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IUE ESA NEWSLETTER

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OBSERVATORY CONTROLLER'S MESSAGE

By the time this Newsletter will have reached you the time for applications for the next round of IUE Observing will already be approaching.

The last shadow season has shown us that the scattered light behaviour in the FES is still rather difficult to predict. Contrary to the behaviour in the previous shadow, during shadow #30 a noticeable increase was seen, however this shows a peculiar response with Beta angle. We are currently making a detailed report on the implications and extrapolations for future impact. The current situation does not present major problems, the only requirement is that better coordinates need to be supplied by the G.O. during the training. To make your life easier (Coradograph measurements are no fun!) we are proceeding to have a convenient implementation of the HST Guide Star Catalogue as an aid to training. A remarkable curiosity is that, due to the way the FES interacts with the OBC, the increased background actually allows tracking on stars whose brightness previously did not allow tracking. The only effect, is the apparent discomfort of not being able to see guide stars on the FES image, this is easily overcome by performing slightly more blind offset maneuvers.

This year you will find that serious attention should be applied to the application forms. One reason for this is the frustration of the members of the IUEAC over the extreme disparity of the physical presentation of the proposals. Therefore the IUEAC has requested to have strict adherence to the Instructions for Applicants. (See article by Brenden Byrne in this Newsletter). I will follow the wishes of the committee. I am sure that all of you will agree that this only represents a fairness reinforcement, assuring that all applications are judged on an equal basis (do not think that, if your justification only fills a single page, the IUEAC will be disappointed!).

A second and very important change is that the SPC has permitted the issue of a call for proposals for two years, following the

recommendations of the IUE Review Team (whose report is reproduced in this Newsletter) It must be understood that this does not imply that the two years will be fully committed in the next allocation meeting, but is does give you the freedom to expand the proposals you might want to make, allowing more complete and/or large proposals be considered by the IUEAC. The Committee has the possibility to assign time which can extend beyond the normal 365 days following June 1st 1993. This has been decided, as explained in the IRT report, to allow new approaches to the definition of the IUE Science Program. For more details on this subject see the Call for Proposals (which is contained in this Newsletter) and the Instructions for Applicants (which will be sent out shortly). Be aware that only 16th round forms will be accepted.

Another new aspect of the IUE Project is that the FES tracking data will now be formally available as a separate archive of IUE Science data. The details of the contents of this archive as well as the access modes (from January 1st. 1993) are explained in the article by Constanze la Dous in this Newsletter.

The rapidly approaching start date of the IUEFA production is obvious from the increased amount of information included in the recent Newsletters. The implications of the IUEFA production on archive access, daily processing etc.. are currently under study, but present expectations are that good old IUESIPS will continue to supply your reduced data at least until the middle of 1993. We will try to minimize the inconveniences of the difference between data in the Archive and new data through technical and administrative solutions.

Note that the ESA IUE Scheduler has changed his E-mail ID and that all queries and info related to this should be addressed to the account given later in this Newsletter.

Finally I would like to mention that you will shortly find the IUE Observatory quite different in appearance since we have, after 15 years, succeeded in replacing our good old EDS systems

by a more modern interface between the user and the S/C through the implementation of new work stations. Let us hope that these will also have to be retired after 15 years!

Willem Wamsteker

EUROPEAN SPACE AGENCY

ASTRONOMY WORKING GROUP

Report of the Review Team on The International Ultraviolet Explorer (IUE)

1. INTRODUCTION AND OBJECTIVE

For several years past, IUE, which celebrated its 14th year of operations in space on 27 January 1992, has had its lifetime extended on a yearly basis. Reference to ESA/SPC(91)51, ESA/SPC(92)3 and SSAC/MIN/62, the latter being the minutes of the SSAC meeting held on 17/18 February 1992 (an extract of which is quoted below), gives the following situation:

"In 1991, the Executive had indicated that a three-year programme would be required for the completion of a final, high-priority science programme, to do the final calibrations and to complete the development of the entire IUE data base, in order to establish the final archive. At present, observations were supported in 1992, with a run-down phase in 1993. The Executive now wished to take up this proposal again, since a strong scientific case could still be made for extension of IUE operations for two years, also leading to a termination of the operational programme at the end of 1994. Such a completion of the IUE final archives and extension should be seen in the context of budgetary pressures, and the SSAC should set priorities. To this end, the Executive was setting up an IUE Review Team to look at the extension and to establish the final archive."

At the request of the Director of the Scientific Programme, a specific team, the IUE Review Team (IRT), was set up by the Astronomy Working Group at its 75th Meeting, held on 28 January 1992. The composition of the IRT is as follows:

C. Barbieri, University of Padua
R. Booth, Onsala Observatory
G. Miley, Leiden Observatory
V. Reglero, University of Valencia
J.-P. Swings, University of Liege (AWG Chairman),

supported by the following ESA staff members:

B.G. Taylor, SSD/ESTEC
S. Volonte, ESA HQ
W. Wamsteker, VILSPA, Madrid.

The Review Team met at VILSPA on 25 and 26 March 1992 (R. Booth was unable to attend) when, as agreed by the AWG and the SSAC, it was charged with the following task:

"to assess the scientific value both of continuing orbital operations of IUE throughout 1993 and 1994 and establishing the final IUE archive in the same time frame.

In order to fulfil this, the IRT will:

- review the value of the science thrusts opened up by IUE to date;

- review the value of the potential use of IUE in 1993/1994:

    - per se,

    - with use of the HST (as at present and with COSTAR),

    - for multispectral programmes.

These objectives imply that, in considering continuation of operations, IRT will look for scientific value on an absolute scale. This means, for instance, that IRT is **not** asked to compare IUE continuation with any other activity and formulate its recommendations on relative values."

In discharging its task, the IRT focussed its attention, in particular, on the following items whose analysis will constitute the backbone of the present report:

- uniqueness of IUE,

- contributions of IUE and resulting scientific highlights,

- the use of IUE (present and future)

- the IUE archive (present and future),

- the overall scenario: IUE extension and final archive.

The final part of the report contains the concluding remarks and a recommendation.

2. UNIQUENESS OF IUE

Despite the launch of the Hubble Space Telescope (HST), IUE remains the only satellite dedicated to performing ultraviolet astronomy, and, in particular, spectroscopy. It has unique characteristics (see Appendix 1, Tables 1a and 1b) that equip it to carry out original science and that have led to many of the discoveries described in Section 3.

(i) The IUE wavelength range covers a region which is inaccessible to the present high-resolution HST spectrographs. This region includes important spectral lines which provide essential diagnostic tools for the physical conditions (mass, density, abundances, ionization, etc.) in a large assortment of planetary, galactic and extragalactic objects.

(ii) The maximum IUE wavelength resolution is higher than that of any other usable UV spectrograph (cf. Appendix 1), which is crucial for studying a wide range of astrophysical problems, from studies of stellar winds, through the properties of the interstellar and intergalactic media to determination of deuterium abundances (e.g., see Section 3.3, Scientific highlights).

(iii) The fast response time of less than 1 hour gives an unparalleled flexibility in scheduling targets of opportunity (e.g., SN 1987a) and allows multiwavelength programmes based on ultraviolet monitoring to be easily carried out. Indeed, IUE has been the driver for several such projects enhancing significantly the scientific returns from other space missions. At present, IUE is being used for programmes involving ROSAT and HST, and will continue to be important after the launch of both EUVE and ISO.

(iv) The high orbital exposure efficiency permits astronomical objects to be observed continuously over long periods, which is critically important for studying objects which vary on a time scale of hours. Such phenomena are widespread in astrophysics. Examples include the Jovian atmosphere, stars (accretion disks in dwarf novae), and the broad-line region in the nuclei of some active galaxies.

(v) On IUE a total on-source exposure time of 2900 hours per year dedicated to ultraviolet astronomy is available to European astronomers. By comparison, a total on-source exposure time of only 110 hours per year is available on HST, where it is divided between visual and ultraviolet astronomy. This larger amount of available time permits qualitatively different classes of programmes to be carried out, particularly in the important area of studying time-variable phenomena.

(vi) The availability of a well-defined archive of more than 85,000 observations taken with a uniform observing mode, photometrically and spectroscopically calibrated and reaching backwards in time for a period of more than 14 years provides a fundamental set of reference data for comparison with new observations.

3. CONTRIBUTIONS OF IUE

The impact of IUE on astronomy is well illustrated by the more than 2100 papers based on IUE data that have been published in refereed journals. Over the past 10 years, the publication rate has remained stable at some 175 papers/year, with an equal fraction under the ESA and NASA responsibilities. This makes IUE the most productive astronomical satellite of all times.

3.1 Project demand

The real need for the observational capabilities offered by IUE is clearly demonstrated by the over-subscription rate which has remained constant over the past six years at 2.8 +/- 0.3.

Demand for IUE Observing Time

YEAR OF OPERATIONS	1986 9th	1987 10th	1988 11th	1989 12th	1990 13th	1991 14th	1992 15th
Shifts requested	832	900	918	682	797	845	813
Load factor*	2.7	3.0	3.1	2.3	2.7	2.8	2.7

* Load factor includes only demand for science observations. Necessary Project activities, such as calibration, spacecraft engineering, Targets-of-Opportunity (ToO) and compensation, are allowed for by a 300-day year.

3.2 The IUE user community

The user community of IUE is very dynamic and is increasing steadily: most senior scientists remain involved, and, in addition, a significant number of young scientists as well as scientists from other disciplines have become interested in the IUE Science Programme (direct data and archives). More than 1000 European scientists have visited the IUE Observatory to participate in their observing programmes. The users of the IUE archives belong to 33 different countries, which extend far beyond the ESA Member States, and clearly demonstrate the interest of the astronomical community in IUE data. A good illustration of the dynamic nature of the IUE community is provided by the number of PhD degrees (129) and Intermediate degrees (54) awarded in ESA Member States through the use of IUE data.

3.3 Scientific highlights

The sheer volume and breadth of the science performed with IUE makes it difficult to give a complete overview of its actual impact on astrophysics. Appendix 2 highlights astrophysical results of IUE in the fields of solar system science, stars and interstellar medium, galaxies and active galactic nuclei.

4. THE IUE ARCHIVE

There are two general reasons why a well-conceived archive of IUE data is required:

i) The data volume is very great in terms of normal astronomical data acquisition: the total observing time in the 14 years of IUE orbital operations corresponds to roughly 70 years of acquisition from a ground-based observatory at a good site. Currently, more than 85,000 IUE observations (210 Gbytes of data) are contained in the IUE archive.

ii) The data reduction requirements are such that it is impossible for individual scientists to handle the basic data reduction (i.e., the transformation of instrumental values into physical values), and, therefore, this fundamental activity has to be tackled by the Project.

The most important innovations in the archive development at ESA (compared to those in the U.K. or the U.S.) are:

a) the placement of the IUE Catalogue (IUE Merged Log) on-line, as early as 1982, under a commercial database management system for remote queries and other archive functions;

b) the creation and organisation of a distributed host system, the Uniform Low Dispersion Archive (ULDA) and its Software Support Package (USSP) for the low dispersion spectroscopic data;

c) (the latest innovation at VILSPA) the implementation of a structured Query Language (SQL) to interrogate the IUE Merged Log with complex queries also from remote sites.

The ESA solution of the ULDA/USSP has taken an innovative approach, through the recognition that the main interest of scientists is in the data in a format of physical units, and that the scientists themselves will develop tools for scientific analysis at their home institutes. The resulting compact IUE low resolution data set (ULDA) has now been delivered to 17 national hosts, which serve astronomical communities extending well beyond the confines of the ESA Member States. Such a high usage demonstrates that the concept has fulfilled an existing need in the user community (as stated in Section 3.2).

At the present time, the IUE archive consists of the archive tapes, which are a copy of the data products supplied on magnetic tape to guest observers. In the future, the IUE Final Archive (IUEFA) will be residing on the more permanent optical disk media. The procedure required to achieve this task is set out in Appendix 3, together with the main scientific advantages to be expected (improvements in quality, S/N ratio, calibration of spectra, etc.).

5. THE OVERALL SCENARIO AND ITS IMPLICATIONS

5.1 Extension of IUE operations

A large community of researchers considers the continued operation of IUE a valuable tool in the quest for answers to an impressive set of fundamental questions, as demonstrated by the considerable over-subscription of observing time proposals submitted each year. There is every reason to expect that this situation will persist in the future. Therefore, an extension of the lifetime of IUE for at least a further two years is amply justified on scientific grounds. Furthermore, such an extension would not enter into conflict with operations to be performed from VILSPA in connection with the forthcoming missions of ISO and Cluster.

Some advantages of fixing a longer than usual extension period in advance are given below:

- programmes requiring a large volume of data can be granted an adequate number of shifts;

- programmes with critical time scales can be optimised in the data sampling rate domain;

- monitoring of temporal developments can be planned sufficiently in advance;

- greater flexibility for targets of opportunity can be maintained.

Such considerations could undoubtedly influence the next Call for Proposals and the philosophy adopted by the Time Allocation Committee.

5.2 The IUE Final Archive

The need to preserve astronomical data and to make them readily accessible to the scientific community, as satisfactorily carried out by the IUE Project, is amply demonstrated by the very great use to which the existing IUE archives is put. Furthermore, the plan to set up the IUE Final Archive, as outlined in Appendix 3, will considerably further enhance the scientific value of the data.

There is a strong justification for these activities to proceed in parallel with the extension of the IUE operations; experience has, indeed, shown that only motivated and well-trained scientists familiar with all the intracacies of such a complex operation, being themselves eager to use the data, can carry out the archiving activity in a proper manner. On the other hand, the firm commitment to produce the archive will have a positive influence on the observing activity during the period of the extension.

6. CONCLUSIONS AND RECOMMENDATION

The IUE Review Team emphasizes the scientific uniqueness of the spectroscopic capabilities of IUE, in particular with respect to HST, the only other mission covering the same wavelength range.

The value of the expected scientific return to be gained from a continuation of IUE operations and the importance of the developments leading to the establishment of the final IUE archive are also stressed.

Thus, on the basis of the above-mentioned conclusions, the IUE Review Team strongly recommends continuation of IUE operations and archive developments at their current level for at least the next two years.

TABLE 1a

CHARACTERISTICS OF HIGH-RESOLUTION UV SPECTROGRAPHS (at 130 nm) ON IUE AND HST

Velocity Resolution (km/sec)	1500	1000	230	16
IUE				
Spectral range 115-320 nm		+		+
Instantaneous spectral coverage		100 nm		100 nm
S/N=10 in 1000 sec* integration		14 mag		8.3 mag
Maximum brightness limit		1.5 mag		-
HST/GHRS**				
Spectral range 170**-320 nm				+
Instantaneous spectral coverage				3.6 nm
S/N=10 in 1000 sec*				15.6 mag
Maximum brightness limit				-
HST/FOS***				
Spectral range 115-320 nm	+		+	
Instantaneous spectral coverage	137 nm		46 nm	
S/N=10 in 1000 sec*	19.2 mag		17.8 mag	
Maximum brightness limit	7.7 mag		6.0 mag	

* NB. The signal-to-noise values are given for an unreddened early B star.

** Goddard High Resolution Spectrograph (whose blue-most section is no longer working, and will not be repaired during the refurbishment mission in 1993 or 1994).

*** Faint Object Spectrograph

TABLE 1b

RELEVANT PROJECT CHARACTERISTICS

	IUE	HST
Orbital exposure efficiency	52%	9%
Minimum response time	60 min	10,000 min
Normal response time	7,200 mn	100,000 min
Photometric accuracy	3%	10% (est.)
Time available for ESA Member States	2900 hrs/yr*	110 hrs/yr

* 30% of the orbit is affected by high background radiation limiting the practical duration of exposures. All ESA time is at low radiation level (i.e., "high quality" time).

ASTROPHYSICAL PROBLEMS CURRENTLY ADDRESSED IN THE IUE SCIENCE PROGRAMME

1 - Solar System

- The determination of the H/D ratio in comets through the observation of OD lines.
- Auroral energy deposition in the Jovian atmosphere, its relation to H3+ formation and its relation to general magnetospheric surface interaction (Io Torus).
- The completion of the UV albedo measurements of planetary satellites.

2 - Stars and Interstellar Medium

- The driving mechanism for stellar winds in early-type and in late-type stars.
- The influence of magnetic fields on mass accretion in close binaries.
- The detailed coronal and chromospheric mapping of the extended atmospheres of late-type giants.
- Atmospheric mapping of peculiar A stars.
- Physical dimensions of magnetic structures on stellar surfaces.
- The study of shocked winds in WR binary systems and wind instabilities in O, B, Be, WR and 53 Per stars.
- The separation of orbital and wind variability effects in massive early type stars.
- Astroseismology exploring the edges of the two pulsational instability strips.
- The study of the rare very hot WD and subdwarf O stars discovered in the HST WFC-EUV survey.
- The determination of abundance anomalies in novae and old novae.
- Initial Mass Function for the Magellanic Clouds and the effects of low metallicity on massive stars.
- Calibration of Co56 mass produced in SNe.

3 - Galaxies

- The establishment of Type Ia supernovae as standard candles.
- The early phase evolution of "normal" Type II supernovae.
- Population synthesis in Starburst Galaxies.

4 - Active Galactic Nuclei

- The existence of a Mass/Luminosity ratio in Active Nuclei.
- The velocity distribution in the Broad-Line-Region.
- The intrinsic variability of Quasars.

THE PREPARATION OF THE IUE FINAL ARCHIVE (IUEFA)

The IUEFA production will involve a complete reprocessing of the IUE data from instrumental units into physical units, through the application of new image processing techniques and a better understanding of the IUE instrumental characteristics. All the experience acquired over the past 14 years in data distribution and archival maintenance will, of course, be applied.

Therefore, the major requirements of any scientific archive, namely:

a) prompt data delivery to the user in well-calibrated, uniform physical units,

b) minimum project interference with the actual retrieval process,

c) careful quality control of the output products,

d) maintenance of scientific expertise in the form of direct use of the data by scientific staff for up-to-date research,

e) close contact with the scientific users community,

are all satisfied by the IUE-ESA Project plans. If this archiving activity will be carried out at VILSPA with the present level of intensity also in the future, the main scientific advantages to be expected are:

- improved S/N in the spectra (from 15% to 80%), improved linearity, homogeneous spectral resolution (according to each camera format), uniformity of information content of the header, for over 85,000 spectra;

- new absolute UV flux calibration;

- modern, more permanent storage medium.

EUROPEAN SPACE AGENCY

ASTRONOMY WORKING GROUP

Recommendation on the extension of the IUE mission

The Astronomy Working Group (AWG), at its 76th Meeting held on 12 May 1992, at Capri, gave careful consideration to the report of the IUE Review Team which had been set up to make an independent assessment of the scientific value of continuing orbital operations of IUE and establishing the IUE final archive (cf. ASTRO(92)4).

The AWG noted:

- the uniqueness of IUE for high resolution UV spectroscopy, its fast response time to targets-of-opportunity, and its long-look capability;

- the contribution of IUE to astronomy as measured by papers (more than 2100) in the scientific literature on topics ranging from the solar system, stars and the ISM and galaxies to AGNs;

- the high exposure efficiency which gives European astronomers 2900 hr/yr for UV spectroscopy compared with a total of exposure time on HST of 110 hr/yr;

- the value of the IUE archive of over 85,000 observations which provides a fundamental set of reference data.

The AWG strongly and unanimously endorses the review team's recommendation that IUE operations and archive development be continued at the current level for at least the next two years.

September 1, 1992

PROPOSALS FOR OBSERVATIONS WITH IUE IN 1993

Dear Colleague,

The International Ultraviolet Explorer (IUE) spacecraft is currently operating very successfully and continues to provide valuable UV spectroscopic data between 1152 A and 3200 A wavelengths. 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 are those recommended by the relevant European and US selection committees.

At its meeting of June 4, 1992, the Science Program Committee of ESA approved the extension of IUE operations and archive support through 1993. In common with the recommendations of the IUE Review Team, the Science Program Committee also suggested to plan for a further extension in 1994 (Space Sciences Newsletter issue 20, June 1992).

The present observing programmes extend to June 1993. Thereafter an additional year of observations will 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 1992. The recommendations of this committee will form the basis for the European observing programme starting June 1993 which could extend well into the next year as explained in the attached "Explanation for 1994 Planning".

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

Yours sincerely,

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

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

EXPLANATION FOR 1994 PLANNING

The recommendation to extend IUE operations for one year and the approved planning for an additional year, made by ESA's SPC (Space Sciences Newsletter issue 20 June 1992), permits to issue an expanded call for proposals for the next episode (16th) starting in June 1993.

As a consequence of this, the IUEAC will consider during its proposal evaluation the possibility to accept proposals for scientific research extending beyond the duration of a single scheduling year. The purpose of this is to assure the optimum utilization of the unique capabilities of IUE while the Spacecraft is still fully operational. It is therefore suggested that applicants also take into consideration, projects of a major nature, either extending over more than one year or requiring larger than normally acceptable amounts of observing time. Although such proposals could be considered to be of the "heroic proposal" type as has been introduced a few years ago, it is not the purpose to consider such proposals in a special category, even though their requirements might be more extensive than normal.

It is highly recommended that this opportunity supplied by ESA's Science Program Committee is utilised optimally.

esa NASA serc

August 15, 1992

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 1992 will be reviewed in order to establish the year's observing program starting the following June. While proposals of a genuine emergency nature may be dealt with more promptly, other proposals received too late will not be considered. Applications are accepted both from observers proposing new programs and from current IUE observers who wish to apply for more time than they have currently been allotted.

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

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

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

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

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

Sincerely,

Yoji Kondo
NASA/IUE Project Scientist

Willem Wamsteker
ESA/IUE Observatory Controller

Robert Wilson
SERC/IUE Project Director

IUE Allocation Committee (IUEAC)

Letter from the Chairman

After almost 15 years of operation the IUE satellite is still, remarkably, functioning close to design capabilities and is producing a wide range of innovative science, much of which is not possible with the Hubble Space Telescope. At our last meeting in March we noted with pleasure that demand for the use of the satellite by the European community continues at a high level and on a broad science base. In the current round the satellite was 2.7 times oversubscribed and this degree of oversubscrition extends from Solar System studies to Quasar research as illustrated in the accompanying figure. The committee felt, however, that there were a number of items which they would like to bring to the attention of the user community in relation to its own activities on their behalf.

Next Allocation Round: ESA considers the continuance of its IUE operations annually on the advice of its Science Programme Committee (SPC). Therefore, the IUEAC has always considered proposals on a strictly annual basis. At its recent meeting (June, 1992) the SPC approved the extension of IUE operations and archive support through 1993. However, in keeping with the recommendations of the IUE Review Team, which are printed in full elsewhere in this Newsletter, it also suggested that planning for a further extension in 1994 was appropriate. Therefore, the IUEAC would like to make it known that, at its next meeting in early 1993, it will consider proposals which require an allocation extending beyond the normal 1 year (see the Call for Proposals).

