58 SS C&G		54	11.66	2140445	+432121	L 3	37991 L	00090	FO	90011112	123708	000500	540 V	
LIL58 HD 206697		54	12.14	2140445	+432121	L 3	38010 L	00236	SO	90011313	135948	001200	340 V	
LIL58 HD 206697		54	12.10	2140445	+432121	L 1	17138 L	00243	SO	90011313	130905	000655	452 V	
LIL58 HD 206697		54	12.09	2140445	+432121	L 1	17139 L	00247	SO	90011314	144941	000500	341 V	P READ
DNI&P SS C&G		54	12.0	2140450	+432122	L 3	38868 L	314	SO	90052517	170500	003000	4X1 G	E=2X,G=151,B=29
DNI&P SS C&G		54	12.0	2140450	+432122	L 1	17989 L	358	SO	90052517	174900	000500	352 G	E=202,G=111,B=39
SELGW HD 206936		49	4.0	2141585	+583300	L 1	17037 L	1047	FU	89123002	022900	013500	554 G	E=247,G=245,B=56
PHCAL ED+284211		16	10.85	2148559	+283733	L 1	16998 S	00186	FO	89122509	094217	000230	500 V	
PHCAL ED+284211		16	10.85	2148559	+283733	L 1	16998 L	00186	FO	89122509	092333	000050	600 V	
PHCAL ED+284211		16	10.94	2148559	+283733	L 1	16999 S	00172	FO	89122510	103207	000230	500 V	
PHCAL ED+284211		16	10.94	2148559	+283733	L 1	16999 L	00172	FO	89122510	102835	000050	600 V	
PHCAL ED+284211		16	10.81	2148559	+283733	L 1	17000 L	00192	FO	89122511	110449	000230	700 V	



PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	numres	stt	ECC	Comment
PHCAL	ED+284211	16	10.79	2148559	+283733	L	1	17001	L	00196	FO	89122511	113834	000230		700	V
PHCAL	ED+284211	16	10.98	2148559	+283733	L	3	37897	L	00166	FO	89122511	115422	000026		500	V
PHCAL	ED+284211	16	10.72	2148559	+283733	H	1	17002	L	00209	FO	89122512	122949	006500		501	V
PHCAL	ED+284211	16	10.81	2148559	+283733	H	3	37898	L	00193	FO	89122513	134521	004500		501	V
PHCAL	ED+28 4211	16	10.50	2148560	+283735	H	3	38862	L	00000	EO	90052323	234848	004500		501	V
PHCAL	ED+28 4211	16	10.83	2148560	+283735	H	1	17977	L	00190	FO	90052400	005159	006500		503	V
PHCAL	ED+28 4211	16	10.82	2148560	+283735	H	3	38863	L	00191	FO	90052402	020533	005000		501	V
PHCAL	ED+28 4211	16	10.82	2148560	+283735	H	1	17978	L	00191	FO	90052403	030424	010000			V
PHCAL	ED +28 4211	16	10.5	2148574	+283734	L	1	16958	L	221	FO	89122007	071900	000050		501	G G=196,B=30
PHCAL	ED +28 4211	16	10.5	2148574	+283734	L	3	37854	L	189	FO	89122007	072300	000026		500	G G=195,B=20
PHCAL	ED +28 4211	16	10.5	2148574	+283734	L	1	16959	L	185	FO	89122008	080600	000050		502	G G=198,B=32
PHCAL	ED +28 4211	16	10.5	2148574	+283734	H	1	16983	L	185	FO	89122221	213700	006800		504	G G=206,B=52
PHCAL	ED +28 4211	16	10.5	2148574	+283734	H	3	37878	L	179	FO	89122223	230100	003500		402	G G=168,B=34
PHCAL	ED +28 4211	16	10.5	2148574	+283734	L	3	38831	L	239	FO	90051818	184600	000026		500	G G=208,B=18
PHCAL	ED +28 4211	16	10.5	2148574	+283734	L	1	17949	L	241	FO	90052014	140300	000050		402	G G=180,B=38
OD68Y	HD 208816	49	4.9	2155139	+632312	H	3	38281	L	22707	FO	90030119	194200	009000		302	G G=130,B=36
OD68Y	HD 208816	49	4.9	2155139	+632312	L	1	17445	L	22509	FO	90030120	202800	000230		X02	G G=5X,B=38
OD68Y	HD 208816	49	4.9	2155139	+632312	H	1	17446	L	22011	FO	90030121	213000	003000		5X3	G B=2X,G=230,B=50