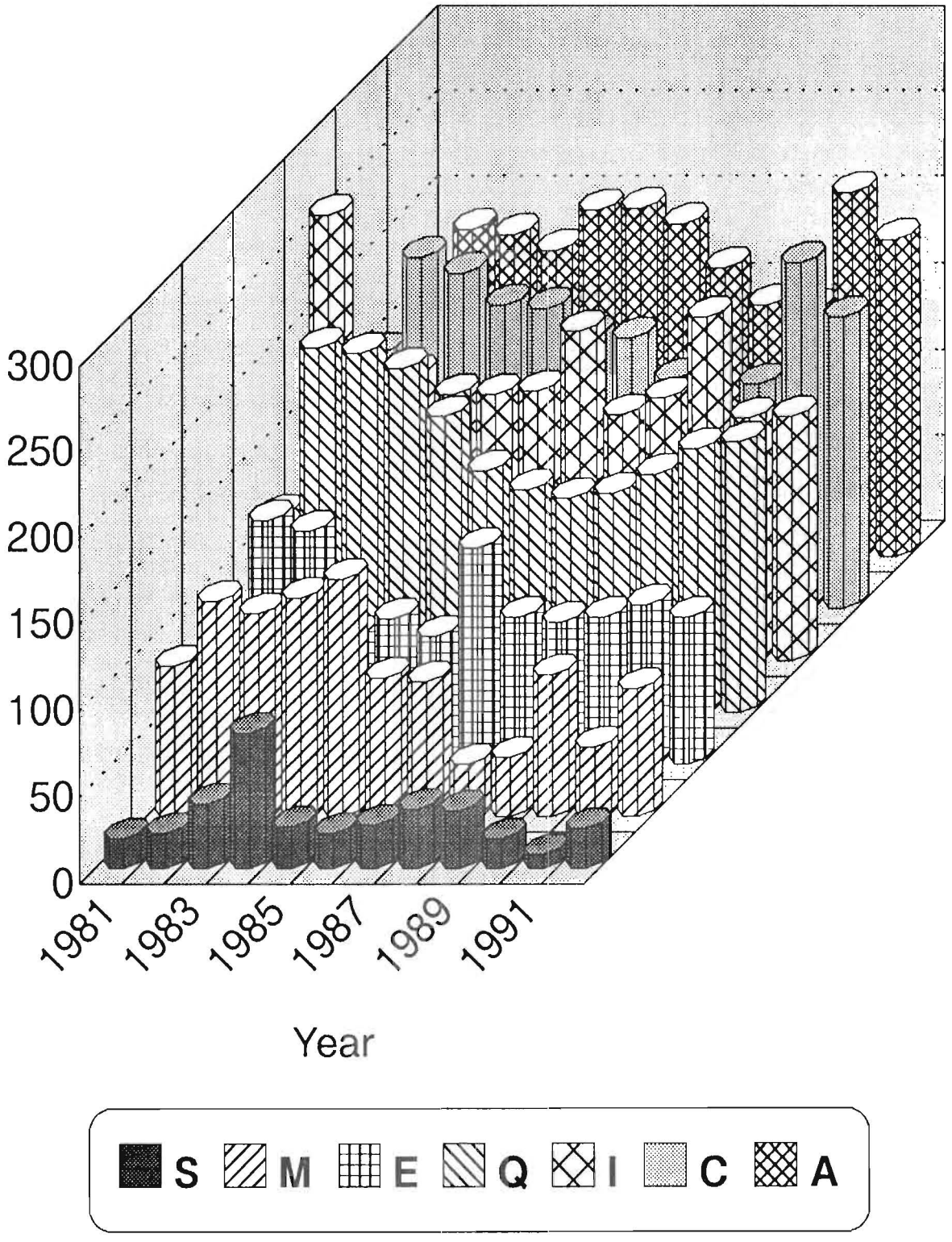
Length of Proposals: A concern of the committee is the length of some proposals. Not all applicants are abiding by the 2 – 3 page rule for the length of scientific case. This is paricularly serious in the case of those collaborating with US colleagues who tend to submit a direct copy of the US case in full. In order to be fair to the majority of proposers from Europe and other nations who do abide with the rules, and to ease the already large amount of reading being done by the committee members, ALL PROPOSALS will be truncated at the specified number of pages and the case judged as is. I have requested the Secretary of the IUEAC not to distribute more than 3 pages and 1 figure, for a maximum of 4 pages scientific justification, to the members of the IUEAC.

Target-of-Opportunity Teams: The committee expressed some concern at the timing of the reporting by the Target-of-Opportunity (ToO) teams, as well as the contents of the reports. The ToO teams are groups of interested individuals in the areas of Supernovae, Novae and Comets who undertake to advise the IUE Observatory staff in the case of the appearance of exceptional targets and to assure an optimization of the observing program as well as a rapid analysis of the data obtained with the IUE. The resulting spectra carry no proprietary rights and immediately enter the public domain. We will request the ToO teams to change the reporting procedures so that their reports will be received by the Secretary on the application deadline, so that ToO team activities can be assessed by the committee in parallel with the proposals from the community. We have requested the ESA IUE Observatory to include these ToO team reports in future issues of the ESA IUE Newsletter in case this is considered desirable by the IUEAC.

In the name of all members of the IUEAC, I wish all of the European IUE community continued successful observing.

P. B. Byrne
Chairman IUEAC

IUE Observation Request Demand



IUE SPACECRAFT STATUS

September 1992

D. Hermoso, VILSPA

1. GENERAL

The spacecraft continued to support science operations normally and effectively in its fifteenth year of highly successful in-orbit operations. At the end of August 1992, a total of 23856 images had been collected from 10149 celestial objects (VILSPA only).

An ITF calibration series was performed from April 26 to May 6. ITF stands for Intensity Transfer Function, the mathematical expression that converts the raw camera data (DN or Data Number) to astronomically useful Flux Number (FN). The ITF is determined for each pixel for the entire 768 by 768 pixel image area of the camera faceplate. The LWP calibration took the bulk of the program time and the SWP calibration was performed in the final days of the series.

To perform the ITF program it is necessary to take a large number of exposures using the on board ultraviolet flood lamps. The UV lamps have experienced "misfires" in the past believed to be temperature related and to avoid this required thermal stabilising the spacecraft during the ITF program. The exposures were performed during both the US and VILSPA shifts

2. POWER SUBSYSTEM.

IUE´s 30th Eclipse Season ran from July 23 to August 15, 1992.The maximum depths of discharge for the season were 49.39% for battery 1, and 52.78% for battery 2.

Weekly top-offs continue for Battery #1 in order to force some charge current into the battery. At present Battery #1 is configured on its main charger, which limits the battery voltage to 24.72 volts. The charger is turned off and trickle resistors supply charge current to the battery. When the redline voltage of 25.84 V is reached the main charger is enabled and the battery voltage is again limited to 24.72V.

3. SOLAR ARRAYS

The average reduction in power between May 1991 and May 1992 at ßeta = 71° was 1.24%. The average yearly degradation from 1978-1992 was 3.31%. The largest degradation took place during the years 1988-1991. This increased degradation may have been a result of the solar cycle maximum. Despite their degradation, enough power is supplied by the arrays to keep the spacecraft power positive over the range of beta angles between 32° and 107°. This range is based on a nominal power requirement of approximately 147.9 watts.

4. ATTITUDE CONTROL SYSTEM

Gyro 5 continues to show 0 amps of motor current since its sudden drop on February 5, 1991. The slope of Gyro 5's drift remains reasonably constant, with the exception of a sudden jump on May 23 (from -265 counts/sec to -273 counts/sec.) and on September 20 (from -285 cts/sec. to -292 cts/sec) Gyro 4 continues to perform nominally, maintaining a very stable drift rate. The nominal increase in gyro drift is associated with the degradation of the gyro's condition, while periodic fluctuations are thermally induced.

Successful spacecraft tests on the One-Gyro system were performed on 13 May 1992. The tests showed favorable spacecraft control in almost all hold/slew modes. Much work had been before these tests to finetune the maneuvering capabilities of the spacecraft under this system and these tests seemed to show that maneuver accuracy is much improved. A new time delay constant in the processing of filtered FES data was also tested and found to give an improvement in stability over the last system.

Two IUE Spacecraft Controllers from VILSPA control station visited GSFC from May 4 to May 14. The two analysts worked with the BIT and Micro VAX simulator for One-Gyro training and observed the One-Gyro spacecraft test on May 13.

On 19 August 1992 the IUE spacecraft successfully executed a 13.92 seconds orbit adjustment Delta-V maneuver with all systems performing nominally.

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

5. THERMAL

In general the spacecraft temperatures remain stable.

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

The HOT OBC ßeta region has changed as follows:

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

6. ANOMALIES

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

• On 6th March the OBC hold worker went suddenly to default mode losing the guide star. Attitude was recovered 39 minutes later.

• On 2nd April a datablock 17 was uplinked and verified to perform a wheel unload. The datablock with 11 commands was never processed by the OBC.

• On 19th May, the LWP camera was commanded to expose for X'365C' OBC ticks (95 minutes). When running the exposure FIN procedure, the message "Exposure times do not agree" was displayed. A dump of OBC telemetry showed that the OBC received the correct exposure time from the ground and that the exposure was indeed terminated by the OBC two ticks short of the commanded time (0.8192 sec).

• On 25th July the software worker remained on after a datablock 21 was uplinked and executed. The worker was turned off via procedure. This type of anomaly is very common and there is a procedure written on purpose.

• On 26th July during a two legs maneuver the FSS experienced two anomalies: a) when crossing ß=75° instead of continuing down to the commanded value of ß=65°, the spacecraft changed its direction from down to up and continued until it reached ß=77° when suddenly it changed again towards the commanded value of ß=65°. b) at ß=65° there appeared an "Attitude Control System overflow" error-flag and the spacecraft started pitching down until ß=61.67° when it was stopped via emergency procedure. The first anomaly was traced down and it was found that A-coarse bit in FSS System-1 Head-2 was causing the increased ßeta calculation. However, the cause of the ACS overflow and pitching movement afterwards are still not understood.

• On 12nd August a datablock with 19 commands was properly uplinked but not correctly processed by the spacecraft.

• August 21st, a DMU (Data Multiplexer Unit) command sent to switch telemetry formats did not take effect. The procedure was rerun and executed properly.

HOMOGENIZATION OF THE NOMENCLATURE IN THE IUE LOG OF OBSERVATIONS [1]

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ABSTRACT

The homogenization of the object nomenclature in the IUE log is a task undertaken by the CDS for the IUE project, as a result of an on-going collaboration (see Barylak et al., 1988; Jasniewicz et al., 1990).

A unique homogeneous identifier is produced for each entry in the log, using the SIMBAD database as a reference, and following a pre-defined list of priority, specific to the IUE project.

This procedure allows to solve the redundancies (objects named with aliases). During this process, a number of ambiguous or erroneous identifications or coordinates are also discovered and corrected.

The resulting file is delivered to the IUE project where ultimate upgrades and modifications are applied to it, just before incorporation in the next versions of the Merged Log, and of the ULDA archive.

1 Introduction: the nomenclature problem

When a Guest Observer uses the International Ultraviolet Explorer (IUE) satellite, he/she enters the names of the targets in the IUE log of observations, using a free format (a string of up to 12 characters). In general, this name, associated to the corresponding coordinates, and object type (the IUE object class) allows to identify the object without ambiguity.

This was at least the current idea before the developments of the archiving facilities —Uniform Low-Dispersion Archive (ULDA; Wamsteker *et al.*, 1989, Ponz *et al.*, 1992) and IUE final Archive, in progress (Wamsteker, 1991). It was then realized that a given object should appear in the log under one single name, always written in the same way so that efficient retrieval techniques can be ap-

[1] Based on data retrieved from the Simbad database, CDS, Strasbourg, France

plied. It was also realized that any error in the name and/or coordinates of the object has the consequence of putting the corresponding archived image into a "black hole" where the standard procedures of de-archiving are unable to find it.

Several hundreds of images (several months of IUE observations !) would simply have been lost, without a specific effort for homogenizing the nomenclature within the IUE archives.

The way to obtain an homogeneous identifier for the IUE targets, is to cross-check the IUE log with SIMBAD, the CDS database (Egret *et al.*, 1991) through a batch procedure. A priority list adopted by the IUE project (Barylak et al., 1988) is then used to decide which one of the possible names will be the "homogenized name" of the object.

In the same time the coordinates and magnitude of the object are extracted from SIMBAD and used as a quality control for the ones given in the IUE log. Discrepancies larger than 3 arcmin. and/or 1 magnitude are flagged.

2 The Data

The work described here is based on the last version of the "Merged IUE Log of IUE Observations", received (in FITS format) from Vilspa in January 1991. It covers IUE observations from January 26, 1978 through May 31, 1990.

This version lists 79,092 observations, of which 5,532 are new records (June 89 to May 1990) since the previous homogenization run (Jasniewicz et al., 1990).

The first step of the homogenization work (detailed hereafter) is mostly concentrated on the following 8,231 entries, namely the new entries and the entries not found in SIMBAD in the previous runs:

- 5 532 new entries (code `O`)
- 1 197 not found in the previous run (code `N`)
- 1 502 flagged as dubious in the previous run (code ?).

The following entries were in general not modified:

- 57 366 satisfactorily homogenized entries (code *)
- 5 833 entries revised by Vilspa (code `R`)
- 7 662 entries concerning solar system objects or IUE specific images from the previous runs (code +).

In a second step the complete file (and not only the new records) is cross-checked against the SIMBAD database in order to reach the highest possible level of homogeneity for identifiers as well as coordinates.

3 Homogenizing the Object Identifiers

3.1 Correcting the identification field

The original identification field from the IUE log is scanned, and when incorrect catalogue abbreviations or ambiguous identifications are found, they are corrected; the resulting identification field is in a format compatible with SIMBAD (typically a catalogue abbreviation, followed by a number or a name within the catalogue).

This first step is done through UNIX procedures, which perform a set of changes to the identification field; these changes are stored in a command file which keeps the memory of all the modifications made to the original file, and can be used for a subsequent iteration.

These substitutions may be very general ("convert all `H` followed by numbers into `HD` followed by the same numbers") or very specific ("change `SSCYGNI` into `V* SS CYG`").

The result of this step is a file containing a "cleaned" (but not yet homogeneous) identification field which can be matched against the SIMBAD database.

3.2 Cross-matching with SIMBAD

The file resulting from the previous step is cross-matched with SIMBAD, the CDS database, through an automatic procedure. The object name prepared in the previous step is used as the access key for entering SIMBAD, where all the other names of the object can be found.

The priority list adopted by the IUE project is then used to decide which one of those possible names will be the "homogenized name" of the object.

In practice the following order of priority is given in the format used by Simbad (see Egret, 1992, for practical details):

Catalogue name	Cat. name (foll.)	Cat. name (foll.)	Cat. name (end)
HD	IC	ESO	PHL
BD	PK	MCG	FEIG
CD	SK	PG	ROSS
CPD	AzV	QSO	3C
V*	LIN	ABCG	X
WD	LHA	NOVA	PKS
GD	DEM	SN	
NGC	MRK	LS	

When none of these identifiers exists, the first identification found in Simbad is taken.

SK, AzV, LIN, LHA and DEM (with other catalogues) will be later transformed into MC (Magellanic Clouds), and LS, PHL, FEIG, ROSS, 3C, X, PKS (with other catalogues) will later appear as 'AOO LS', etc...(AOO stands for Any Other Objects). The IUE and ZZ categories (IUE specific images, and solar system objects) are not cross-matched against Simbad.

The process is reliable and consistent: starting from any of the possible identifiers of a given object, one always finds the same homogenized identifier.

3.3 The result file

The next step consists in the merging of the data produced for the subset of the log considered here into the complete file of 79,092 records and a check of the coordinates and magnitude of the object extracted from SIMBAD against the original ones from the Merged log.

When the coordinates or magnitudes disagree significantly from the ones given in the IUE log (by more than 3 arcmin. for right ascension or declination, and/or 1 magnitude for V magnitude) the object is flagged with a question mark (?) in the result file.

4 The homogenized IUE log

An additional iteration is needed with the contribution of the Vilspa staff. This is the only way to track possible misinterpretations, as well as to check a number of corrections introduced by hand, when the Simbad database does not give the full information needed for the IUE project (this is the case, for instance, for the ESOB entries which do not keep the object type in Simbad). A couple of thousand duplicated records had also to be corrected (mainly IUE specific images), reducing the original number of 79,092 to 77,058 records.

These upgrades and modifications are done at Vilspa in collaboration with CDS.

Statistics of the success flags are given in Table 1, while statistics of catalogue names are given in Table 2.

5 Conclusion

The Centre de Données astronomiques de Strasbourg (CDS) has produced, for the IUE project, the fourth iteration of the task of homogenizing object identifications and coordinates in the Merged Log of IUE Observations.

An efficient set of tools has been developed in the Simbad environment, which makes possible an efficient homogenization of the object nomenclature, as

Flag	Meaning	Entries	%
*	homogenized by CDS	62266	80.78
!	IUE specific	5508	7.15
+	ZZ (solar system)	3989	5.17
?	discrepant with SIMBAD	1806	2.34
N	not found in SIMBAD	1033	1.34
R	revised by VILSPA	2483	3.22

Table 1: Statistics of Homogenized Object Identifications: the success flags

Cat Cat	Number of Entries	%	Non redundant Entries
ABCG	28	0.04	11
AOO	1716	2.23	566
BD	4289	5.56	286
CD	502	0.65	95
CPD	237	0.31	53
ESOB	252	0.33	19
GD	36	0.05	15
HD	44062	57.16	4363
IC	302	0.39	41
IUE	5505	7.14	–
MC	1405	1.82	443
MCG	56	0.07	15
MRK	802	1.04	99
NGC	4754	6.17	406
NOVA	262	0.34	6
PG	1011	1.31	198
PK	389	0.50	105
QSO	632	0.82	103
SN	1035	1.34	17
V*	4757	6.17	305
WD	686	0.89	159
ZZ	4367	5.67	107

Table 2: Statistics of Homogenized Object Identifications: the catalogue names

well as an additional quality control through a validation of both coordinates and magnitudes.

In the context of the preparation of the IUE Final Archive, this effort will allow a fast and efficient access to the images of objects collected by the IUE satellite.

References

[1] Barylak, M, Wamsteker, W, Schmitz, M 1988, in *A Decade of Astronomy with IUE*, Greenbelt, U.S.A., 12-15 April 1988, ESA SP- 281, 2, 373.

[2] Egret D, Wenger M, Dubois P (1991): in *Databases & On–line Data in Astronomy*, Albrecht & Egret (Eds.), Kluwer Academic Publishers, Dordrecht, 79.

[3] Egret D (1992): CDS Inform. Bull. 40

[4] Jasniewicz, G, Egret, D, Barylak, M, Wamsteker, W, in *Evolution in Astrophysics*, Toulouse, France, 29 May-1 June 1990, ESA SP-310, 601.

[5] Ponz J D *et al.* (1992): *The IUE Archive: A Tool for Astronomy*, this Conference.

[6] Wamsteker W (1991): in *Databases & On–line Data in Astronomy*, Albrecht & Egret (Eds.), Kluwer Academic Publishers, Dordrecht, 35.

[7] Wamsteker W., Driessen C., Munoz J. R., Hassall B. J. M., Pasian F., Barylak M., Russo G., Egret D., Murray J., Talavera A., Heck A.(1989), *Astron. Astrophys. Suppl. Ser.*, **79**, 1.

THE IUE FINAL ARCHIVE IV: A revised Calibration

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In the first part of this series it was mentioned that the calibration would be one of the subjects in which the Final Archive would represent an improvement with respect to the current IUESIPS. To better understand this, let us first summarize the basis of the current IUE calibration (i.e. the one implemented in IUESIPS).

The current IUE calibration is based on the bright (V=1.84) B3V star Eta UMa. The absolute fluxes of this star were given by Bohlin et al. (1980) and are based on previous UV experiments. These fluxes implicitly define the "IUE flux scale". The accuracy of the Eta UMa fluxes is ±10%. (Bohlin et al. 1980)

Given the fluxes of Eta UMa, Bohlin et al. (1980) derived corrections factors that allowed to convertother experiments to the IUE flux scale. Since Eta UMa is too bright to be observed by IUE in low dispersion as a point source, it was necessary to define the fluxes of a set of stars over a wide range of brightness (the IUE secondary standard stars). These secondary standard stars have been used in the past to derive the calibration curves of the three IUE cameras (Bohlin et al. 1980; Cassatella et al. 1992).

There were from the beginning of IUE some indications of not understood discrepancies between models and observations. These discrepancies were similar in objects of very different physical nature, such as White Dwarfs (Greenstein and Oke, 1979), hot subdwarfs and BL Lac objects (Hackney et al. 1982). More recently, Finley et al. (1990), by comparison of IUE observations and models of seven hot DA White Dwarfs, whose continuum spectra are relatively easy to model, have shown that there is systematic discrepancy that reaches its maximum value (~ 15%) around 1600 Å. This is also the spectral region where Bohlin's correction factors are maximum and most likely systematic errors could have been introduced from the beginning. Further indications of an error in the IUE flux scale come from the fact that the fluxes of the secondary standard stars are not self consistent, i.e. there is a systematic discrepancy between the IUE internal fluxes and the input fluxes of some of them (see for instance Cassatella et al. 1992).

Since a revision of the IUE calibration was considered an urgent issue given the reprocessing for the Final Archive and the importance of IUE in the Hubble Space Telescope calibration, a meeting on this subject was held at VILSPA on December 11-12 1990. As a result of this meeting it was clear that hot DA White Dwarfs were the most suitable objects for the calibration of IUE, since they have no lines but Lyman α in the IUE range, and the continuum flux is well

understood. In particular, G191 B2B (T_{eff}=58000 K, log g=7.5) was chosen as the primary standard (see for instance Koester, 1990). From that moment an exhaustive observational program including White Dwarfs and the secondary IUE standard stars was undertaken. Its purpose was to collect a large set of good quality data in all the cameras and configurations in a short time scale, so that the set of data was not significantly affected by the cameras sensitivity degradation.

The accuracy of the IUE calibration depends also on other "internal" factors, such as the exact knowledge of the exposures times, of the time sensitivity degradation of the cameras, or the dependence of the cameras sensitivity on the THDA (see the details in the "Calibration Plan for the IUE Final Archive", Cassatella, 1990). Such studies were included as an integral part of the re-calibration effort and the accuracy of most of the implied parameters has been substantially improved (Command Decoder Cycle Time: Oliversen, 1987; Camera Rise Times: González-Riestra, 1991; THDA dependence: Garhart, 1991; SWP sensitivity degradation: Garhart, 1992a; Size of SW large aperture: Garhart, 1992b).

The procedure that will be followed for the Final Archive calibration can be summarized in the following steps (see Cassatella, 1991):

- From the recalibration data taken in 1991 and White Dwarf models, the 1991 calibration curves and the relative fluxes of the secondary standard stars will be derived.

- The zero point of the IUE flux scale will be set by constraining the fluxes of the secondary standard stars to match those given by OAO-2 in the region 2100-2300 Å. where there is an excellent agreement between OAO-2 and other UV experiments.

- These newly defined fluxes of the standard stars together with the observations that were performed in 1985 (epoch in which the current Intensity Transfer Functions - ITFs - were taken) will be used to derive the sensitivity curves of the three cameras. These curves will be applicable to low dispersion large aperture spectra only. Appropriate correction factors for trailed and small aperture spectra will be derived.

- All the spectra will be corrected for the camera sensitivity degradation.

REFERENCES

Bohlin, R.C., Holm, A.V., Savage, B.D., Snijders, M.A.J., Sparks, W.M. (1980) Astron. Astrophys. 85,1

Cassatella, A. (1990) Report to the Three Agency Meeting, May 1990, VILSPA, p. II-60

Cassatella, A. (1991) Report to the Final Archive Definition Committee, March 1991, GSFC

Cassatella, A., González-Riestra, R., Imhoff, C., Oliversen, N., Lloyd, C. (1992) Astron. Astrophys. 256, 309

Finley, D.S, Basri, G. Bowyer, S. (1990) Astrophys.J. 359,483

Garhart, M. (1991) Report to the Three Agency Meeting, June 1991, VILSPA, p.VI-38

Garhart, M. (1992a) Report to the Three Agency Meeting, June 1992, VILSPA, p.III-1

Garhart, M. (1992b) Report to the Three Agency Meeting, June 1992, VILSPA, p.III-31

González-Riestra, R. (1991) Report to the Three Agency Meeting, June 1991, VILSPA, p.VI-82

Koester, D. (1990) Report to the Meeting on the IUE Calibration, December 1990, VILSPA

Oliversen, N. (1987) Report to the Three Agency Meeting, November 1987, GSFC, p. D-53

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The IUE FES Photometric Archive (IUEFPA)

Constanze la Dous, VILSPA, September 1992

Introduction

The Fine Error Sensor (FES) on board the IUE spacecraft has proved to be able to perform photometric measurements (in approximately V light) with a time resolution of 92 msec in the F/O mode (384 msec in the S/O mode) and rather high accuracy: for a 5^{th} mag star (giving on the order of 23000 counts/measuring sample) a standard deviation of 0.0003 mag can be achieved (Pike and Wamsteker, 1990). Put differently, if one assumes that the individual FES readings follow a Poisson distribution, the signal-to-noise that will be achieved as a function of the V-magnitude of the stars and the integration time in seconds is

$$S/N = \sqrt{2.3e7 * 10^{-0.4*V} * t}$$

This would mean, for example, that within 4.4 seconds a S/N of 100, or a S/N of 48 within one second, respectively, can be obtained for a 10^{th} magnitude star.

During each observation, in order to ensure correct tracking, the FES is pointing at a bright star in the vicinity of the spectroscopic target and the counts are recorded in the engineering data on the so-called history tape. As during recent years the interest in astro-seismology and the awareness of its importance for the understanding of stellar structure and evolution have increased, it was decided to make these tracking data available for scientific investigations and a procedure has been devised by which they can be extracted from the history tapes. As of the 11th of May, 1992, suitable tracking data taken at VILSPA are collected in the newly created FES Photometric Archive (IUEFPA) (Table 1); observations taken at NASA will be included soon. The scientific reasons for this decision, the sort and format of the data extracted and archived, and the procedure to request them will be described in the following.

The Scientific Objective

By analogy to insights gained about the interior of the Earth through seismology, during the last decade helioseismology, i.e. the study of short-term pulsations of the solar surface, has revolutionized the understanding of the interior of the Sun, of its structure, and of its evolution. Likewise, stellar seismology is seen increasingly as one of the observational keys to the understanding of stellar structure and evolution, with important consequences for the understanding of stars in general. Only limited success in this area has been achieved with ground-based observations (e.g., Belmonte Avilés, 1989; Breger et al., 1987; Gelly et al., 1986; Kurtz, 1982; 1986; Mangeney et al., 1988, Noyes et al., 1984). A major problem with ground-based observations is that, even under optimum conditions, uninterrupted strings of observations can hardly be longer than four to six hours. Also variations in the transparency of the Earth's atmosphere

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occur on the same time scales as oscillations in stars. For both these reasons it is clear that sure detection of stellar oscillations is difficult with observations from the ground except in special cases when the amplitudes are very large. From a high orbit around the Earth, such as IUE's, it is possible to uninterruptedly point at the same source for much longer, which then allows for the detection of (the expected) much smaller amplitudes in the oscillations. Also, since the FES actually functions as a nearly perfect photon detector, the signal-to-noise ratio in the Fourier transform will be enhanced through the long continuous time coverage possible.

The Data

Tracking stars are chosen on grounds of their apparent proximity to the target stars and because of their optical brightness (brighter than some 12^{th} mag), but no requirements are made as to the spectral type of the stars. For the reasons given above, it is obvious that only tracking data from nearly full-shift exposures can be used for oscillation analysis. Such conditions are being met typically some ten to fifteen times every month. Some tests about the identity of the guide stars were carried out for a three month period, and it showed that they were rather well distributed throughout the HR Diagram. Thus, without any impediment to the spectroscopic observations, within a relatively short period of time a sizeable set of high-speed photometric data of a random set of stars can be obtained, on which for example statistical search for stellar oscillations could be based.

Whenever it is expected that during a shift data suitable for oscillation analysis will be acquired (i.e. for uninterrupted tracking of 5 hours or more duration), all scientifically relevant information on the FES data is safeguarded for further analysis; in particular the identity of the object of which a spectrum is being taken and of the guide stars, its position in the FES field together with the roll angle of the telescope, and the amount of scattered (background) light. All this information, and some more, will be contained in the FITS header to the FITS data file; the data part of the file will contain a listing of the times when FES measurements were taken and the FES counts (information on the FES mode is part of the header). Such exposures yield between 200,000 and 250,000 individual measurements per shift which take up between 3.8 and 4.7 Gbyts. Beginning and end of the data string are defined by the times when track was put on and broken, respectively (for technical reasons neither of which need be identical with the respective times of the spectroscopic observation).

At the time of writing this report only VILSPA is participating in the FES archive project, but NASA will join soon.

A catalogue to the FES Archive will be published on a regular basis (Table 2). It will contain the date and times of the observations, the name and coordinates of the guide star, the average count rate and FES mode during the entire run and the number of the respective FES image, if there is any. In addition, for each observation a set of three plots will be published which will enable the interested user to assess the quality of the data: the first one is of the entire data set with every plotted point being the average of 100 individual measurement; the second is a one hour string some time

into the observation, again with 100 measurements averaged in each point, but plotted with higher resolution; and the third is a string of ten minutes with all individual measurements plotted (an example is given in Fig. 1). The combination of these three should reasonably well describe the data.

The interested user should be aware of several facts about the data. First of all, what is stored in the archive are raw data. This, however, does not ensure that for the entire time useful data are being acquired as occasionally technical problems occur which do not affect the exposure but may prevent any, or reliable, tracking data being stored on the history tape. These problems can be spotted by inspection of the plots published with the catalogue, or by simply plotting the data once again. Some others cannot.

The amount of scattered light (background) varies considerably with time and with the β angle at which observations are being taken. The value for the background measurements at the Reference Point is given in the header so that the guide star counts can be corrected. [1]

The focus of the telescope varies slightly during the course of the observations and is measured and — if necessary — adjusted occasionally. These times and the focus values are part of the header information. A formalism for the correction of this dependence is given in Perez (1991a and b) as well as Perez and Fernley (1991). Also there are known to occur low-amplitude drifts in the data with characteristic time scales on the order of hours due to instrumental effects; thus, the data may have to be rectified before analysis.

The way in which the FES counts are being measured results in obtaining values in two perpendicular directions, one alternating with the other, refered to as 'X' and 'Y' readings. There exists a systematic offset of a few percent between the two, the X-data are significantly noisier than the Y-data (Pepoy et al., 1989; Pike and Wamsteker, 1990). In principle problems with this can be avoided by only considering every other value, but due to technical failures it may happen that the regularly alternating sequence gets upset. Results will have to be inspected carefully for spurious features due to this effect.

There exists no absolute calibration of the FES photometric measurements, however differentially the internal accuracy is very high (Pike and Wamsteker, 1990). An approximate value for the V-magnitude can be obtained with the calibration of the FES in Perez (1991a and b).

How to Request the Data

At the Three Agency Meeting in June 1991 it was decided that there will be no proprietary rights on the FES tracking data which will be stored in the FES archive. Thus, as soon as the data have been processed and become part of the archive, they

[1] It has to be noticed here that all scattered light measurements are in the 'S/O' ('slow track overlap') mode, while the guide star counts may be measured either in this same mode or, if it is bright, in the 'F/O' ('fast track overlap') mode (key 'MODE'), where the conversion between the two is F/O = 4 * S/O.

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can be requested by any member of the astronomical community. The IUE Archival Retrieval Form (see back of this Newsletter) has been changed accordingly; interested users are kindly requested to use it, whereby data sets should be identified by their 'FILENAME' in Table 2. The data will be provided in FITS format, which includes a self-descriptive header and the times and counts for each measurement.

Bibliography

Belmonte Avilés, J.A.: 1989, Ph.D. Thesis, Instituto de Astrofísica de Canarias

Breger, M., Huang, L., Jiang, S.Y., Guo, Z., Antonello, E., and Mantegazza, L., 1987, *Astron. Astrophys.* **175**, 117

Gelly, B., Grec, G., and Fossat, E., 1986, *Astron. and Astrophys.* **164**, 383

Kurtz, D., 1982, *Mon. Not. R. Astr. Soc.* **200**, 807

Kurtz, D., 1986, in *Seismology of the Sun and the Distant Stars*, D. Gough (ed.), Reidel, p. 441

Mangemey, A., Chevreton, M., Belmonte, J.A., Daeppen, W., Saint-Pe, O., Praderie, F., Roca-Cortes, T., Fuensalida, J., and Alvarez, M.: 1988, Proc. Symp. *Seismology of the Sun and Sun-like Stars*, Tenerife, ESA SP-286, p. 551

Noyes, R.W., Bliunas, S.L., Belserene, E., Duncan, D.K., Horne, J., and Widrow, L., 1984, *Astrophys. J.* **285**, L23

Pepoy, J., Ohi, D., and Stoken, C.: 1989, internal report by Bendix Field Engineering Corporation

Perez, M.R., 1991a, *ESA IUE Newsletter* **38**, p. 27

Perez, M.R., 1991b, *NASA IUE Newsletter* **45**, p. 19

Perez, M. and Fernley, J., 1991, *ESA IUE Newsletter* **36**, p. 15

Pike, C.D. and Wamsteker, W., 1990, in *Evolution in Astrophysics - IUE Astronomy in the era of new space missions*, Proc. of an International Workshop held in Toulouse, France, 29 May - 1 June 1990, ESA SP-310, p. 353

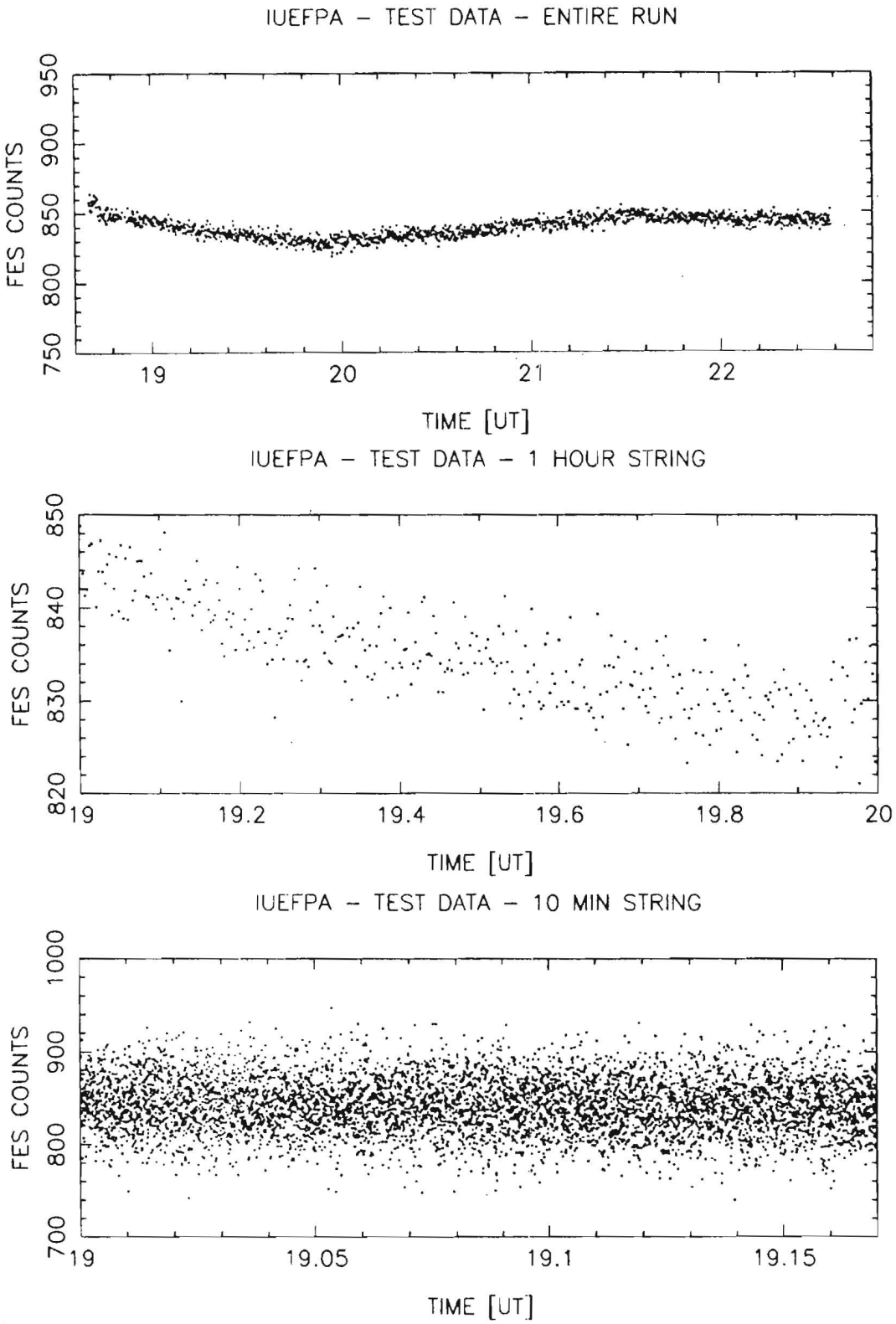


Figure 1: *Example of data in the IUE FES Photometric Archive:* **a:** *the entrire run with each plotted point being the average of 100 individual measurements;* **b:** *a one hour string of data with again 100 measurements being averaged in each plotted point;* **c:** *all measurements during a 10 min interval of time.*

6

DATE	IDENTIFICATION	MAG.	SPT	DURATION [min]
10.05.92	GSC 9161.00979	10.6		400
11.05.92	HD 33043 = SAO 249176	9.4	F0 V	440
12.05.92	HD 269678	11.6	A0 Iab:	404
13.05.92	"			422
19.05.92	DM 79 601 = SAO 9239	9.5	A 2	388
22.05.95	GSC 7144.03292 =? HD73964?	9.6	G8 III?	430
23.05.92	GSC 7105.03052	10.9		445
10.06.92	CPD -69 400?	11.3		440
11.06.92	GSC 8413.01446	12.2		380
12.06.92	"			351
13.06.92	"			370
14.06.92	"			402
15.06.92	GSC 5748.02578	11.5		360
24.06.92	HD 270947	10.4	F2	390
27.06.92	?			410
06.07.92	CD -47 4052	10.5	A0	397
10.07.92	HD 332.76 = SAO 69741	9.3	A2	880
17.07.92	GSC 5525.00745	12.0		408
19.07.92	GSC 5525.00866	12.7		363
22.07.92	GSC 1162.00131	12.3		440
23.07.92	HD 270947	10.1	F2	370
28.07.92	HD 160574	9.8	A2	357
01.08.92	GSC 5122.00670	11.4		300
07.08.92	GSC 4424.00081	11.0		362
08.08.92	GSC 2337.00446	11.0		580
09.08.92	GSC 9111.00515	11.5		360
10.08.92	"	11.5		440
24.08.92	GSC 3895.01560	10.3		408

Table 1: *The list of observations currently contained in the IUE FES Photometric Archive.*

THE FES ARCHIVE CATALOGUE

FILENAME	FESIM	OBJECT	R.A.	DEC	OBS. DATE	EXP. TIME	TIME	CTS	MD	CAM	STA
			HHMMSSs	DDMMSS	YYMMDD	HHMMSS	MMM:SS				
920510VI	2541 GSC	9161.00979	0457399	-682618	920511	000516	400:00	343	SO	FES2	V
920511VI	2542 HD	33043	0502213	-664715	920512	000835	440:00	1060	FO	FES2	V
920512VI	2543 HD	269678	0531176	-671714	920513	000336	404:00	226	SO	FES2	V
920513VI	2544 HD	269678	0531176	-671714	920513	234446	422:00	426	SO	FES2	V
920519VI	DM	79 601	1846556	+794330	920520	001951	388:00	402	FO	FES2	V
920522VI	2425 GSC	7144.03292	0837583	-350202	920522	232235	430:00	453	FO	FES2	V
920523VI	2546 GSC	7105.03052	0728223	-305124	920523	232229	445:00	238	FO	FES2	V
920610VI	2548 GSC	9162.00629	0535489	-691539	920610	200620	440:00	487	SO	FES2	V
920611VI	2549 GSC	8413.01446	2020141	-504700	920611	222747	380:00	225	FO	FES2	V
920612VI	GSC	8413.01446	2020141	-504700	920612	225617	351:00	204	FO	FES2	V
920613VI	GSC	8413.01446	2020141	-504700	920613	223747	370:00	206	FO	FES2	V
920614VI	GSC	8413.01446	2020141	-504700	920614	220550	402:00	188	FO	FES2	V
920615VI	2550 GSC	5748.02578	2014289	-124025	920615	221600	360:00	130	FO	FES2	V
920624VI	2553 HD	270947	0500540	-655500	920624	221759	390:00	305	FO	FES2	V
920627VI	?		0157387	-615132	920627	213218	410:00	503	SO	FES2	V
920706VI	2557 CD	-47 4052	0829544	-472625	920706	201040	397:00	222	FO	FES2	V
920710VI	2559 HD	332076	2014515	+312123	920710	180958	880:00	849	FO	FES2	V
920717VI	2580 GSC	5525.00745	1211181	-132955	920717	195950	408:00	153	FO	FES2	V
920719VI	2561 GSC	5525.00866	1211369	-132759	920719	204455	363:00	494	SO	FES2	V
920722VI	2562 GSC	1162.00131	2317129	+091844	920722	185814	440:00	319	SO	FES2	V
920723VI	2563 HD	270947	0500528	-655452	920723	183630	370:00	309	FO	FES2	V
920728VI	2564 HD	160574	1738575	-332623	920728	185029	357:00	280	FO	FES2	V
920801VI	2565 GSC	5122.00670	1844274	-054621	920801	185041	300:00	237	SO	FES2	V
920807VI	2567 GSC	4424.00081	1711058	+722320	920807	174529	362:00	275	FO	FES2	V
920808VI	2569 GSC	2337.00446	0240368	+370919	920808	180408	180:00	184	FO	FES2	V
920809VI	2570 GSC	9111-00515	2132361	-641119	920809	175046	460:00	500	SO	FES2	V
920810VI	2571 GSC	9111.00515	2132360	-641119	920810	174340	440:00	131	FO	FES2	V
920824VI	2572 GSC	3895.01560	1718376	+575056	920824	175900	408:00	259	FO	FES2	V

Table 2: *The catalogue to the IUE FES Photometric Archive — as of September 20, 1992.*

Low-Dispersion Quick-Look Sensitivity Monitoring

Matthew P. Garhart
Computer Sciences Corporation
27 May 1992

Introduction/Analysis

The low-dispersion sensitivity degradation analysis has been updated to May 1992 for the primary cameras and October 1991 for the LWR. Although the Final Archive processing has begun, it is important to continue this study in order to monitor possible changes in camera sensitivity and provide an up-to-date THDA (Camera Head Amplifier Temperature) coefficient, which is used to correct for variations in camera sensitivity as a function of temperature (Garhart 1991).

The sensitivity data are analyzed using the standard methods as described by Holm and Schiffer (1980). The database consists of several hundred observations of the five standard stars. The flux data are ratioed to a reference spectrum for each star (Table 1) and separated into several wavelength bins, each 150Å wide (300Å for the LWR). The binned flux ratios are then fit with a multiple linear regression to find the time rate of change (%/yr.) in each wavelength region and the overall temperature dependence (%/°C) of the camera. The temperature coefficient is assumed to be time independent and is fit to the head amplifier temperature (THDA). The temperature and time dependent coefficients for the three cameras are listed in Table 3. The data are normalized to 1978 and corrected for camera temperature dependence before being plotted in Figures 1-4.

Table 1.

Reference Stars used for normalization

STAR	LWP	date	LWR	date	SWP	date
BD+28° 4211	3688	1984.5	1712	1978.5	2139	1978.6
HD 93521	3535	1984.4	1589	1978.4	1955	1978.5
HD 60753	3689	1984.5	1642	1978.4	1752	1978.3
BD+33° 2642	3610	1984.5	2137	1978.6	4003	1979.1
BD+75° 325	3537	1984.4	2748	1978.8	4237	1979.1

Results

The LWP degradation remains quite linear since the 1984 - 1985 epoch when it became the primary camera. The apparent increase in the rate of degradation, most evident in the short wavelength end of the camera, is due to the 1984.5 jump in sensitivity. The LWR camera continues to show some slowing in the degradation rates after its decomissioning. The rate of SWP degradation has remained relatively stable over the past several years.

However, a jump in sensitivity, similar to the one seen in the LWP plots (Figures 1 and 2) and occuring at the same time period, is visible in all three wavelength bins for the SWP camera (Figure 4). This feature is not seen in the LWR camera (Figure 2), although, one can see that the degradation rate changed at this point in time. The sensitivity results, as shown in Table 2, are derived using a starting date of 1984.5, which corresponds to the approximate time the LWP became the primary camera. These values indicate an increase in the sensitivity degradation rate for the LWP in all bandpasses when compared with the trends using all the data. The opposite effect can be seen when one uses 1984.5 as the starting/ending point for the LWR regression analysis.

Table 2.

Comparison of camera degradation rates

LWP Time Dependence [$\frac{\%}{yr.}$]

Wavelength Region (Å)	1980.4 1992.3	1984.5 1992.3
2075 - 2225	-0.82±0.03	-1.39±0.04
2225 - 2375	-1.36±0.03	-1.77±0.04
2375 - 2525	-1.27±0.03	-1.67±0.04
2525 - 2675	-1.24±0.03	-1.56±0.04
2675 - 2825	-1.12±0.03	-1.35±0.04
2825 - 2975	-0.90±0.03	-0.13±0.04

LWR Time dependence [$\frac{\%}{yr.}$]

Wavelength Region (Å)	1978.4 1991.8	1978.4 1984.5	1984.5 1991.8
2250 - 2550	-1.80±0.03	-2.51±0.08	-1.04±0.07
2550 - 2650	-1.46±0.03	-1.46±0.08	-1.12±0.07
2750 - 3050	-1.31±0.03	-1.49±0.08	-0.95±0.07

The THDA's for each observation are plotted in Figure 5. The statistical increase in camera temperatures is less than 1%/yr. when the least-squares analysis of the data is restricted to dates after 1981 (1983 for the LWP).

References

Holm, A.V., and Schiffer, F.H. 1980, *IUE NASA Newsletter*, **9**, 8.
Garhart, M.P. 1991, *IUE NASA Newsletter*, **46**, 65.

Table 2.