OD68Y	HD 208816	49	4.9	2155139	+632312	L	3	38282	L			90030122	220800	000200			G
PHCAL	ED+284211	16	11.11	2198560	+283734	H	1	17003	L	00148	FO	89122513	143821	001800		401	V
LIL55	HD209481	12	06.01	2200238	+574533	H	3	38920	L	13008	FO	90053005	055737	000645		501	V
IBLRK	HD 209481	12	5.6	2200238	+574533	H	3	38911	L	1576	FO	90052919	195600	000600		502	G G=212,B=38
LIL55	HD209481	12	06.08	2200238	+574533	H	3	38932	L	12345	FO	90053100	002256	000710		600	V
LIL55	HD209481	12	06.07	2200238	+574533	H	3	38933	L	12440	FO	90053101	010452	000703		600	V
LIL55	HD209481	12	06.06	2200238	+574533	H	3	38934	L	12486	FO	90053101	015852	000702		600	V
LIL55	HD209481	12	06.07	2200238	+574533	H	3	38935	L	12441	FO	90053102	023603	000703		600	V
LIL55	HD209481	12	06.07	2200238	+574533	H	3	38936	L	12426	FO	90053103	031224	000704		600	V
LIL55	HD209481	12	06.07	2200238	+574533	H	3	38937	L	12433	FO	90053103	034837	000704		600	V
LIL55	HD209481	12	06.07	2200238	+574533	H	3	38938	L	12429	FO	90053104	042825	000704		600	V
LIL55	HD209481	12	06.06	2200238	+574533	H	3	38939	L	12483	FO	90053105	050639	000702		501	V
IBLRK	HD 209481	12	5.6	2200240	+574533	H	3	38925	L	14876	FO	90053018	180000	000630		502	G G=212,B=40
IBLRK	HD 209481	12	5.6	2200240	+574533	H	3	38926	L	14529	FO	90053018	184500	000630		502	G G=212,B=40
IBLRK	HD 209481	12	5.6	2200240	+574533	H	3	38927	L	14426	FO	90053019	193300	000645		502	G G=212,B=40
IBLRK	HD 209481	12	5.6	2200240	+574533	H	3	38928	L	14129	FO	90053020	201700	000700		502	G G=212,B=40
IBLRK	HD 209481	12	5.6	2200240	+574533	H	3	38929	L	14385	FO	90053021	211400	000730		502	G G=225,B=40
IBLRK	HD 209481	12	5.6	2200240	+574533	H	3	38930	L	14416	FO	90053021	215900	000730		502	G G=225,B=40
SCMA	AUSTIN	06		2202000	+251618	L	3	38802	L			90051612	120300	000400		30	G B=107,B=17
SCMA	AUSTIN	06		2202442	+251435	L	3	38803				90051613	132200	000500		40	G B=127,B=17
SCMA	AUSTIN	06		2203000	+251618		9	02316				90051607	074500	016000			G
SCMA	AUSTIN	06		2203000	+251618	L	1	17917	L	120	FO	90051607	075300	000500		52	G B=194,B=32
SCMA	AUSTIN	06		2203000	+251618	H	1	17918	L			90051608	083800	012000		34	G B=111,B=51
SCMA	AUSTIN	06		2203000	+251618	L	3	38800				90051608	084800	000200		30	G B=43,B=15
SCMA	AUSTIN	06		2203000	+251618	L	9	02317				90051609	092600	002000			G
SCMA	AUSTIN	06		2203000	+251618	L	3	38801	L			90051609	093800	006000		X1	G B=4X,B=21
SCMA	AUSTIN	06		2203000	+251618	H	1	17919	L			90051611	111200	008000		34	G B=129,B=51
SCMA	AUSTIN	06		2203000	+251618	H	1	17920	L			90051613	131800	009000		34	G B=132,B=57
SCMA	AUSTIN	06		2203000	+251618	L	9	02318				90051614	140000	002000			G
SCMA	AUSTIN	06		2203000	+251618	H	1	17921	L			90051615	152800	009000		45	G B=184,B=61
SCMA	AUSTIN	06		2203000	+251618	L	3	38804	L			90051615	153000	000500		40	G B=131,B=13
SCMA	AUSTIN	06		2203000	+251618	L	3	38805	L	489	SO	90051617	171100	002800		X1	G B=4X,B=21

FFO	Object	CL	MAG	R.A.	DEC	D C	Image A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