Results of low dispersion camera sensitivity analysis - May 1992

LWP Camera

Temperature dependence = -0.22 ± 0.02 [$\frac{\%}{^{\circ}C}$]

588 data points used in regression

Time Dependence [$\frac{\%}{yr.}$]

Wavelength Region (Å)	1992.3	1990.3	1980.4 to 1988.4	1986.4	1984.8	1983.4
2075 - 2225	-0.82±0.03	-0.63±0.04	+0.01±0.07	+0.56±0.12	+0.78±0.19	-0.40±0.30
2225 - 2375	-1.36±0.03	-1.25±0.04	-0.87±0.07	-0.52±0.12	-0.47±0.19	-2.28±0.30
2375 - 2525	-1.27±0.03	-1.16±0.04	-0.74±0.07	-0.43±0.12	-0.13±0.19	-2.15±0.30
2525 - 2675	-1.24±0.03	-1.18±0.04	-0.87±0.07	-0.45±0.12	-0.04±0.19	-0.98±0.30
2675 - 2825	-1.12±0.03	-1.08±0.04	-0.83±0.07	-0.50±0.12	-0.22±0.19	-0.96±0.30
2825 - 2975	-0.90±0.03	-0.88±0.04	-0.57±0.07	-0.27±0.12	+0.06±0.19	-0.44±0.30

LWR Camera

Temperature dependence = -0.87 ± 0.04 [$\frac{\%}{^{\circ}C}$]

405 data points used in regression

-5.0 kV UVC = 309 data pts.

-4.5 kV UVC = 96 data pts.

Time dependence [$\frac{\%}{yr.}$]

Wavelength Region (Å)	1991.8	1990.3	1978.4 to 1988.1	1986.4	1984.8	1983.6
2250 - 2550	-1.80±0.03	-1.90±0.04	-2.06±0.04	-2.49±0.08	-2.38±0.11	-2.30±0.11
2550 - 2650	-1.46±0.03	-1.47±0.04	-1.51±0.04	-1.73±0.08	-1.77±0.11	-1.19±0.11
2750 - 3050	-1.31±0.03	-1.34±0.04	-1.34±0.04	-1.73±0.08	-1.87±0.11	-1.13±0.11

SWP Camera

Temperature dependence = -0.47 ± 0.02 [$\frac{\%}{^{\circ}C}$]

701 data points used in regression

Time dependence [$\frac{\%}{yr.}$]

Wavelength Region (Å)	1992.3	1990.3	1979.5 to 1988.7	1986.3	1984.8	1983.6
1225 - 1375	-0.82±0.02	-0.83±0.03	-0.75±0.04	-0.66±0.06	-0.73±0.09	-0.46±0.16
1475 - 1625	-0.51±0.02	-0.53±0.03	-0.47±0.04	-0.22±0.06	-0.20±0.09	+0.16±0.16
1775 - 1925	-0.76±0.02	-0.80±0.03	-0.79±0.04	-0.69±0.06	-0.68±0.09	-0.63±0.16

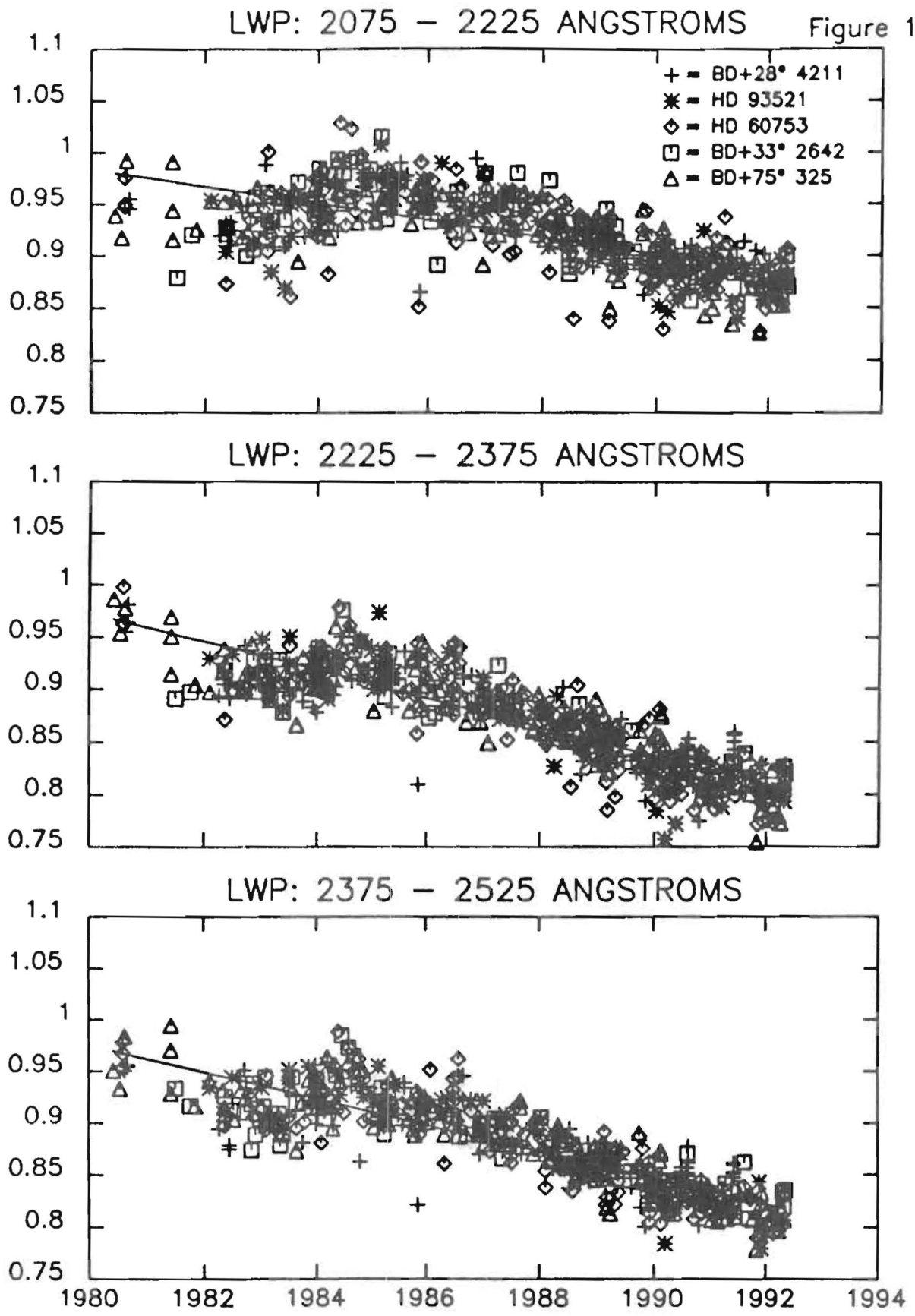

LWP: 2075 – 2225 ANGSTROMS
+ = BD+28° 4211
* = HD 93521
◇ = HD 60753
□ = BD+33° 2642
△ = BD+75° 325
LWP: 2225 – 2375 ANGSTROMS
LWP: 2375 – 2525 ANGSTROMS
1.1
1.05
1
0.95
0.9
0.85
0.8
0.75
1980
1982
1984
1986
1988
1990
1992
1994

Figure 1

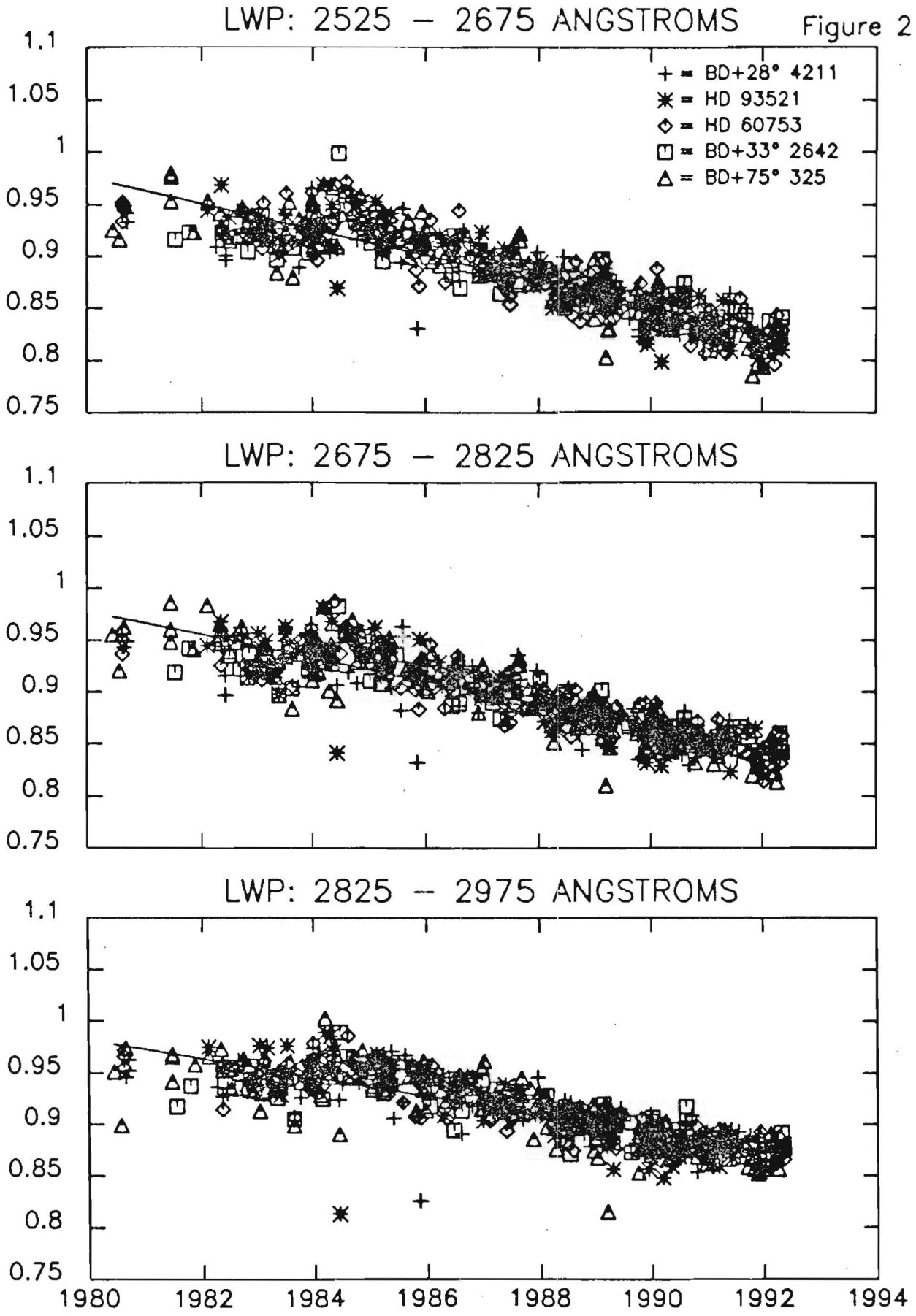

LWP: 2525 – 2675 ANGSTROMS
+ = BD+28° 4211
✳ = HD 93521
◇ = HD 60753
□ = BD+33° 2642
△ = BD+75° 325
LWP: 2675 – 2825 ANGSTROMS
LWP: 2825 – 2975 ANGSTROMS
1.1
1.05
1
0.95
0.9
0.85
0.8
0.75
1980
1982
1984
1986
1988
1990
1992
1994

Figure 2

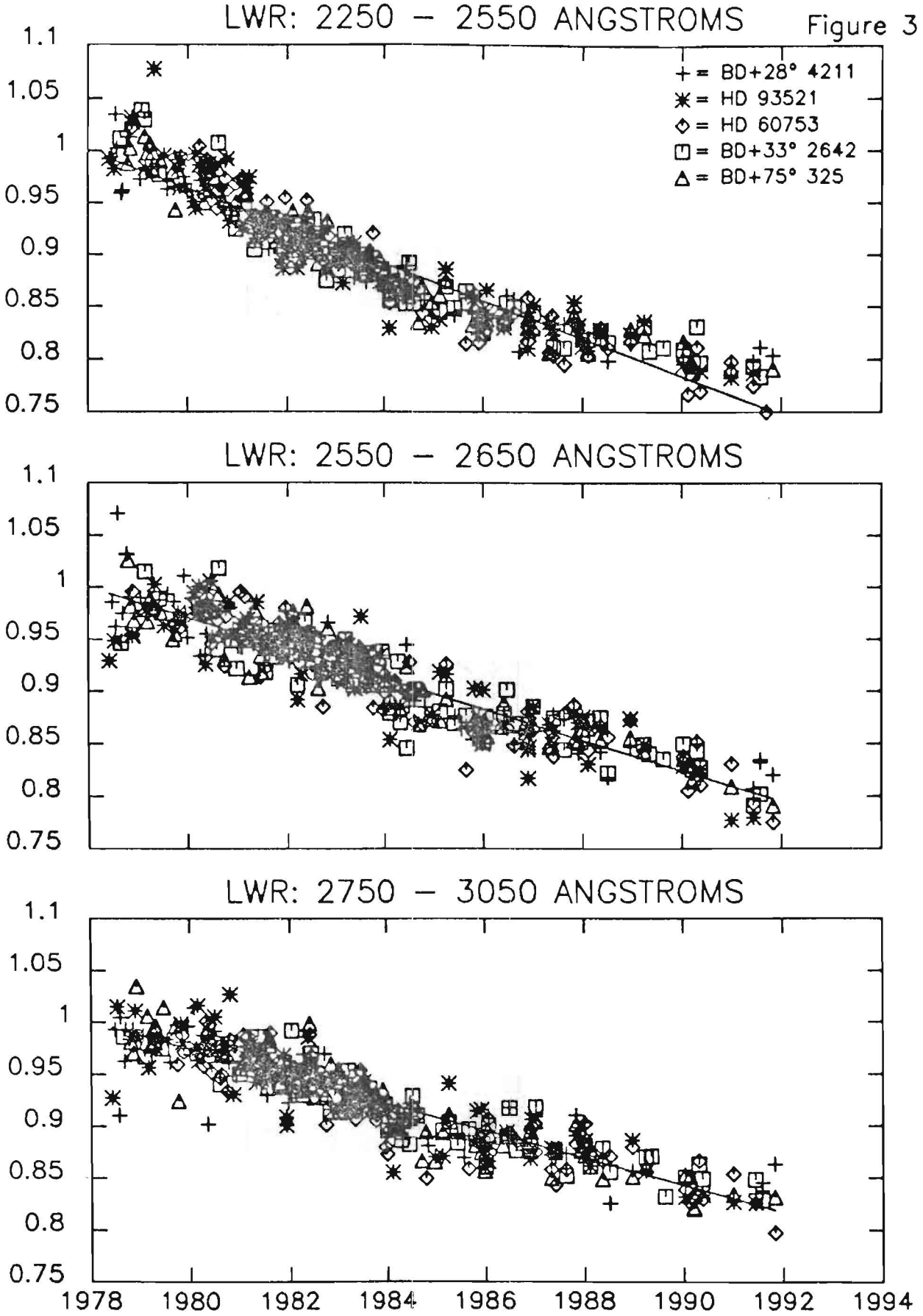

LWR: 2250 – 2550 ANGSTROMS
+ = BD+28° 4211
✳ = HD 93521
◇ = HD 60753
□ = BD+33° 2642
△ = BD+75° 325
LWR: 2550 – 2650 ANGSTROMS
LWR: 2750 – 3050 ANGSTROMS
1.1
1.05
1
0.95
0.9
0.85
0.8
0.75
1978
1980
1982
1984
1986
1988
1990
1992
1994

Figure 3

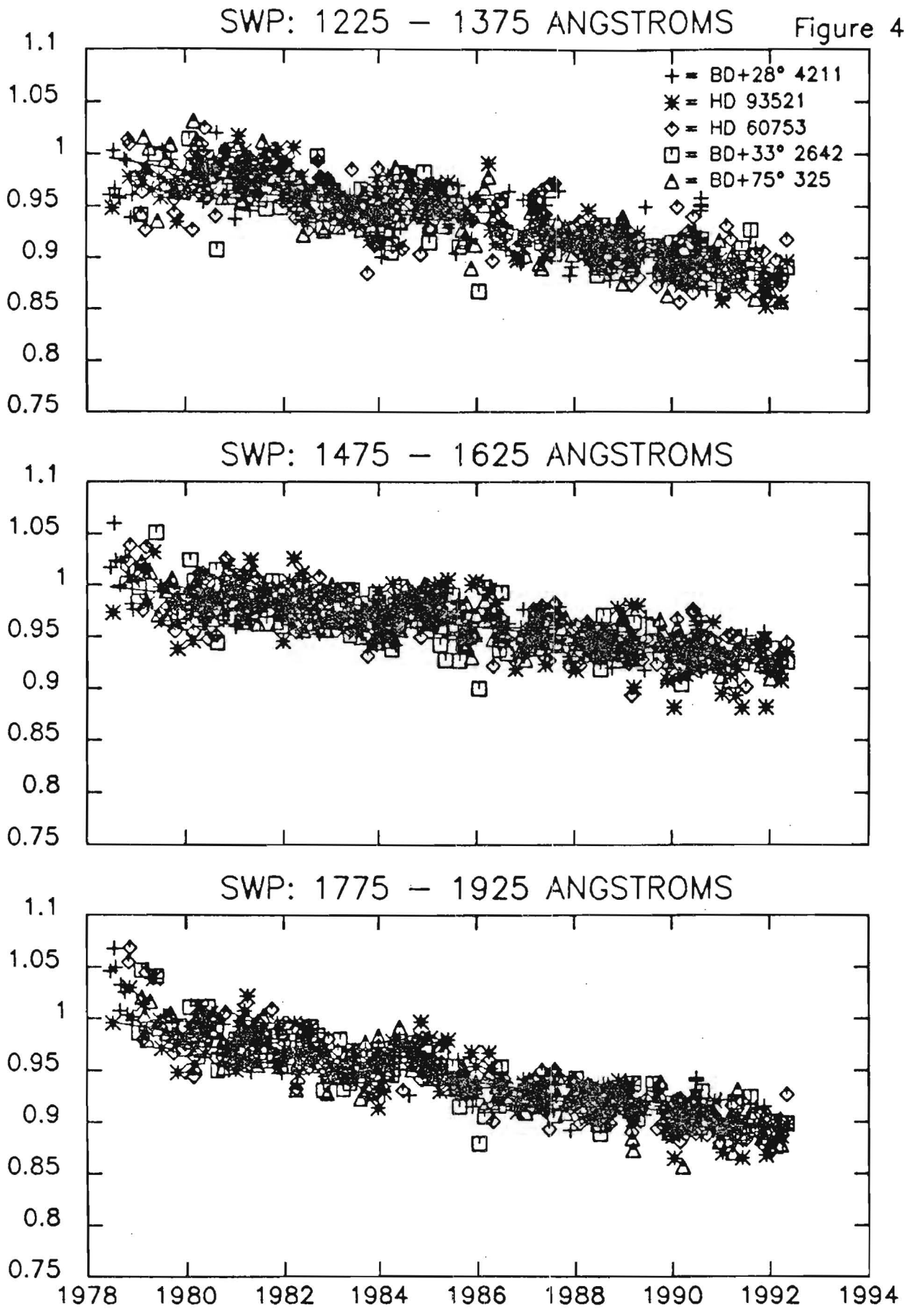
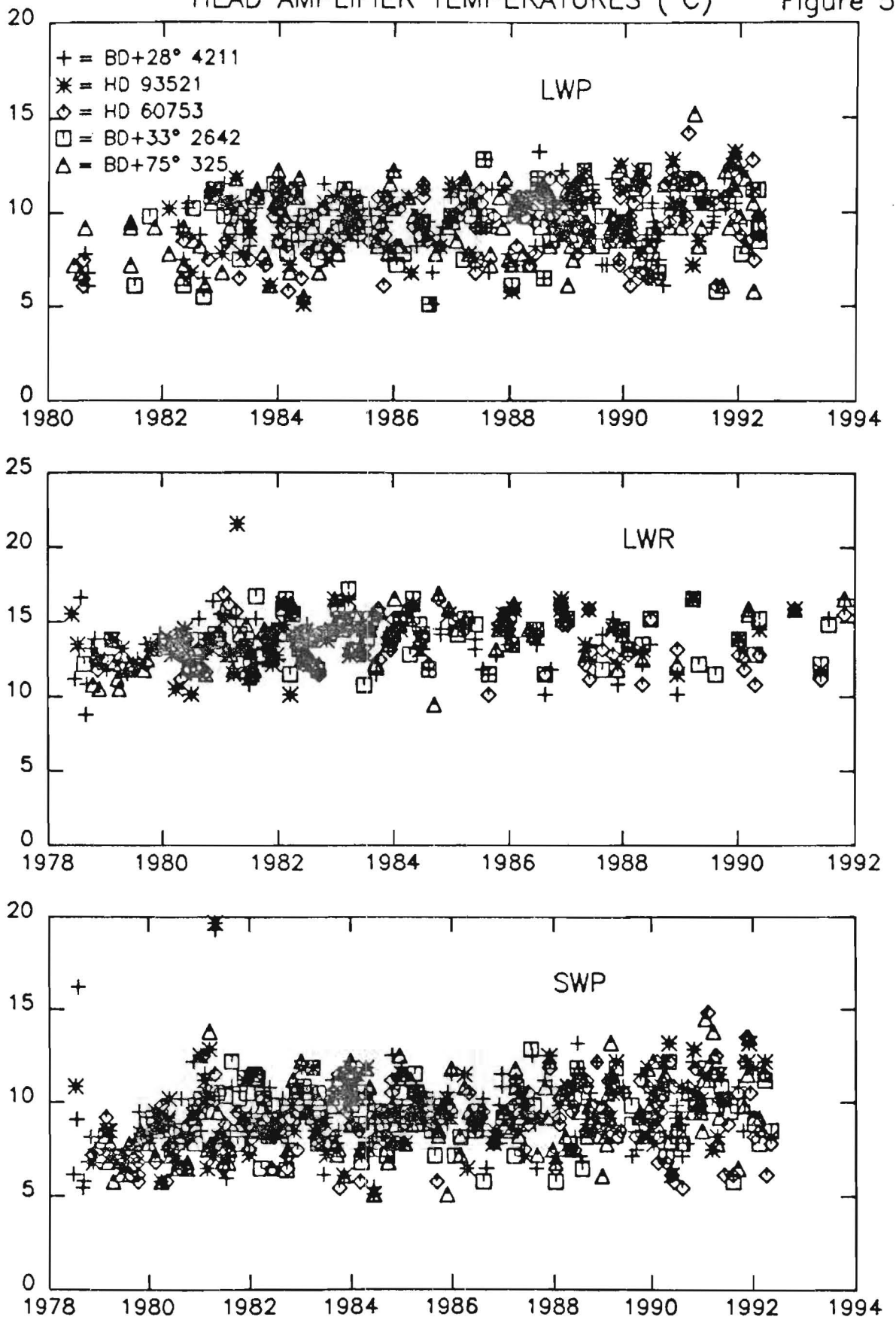

SWP: 1225 – 1375 ANGSTROMS
+ = BD+28° 4211
* = HD 93521
◇ = HD 60753
□ = BD+33° 2642
△ = BD+75° 325
SWP: 1475 – 1625 ANGSTROMS
SWP: 1775 – 1925 ANGSTROMS
1.1
1.05
1
0.95
0.9
0.85
0.8
0.75
1978
1980
1982
1984
1986
1988
1990
1992
1994

Figure 4

HEAD AMPLIFIER TEMPERATURES (°C) Figure 5



VILSPA::IUESCHED A New E-Mail Account for Scheduling Queries

A new account dedicated to scheduling is now open at Vilspa on SPAN. This account is "VILSPA::IUESCHED". Guest Observers should send their scheduling requests directly to this account from now on.