SCIMA	AUSTIN	06		2203000	+251618	H 1	17922 L	502	SD	90051617	174900	001500	X8	G E=1.5X, B=96
SCIMA	AUSTIN	06		2203000	+251618	L 1	17923 L	484	SD	90051619	194600	002000	2X6	G E=6X, C=97, B=80
SCIMA	AUSTIN	06		2203000	+251618	L 3	38806 L	484	SD	90051619	194800	000500	50	G E=168, B=15
SCIMA	AUSTIN	06		2203000	+251618	H 1	17924 L			90051621	211100	008000	43	G E=151, B=43
SCIMA	AUSTIN	06		2203000	+251618	L 3	38807 L			90051621	213100	000500	40	G E=157, B=13
IMLH	HD	210121	21	7.5	2205361	-034636	H 3 38860 L	2696	FO	90052307	075000	042000	X08	G C=3X, B=99
IMLH	HD	210121	21	7.5	2205361	-034636	H 3 38872 L	2544	FO	90052608	080400	040500	X09	G C=3X, B=102
IMLH	HD	210121	21	7.5	2205361	-034636	H 3 38886 L	2634	FO	90052807	073900	043000	X09	G C=4X, B=136
PHCAL	HD	209952	22	1.74	22055.	-471215	H 1 17875 L	4574	FU	90050818	183700	000007	503	G C=220, B=43
PHCAL	HD	209952	22	1.74	22055.	-471215	H 3 38745 L	4675	FU	90050818	184200	000012	502	G C=215, B=38
USSES	ED	+17 4708	43	9.5	2209007	+175056	L 1 17972 L	456	FO	90052220	200100	000730	502	G C=225, B=35
USSES	ED	+17 4708	43	9.5	2209007	+175056	L 3 38856 L	449	FO	90052220	201600	006000	401	G C=140, B=24
USSES	HD	210745	47	3.4	2209069	+575715	H 1 16885 L	886	FU	89120308	083700	001300	341	G E=132, C=65, B=28
SCLOW	HD	210745	49	3.4	2209069	+575715	L 1 17038 S	902	FU	89123005	055800	001000	5X2	G C=238, B=33, E=2X
SCLOW	HD	210745	49	3.4	2209069	+575715	L 1 17038 L	864	FU	89123005	055800	001000	5X2	G C=238, B=33, E=2X
SCLOW	HD	210745	49	3.4	2209069	+575715	L 1 17039 L	966	FU	89123006	065400	001500	XX2	G E=3X, C=2X, B=37
LIL55	HD209481		12	06.02	2220238	+574533	H 3 38921 L	12890	FO	90053006	064230	000645	501	V
SCIMA	1989 C1	06	11	2231269	+284929	H 9	02314			90051216	163300	000000		G
SCIMA	1989 C1	06	11	2231269	+284929	L 9	02315			90051218	184300	000000		G
SCIMA	1989 C1	06	11	2231269	+284929	L 1	17899 L	159	FO	90051316	162200	000300		G E=156
SCIMA	1989 C1	06	11	2231269	+284929	L 3	38781 L			90051316	163200	000400		G
SCIMA	1989 C1	06	11	2231269	+284929	L 1	17900 L			90051318	181300	001500		G
SCIMA	1989 C1	06	11	223127	+284929	H 9	02314			90051316	161400	004000		G
SCIMA	1989 C1	06	11	223127	+284929	L 1	17900 L	157	FO	90051317	173800	001500	2X6	G E=6X, C=92, B=73
WRLSS	CQ CEP	11	8.9	2234568	+563846	H 3	38112 L	1035	FO	90020211	114700	019000	334	G E=129, C=130, B=51
WRLSS	CQ CEP	11	8.9	2234568	+563846	L 1	17285 L	942	FO	90020215	150100	000150	502	G C=241, B=36
WRLSS	CQ CEP	11	8.9	2234568	+563846	H 3	38113 L	938	FO	90020215	153800	018000	334	G E=132, C=128, B=51
WRLSS	CQ CEP	11	8.9	2234568	+563846	L 1	17286 L	776	FO	90020218	184200	000115	402	G C=158, B=36
WRLSS	CQ CEP	11	8.9	2234568	+563846	H 3	38128 L	883	FO	90020312	121900	019000	334	G E=150, C=145, B=58
WRLSS	CQ CEP	11	8.9	2234568	+563846	H 3	38129 L	883	FO	90020315	155300	018700	335	G E=143, C=132, B=66
WRLSS	CQ CEP	11	8.9	2234568	+563846	H 3	38133 L	693	FO	90020412	120600	022000	334	G E=147, C=110, B=51
WRLSS	CQ CEP	11	8.9	2234568	+563846	H 3	38134 L	693	FO	90020416	160900	020000	334	G E=136, C=130, B=51
WRLSS	CQ CEP	11	8.9	2234568	+563846	H 3	38141 L	837	FO	90020512	120800	020000	334	G E=139, C=128, B=52
WRLSS	CQ CEP	11	8.9	2234568	+563846	H 3	38142 L	837	FO	90020515	155100	019400	335	G E=153, C=155, B=66
WRLSS	CQ CEP	11	8.9	2234568	+563846	H 3	38153 L	952	FO	90020612	120400	020000	335	G E=155, C=150, B=66
WRLSS	CQ CEP	11	8.9	2234568	+563846	H 3	38154 L	952	FO	90020615	155400	018500	337	G E=161, C=164, B=82
WRLSS	CQ CEP	11	8.9	2234568	+563846	H 3	38159 L	1035	FO	90020712	124700	039000	446	G E=222, C=185, B=72
PHCAL	WAVCAL	98		2236599	+384721	L 1	17025 L			89122901	014400	000000	X2	G E=1.5X, B=31
PHCAL	WAVCAL	98		2236599	+384721	L 1	17026 S			89122902	021400	000001	X2	G E=3X, B=32
PHCAL	WAVCAL	98		2236599	+384721	L 1	17027 S			89122902	024200	000002	X2	G E=6X, B=33
PHCAL	WAVCAL	98		2236599	+384721	H 1	17028 S			89122903	031100	000004	72	G E=15X, B=35
PHCAL	WAVCAL	98		2236599	+384721	H 1	17029 S			89122903	034000	000008	72	G E=30X, B=36
PHCAL	WAVCAL	98		2236599	+384721	H 1	17030 S			89122904	041300	000016	23	G E=60X, B=41
PHCAL	WAVCAL	98		2236599	+384721	H 1	17031 S			89122904	044100	000032	33	G E=120X, B=41
PHCAL	HD214680	13	05.19	2237009	+384721	L 1	16960 L	22826	FO	89122009	094247	000001	600	V
PHCAL	HD214680	13	05.15	2237009	+384721	L 1	16961 L	23333	FO	89122010	102248	000001	600	V
PHCAL	HD214680	13	05.14	2237009	+384721	L 1	16962 L	23527	FO	89122010	105615	000001	400	V
PHCAL	HD214680	13	05.15	2237009	+384721	L 1	16963 L	23331	FO	89122011	113203	000001	400	V
PHCAL	HD214680	13	05.15	2237009	+384721	L 1	16964 L	23355	FO	89122012	120545	000001	400	V
PHCAL	HD214680	13	05.14	2237010	+384722	L 1	16965 L	23581	FO	89122012	123818	000001	600	V

FRO	Object	CL	MAG	R.A.	DEC	D C Image A	FES	MD	Obs.date	Exptim	numscstt	ECC	Comment	
SQMA	AUSTIN	06		2253512	+310602	9 02312			90051008	081700	000000	G		
SQMA	AUSTIN	06		2253512	+310602	L 1 17892 L			90051110	105600	002500	G		
SQMA	AUSTIN	06		2253512	+310602	L 1 17892 L			90051111	112800	002500	G		
SQMA	AUSTIN	06		2253513	-310602	L 9 02312			90051108	080600	004000	G		
SQMA	AUSTIN	06		2253513	+310602	L 3 38773 L	184	FO	90051108	083600	000600	X0	G E=1.5X,B=18	
SQMA	AUSTIN	06		2253513	+310602	L 1 17892 L	184	FO	90051108	084800	002500	3?6	G E=35X,G=154,B=76	
HIEB	GED37 S	69	16.0	2254031	+614558	L 3 38212 L		EO	90021812	122200	060150	09	G B=127	
LS076	AUSTIN	06		2300599	+314959	L 1 17885 S	213	FO	90051008	085400	019000	X4	G E=5X,B=53	
LS076	AUSTIN	06		2300599	+314959	L 1 17885 S	212	FO	90051009	091300	001500	X4	G E=5X,B=53	
LS076	AUSTIN	06		2300599	+314959	L 1 17885 S			90051011	113800	001500	G		
LS076	AUSTIN	06		2300599	+314959	L 1 17885 S			90051012	120300	001500	G		
LS076	AUSTIN	06		2302262	+315314	9 02311			90050909	095700	000000	G		
LS076	AUSTIN	06		2302262	+315315	H 9 02311			90051008	081300	004000	G		