Richard Monier, Vilspa Scheduler

REMOTE INTERROGATION OF THE IUE DATABASE

The IUE database is installed on a Microvax II which is part of the VILSPA Scientific Computing Center. It can be accessed through packet switching data networks (PSDN).

On this Microvax a dedicated captive account has been created. If your institute is connected to the Space Physics Analysis Network (SPAN), simply:

```
$SET HOST VILSPA (or 28843, or 28845)
```

If your institute is not connected to SPAN, check with your site manager that your computer is actually linked to a PSDN (X.25) and then issue one of the following commands:

```
$SET HOST/X29  21452130213328        (VILSPA VAX)
$SET HOST/X29  2145213024309         (VILSPA VAX)
$SET HOST/X29  21452130213323        (VILSPA NCC)
```

Once connected, follow the following prompt and answer sequence:

```
Username: VILSPA
Password: DB
```

The last PSDN number connects you to the VILSPA Network Control Center (NCC), prompting you for the NAME of a service. Answer:

VAX

Upon seeing the message **"CALL COMPLETED TO ..."**, hit <RETURN> (once or twice).Use the same Username and Password as above to login.

The database menu selection program will then automatically be activated. Among various options, it offers the possibility to issue **on-line IUE data dearchiving requests**. Therefore, you should register carefully the first time you login to the VILSPA database. In particular, make sure to give your correct address; it will be used to mail the data you have asked for. To register as a new user, type in NEW to the codename prompt. Then, enter a CODENAME of your choice, with between 2 and 4 characters, together with your real name and address. On subsequent calls to the database, simply give the codename under which you registered the first time. The rest of the procedure is self-explanatory. Moreover, the HELP command will allow you to get easily acquainted with the system. Under the first menu branch you have also access to the database via the standard structured query language SQL. A complete description of the VILSPA Database can be found in the "VILSPA Database User's Guide" (M. Barylak, 1991, *ESA IUE Newsletter No. 37)* which is available upon request.

APPROVED PROPOSALS ESA IUE ALLOCATION 15TH YEAR: 1992-1993

Star formation in blue compact dwarfs in the Virgo Cluster, SWP spectroscopy	Almoznino	Tel Aviv	PE 001
	Brosch	Tel Aviv	PE 001
	Gondhalekar	RAL	
Carbon abundance in type I Planetary Nebulae	Patriarchi	Firenze	PM 002
	Perinotto	Fir	
Phase resolved spectrophotometry of Beta CrB (A8p) with the IUE	Monier	VILSPA	PA 003
Phase resolved spectrophotometry and mode identifications of Beta Cephei stars	Monier	VILSPA	PA 004
	Cugier	Wroclaw	PA 004
Phase resolved spectrophotometry and mode identifications for two Delta Scuti stars of spectral type F	Monier	VILSPA	PC 005
			PC 005
			PC 005
	Kreidl	Lowell	PC 005
Symbiotic stars misidentified as as Planetary Nebulae	Friedjung	IAP Paris	PI 007
	Raytchev	Stras	
	Acker	Strasbourg	PI 007
Observation of old Nova at similar time as with the HST	Friedjung	IAP Paris	PI 008
	Cassatella	Fras	
	Bianchini	Padova	PI 008
	Selvelli	Trieste	PI 008
International AGN watch: probing the nuclear regions of NGC 5548	Alloin	CNRS Paris	PQ 009
	Clavel	ESA/ESTEC	PQ 009
	Netzer	Tel Aviv	PQ 009
	Wamsteker	VILSPA	PQ 009
+25 Participants			
Chemical abundances from B field stars around young clusters in the Magellanic Clouds	Wolf	Heidelberg	PA 010
	Scholz	Heidelberg	PA 010
	Juttner	Heid	
	Stahl	Heidelberg	PA 010
	Baschek	Heidelberg	PA 010
	Bessell	Mt. Stromlo	PA 010
UV-orbital variability of the new eclipsing CV 1804+6753	Reimers	Hamburg	PI 012
	Bade	Ham	
	Barwig	Muenchen	PI 012
Chemical evolution in the Magellanic Clouds through study of Planetary Nebulae and HII regions	Dennefeld	IAP Paris	PM 014
	Leisy	IAP Paris	PM 014
	Stasinska	Meudon	PM 014
Interstellar gas in the fields of globular clusters and a high velocity stream	Bates	Belfast	PM 015
	Montgomery	Belfast	PM 015
	Kemp	Bel	
	Wood	Belfast	PM 015
	Davies	Jodrell Bank	PM 015
The nature of M dwarfs with a zero H alpha flux	Doyle	Armagh	PC 016
	Mathioudakis	Armg	

First observations of the atmospheric eclipse of Beta Scuti	Hunsch Schroder	Hamburg Hamb	PC 018
Ultraviolet Observations of the Peculiar Star System HD 191589	Jorissen Mayor Johnson Ake	ESO Muenchen Geneve Indiana GSFC/NASA	PC 020 PC 020 PC 020 PC 020
New X-ray sources in the LMC discovered by ROSAT	Bianchi Pakull Hasinger	Torino Heid Muenchen	PI 024 PI 024
IUE survey of X-ray selected late-type m.s. and evolved stars	Bianchi Maggio Favata	Torino Palermo ESA	PC 025 PC 025
Symbiotic stars in the Large Magellanic Cloud	Morgan	Edinburgh	PI 026
The UV spectrum of MCA - 1-B: the first Ofp/WN9 stars discovered in M33	Willis Schild Smith Crowther Conti	UCL London UCL London UCL London UCL London Jila USA	PA 027 PA 027 PA 027 PA 027 PA 027
Multi-frequency observations of the outburst of the outburst phase of the LMC-LBV R127	Stahl Wolf Zickgraf Cassatella Viotti	Heidelberg Heidelberg Heid Frascati Frascati	PA 028 PA 028 PA 028 PA 028
A magnitude-limited survey of single, non-variable G supergiants	Jordan Brown	Oxford JILA	PC 029
Detection of high-velocity halo clouds	de Boer Bomans Lilienthal	Bonn Bon Bonn	PM 033 PM 033
The dynamics of the supershell LMC 4	Bomans de Boer Chu Koornneef	Bonn Bonn Illi STScI	PM 034 PM 034 PM 034
HDE 332077: a Tc-poor S star with a main sequence companion?	Jorissen Mayor	ESO Muenchen Genv	PC 035
UV variability of the quasar 3C 273	Ulrich Courvoisier Wamsteker	ESO Muenchen Geneve VIL	PQ 037 PQ 037
Observations of the cool corona of HR 2554 with high resolution	Schroder Reimers	Hamburg Hamb	PC 039
Orbital and rotational modulations in the UV emissions from SS Cygni in quiescence	Giovannelli Polcaro Sabau Gaudenzi Rossi Martinez-P.	Frascati Frascati INTA Roma Roma La Laguna	PI 043 PI 043 PI 043 PI 043 PI 043
Ultraviolet (IUE) spectra of Post AGB stars	Parthasarathy	Bangalore	PA 044
Empirical velocity laws for the wind of cool giants	Vogel Nussbaumer	Zurich Zur	PC 045

The hottest symbiotic nova: HM Sge	Vogel Nussbaumer	Zurich Zur	PI 046
Atmospheres of the hot components in symbiotic systems	Vogel Nussbaumer Schmutz	Zurich Zu Zurich	PA 047 PA 047
LMC giant shell N 154 and the origin of its X-ray emission	Bomans de Boer	Bonn Bonn	PM 048
The bright part of the stellar population in Region E in LMC 4	Seggewiss de Boer Vallenari Richtler Bomans	Bonn Bonn Bonn Bonn Bonn	PA 049 PA 049 PA 049 PA 049
New supernova remnant hidden in luminous HII region N 159 in LMC	de Boer Bomans Chu Wakker Kennicutt	Bonn Bonn Ill Illinois Arizona	PM 050 PM 050 PM 050 PM 050
The core of 30 Doradus	de Boer Bomans Chu Mac Low Parker Wakker Walborn	Bonn Bonn Ill NASA Ames Colorado Illinois STScI	PM 051 PM 051 PM 051 PM 051 PM 051 PM 051
PU Vul: from supergiant to the nebular phase	Nussbaumer Schmutz Vogel	Zurich Zur Zurich	PI 052 PI 052
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Coordinated UV and EUV Observations of BL Lacs and Seyferts

Malkan Matthew A. UC LA SYOMM
Ultraviolet Spectra of the Complete 12-micron Seyfert 1 Galaxy Sample

Mansperger Cathy S. CSC - IUE Observatory DNOCM
Orbital Coverage of Dwarf Novae in the Ultraviolet

Massa Derck L. Applied Research Corporation RRODM
Wind Variability of Rapidly Rotating B Supergiants

Massa Derck L. Applied Research Corporation OCODM
A High Dispersion Survey of B Supergiants in Open Clusters

McCluskey George E. Lehigh University DLOGM
Mass Flow in the Interacting Semi-Detached Binary Delta Librae

McCollum Bruce CSC - IUE Observatory SSOBM
The Circumstellar Material of Socket Stars

McGrath Melissa A. Johns Hopkins University SUOMM
The Auroral and Dayglow Emissions of Saturn and Uranus

McGrath Melissa A. Johns Hopkins University SSOMM
Targets of Opportunity in the Outer Solar System

McGrath Melissa A. Johns Hopkins University IOOMM
Ultraviolet Variability in the Io Plama Torus

Meyer David M. Northwestern University SNODM
High-Velocity Gas in the SN1991T/3C273 Sightline

Meylan Thomas CSC - IUE Observatory OPOTM
Bolometric Corrections of Ap(Si) Stars in Open Clusters using Low Dispersion IUE Spectroscopy

Mushotzky Richard F. NASA - GSFC AGORM
The Origin of the UV Radiation in Active Galaxies: Tests of the Reprocessing Models

Neff James E. Penn State University VTOJN
The Spatially-Resolved Structure of the V711 Tau Stellar Environmentent

Nichol-Bohlin Joy CSC - Astronomy Programs SWOJN
Simultaneous UV and Optical Study of O Star Winds

Peimbert Manuel UNAM - MEXICO HROMP
The Carbon Abundance in the Galactic H II Region M17

Pena Miriam UNAM - MEXICO HDOMP
High Dispersion Study of BB1

Peters Geraldine J. USC TTOGP
IUE Observations of the Early-type Near Contact System TT Aurigae

Peterson Bradley M. Ohio State University PNOBP
International AGN Watch: Probing the Nuclear Regions of NGC5548

Peterson Bradley M. Ohio State University AGOBP
International AGN Watch: Mapping the Broad-Line Region in NGC3783

Philip A. G. Davis Institute for Space Obs. HBOAP
Ultraviolet Observations of Field Horizontal-Branch Stars

Plavec Mirek J. UC LA IBOMP
Eclipses of Three Interacting Binaries

Polidan Ronald S. NASA - GSFC LEORP
Multiwavelength Study of 17 Leporis

Polidan Ronald S. NASA - GSFC PLORP
The Peculiar Luminous Star BD+14 3887

Polidan Ronald S. NASA - GSFC RMORP
V342 AQL: An Active Algol System in the Rapid Mass Transfer phase?

Polidan Ronald S. NASA - GSFC TUORP
A Study of Surface Carbon Depletion in the Mass Algol System
TU MON

Porter Alain KPNO QROAP
Lyman Continua and Absorption Systems in Bright High Redshift Quasars

Raymond John C. Harvard CFA - SAO CLOJR
IUE Observations of HUT and ROSAT Targets in the Cygnus Loop

Raymond John C. Harvard CFA - SAO AGOJR
Accretion Geometries of Long-Period AM Her Stars

Reichert Gail A. USRA LIOGR
UV and Optical Observations of Liners

Rodrigue Melodi U Nevada - Reno MCOMR
H95c: A Merger Candidate

Saar Steven H. Harvard CFA - SAO BYOSS
Deep SWP Spectra of "Marginal" BY Dra Stars

Saar Steven H. Harvard CFA - SAO SCOSS
UV Spectra of the "Super-Cycle" Star: HD 10780

Schmidtke Paul C. Arizona State University BIOPS
The UV Spectrum of the Low-Mass X-ray Binary 2S0921-630

Shore Steven N. CSC - GHRS LBOSS
Monitoring the Most Massive Stars

Shrader Chris R. CSC - GRO XROCS
X-Ray Transients as Targets of Opportunity

Shull J. Michael U Colorado - CASA PGOJS
Intrinsic C IV Absorption in PG-QSOs and Seyfert Galaxies

Simon Theodore U Hawaii TBOTS
Convection, Granulation, and Thermal Bifurcation in the A Stars

Simon Theodore U Hawaii ABOTS
Activity Cycle of the Herbig Ae Star AB Aurigae

Sion Edward M. Villanova University UGOES
The Cooling of the White Dwarf in U Gem

Sion Edward M. Villanova University WWOES
Do DA Stars Have Weak Winds?

Sion Edward M. Villanova University HROES
IUE High Resolution Study of a Newly Discovered PG1159 Star

Smith Myron A. CSC - Astronomy Programs AHOMS
Ultraviolet Variations in Alpha-1 Her and Alpha-1 Sco

Sonneborn George NASA - GSFC SNOGS
Late-Time Spectroscopy of SN 1987-A

Sonneborn George NASA - GSFC SMOGS
An UV Spectrophotometric Census of B Supergiants in the SMC

Sonneborn George NASA - GSFC SGOGS
Anomalous A-Type Supergiants in the Magellanic Clouds

Starrfield Sumner G. Arizona State University NOOSS
Coordinated Multiwavelength Observations of Classical and Recurrent Novae in Outburst

Starrfield Sumner G. Arizona State University LNOSS
UV Observations of Novae During the Late States of Their Outbursts

Stencel Robert E. U Colorado - CASA LPORS
Fifteenth Episode Monitoring of Long Period Eclipsing Systems

Stencel Robert E. U Colorado - CASA SCORS
Intersystem C II Lines as Shock Diagnositics in Stellar Chromospheres

Stern S. Alan Southwest Research Institute NSOSS
Comparative UV Studies of New Satellite, Ring and Asteroidal Targets

Szkody Paula A. U Washington TTOPS
Target of Opportunity: TT Crt and YY Dra at Outburst

Szkody Paula A. U Washington VAOPS
Disk Precession in the Magnetic Old Nova V603 Aql

Teays Terry J. CSC - IUE Observatory CCOTT
Short Period Type II Cepheids with Carbon Star Characteristics

Turnshek David A. U Pittsburgh LAODT
Damped Lyman-alpha Absorption from Low to Moderate Redshift Galaxies

Urry C. Megan ST ScI MMOCU
Intensive Multiwavelength Monitoring of the Blazar 3C279

Welty Daniel E. U Chicago UVODW
Studies of Unusual Far-UV Extinction

Wheeler J. Craig U Texas - Austin GKOJW
Synoptic Observations of GK Persei

Whitney Barbara A. Harvard CFA - SAO RCOBW
Comprehensive Coverage of an R CrB Dust Ejection Cycle

Wilkes Belinda J. Harvard CFA - SAO XROBW
Range of Continuum Properties and the UV/Soft X-ray Connection for Quasars

Willson Lee Anne Iowa State University DNOLW
Dust Nucleation and Mass Loss in Miras - L2 Puppis and V CVn

Wu Chi-Chao CSC - ST ScI SAOCW
Augmentation of the IUE Ultraviolet Spectral Atlas

Yusef-Zadeh Farhad Northwestern University HHOFY
Observations of Bright HH Objects in M42

MERGED LOG OF IUE OBSERVATIONS

1 DECEMBER 1991 - 30 JUNE 1992

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

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

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

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

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

EXPOSURE CLASSIFICATION CODES

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

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

The CONTINUUM and EMISSION are both classified as follows:-

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

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

The BACKGROUND classification codes are:- (limits inclusive)

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

NOTES

1) No exposure classification code was assigned to VILSPA images before 1 August 1978.

2) Prior to 1 Sept 1979, the BACKGROUND digit was not included and the ECC occupied the first two places in the comment line.

3) The Goddard images are described in the comments by the gross DN of the CONTINUUM (C), EMISSION LINES (E) and BACKGROUND (B).

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
PHCAL	NULL	99	99.99	0000000	+000000	L	1	22064	L	00000		91122410	102000	000000	000 V	
PHCAL	60% TFLOOD	99	99.99	0000000	+000000	L	1	22065	L	00000		91122410	105450	000100	009 V	
PHCAL	20% TFLOOD	99	99.99	0000000	+000000	L	1	22066	L	00000		91122411	112242	000020	002 V	
PHCAL	40%TFLOOD	99	99.99	0000000	+000000	L	1	22067	L	00000		91122411	115056	000040	006 V	
PHCAL	60% TFLOOD	99	99.99	0000000	+000000	L	1	22068	L	00000		91122412	121849	000100	009 V	
PHCAL	100% TFLOO	99	99.99	0000000	+000000	L	1	22069	L	00000		91122412	124654	000140	00X V	
PHCAL	2ND READ	99	99.99	0000000	+000000	L	1	22070	L	00000		91122413	131000	000000	003 V	
PHCAL	NULL	99	99.99	0000000	+000000	L	1	22071	L	00000		91122413	132700	000000	009 V	
PHCAL	NULL	99	99.99	0000000	+000000	L	1	22072	L	00000		91122413	135500	000000	001 V	
PHCAL	NULL	99	99.99	0000000	+000000	L	3	43448	L	00000		91122310	102500	000000	003 V	
PHCAL	60%CALLV	99	99.99	0000000	+000000	L	3	43449	L	00000		91122311	110015	000149	009 V	
PHCAL	20%CALLV	99	99.99	0000000	+000000	L	3	43450	L	00000		91122311	112852	000036	005 V	
PHCAL	120%CALLV	99	99.99	0000000	+000000	L	3	43451	L	00000		91122311	115641	000338	009 V	
PHCAL	60%CALLV	99	99.99	0000000	+000000	L	3	43452	L	00000		91122312	122620	000149	009 V	
PHCAL	100%TFLOOD	99	99.99	0000000	+000000	L	3	43453	L	00000		91122312	125456	000016	00X V	
PHCAL	160%CALLV	99	99.99	0000000	+000000	L	3	43454	L	00000		91122313	132300	000451	00X V	
PHCAL	2ND READ	99	99.99	0000000	+000000	L	3	43455	L	00000		91122313	135000	000000	001 V	
PHCAL	NULL	99	99.99	0000000	+000000	L	3	43456	L	00000		91122314	142000	000000	003 V	
PHCAL	NULL	99	99.99	0000000	+000000	L	3	43457	L	00000		91122314	144500	000000	000 V	
NP098	NULL	99	99.99	0000000	+000000	H	3	43605		00000		92011110	102000	000000	000 V	
PHCAL	NULL	99	99.99	0000000	+000000	L	2	18637	L	00000		92011208	080900	000000	001 V	4.5 KW
PHCAL	NULL	99	99.99	0000000	+000000	L	2	18638	L	00000		92011208	084100	000000	005 V	4.5 KV
PHCAL	60%CALLV	99	99.99	0000000	+000000	L	2	18639	L	00000		92011209	092001	000234	006 V	4.5 KV
PHCAL	20% CALLV	99	99.99	0000000	+000000	L	2	18640	L	00000		92011210	100141	000051	003 V	IWR 4.5 KV
PHCAL	120% CALLV	99	99.99	0000000	+000000	L	2	18641	L	00000		92011210	103300	000509	009 V	IWR 4.5 KV
PHCAL	60% CALLV	99	99.99	0000000	+000000	L	2	18642	L	00000		92011211	110729	000234	006 V	IWR 4.5 KV
PHCAL	100% TFLOO	99	99.99	0000000	+000000	L	2	18643	L	00000		92011211	113636	000030	00X V	IWR 4.5 KV
PHCAL	160% CALLV	99	99.99	0000000	+000000	L	2	18644	L	00000		92011212	120759	000652	00X V	IWR 4.5KV
PHCAL	NULL	99	99.99	0000000	+000000	L	2	18645	L	00000		92011212	123520	000000	000 V	IWR 4.5 KV
PHCAL	NULL	99	99.99	0000000	+000000	L	2	18646	L	00000		92011213	130600	000000	006 V	IWR-4.5 KV
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NC184	NULL	99	99.99	0000000	+000000	L	1	22555	L	00000		92030910	104441	000000	V	
NC184	NULL	99	99.99	0000000	+000000		2	18657	L	00000		92030903	030053	000000	V	
NI075	NULL	99	99.99	0000000	+000000	L	3	44345	L	00000		92040602	023000	000000	V	
PHCAL	240%UV	99	99.99	0000000	+000000	H	1	22983	L	00000		92043023	230829	001150	008 V	
PHCAL	20%UV	99	99.99	0000000	+000000	H	1	22984	L	00000		92043023	235956	000059	005 V	
PHCAL	120%CALLV	99	99.99	0000000	+000000	H	1	22985	L	00000		92050100	003706	000555	006 V	
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PHCAL	140%CALLV	99	99.99	0000000	+000000	H	1	22988	L	00000		92050102	024649	000654	006 V	
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PHCAL	280%CALLV	99	99.99	0000000	+000000	H	1	22990	L	00000		92050104	041910	001349	009 V	
PHCAL	80% CALLV	99	99.99	0000000	+000000	H	1	22991	L	00000		92050105	051538	000357	004 V	
PHCAL	20% CALLV	99	99.99	0000000	+000000	H	1	22992	L	00000		92050105	055759	000059	003 V	
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PHCAL	100%CALLV	99	99.99	0000000	+000000	H	1	23012	L	00000		92050200	005219	000545	006 V	
PHCAL	80% CALLV	99	99.99	0000000	+000000	H	1	23013	L	00000		92050201	013634	000436	005 V	

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	nnnnnsstt	ECC	Comment
PHCAL	140%CALLV	99	99.99	0000000	+000000	H	1	23014	L	00000		92050202	023358	000803	006	V
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PHCAL	200%CALLV	99	99.99	0000000	+000000	H	1	23017	L	00000		92050204	043826	001130	007	V
PHCAL	80% CALLV	99	99.99	0000000	+000000	H	1	23018	L	00000		92050205	053742	000436	005	V
PHCAL	NULL	99	99.99	0000000	+000000	H	1	23019	L	00000		92050206	061200	000000	002	V
PHCAL	NULL	99	99.99	0000000	+000000	H	3	44500	L	00000		92050301	014710	000000	001	V
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PHCAL	100%CALLV	99	99.99	0000000	+000000	H	3	44503	L	00000		92050303	033605	000453	006	V
PHCAL	160%CALLV	99	99.99	0000000	+000000	H	3	44499	L	00000		92050223	232222	000749	007	V
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PHCAL	130%CALLV	99	99.99	0000000	+000000	H	3	44505	L	00000		92050304	045717	000620	007	V
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PHCAL	20%CCALLV	99	99.99	0000000	+000000	H	3	44577	L	00000		92050505	050632	000059	003	V
PHCAL	200%CALLV	99	99.99	0000000	+000000	H	3	44578	L	00000		92050505	053703	000948	009	V
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PHCAL	240%CALLV	99	99.99	0000000	+000000	H	3	44603	L	00000		92050600	003343	001236	009	V
PHCAL	60%CALLV	99	99.99	0000000	+000000	H	3	44604	L	00000		92050601	013705	000309	008	V
PHCAL	280%CALLV	99	99.99	0000000	+000000	H	3	44605	L	00000		92050602	021122	001442	009	V
PHCAL	NULL	99	99.99	0000000	+000000	H	3	44606	L	00000		92050602	025500	000000	000	V
PHCAL	100%CALLV	99	99.99	0000000	+000000	H	3	44607	L	00000		92050603	032340	000515	009	V
NE062	STAR 3	20	15.80	0000000	+000000	E	9	02548	2	00000	BO	92061021	212000	016000		V FES IMAGE FOR SWP449
PHCAL	NULL	99	99.99	0000000	+000000	L	1	23375		00000		92062522	000000	000000	600	V
NM021	NULL	99	99.99	0000000	+000000		3	45002		00000		92062421	000000	000000		V
BENSA	HD 886	20	2.830	0010396	+145420	L	3	43467	L	1868	FU	91122501	015300	000000	X00	G G=1.5X,B=17

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	EES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
VENSA	HR 63	30	4.610	0014286	+382424	L	3	43462	L	346	FU	91122406	060900	000033	400	G G=162,B=17
KDNCA	HD 1405	46	8.500	0015436	+304052	L	3	43690	L	784	FO	92011923	233700	012000	337	G E=132,C=117,B=90
NC112	HD1835	44	06.75	0020191	-122912	H	1	22004	L	07072	FO	91121611	114220	010000	562	V
NC112	HD1835	44	06.79	0020191	-122912	H	1	22005	L	06826	FO	91121614	140225	016500	573	V
NC112	HD 1835	44	06.78	0020191	-122912	H	1	22037	L	06900	FO	91122012	121355	010000	601	V
NC112	HD 1835	44	06.77	0020191	-122912	H	1	22038	L	06958	FO	91122014	143924	013000	601	V
SUNEG	HD 2151	44	2.800	0023090	-773200	L	3	44168	L	1523	FU	92031314	145100	001300	500	G G=224,B=20
NA186	HD3283	32	06.15	0033358	+600304	H	1	22045	L	11646	FO	91122114	144605	004500	501	V
PHCAL	HD 3360	21	3.680	0034103	+533719	H	3	43294	L	855	FU	91120208	083500	000024	402	G G=180,B=35
PHCAL	HD 3360	20	3.700	0034103	+533719	H	3	43542	L	873	FU	92010300	004100	000024	502	G G=185,B=32
PHCAL	HD 3360	21	3.680	0034103	+533719	H	3	44006	L	890	FU	92021622	222200	000024	502	G G=190,B=32
NC199	RE0044+09	46	10.63	0041255	+091634		3	44864	L	00227	FO	92060422	220131	006000	700	V
SMOGS	SK 15	24	12.20	0045500	-732410	L	3	44953	L	453	SO	92061815	153900	005500	402	G G=175,B=32
SMOGS	SK 31	23	11.10	0048041	-731204	L	3	44954	L	727	SO	92061817	173400	001500	400	G G=135,B=15
SMOGS	SK 33	23	11.03	0048198	-732404	L	3	44952	L	771	SO	92061814	141000	003400	400	G G=140,B=17
ASNFB	AV000076	32	11.19	0048477	-734452	L	3	43335	L	143	FO	91120618	185000	005000	401	G G=156,B=22
SMOGS	SK 45	25	11.40	0049373	-723916	L	3	44955	L	592	SO	92061818	185600	011300		G
SMOGS	AV 104	23	13.10	0049526	-730423	L	3	44959	L	382	SO	92061915	155800	006200	X01	G G=1.5X,B=21
SMOGS	SK 56	25	10.70	0051198	-725416	L	3	44958	L	903	SO	92061914	140900	002100	400	G G=150,B=16
PGOJS	PG 0052+251	85	15.40	0052111	+250924	L	3	45033	L	0	BO	92062905	055200	006000	232	G E=82,C=51,B=33
PGOJS	PG 0052+251	85	15.40	0052111	+250924	L	3	45034	L	0	BO	92062909	092700	020000	352	G E=196,C=110,B=40
SMOGS	SK 57	25	12.20	0052156	-730214	L	3	44960	L	489	SO	92061917	174900	006000	500	G G=200,B=16
SMOGS	SK 62	23		0054303	-731050	L	3	44961	L	412	SO	92061919	194000	006000	501	G G=180,B=23
PQ099	RXJ0057-22	84	13.50	0054530	-223909	L	3	44957	L	00000	BO	92061902	022331	011000	351	V
PQ099	RXJ0057-22	84	13.50	0054530	-223909	L	1	23323	L	00000	BO	92061904	042059	003000	301	V
PQ099	RXJ 0057-2	84	13.50	0054530	-223909	L	3	45039	L	00000	BO	92063001	014016	011000	350	V
PQ099	RXJ 0057-2	84	13.50	0054530	-223909	L	3	45040	L	00000	BO	92063004	040218	004500	330	V
SMOGS	SK 73	24	12.60	0056546	-723235	L	3	44978	L	411	SO	92062215	155300	006500	501	G G=200,B=23
NENPC	NGC 346	72		0057188	-722741	L	3	44451	L	0	BO	92042119	191900	001000	00	G B=15
NENPC	NGC 346	72		0057221	-722647	L	3	44452	L	0		92042120	203100	003000	400	G G=155,B=17
NENPC	NGC 346	72		0057221	-722647	L	3	44453	L	0		92042122	220900	013500	501	G G=251,B=30
NENPC	NGC 346	72		0057221	-722647	L	3	44455	L	0	BO	92042210	100600	036000	405	G G=175,B=62
SMOGS	SK 87	23	12.90	0058506	-722706	L	3	44977	L	375	SO	92062213	135000	007500	501	G G=215,B=24
ASNFB	AV000254	32	11.60	0058595	-714828	L	3	43336	L	114	FO	91120620	204900	024000	303	G G=136,B=50
SGOGS	R 24	32	12.52	0100340	-721857	L	3	44740	L	370	SO	92052212	122500	015000	401	G G=130,B=27
NA004	AV304	20	14.98	0100454	-725522	L	1	22810	L	00000	BO	92041405	054917	006000	401	V
NA004	AV 304	20	14.98	0100454	-725522	L	3	44399	L	00000	BO	92041406	065354	011300	400	V
SMOGS	AV 314	24	12.90	0101111	-723251	L	3	44979	L	412	SO	92062217	175200	008000	501	G G=193,B=23
SMOGS	SK 116	23	13.00	0103175	-730250	L	3	44931	L	373	SO	92061517	174900	008300	401	G G=145,B=24
SMOGS	SK 119	23	12.20	0103240	-725602	L	3	44929	L	473	SO	92061514	141400	002400	400	G G=144,B=19
SMOGS	SK 121	25	11.40	0103543	-730417	L	3	44930	L	656	SO	92061515	154300	007500	503	G G=205,B=50
SMOGS	SK 128	24	12.20	0104556	-723810	L	3	44932	L	475	SO	92061520	202000	002700	500	G G=170,B=15
NA041	R-40	25	10.38	0105460	-724400	L	1	21978	L	00282	FO	91120910	100132	002000	700	V
NA041	R-40	25	10.57	0105460	-724400	H	1	21987	L	00238	FO	91121010	100946	030000	302	V
NA040	R 40	25	10.26	0105460	-724400	L	3	44905	L	00315	FO	92061004	040451	002000	300	V
ASNFB	AV000442	32	11.30	0107281	-731829	L	3	43318	L	122	FO	91120423	231400	015000	301	G G=114,B=30
SGOGS	SK 154	32	11.56	0112585	-732836	L	3	44739	L	130	FO	92052208	081000	018000	402	G G=139,B=35
AGNDW	MRN 1	84	13.90	0113196	+324933	L	3	43427	L	0	BO	91121917	174300	042500	326	G E=66,C=102,B=72
NQ072	FAIRALL 9	84	12.10	0121512	-590359	L	3	44737	L	00000	BO	92052203	032701	009000	360	V
AGNDC	FAIRALL9	84	14.00	0121512	-590359	L	3	44976	L	0	BO	92062211	115100	004500	340	G E=162,C=41,B=17

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	nnnnsstt	ECC	Comment
NC072	FAIRALL 9	84	12.10	0121512	-590359	L	1	23154	L	00000	BO	92052205	050242	006000	340	V
NC072	FAIRALL 9	84	12.10	0121512	-590359	L	3	44738	L	00000	BO	92052206	061134	003500	250	V
NA154	M33-OB21-J	13	19.00	0130086	+302029	E	9	02517	2	00000	BO	91121209	093000	016000		V FES FOR SWP43365
WONDH	M33 B2LJ	13	19.00	0130086	+302028	L	3	43365	L	0	BO	91121210	101700	084500	308	G G=170,B=100
SCNMA	C 1991G1	06		0134437	-490610	L	3	44067	L	116	FO	92022615	151900	018000	42	G E=149,B=35
NC121	UV CET	48	12.50	0136350	-181219	L	3	43549	L	00000	BO	92010508	082238	004000		V IMAGE READ AT GSFC
NA187	R-50	26	99.99	0143177	-745550	E	9	02515	2	00321	SO	91121111	110000	016000		V FES FOR IWP 21992
NA187	R 50	26	11.79	0143177	-745550	L	3	43360	L	00321	SO	91121110	102443	003000	300	V
NA098	HD11413	30	06.27	0148581	-502711	L	3	43607	L	10559	FO	92011113	133553	000300	700	V
NA098	HD11413	30	06.21	0148581	-502711	L	3	43608	L	11158	FO	92011114	141520	000100	500	V
NC190	HD12311	40	99.99	0157116	-614844	E	9	02554	2	00000		92062721	210700	016000		V IMAGE FOR FES PHOTOM
NC190	HD12311	40	03.17	0157117	-614845	H	3	45023	L	01517	FU	92022721	213218	041000	704	V
USSBS	HD 12311	40	2.900	0157117	-614845	H	3	45035	L	1514	FU	92062916	163500	000800	502	G G=187,B=35
NA186	HD12301	25	05.94	0159166	+640859	H	1	21953	L	13772	FO	91120610	104722	002000	601	V
SCNOW	HD 12953	32	5.680	0205099	+581113	L	3	43440	L	11904	FO	91122201	012800	002700	500	G G=211,B=18
SCNOW	HD 12953	32	5.680	0205099	+581113	L	3	43440	S	12036	FO	91122201	014600	001500	400	G G=123,B=18
NA004	D-2	20	14.50	0206307	-743110	L	1	22809	L	00000	BO	92041401	014854	007500	401	V
NA004	D-2	20	14.50	0206308	-743111	L	3	44398	L	00000	BO	92041403	030804	013000	300	V
VENSA	HR 664	30	4.010	0214204	+333652	L	3	43463	L	551	FU	91122407	073600	000020	500	G G=202,B=18
CD08Z	MIRA AB	66	8.500	0216490	-031213	L	3	43942	L	14222	FO	92020620	205100	007000	4X0	G E=1.5X,G=152,B=20
VENSA	HR 708	22	4.890	0223320	-123058	L	3	43460	L	24426	FO	91122403	030800	000036	500	G G=205,B=18
VENSA	HR 718	25	4.280	0225300	+081410	L	3	43461	L	455	FU	91122404	043800	000016	500	G G=210,B=17
TBOIS	HD 15638	40	8.700	0226590	-613141	L	3	45007	L	863	FO	92062517	170900	003500	502	G G=244,B=39
CD06Z	PHL 1377	85	16.50	0232365	-041510	L	3	43947	L	0	BO	92020716	163800	012000	201	G G=45,B=25
NA098	HD16955	30	06.68	0240568	+252536	L	3	43609	L	07547	FO	92011114	145633	000130	500	V
COOPF	1991A1	06		0253439	+712626	L	3	44969	L	157	FO	92062108	080300	012000	21	G E=41,B=27
NM124	HD 18519	30	4.600	0256208	+210830	H	3	43591	L	28027	FO	92011016	162700	002000	502	G G=250,B=40
USSBS	HD 18604	25	4.700	0257019	+084233	H	3	43396	L	27105	FO	91121604	042400	000249	502	G G=192,B=38
PHCAL	SKY	07	99.99	0304049	-061651	L	3	43876	L	00000		92012806	064155	004000	041	V
PHCAL	SKY	07	99.99	0304049	-061651	L	3	43877	L	00000		92012807	075407	004000	050	V SKY NEAR HD 19349
PHCAL	SKY	07	99.99	0304049	-061651	L	3	43878	L	00000		92012809	090122	003500	050	V SKY NEAR HD 19349
PHCAL	SKY	07	99.99	0304049	-061651	L	3	43879	L	00000		92012810	100132	003500	051	V SKY NEAR HD 19349
PHCAL	SKY	07	99.99	0304049	-061651	L	3	43875	L	00000		92022805	053532	003000	031	V SKY NEAR HD19343 IWL
PHCAL	GC 3718	07	99.99	0304049	-061651	E	9	02528	2	00000		92012805	051000	016000		V FES FOR IWP22292,IWL
PHCAL	SKY BKGD	07		0304050	-061651	L	3	43880	L	0		92012811	110100	004000	41	G E=144,B=22
USSBS	HD 20902	41	1.800	0320444	+494106	H	3	43395	L	3572	FU	91121603	030900	002700	X02	G G=1.5X,B=37
NM124	HD 21134	30	7.800	0322209	+104804	H	3	43592	L	3383	FO	92011019	192500	012500	403	G G=160,B=45
CD092	GK PER	55	13.30	0327475	+434404	L	3	43923	L	264	SO	92020320	202800	017000	331	G E=62,G=60,B=29
CD092	GK PER	55	13.30	0327475	+434404	L	3	44143	L	276	SO	92030919	195000	018000	333	G E=76,G=75,B=45
CD09Z	GK PER	55	13.30	0327475	+434404	L	3	44322	L	131	FO	92040318	180200	015000	302	G G=75,B=40
NE077	SBS0335-05	88	17.00	0335151	-051227	L	3	44070	L	00000	BO	92022706	060656	040000	301	V
NE077	SKY BKGD	07	99.99	0335151	-051227	L	1	22472	L	00000		92022808	084045	006000	111	V SERENDIPITY
NE077	SBS0335-05	88	17.00	0335151	-051227	L	3	44075	L	00000	BO	92022801	015742	064600	333	V STARTED AT GSFC
NE077	SBS0335-05	88	17.00	0335151	-051227	L	3	44078	L	00000	BO	92022901	015335	061200	332	V STARTED AT GSFC
NE033	2A 0335	88	14.00	0335573	+094827	L	3	43531	L	00000	BO	92010108	080729	040000	002	V
RGNIA	HR 1105	66	5.140	0337477	+630325	L	3	43673	L	23072	FO	92011723	235500	009000	345	G E=192,G=130,B=70
RGNIA	HR 1105	66	5.140	0337477	+630325	L	3	44151	L	22615	FO	92031100	002100	009000	20	G E=39,B=19
NC176	HII-314	72	10.73	0341200	+243831	L	1	22320	L	00207	FO	92020208	081617	006000	451	V
NC176	HII 996	72	10.63	0343230	+242505	L	1	22321	L	00226	FO	92020210	100547	004000	451	V
WONGB	0343-007	37	14.91	0343521	+004755	L	3	43399	L	0	BO	91121620	204800	003000	500	G G=200,B=18

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
WDNGB	0343-007	37	14.91	0343521	+004755	H	3	43400	S	0	BO	91121622	223500	007000	400	G G=170,B=20
NC176	HII 1207	72	10.50	0343550	+243841	L	1	22319	L	00000	BO	92020206	063551	004000	331	V
NA165	HD23630	23	03.11	0344304	+235708	H	3	43484	L	01603	FU	91122712	123959	000050	500	V
NA165	HD23630	23	03.11	0344304	+235708	H	1	22100	L	01602	FU	91122712	124503	000030	501	V
NA165	HD23630	23	03.09	0344304	+235708	H	1	22420	L	01618	FU	92022008	083553	000030	501	V
NA165	HD23630	23	03.08	0344304	+235708	H	3	44027	L	01634	FU	92022008	082840	000050	501	V
NA165	HD23862	23	05.23	0346124	+235907	H	1	22098	L	22337	FO	91122710	100557	000415	601	V
NA165	HD23862	23	05.20	0346124	+235907	H	3	43482	L	22713	FO	91122710	101830	001000	601	V
NA165	HD23862	23	05.16	0346124	+235907	L	1	22099	L	23267	FO	91122711	110145	000003	501	V
NA165	HD23862	23	05.18	0346124	+235907	L	3	43483	L	23012	FO	91122711	113418	000005	500	V
NA165	HD23862	23	05.20	0346124	+235907	H	3	44025	L	22747	FO	92022005	054556	001000	600	V
NA165	HD23862	23	05.23	0346124	+235907	H	1	22418	L	22284	FO	92022006	060428	000415	501	V
NA165	HD23862	23	05.19	0346124	+235907	L	3	44026	L	22917	FO	92022007	071531	000005	500	V
NA165	HD23862	23	05.19	0346124	+235907	L	1	22419	L	22894	FO	92022007	072422	000003	501	V
WDNSK	GD 52	37	15.20	0348479	+335831	L	3	43638	L	0	BO	92011415	151800	044600	405	G G=210,B=68
NM124	HD 24263	22	5.700	0349201	+062310	H	3	43593	L	13921	FO	92011022	223500	002000	503	G G=250,B=45
EXNDW	HD 24263	24	5.670	0349202	+062304	L	3	44109	L	14172	FO	92030323	234200	000009	500	G G=187,B=13
EXNDW	HD 24263	24	5.670	0349202	+062304	H	3	44110	L	14203	FO	92030400	002200	002000	X03	G G=1.5X,B=48
EXNDW	HD 24263	24	5.670	0349202	+062304	L	3	44111	L	14258	FO	92030401	013400	002000	X03	G G=1.5X,B=47
EXNDW	HD 24263	24	5.670	0349202	+062304	L	3	44112	L	13936	FO	92030402	024000	000014	500	G G=244,B=14
PHCAL	D 24	23	2.900	0354295	+395202	H	3	43543	L	1900	FU	92010301	015800	000012	502	G G=190,B=38
USSBS	HD 25025	49	2.950	0355417	-133858	L	3	43394	L	1393	FU	91121600	003100	010000	351	G E=192,G=55,B=25
CSNMS	HD 25340	21	5.300	0358598	-014118	L	3	43987	L	19407	FO	92021412	122800	000003	500	G G=218,B=20
CSNMS	HD 25340	21	5.300	0358598	-014118	L	3	43987	S	19404	FO	92021412	123400	000004	400	G G=156,B=20
NA155	NGC 1501	70	14.30	0402406	+604712	H	3	44229	L	00000	BO	92032507	070712	022000	111	V NO SPECTRUM VISIBLE
CD09Z	40681107	19	10.60	0402564	+615221	L	3	44144	L	218	FO	92031000	001400	003700	400	G G=152,B=17
CENRK	HD 25638	12	6.990	0403238	+621209	H	3	43366	L	0		91121301	015700	004000	301	G G=60,B=25
CENRK	HD 25638	12	6.990	0403238	+621209	H	3	43367	L	0		91121303	031000	007500	302	G G=80,B=35
CONDA	HD 26965	46	4.430	0412582	-074350	L	3	43957	L	359	FU	92021020	200700	019000	432	G E=139,G=144,B=40
TINIS	BP TAU	58	12.00	0416086	+285916	L	3	43552	L	203	SO	92010517	172100	030000	344	G E=155,G=105,B=55
TINIS	BP TAU	58	12.00	0416086	+285916	L	3	43563	L	229	SO	92010716	164600	030500	344	G E=170,G=100,B=60
TINIS	BP TAU	58	12.00	0416086	+285916	L	3	43585	L	188	SO	92010916	163600	031000	333	G E=148,G=120,B=50
TINIS	BP TAURI	58	12.00	0416086	+285916	L	3	43610	L	227	SO	92011116	161300	034000	335	G E=137,G=110,B=62
TINIS	BP TAURI	58	12.00	0416086	+285915	L	3	43635	L	236	SO	92011316	163200	031000	342	G E=165,G=75,B=37
TINIS	BP TAURI	58	12.00	0416086	+285916	L	3	43650	L	249	SO	92011516	162800	035000	345	G E=175,G=115,B=70
TINIS	BP TAURI	58	12.00	0416086	+285916	L	3	43672	L	247	SO	92011716	165000	030000	335	G E=164,G=130,B=70
TINIS	BP TAU	58	12.00	0416086	+285916	L	3	43689	L	273	SO	92011916	162700	030500	335	G E=142,G=110,B=70
USSBS	HD 27808	41	7.100	0421165	+213718	L	3	43896	L	3508	FO	92013100	000300	005500	301	G G=105,B=25
PHCAL	SKY EXGD	07		0430072	-031851	L	3	43881	L	0		92012812	123000	003500	40	G E=155,B=20
PHCAL	SKY EXGD	07		0430072	-031851	L	3	43882	L	0		92012813	132800	004000	41	G E=128,B=22
IGNIH	NGC 1614	88	13.30	0431353	-084100	L	3	43443	L	0	BO	91122217	175200	042000	304	G G=100,B=60
WRNRC	NGC 1614	88	13.63	0431354	-084057	L	3	43466	L	0	BO	91122417	175800	041000	336	G E=114,G=113,B=80
EXNSS	ED +26 730	46	8.420	0433420	+270200	L	3	43950	L	1539	FO	92020820	205500	022500	32	G E=96,B=35
PENTG	HD 29573	60	5.010	0436335	-121315	H	3	43303	L	22937	FO	91120307	072500	002100	502	G G=221,B=38
CSNMS	HD 29589	22	5.500	0437162	+120604	L	3	43988	S	16683	FO	92021413	134800	000008	500	G G=180,B=18
CSNMS	HD 29589	22	5.500	0437162	+120604	L	3	43988	L	16625	FO	92021413	135300	000005	500	G G=225,B=18
NA009	S-216	71	12.10	0439408	+463630	H	3	43949	L	00000	BO	92020805	052228	035500	402	V
EXNDW	HD 30122	24	6.350	0442412	+233210	L	3	44196	L	8312	FO	92031921	212700	000025	500	G G=200,B=15
NC112	HD30495	44	05.88	0445041	-170129	H	1	22003	L	14414	FO	91121609	094856	004000	561	V
NC112	HD30495	44	05.91	0445218	-170125	H	1	22036	L	14087	FO	91122010	101549	004000	601	V