XQKEW	FG 2304+042	85	15.4	2304301	+041641	L 3 37920 L		EO	89122917	174800	042000	345	G E=202,G=92,B=65	
LS076	AUSTIN	06		2308599	+323000	L 3 38750 L	224	FO	90050909	090400	019500	331	G E=84,G=46,B=25	
LS076	AUSTIN	06		2309000	+323000	L 1 17879 L	226	FO	90050908	084800	000240	?9	G E=171,B=351	
OK67K	NOVAND86	55	15	2309476	+471200	L 1 17160 L		EO	90011516	160300	011000	304	G G=78,B=56	
OK67K	NOVAND86	55	15	2309476	+471200	L 3 38031 L		EO	90011517	175800	029000	304	G G=84,B=58	
LS076	AUSTIN	06		2310238	+323417	9 02310			90050811	112500	000000	G		
SALOW	HD 219615	45	3.7	2314343	+030031	L 1 17036 L	614	FU	89123001	012600	000136	502	G G=234,B=36	
IA003	HD220140	70	08.01	2317533	+784346	L 1 17061 L	02335	FO	90010107	074932	000500	442	V	
IA003	HD220140	70	08.01	2317533	+784346	L 1 17061 S	02335	FO	90010108	080304	000500	332	V	
IA003	HD220140	70	08.03	2317533	+784346	L 1 17062 L	02303	FO	90010111	112238	000600	452	V	
IA032	HD220140	70	08.06	2317534	+784347	L 1 17021 S	02240	FO	89122810	105244	000500	301	V	
IA032	HD220140	70	08.06	2317534	+784347	L 1 17021 L	02240	FO	89122810	104152	000500	501	V	
IA032	HD220140	70	08.09	2317534	+784347	L 3 37911 L	02183	FO	89122811	110757	014000	330	V	
IA032	HD220140	70	08.09	2317534	+784347	L 3 37921 L	02185	FO	89123009	092202	027000	331	V	
IA032	HD220140	70	08.08	2317534	+784347	L 1 17041 L	02194	FO	89123009	095730	000500	500	V	
IA003	HD220140	70	08.00	2317534	+784347	L 3 37931 L	02364	FO	90010108	081642	028000	231	V	
SCIMA	AUSTIN	06		2325394	+334326	9 02308			90050709	094900	004000	G		
SCIMA	AUSTIN	06		2325395	334326.	9 02307			90050708	083000	004000	G		
SCIMA	AUSTIN	06		2325395	334326.	L 1 17869 L	299	FO	90050708	083800	001500	3?5	G E=20X,G=99,B=61	
SCIMA	AUSTIN	06		2325395	334326	L 3 38739 L	298	FO	90050709	090100	009000	31	G E=54,B=25	
SCIMA	AUSTIN	06		2325395	334326.	L 1 17869 L	300	FO	90050709	092500	001500	3?5	G E=20X,G=99,B=61	
SCIMA	AUSTIN	06		2325395	334326	L 3 38739 L	297	FO	90050712	122400	009000	31	G E=54,B=25	
NFLFD	M2-	55	71	13.0	2329421	+700537	L 1 17422 L		EO	90022522	222400	009000	09	G B=165
LHO46	Z AND	57	10.94	2331149	+483230	L 3 37890 L	00172	FO	89122410	105204	000800	140	V	
LHO46	Z AND	57	11.08	2331149	+483230	L 1 16993 L	00152	FO	89122410	102031	002500	361	V M2 SATURATED	
LHO46	Z AND	57	10.50	2331150	+483231	H 1 16994 L	00172	FO	89122411	113524	010500	131	V	
LHO46	Z AND	57	10.95	2331150	+483231	L 3 37891 L	00170	FO	89122413	132600	006000	360	V O4 SATURATED	
LHO46	Z AND	57	10.92	2331150	+483231	H 3 37892 L	00174	FO	89122415	150000	010500	151	V	
SCIMA	1989 C1	06	11	233127	+284929	L 9 02315			90051318	183100	004000	G		
CSLTA	HD 222107	45	4.0	2335065	+461114	L 3 38110 L		FU	90020200	002900	006000	G		
USSES	HD 222404	46	3.2	2337165	+772111	H 1 16884 L	959	FU	89120307	074300	002000	502	G G=205,B=31	
OD67Y	R AQR	57	10.0	2341142	-153342	L 1 17024 L	9562	FO	89122823	231900	004000	4?2	G E=2X,G=159,B=38	
OD67Y	R AQR	57	10.0	2341142	-153342	L 3 37915 L	8957	FO	89122900	000900	004000	3?1	G E=4X,G=53,B=21	