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
CD88Y	DEM8 (E4)	13	12.00	0451388	-665958	L	3	43362	L	257	SO	91121203	034100	004000	400	G G=160,B=20
CD88Y	DEM8 (E4)	13	12.00	0451389	-665959	L	3	43361	L	263	SO	91121201	015600	001000	202	G G=52,B=35
EMNSS	GL 182	48	9.600	0456590	+014236	L	3	44059	L	331	FO	92022522	223200	014000	02	G B=35
NA023	BR10	10	99.99	0457330	-682827	E	9	02541	2	00000	BO	92051100	001000	016000		V FES FOR SWP 44642
NA023	BR10	10	13.90	0457330	-682827	H	3	44642	L	00000	BO	92051100	000516	040000	302	V
NA030	SK6640	14	13.00	0457374	-663716	L	3	43589	L	00000	BO	92011011	114524	004000	430	V
NA030	SK-6640	14	13.00	0457374	-663716	L	1	22234	L	00000	BO	92011012	123002	002000	401	V
LENSS	S012/IMC	26	12.60	0457400	-675208	L	3	44666	L	292	SO	92051421	215700	005000	500	G G=170,B=15
WRNPC	NGC 1741	88	13.30	0459094	-041943	L	3	43481	L	36	SO	91122618	182600	038500	3X5	G E=1.5X,G=150,B=62
NM021	SK-65 22	15	09.02	0501139	-655649	E	9	02553	2	00954	FO	92062421	213000	016000		V FES FOR SWP 45003 -
NM021	SK-65 22	15	12.10	0501139	-655649	H	3	45003	L	00000	BO	92062422	221759	039000	002	V
PHCAL	G 191B2B	37	11.80	0501310	+524548	L	2	18625	L	275	SO	91120802	022300	000330	401	G G=175,B=25
PHCAL	G 191B2B	37	11.80	0501310	+524548	L	2	18626	L	272	SO	91120803	031000	000330	401	G G=160,B=25
PHCAL	G 191B2B	37	11.80	0501310	+524548	L	2	18627	L	270	SO	91120803	035100	000330	401	G G=155,B=25
PHCAL	G 191B2B	37	11.80	0501310	+524548	L	2	18628	L	280	SO	91120804	043600	000700	501	G G=240,B=27
PHCAL	G 191B2B	37	11.80	0501310	+524548	L	2	18629	L	275	SO	91120805	051800	000700	501	G G=230,B=27
PHCAL	G 191B2B	37	11.80	0501310	+524548	L	2	18630	L	284	SO	91120806	061100	000700	501	G G=215,B=28
PHCAL	G 191B2B	37	11.80	0501310	+524548	L	2	18631	L	283	SO	91120806	065700	001200	X01	G G=1.5X,B=25
PHCAL	G 191B2B	37	11.80	0501310	+524548	L	2	18632	L	290	SO	91120807	074900	001200	X01	G G=1.5X,B=30
PHCAL	G 191B2B	37	11.80	0501310	+524548	L	3	43403	S	282	SO	91121704	041500	000245	300	G G=103,B=17
PHCAL	G 191B2B	37	11.80	0501310	+524548	L	3	43404	S	278	SO	91121704	045000	000245	300	G G=110,B=17
NA050	UX ORI	30	11.23	0502004	-035129	L	3	43931	L	00133	FO	92020505	051107	009000	300	V
NA050	UX ORI	30	11.36	0502004	-035129	L	1	22337	L	00118	FO	92020506	065102	002200	401	V
NA030	HDE269006	14	12.33	0502459	-712422	L	3	43584	L	00199	SO	92010914	141336	002000	540	V
PHCAL	HD 32630	21	3.180	0503002	+411008	H	3	44004	L	1343	FU	92021620	200600	000024	502	G G=200,B=36
NA023	HD33133	11	12.62	0503056	-664506	E	9	02542	2	00153	SO	92051123	233000	016000		V FES FOR SWP44648
NA023	HD 33133	11	12.62	0503056	-664506	E	3	44648	L	00153	SO	92051200	000835	040000	342	V FES FOR SWP 44658
NONSS	IMC 1991	55		0504127	-702216	L	3	43310	L	0	BO	91120318	182200	012000	31	G E=119,B=25
NONSS	IMC 1991	55		0504127	-702216	L	3	43311	L	0	BO	91120320	205500	023500	53	G E=228,B=41
NONSS	NOVA IMC	55		0504127	-702216	L	3	43902	L	0	BO	92013112	122000	033000	345	G E=208,G=85,B=62
NONSS	N IMC 91	55		0504127	-702216	L	3	44230	L	0	BO	92032512	120100	041000	35	G E=141,B=70
NA064	0504-241	17	15.20	0504134	-240758	L	1	22367	L	00000	BO	92021004	045025	008820	402	V
NA064	0504-241	17	15.20	0504134	-240758	L	3	43954	L	00000	BO	92021006	062359	003140	400	V
NA030	PS 34-16	20	15.00	0504276	-662848	L	3	43844	L	00000	BO	92012607	075718	012000	501	V
NA030	PS 34-16	20	15.00	0504276	-662848	L	1	22287	L	00000	BO	92012610	100214	007500	401	V
CONTA	HD 32923	44	5.000	0504296	+183440	L	3	43966	L	21148	FO	92021120	203600	018000	X02	G G=1.2X,B=40
WRNPC	MK 1094	88	14.10	0508174	-024433	L	3	43474	L	0	BO	91122517	175000	042000	3X6	G E=4X,G=117,B=80
NA064	0511-230	17	14.40	0511458	-230245	L	3	43955	L	00000	BO	92021008	082429	001500	400	V
NA064	0511-230	17	14.40	0511845	-230245	L	1	22368	L	00000	BO	92021007	073202	004640	401	V
CONTA	SKY EHGD	07		0512585	+455554	H	3	44037	L	0		92022119	191900	003000	01	G B=25
CONTA	SKY	07		0512595	+455658	H	3	43967	L	14458	FU	92021200	001300	003000	01	G B=30
CONTA	SKY	07		0512595	+455658	H	3	43974	L	14354	FU	92021223	235300	003000	01	G B=30
CONTA	SKY	07		0512595	+455658	H	3	43983	L	14741	FU	92021400	000900	003000	01	G B=30
CONTA	SKY	07	0.000	0512595	+455658	H	3	43991	L	14748	FU	92021423	234000	003000	01	G B=30
CONTA	HD 34029	45	0.100	0512595	+455658	H	3	43992	L	14852	FU	92021500	005300	003000	X43	G E=178,G=1.5X,B=45
PHCAL	HD 34029	44	0.080	0512595	+455658	H	3	44005	L	14646	FU	92021620	205700	002030	452	G E=205,G=145,B=35
CONTA	HD 34029	45	0.100	0512595	+455658	H	3	44038	L	14534	FU	92022120	202200	003000	502	G G=251,B=40
NA030	SK-69 75	14	11.03	0513529	-693545	L	3	43569	L	00158	FO	92010813	131311	003000	500	V
NA030	SK-69 75	14	11.01	0513529	-693545	L	1	22221	L	00161	FO	92010813	134910	002000	701	V
NA041	S-22	23	11.90	0513570	-673012	L	3	43349	L	00292	SO	91120911	110917	003000	340	V

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	EES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
NA041	S-22	23	11.87	0513570	-673012	L	1	21979	L	00300	SO	91120911	114748	002000	560	V
NA041	S-22	23	11.87	0513570	-673012	L	3	43350	L	00300	SO	91120912	122851	003000	340	V
IENSS	S22/IMC	26	11.80	0513574	-673012	L	3	44160	L	396	SO	92031221	211200	005000	502	G G=214,B=38
NC156	RXJ0513-69	59	18.00	0514159	-695507	L	3	44467	L	00000	BO	92042402	020640	040000	452	V 2 SPECTRA
NI153	RXJ0513-69	59	18.00	0514160	-695507	L	1	22883	L	00000	BO	92042502	022222	038500	405	V 2 SPECTRA
NA040	HEN S93	33	12.70	0516438	-682524	L	1	23269	L	00000	BO	92060821	214944	004500	312	V
NA040	HEN S93	33	12.70	0516438	-682518	L	3	44896	L	00000	BO	92060822	224030	018000	311	V
NA004	PS 34-144	20	14.60	0517022	-660413	L	1	22822	L	00000	BO	92041501	015954	006000	501	V
NA004	PS 34-144	20	14.60	0517022	-660413	L	3	44405	L	00000	BO	92041503	030648	014000	600	V
PHCAL	WAVCAL	98	4.290	0517162	-131337	L	2	18634	S	0		92010119	191000	000001	?0	G E=10X,B=19
PHCAL	TFLOOD	99	4.290	0517162	-131337	L	2	18635	S	0		92010119	193900	000010	09	G B=136
PHCAL	WAVCAL	98	4.290	0517162	-131337	H	2	18636	S	0		92010120	200700	000022	31	G E=60X,B=25
PHCAL	HD 34816	20	4.290	0517162	-131337	H	3	43320	L	505	FU	91120507	072100	000022	402	G G=160,B=32
PHCAL	WAVCAL	98	4.290	0517162	-131337	L	3	43532	S	0		92010117	170800	000002	?0	G E=10X,B=16
PHCAL	TFLOOD	99	4.290	0517162	-131337	L	3	43533	S	0		92010118	180100	000005	09	G B=104
PHCAL	WAVCAL	98	4.290	0517162	-131337	H	3	43534	S	0		92010118	182600	000200	32	G E=60X,B=33
PHCAL	HD 34816	20	4.290	0517162	-131337	H	3	43535	L	490	FU	92010201	014300	000022	402	G G=167,B=31
PHCAL	HD 00034816	20	4.290	0517162	-131337	H	3	43984	L	565	FU	92021401	012400	000022	402	G G=170,B=32
PHCAL	HD 34816	20	4.290	0517162	-131337	H	3	44185	L	536	FU	92031711	114800	000022	502	G G=206,B=31
EXNDW	HD 34989	20	5.800	0519001	+082251	L	3	44197	L	13815	FO	92031922	223700	000002	500	G G=240,B=18
RGNTA	HD 35155	66	6.770	0519548	-084247	L	3	43674	L	5911	FO	92011803	032600	003500	X51	G E=201,C=1.5X,B=28
RGNTA	HD 35155	66	6.770	0519548	-084247	L	3	43675	L	5860	FO	92011805	055800	002500	540	G E=141,C=175,B=17
RGNTA	HD 35155	66	6.770	0519548	-084247	L	3	44150	L	6105	FO	92031019	194700	009000	550	G E=210,C=187,B=17
PHCAL	HD 35468	23	1.640	0522269	+061822	H	3	44092	L	5298	FU	92030202	023000	000005	502	G G=210,B=35
NA023	HD36063	11	12.99	0523072	-713841	H	3	44635	L	00110	SO	92051000	001040	039000	403	V
NA030	HDE269445	11	11.80	0523098	-680427	L	3	43568	L	00320	SO	92010811	112133	002500	500	V
NA030	HDE269445	11	11.81	0523098	-680427	L	1	22220	L	00316	SO	92010812	120543	001000	501	V
NM021	SK -6686	23	12.90	0524520	-660717	H	3	44382	L	00000	BO	92041202	021859	037300	331	V
NA040	HEN S35	23	12.70	0527160	-662430	L	1	23271	L	00000	BO	92060904	043023	002000	411	V TWO STARS IN SLIT
NA040	HEN S35	23	12.70	0527160	-662430	L	3	44903	L	00000	BO	92060922	223017	006000	500	V
NE076	NGC1983	83	10.61	0528030	-690130	L	3	44184	L	00230	FO	92031703	035751	001300	500	V
NE076	N 1983	83	10.65	0528030	-690130	H	1	22617	L	00223	FO	92031704	042715	038000	503	V
NE076	NGC 1983	83	10.66	0528030	-690130	L	1	22637	L	00220	FO	92031904	042934	000900	501	V
NE076	NGC 1983	83	10.65	0528030	-690130	H	3	44195	L	00223	FO	92031900	044834	036000	401	V
NA030	HDE269582	14	11.66	0528118	-690126	L	3	43583	L	00361	SO	92010912	125002	001800	500	V
NA030	HDE269582	14	11.66	0528118	-690126	L	1	22225	L	00360	SO	92010913	132048	001200	501	V
NI153	RXJ0527B	59	15.30	0528155	-695622	L	3	44877	L	00000	BO	92060701	011445	021300	200	V
NI153	RXJ0527A	59	15.20	0528166	-695630	L	3	44876	L	00000	BO	92060622	223341	012000	200	V
NI075	T AUR	55	15.00	0528465	+302436	L	3	44179	L	00000	BO	92031504	042644	020000	330	V
NI075	T AUR	55	15.00	0528465	+302436	L	1	22601	L	00000	BO	92031507	074947	018000	302	V
NE099	NGC2004/33	83	16.90	0530397	-671923	L	3	44661	L	00000	BO	92051323	234446	042200	502	V
NE099	NGC 2004/1	83	16.70	0530409	-672012	L	3	44658	L	00000	BO	92051300	000336	040400	403	V
NE099	NGC2004/11	83	16.70	0530409	-672012	D	9	02543	2	00000	BO	92051223	233000	016000		V FES FOR SWP 44658 -O
NE099	NGC2004/51	83	14.30	0530436	-671917	L	3	44669	L	00000	BO	92051504	042034	010000	501	V 2 STARS IN APERTURE
NE099	NGC2004/51	83	14.30	0530436	-671917	L	1	23098	L	00000	BO	92051506	060614	004100	402	V 2 STARS IN APERTURE
NE099	NGC2004/8	83	13.50	0530456	-672105	L	3	44667	L	00000	BO	92051423	235335	005500	300	V
NE099	NGC2004/45	83	14.30	0530495	-671930	L	3	44668	L	00000	BO	92051501	013720	012000	600	V 2 STARS IN APERTURE
SGOGS	HD 269651	32	10.70	0530529	-691120	L	3	44909	L	211	FO	92061013	135600	007800	301	G G=120,B=23
NA030	HDE269687	11	12.08	0531456	-690742	L	3	43567	S	00249	SO	92010809	094901	001200	300	V
NA030	HDE269687	11	12.08	0531456	-690742	L	3	43567	L	00249	SO	92010809	092813	001200	500	V

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	EES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
NA030	HDE269687	11	12.11	0531456	-690742	L	1	22219	S	00241	SO	92010810	103353	001000	401	V
NA030	HDE269687	11	12.11	0531456	-690742	L	1	22219	L	00241	SO	92010810	101759	001000	501	V
NM079	SK-67169	23	12.18	0531540	-670400	H	3	43299	L	247	SO	91120218	183000	038000	306	G G=158,B=78
CD88Y	LH76 L21	13	12.59	0532310	-674214	L	3	43354	L	204	SO	91121005	052000	001000	500	G G=210,B=15
CD88Y	LH76 L51	23	11.80	0532310	-674214	L	3	43355	L	294	SO	91121006	062400	000600	400	G G=115,B=15
CD88Y	LH76 L59	23	12.13	0532310	-674214	L	3	43356	L	252	SO	91121007	073200	001000	400	G G=155,B=15
CD88Y	LH76 L51	23	11.80	0532310	-674214	L	3	43357	L	295	SO	91121008	083400	001000	500	G G=185,B=18
CD88Y	LH76(L1)	23	12.31	0532320	-674215	L	3	43351	L	237	SO	91121001	013400	001500	X00	G G=2X,B=15
CD88Y	LH76(L1)	13	12.30	0532320	-674215	L	3	43352	L	236	SO	91121002	025800	001000	500	G G=235,B=15
CD88Y	LH76 L70	23	12.83	0532320	-674215	L	3	43353	L	175	SO	91121004	041000	001500	500	G G=200,B=15
HHNKB	HH 2 G	69	15.80	0533600	-064857	L	3	43891	L	0	BO	92012905	052300	063600	307	G G=130,B=90
NA050	V380 ORI	30	10.70	0534000	-064500	L	3	43925	L	00213	FO	92020406	061508	007500	400	V
NA050	V380 ORI	30	10.60	0534000	-064500	L	1	22329	L	00232	FO	92020407	073918	002000	501	V
NM037	HH 2G	72	15.80	0534001	-064858	E	9	02529	2	00000	BO	92012905	050000	016000		V FES FOR SWP#43891
NA155	NGC 1985	70	13.60	0534326	+315724	L	1	22682	L	00000	BO	92032503	035413	006000	201	V WEAK SPECTRUM
NA155	NGC 1985	70	13.60	0534326	+315724	L	3	44228	L	00000	BO	92032504	045910	003500	100	V
NA050	BF ORI	31	10.46	0534470	-063646	L	1	22328	L	00263	FO	92020405	051740	004000	501	V
CD88Y	DEM 243	23	12.00	0535270	-660426	L	3	43363	L	231	SO	91121205	055000	003000	X02	G G=1.5X,B=40
CD88Y	DEM 243	23	12.00	0535270	-660426	L	3	43364	L	200	SO	91121207	071700	002000	500	G G=225,B=20
LENSS	S124/IMC	26	10.70	0535409	-694226	L	3	44663	L	227	FO	92051417	172800	001000	X07	G G=1.5X,B=85
LENSS	S124/IMC	26	10.70	0535409	-694226	L	3	44664	L	223	FO	92051419	195800	001000	X05	G G=1.5X,B=65
LENSS	S124/IMC	26	10.70	0535409	-694226	L	3	44665	L	0		92051420	203500	000400	400	G G=134,B=16
SNNGS	SN 1987A	56	17.00	0535500	-691758	L	3	43393	L	0	BO	91121518	180700	034000	505	G G=253,B=61
SNNGS	SN 1987A	56	1.700	0535500	-691758	L	3	44017	L	0	BO	92021814	144600	034000	504	G G=216,B=52
SNNGS	SN 1987A	56	17.00	0535500	-691758	L	3	44142	L	0	BO	92030912	125100	036000	404	G G=208,B=60
SNNGS	SN 1987A	56	17.00	0535500	-691758	L	3	44442	L	0	BO	92042010	100700	027000	403	G G=190,B=50
SNNGS	STAR 3	23	15.80	0535503	-691758	L	3	44910	S	0	BO	92061020	200600	098000	309	G G=197,B=122
NA030	BE 381	14	13.30	0536142	-690050	L	3	43582	L	00000	BO	92010911	111245	004500	330	V
NA030	GE 381	14	13.30	0536142	-690050	L	1	22224	L	00000	BO	92010912	120635	002500	301	V
LENSS	S127/IMC	65		0536475	-692438	L	3	44638	L	785	SO	92051016	162500	001200	00	G B=13
LENSS	S127/IMC	26	10.90	0536475	-692438	L	3	44640	L	201	FO	92051020	200900	001000	400	G G=123,B=19
LENSS	S127/IMC	26	10.90	0536475	-692438	L	3	44640	S	196	FO	92051020	202700	002000	400	G G=121,B=19
NA187	R 127	52	09.36	0537036	-693151	H	1	22351	L	00703	FO	92020705	052343	035400	603	V
NA040	R 127	52	09.27	0537060	-693150	H	1	23278	L	00762	FO	92060923	235208	022500	402	V
LENSS	S128/IMC	26	10.40	0537066	-693128	L	3	44161	L	670	FO	92031223	230000	001000	400	G G=121,B=18
LENSS	S128/IMC	26	10.40	0537066	-693128	L	3	44162	L	663	FO	92031300	001200	002000	500	G G=200,B=15
NA030	HDE269858	14	09.31	0537080	-693128	L	3	43581	L	00732	FO	92010908	081931	001000	330	V
NA030	HDE269858	14	09.35	0537080	-693128	L	1	22223	S	00712	FO	92010909	100009	000400	201	V
NA030	HDE269858	14	09.35	0537080	-693128	L	1	22223	L	00712	FO	92010909	095133	000400	401	V
LENSS	S128/IMC	26	10.00	0537100	-693127	L	3	44641	L	796	FO	92051021	215000	000800	331	G B=114,G=104,B=23
LENSS	S128/IMC	26	10.00	0537100	-693127	L	3	44641	S	807	FO	92051022	220900	002000	301	G G=64,B=22
CYNOR	BY CAM	59	15.00	0538159	+605003	L	3	43572	L	0	BO	92010900	000600	002000	30	G B=45,B=18
CYNOR	BY CAM	59	15.00	0538159	+605003	L	3	43573	L	0	BO	92010900	004900	002000	30	G B=45,B=18
CYNOR	BY CAM	59	15.00	0538159	+605003	L	3	43574	L	0	BO	92010901	013500	002000	20	G B=32,B=18
CYNOR	BY CAM	59	15.00	0538159	+605003	L	3	43575	L	0	BO	92010902	022000	002000		G B=40,b=19
CYNOR	BY CAM	59	15.00	0538159	+605003	L	3	43576	L	0	BO	92010903	030300	002000	20	G B=34,B=20
CYNOR	BY CAM	59	15.00	0538159	+605003	L	3	43577	L	0	BO	92010903	034600	002000	30	G B=45,B=20
CYNOR	BY CAM	59	15.00	0538159	+605003	L	3	43578	L	0	BO	92010904	043100	002000	20	G B=35,B=20
CYNOR	BY CAM	59	15.00	0538159	+605003	L	3	43579	L	0	BO	92010905	051500	002200	20	G B=36,B=20
CYNOR	BY CAM	59	15.00	0538159	+605003	L	3	43580	L	0	BO	92010906	060100	002200	20	G B=33,B=20

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
CVNDR	BY CAM	59	1.500	0538159	+605003	L	3	43594	L		0	BO	92011100	000200	002000	220 G E=34,C=26,B=15
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43595	L		0	BO	92011100	004800	002000	220 G E=31,C=28,B=15
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43596	L		0	BO	92011101	013300	002000	220 G E=35,C=28,B=15
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43597	L		0	BO	92011102	021800	002000	230 G E=49,C=28,B=15
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43598	L		0	BO	92011103	030300	002000	230 G E=40,C=34,B=15
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43599	L		0	BO	92011103	034900	002000	220 G E=28,C=30,B=15
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43600	L		0	BO	92011104	043400	002000	230 G E=35,C=30,B=12
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43601	L		0	BO	92011105	051800	002000	220 G E=35,C=30,B=15
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43602	L		0	BO	92011106	060200	002000	230 G E=37,C=30,B=12
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43624	L		0	BO	92011223	234200	002000	230 G E=40,C=27,B=18
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43625	L		0	BO	92011300	002600	002200	330 G E=35,C=25,B=
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43626	L		0	BO	92011301	011200	002000	220 G E=36,C=25,B=18
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43627	L		0	BO	92011301	015600	002100	230 G E=52,C=28,B=18
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43628	L		0	BO	92011302	024000	002100	230 G E=40,C=28,B=18
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43629	L		0	BO	92011303	032500	002100	220 G E=37,C=36,B=18
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43630	L		0	BO	92011304	041000	002100	220 G E=38,C=26,B=18
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43631	L		0	BO	92011304	045500	002100	230 G E=50,C=26,B=18
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43632	L		0	BO	92011305	054000	002100	230 G E=44,C=28,B=18
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43633	L		0	BO	92011306	062500	002300	230 G E=46,C=27,B=18
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43639	L		0	BO	92011423	234200	002100	220 G E=31,C=23,B=12
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43640	L		0	BO	92011500	002700	002100	220 G E=37,C=32,B=20
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43641	L		0	BO	92011501	011500	001900	220 G E=35,C=32,B=20
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43642	L		0	BO	92011501	015700	002000	220 G E=31,C=35,B=20
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43643	L		0	BO	92011502	024100	002100	221 G E=40,C=37,B=22
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43644	L		0	BO	92011503	032600	002100	220 G E=25,C=34,B=17
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43645	L		0	BO	92011504	041100	002100	220 G E=29,C=34,B=17
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43646	L		0	BO	92011504	045500	002100	220 G E=36,C=34,B=17
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43647	L		0	BO	92011505	053900	002200	220 G E=35,C=34,B=17
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43648	L		0	BO	92011506	062600	002300	220 G E=29,C=34,B=20
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43655	L	798	FU	92011623	232000	002000		230 G E=43,C=32,B=20
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43656	L		0	BO	92011700	000600	002000	230 G E=52,C=35,B=17
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43657	L		0	BO	92011700	004900	002100	221 G E=34,C=42,B=23
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43658	L		0	BO	92011701	013500	002100	221 G E=40,C=50,B=30
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43659	L		0	BO	92011702	021900	002100	221 G E=41,C=50,B=30
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43660	L		0	BO	92011703	030300	002100	321 G E=42,C=50,B=26
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43661	L		0	BO	92011703	034800	002100	220 G E=34,C=36,B=20
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43662	L		0	BO	92011704	043200	002200	220 G E=29,C=32,B=17
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43663	L		0	BO	92011705	051700	002200	220 G E=34,C=33,B=17
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43664	L		0	BO	92011706	060300	002200	230 G E=41,C=36,B=17
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43680	L		0	BO	92011900	005700	002100	322 G E=49,C=56,B=32
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43681	L		0	BO	92011901	014300	002100	333 G E=88,C=81,B=50
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43682	L		0	BO	92011902	022700	002100	323 G E=60,C=70,B=45
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43683	L		0	BO	92011903	031200	002100	321 G E=34,C=50,B=28
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43684	L		0	BO	92011903	035800	002100	220 G E=35,C=35,B=18
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43685	L		0	BO	92011904	044300	002100	330 G E=39,C=39,B=18
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43686	L		0	BO	92011905	052700	002100	230 G E=51,C=35,B=18
CVNDR	BY CAM	59	15.00	0538159	+605003	L	3	43687	L		0	BO	92011906	061200	002100	220 G E=28,C=33,B=18
XENAC	IMCX-3	59	16.60	0538399	-640637	L	3	43571	L		0	BO	92010816	160700	040000	305 G C=110,B=65
ADCAC	IMC X-3	59	16.60	0538399	-640637	H	3	44831	L		0	BO	92060205	054600	042000	305 G C=142,B=68
ADCAC	IMC X-3	59	16.60	0538399	-640637	L	3	44854	L		0	BO	92060405	055300	041500	305 G C=131,B=67

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
ADOAC	IMC X-3	59	16.60	0538399	-640637	L	3	44995	L	0	BO	92062405	055500	041500	336	G E=108,G=130,B=73
NENEC	30 DORAD	72	9.500	0539035	-690735	L	3	44450	L	0	BO	92042117	171200	004500	500	G G=183,B=15
CD20Z	R143	52	12.00	0539126	-690938	L	3	44923	L	136	FO	92061410	104400	012500	300	G G=81,B=20
CD20Z	R143	52	12.00	0539126	-690938	L	3	44951	L	121	FO	92061809	094800	018000	302	G G=120,B=35
CD88Y	LH101 L9	23	13.70	0539290	-693114	L	3	43359	L	121	SO	91121106	065700	006000	300	G G=110,B=20
CD88Y	LH101L20	23	10.30	0539300	-693115	L	3	43358	L	115	FO	91121105	052800	002000	500	G G=203,B=15
NA027	HD38090	32	06.11	0540076	-222348	H	3	43918	L	12047	FO	92020307	070335	007000	500	V
NM095	HD38090	32	06.08	0540076	-222348	H	1	22323	L	12292	FO	92020308	082145	001500	401	V
SUOEG	AR DOR	66	14.50	0540250	-691836	L	3	44818	L	0	BO	92053120	204300	008000	300	G G=43,B=18
LENSS	S134/IMC	26	12.10	0540352	-692412	L	3	44163	L	363	SO	92031301	015600	002000	350	G E=241,G=95,B=14
NA050	HD38238	30	09.24	0541457	+000714	L	1	22330	L	C0783	FO	92020409	090012	002000	701	V
NA050	HD38238	30	09.17	0541457	+000714	L	3	43932	L	00829	FO	92020507	073325	007000	500	V
NA050	HD38238	30	09.22	0541457	+000714	L	1	22338	L	C0794	FO	92020508	085252	001500	701	V
NA040	HEN S137	23	13.00	0542095	-693857	L	1	23270	L	C0000	BO	92060802	020408	003000	311	V
NA040	HEN S137	23	13.00	0542095	-693857	L	3	44897	L	C0000	BO	92060902	023826	009000	310	V
PHCAL	HD 38666	12	5.170	0544084	-321927	H	3	43319	L	21639	FO	91120505	055800	000051	502	G G=190,B=38
PHCAL	HD 038666	12	5.170	0544084	-321927	L	3	43475	L	21872	FO	91122601	013900	000000	400	G G=152,B=18
PHCAL	HD 038666	12	5.170	0544084	-321927	L	3	43476	L	23044	FO	91122602	025500	000500	X00	G G=2X,B=18
PHCAL	HD 38666	12	5.170	0544084	-321927	L	3	43477	L	22926	FO	91122604	041600	004500	402	G G=165,B=40
PHCAL	HD 038666	12	5.170	0544084	-321927	L	3	43478	L	23175	FO	91122606	063200	000500	300	G G=101,B=18
PHCAL	HD 038666	12	5.170	0544084	-321927	L	3	43479	L	23756	FO	91122607	075200	000500	500	G G=239,B=18
PHCAL	HD 38666	12	5.170	0544084	-321927	H	3	43651	L	21471	FO	92011607	075600	000051	502	G G=198,B=38
PHCAL	HD 38666	16	5.200	0544084	-321927	H	3	43968	L	22110	FO	92021201	012600	000051	502	G G=200,B=35
PHCAL	HD 38666	12	5.170	0544084	-321927	H	3	44222	L	22756	FO	92032414	141500	000051	502	G G=190,B=35
PHCAL	HD 38666	12	5.170	0544084	-321927	H	3	44283	L	23045	FO	92040119	195400	000051	502	G G=226,B=31
NA030	SK-69 297	14	12.50	0544543	-692122	L	3	43843	L	00000	BO	92012605	052750	008000	500	V
NA030	SK-69 297	14	12.50	0544543	-692122	L	1	22286	L	00000	BO	92012606	065240	003000	501	V
NA040	HEN S59	32	14.40	0545425	-681249	L	3	44885	L	00000	BO	92060722	220202	030000	501	V
NA040	HEN S59	32	14.40	0545425	-681249	L	1	23267	L	00000	BO	92060803	030903	010000	301	V
LENSS	S61/IMC	26	11.30	0545561	-671526	L	3	44639	L	110	FO	92051017	175500	001500	501	G G=198,B=23
LENSS	S61/IMC	26	11.30	0545561	-671526	L	3	44639	S	109	FO	92051018	181900	004000	500	G G=193,B=20
NA030	SK-67 266	11	12.28	0545573	-671528	L	3	43566	L	00208	SO	92010808	081133	002000	600	V
NA030	SK-67 266	11	12.26	0545573	-671528	L	1	22218	L	00212	SO	92010808	084719	002000	701	V
BENCG	HD 39060	60	3.840	0546058	-510501	H	3	44402	L	647	FU	92041421	211100	001000	502	G G=215,B=36
BENCG	HD 39060	60	3.840	0546058	-510501	H	3	44403	L	641	FU	92041422	222100	002000	X02	G G=2X,B=32
NM096	HD 39060	31	04.14	0546059	-510502	H	3	43414	L	00637	FU	91121809	095034	001000	500	V
NM096	BETA PIC	31	3.800	0546059	-510502	H	3	43415	L	646	FU	91121810	104400	060000	?09	G G=50X,B=120
NM096	HD 39060	31	04.15	0546059	-510502	H	1	22024	L	00630	FU	91121810	100639	000400	502	V
NM096	BETA PIC	31	3.800	0546059	-510502	H	3	43416	L	650	FU	91121822	224500	001000	502	G G=190,B=32
NM096	HD 39060	31	04.13	0546059	-510502	H	1	22025	L	00640	FU	91121812	125958	000400	501	V
NM096	BETA PIC	31	3.800	0546059	-510502	H	3	43417	L	650	FU	91121823	235800	001000	502	G G=190,B=32
NM096	HD 39060	31	04.15	0546059	-510502	H	1	22026	L	00632	FU	91121815	151435	000400	501	V
NM096	BETA PIC	31	3.800	0546059	-510502	H	3	43418	L	650	FU	91121900	005700	001000	502	G G=200,B=35
NM096	HD 39060	31	04.14	0546059	-510502	E	9	02520	2	00637	FU	91121809	093000	016000		V FES FOR SWP#43414, S
BENCG	HD 39060	60	3.850	0546059	-510501	H	3	44395	L	645	FU	92041320	204100	001000	502	G G=210,B=40
BENCG	HD 39060	60	3.850	0546059	-510501	H	3	44396	L	646	FU	92041321	215800	002000	X02	G G=2X,B=40
BENCG	HD 39060	60	3.850	0546059	-510501	H	3	44397	L	644	FU	92041322	224500	011000	?04	G G=11,B=58
BENCG	HD 39060	60	3.850	0546059	-510501	H	3	44465	L	652	FU	92042322	222100	001100	502	G G=210,B=32
BENCG	HD 39060	60	3.850	0546059	-510501	H	3	44466	L	650	FU	92042323	234900	002200	X03	G G=2X,B=48
NC091	HD39118	44	06.33	0547539	+020042	H	1	22582	L	10085	FO	92031305	050129	008000	701	V

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
NC091	HD39118	44	06.43	0547539	+020042	L	3	44165	L	09784	FO	92031306	062831	000200	500	V
LSNAD	ALPHA CR	49	0.500	0552280	+072358	L	3	43700	L	13582	FU	92012118	184300	005000	4X0	G E=4X,C=135,B=18
LSNAD	ALPHA CR	49	0.500	0552280	+072358	L	3	43701	L	13761	FU	92012121	212200	001230	340	G E=137,C=44,B=18
LSNAD	ALPH CRI	49	0.500	0552280	+072358	L	3	43998	L	14013	FU	92021521	211200	005000	4X0	G E=4X,C=130,B=20
LSNAD	ALPHA CR	49	0.500	0552280	+072358	L	3	44107	L	13663	FU	92030318	185900	005000	5X0	G E=4X,C=176,B=17
LSNAD	ALPHA CR	49	0.500	0552280	+072358	L	3	44108	L	13623	FU	92030321	215900	001230	340	G E=132,C=68,B=15
LSNAD	HD 39801	49	0.500	0552280	+072358	H	3	44223	L	13100	FU	92032415	150000	021000	354	G E=223,C=90,B=56
LSNAD	HD 39801	49	0.500	0552280	+072358	L	3	44224	L	13490	FU	92032419	195000	001230	241	G E=132,C=43,B=26
LSNAD	HD 39801	49	0.500	0552280	+072358	L	3	44225	L	13347	FU	92032421	210500	005000	4X2	G E=2X,C=145,B=36
CSNMS	HD 42690	20	5.000	0609257	-063215	L	3	44285	L	24014	FO	92040200	003500	000001	400	G C=151,B=13
CSNMS	HD 42690	20	5.000	0609257	-063215	L	3	44285	S	24128	FO	92040200	004000	000002	500	G C=183,B=13
DANUH	G104-27	37	13.40	0612236	+174443	H	3	44002	L	0	BO	92021605	055900	072000	309	G C=220,B=125
NA130	G104-27	37	13.40	0612237	+174444	L	3	44001	L	00000	BO	92021605	052514	000800	300	V
CSNMS	HD 44179	25	3.800	0617370	-103652	L	3	43989	L	771	FO	92021416	163800	016000	X01	G C=3X,B=30
CSNMS	HD 44179	25	3.800	0617370	-103652	L	3	43997	L	787	FO	92021516	161600	018500	X03	G C=3X,B=42
CSNMS	HD 44179	25	3.800	0617370	-103652	L	3	44022	L	770	FO	92021918	182200	024000	X01	G C=5X,B=30
CSNMS	HD 44179	25	3.800	0617370	-103652	L	3	44023	L	785	FO	92021923	231300	006000	400	G C=150,B=20
PHCAL	HD 45057	24	5.860	0621145	-531831	L	3	43348	L	5567	FO	91120908	084000	000012	500	G C=190,B=15
PHCAL	HD 45557	30	5.790	0623366	-601510	L	3	43347	L	12880	FO	91120907	073000	000020	400	G C=163,B=18
CSNMS	HD 45677	60	3.800	0625590	-130112	L	3	44033	S	1957	FO	92022104	041200	000300	500	G C=223,B=18
CSNMS	HD 45677	60	3.800	0625591	-130112	L	3	44033	L	1960	FO	92022104	040600	000200	X00	G C=1.5X,B=18
CSNMS	HD 45677	60	3.300	0625591	-130112	L	3	44069	L	2076	FO	92022700	003200	000100	500	G C=172,B=17
CSNMS	HD 45677	60	3.300	0625591	-130112	L	3	44069	S	2076	FO	92022700	004200	000200	400	G C=140,B=17
CSNMS	HD 259431	26	3.700	0630194	+102138	L	3	44014	L	967	FO	92021723	235700	000500	500	G C=178,B=18
CSNMS	HD 259431	26	3.700	0630194	+102138	L	3	44014	S	977	FO	92021700	001800	000700	400	G C=118,B=18
CSNMS	WAIK 90	26	12.80	0637595	+095053	L	3	44015	L	193	SO	92021801	014500	018000	403	G C=148,B=41
CSNMS	WAIK 90	26	12.80	0637595	+095053	L	3	44024	L	212	SO	92022002	024000	013000	302	G C=120,B=35
CD15Z	W 90	22	12.70	0637595	+095054	L	3	44261	L	322	SO	92032823	235600	017300	402	G C=145,B=33
NA024	HD 50896	11	06.85	0652081	-235152	H	3	43709	L	06486	FO	92012204	044845	000400	370	V
WANEC	HD 50896	11	5.940	0652081	-235152	H	3	43702	L	6739	FO	92012123	231300	000400	5?1	G E=3,C=181,B=30
NA024	HD 50896	11	06.86	0652081	-235152	H	3	43710	L	06427	FO	92012205	052814	000400	370	V
WANEC	HD 50896	11	5.940	0652081	-235152	H	3	43703	L	6827	FO	92012123	234800	000400	4X1	G E=3X,C=180,B=30
NA024	HD 50896	11	06.86	0652081	-235152	H	3	43711	L	06458	FO	92012206	060653	000400	370	V
WANEC	HD 50896	11	5.940	0652081	-235152	H	3	43704	L	6704	FO	92012200	002300	000400	5X1	G E=3X,C=185,B=30
NA024	HD 50896	11	06.84	0652081	-235152	H	3	43712	L	06556	FO	92012206	064738	000400	370	V
WANEC	HD 50896	11	5.940	0652081	-235152	H	3	43705	L	6804	FO	92012200	005700	000400	5X1	G E=3X,C=190,B=30
NA024	HD 50896	11	06.82	0652081	-235152	H	3	43713	L	06657	FO	92012207	073604	000400	370	V
WANEC	HD 50896	11	5.940	0652081	-235152	H	3	43706	L	6670	FO	92012201	013100	000400	5X1	G E=3X,C=182,B=30
NA024	HD50896	11	06.83	0652081	-235152	H	3	43714	L	06606	FO	92012208	082313	000400	370	V
WANEC	HD 50896	11	5.940	0652081	-235152	H	3	43707	L	6643	FO	92012202	020600	000400	5X1	G E=3X,C=181,B=30
NA024	HD 50896	11	06.82	0652081	-235152	H	3	43715	L	06671	FO	92012208	085608	000400	370	V
WANEC	HD 50896	11	5.940	0652081	-235152	H	3	43708	L	6667	FO	92012202	024200	000400	4X1	G E=3X,C=179,B=30
NA024	HD 50896	11	06.80	0652081	-235152	H	3	43739	L	06795	FO	92012304	044517	000400	550	V
WANEC	HD 50896	11	5.940	0652081	-235152	H	3	43718	L	6444	FO	92012214	141700	000400	4X1	G E=4X,C=150,B=30
NA024	HD 50896	11	06.80	0652081	-235152	H	3	43740	L	06801	FO	92012305	053718	000400	550	V
WANEC	HD 50896	11	5.940	0652081	-235152	H	3	43719	L	6509	FO	92012214	145400	000400	3X1	G E=4X,C=120,B=30
NA024	HD50896	11	06.79	0652081	-235152	H	3	43741	L	06839	FO	92012306	061205	000400	550	V
WANEC	HD 50896	11	5.940	0652081	-235152	H	3	43720	L	6624	FO	92012215	152900	000400	3X1	G E=4X,C=125,B=30
NA024	HD 50896	11	06.79	0652081	-235152	H	3	43742	L	06829	FO	92012306	065158	000400	550	V
WANEC	HD 50896	11	5.940	0652081	-235152	H	3	43721	L	6707	FO	92012216	160300	000400	3X1	G E=4X,C=120,B=30

PRO	Object	CL	MAG	R.A.	DEC	D C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
NA024	HD 50896	11	06.79	0652081	-235152	H	3 43743	L	06844	FO	92012307	073334	000400	550	V
WNPEC	HD 50896	11	5.940	0652081	-235152	H	3 43722	L	6735	FO	92012216	163700	000400	3X1	G E=4X,G=125,B=30
NA024	HD 50896	11	06.80	0652081	-235152	H	3 43744	L	06799	FO	92012308	080931	000400	550	V
WNPEC	HD 50896	11	5.940	0652081	-235152	H	3 43723	L	6692	FO	92012217	171100	000400	3X1	G E=4X,G=120,B=30
NA024	HD50896	11	06.80	0652081	-235152	H	3 43773	L	06773	FO	92012404	044240	000400	550	V
WNPEC	HD 50896	11	5.940	0652081	-235152	H	3 43724	L	6652	FO	92012217	175300	000400	3X1	G E=4X,G=120,B=30
NA024	HD 50896	11	06.81	0652081	-235152	H	3 43774	L	06741	FO	92012405	052901	000400	550	V
WNPEC	HD 50896	11	5.940	0652081	-235152	H	3 43725	L	6743	FO	92012219	190800	000400	5X1	G E=3.5X,G=180,B=25
NA024	HD50896	11	06.82	0652081	-235152	H	3 43775	L	06692	FO	92012406	060402	000400	550	V
WNPEC	HD 50896	11	5.940	0652081	-235152	L	3 43726	L	6591	FO	92012219	194200	000400	5X1	G E=3.5X,G=200,B=25
NA024	HD50896	11	06.82	0652081	-235152	H	3 43776	L	06688	FO	92012406	063723	000400	550	V
WNPEC	HD 50896	11	5.940	0652081	-235152	H	3 43727	L	6499	FO	92012220	201500	000400	5X1	G E=3.5X,G=185,B=25
NA024	HD50896	11	06.82	0652081	-235152	H	3 43777	L	06698	FO	92012407	071450	000400	550	V
WNPEC	HD 50896	11	5.940	0652081	-235152	H	3 43728	L	6482	FO	92012220	204700	000400	5X1	G E=3.5X,G=178,B=27
NA024	HD50896	11	06.82	0652081	-235152	H	3 43778	L	06660	FO	92012407	074820	000400	550	V
WNPEC	HD 50896	11	5.940	0652081	-235152	H	3 43729	L	6414	FO	92012221	212300	000400	4X1	G E=3.5X,G=178,B=29
NA024	HD50896	11	06.83	0652081	-235152	H	3 43779	L	06620	FO	92012408	082131	000400	550	V
WNPEC	HD 50896	11	5.940	0652081	-235152	H	3 43730	L	6516	FO	92012221	215600	000400	5X1	G E=3.5X,G=183,B=25
NA024	HD 50896	11	06.83	0652081	-235152	H	3 43780	L	06607	FO	92012408	085457	000400	550	V
WNPEC	HD 50896	11	5.940	0652081	-235152	H	3 43731	L	6466	FO	92012222	222800	000400	5X1	G E=3.5X,G=185,B=30
NA024	HD 50896	11	06.81	0652081	-235152	H	3 43781	L	06712	FO	92012409	093351	000400	550	V
WNPEC	HD 50896	11	5.940	0652081	-235152	H	3 43732	L	6610	FO	92012223	230200	000400	5X1	G E=3.5X,G=183,B=27
NA024	HD 50896	11	06.81	0652081	-235152	H	3 43782	L	06718	FO	92012410	100835	000400	550	V
WNPEC	HD 50896	11	5.940	0652081	-235152	H	3 43733	L	6661	FO	92012223	234000	000400	5X1	G E=3.5X,G=182,B=25
NA024	HD 50896	11	06.80	0652081	-235152	H	3 43745	L	06809	FO	92012308	085010	000400	550	V
WNPEC	HD 50896	11	5.940	0652081	-235152	H	3 43734	L	6735	FO	92012300	001500	000400	5X1	G E=3.5X,G=190,B=25
NA024	HD 50896	11	06.79	0652081	-235152	H	3 43746	L	06871	FO	92012309	092233	000400	550	V
WNPEC	HD 50896	11	5.940	0652081	-235152	H	3 43735	L	6802	FO	92012300	005100	000400	5X1	G E=3.5X,G=185,B=25
NA024	HD 50896	11	06.79	0652081	-235152	H	3 43747	L	06861	FO	92012309	095414	000400	550	V
WNPEC	HD 50896	11	5.940	0652081	-235152	H	3 43736	L	6879	FO	92012201	012700	000400	4X2	G E=3.5X,G=181,B=33
NA024	HD50896	11	06.80	0652081	-235152	H	3 43809	L	06784	FO	92012504	045904	000400	570	V
WNPEC	HD 50896	11	5.940	0652081	-235152	L	3 43737	L	6904	FO	92012302	020700	000400	4X1	G E=3.5X,G=180,B=30
NA024	HD50896	11	06.80	0652081	-235152	H	3 43810	L	06763	FO	92012505	053323	000400	570	V
WNPEC	HD 50896	11	5.940	0652081	-235152	H	3 43738	L	6882	FO	92012302	024200	000400	5X1	G E=3.5X,G=190,B=30
NA024	HD50896	11	06.81	0652081	-235152	H	3 43811	L	06724	FO	92012506	060604	000400	570	V
WNPEC	HD 50896	11	5.940	0652081	-235152	H	3 43750	L	7193	FO	92012313	135000	000400	4X1	G E=3.5X,G=130,B=30
NA024	HD50896	11	06.82	0652081	-235152	H	3 43812	L	06695	FO	92012506	063827	000400	570	V
WNPEC	HD 50896	11	5.940	0652081	-235152	H	3 43751	L	6996	FO	92012314	142300	000400	3X2	G E=3.5X,G=131,B=32
NA024	HD50896	11	06.80	0652081	-235152	H	3 43813	L	06766	FO	92012507	071721	000400	570	V
WNPEC	HD 50896	11	5.940	0652081	-235152	H	3 43752	L	7057	FO	92012314	145600	000400	4X1	G E=3.5X,G=141,B=30
NA024	HD50896	11	06.80	0652081	-235152	H	3 43814	L	06788	FO	92012507	075311	000400	570	V
WNPEC	HD 50896	11	5.940	0652081	-235152	H	3 43753	L	7167	FO	92012315	153100	000400	4X2	G E=3.5X,G=132,B=32
NA024	HD96548	11	06.81	0652081	-235152	H	3 43815	L	06726	FO	92012508	082821	000400	570	V
WNPEC	HD 50896	11	5.940	0652081	-235152	H	3 43754	L	7059	FO	92012316	160500	000400	4X2	G E=3.5X,G=132,B=32
NA024	HD50896	11	06.83	0652081	-235152	H	3 43816	L	06610	FO	92012509	090224	000400	570	V
WNPEC	HD 50896	11	5.940	0652081	-235152	L	3 43755	L	6983	FO	92012316	164000	000400	4X2	G E=3.5X,G=138,B=32
WNPEC	HD 50896	11	5.940	0652081	-235152	H	3 43756	L	6878	FO	92012317	171400	000400	4X2	G E=3.5X,G=135,B=32
WNPEC	HD 50896	11	5.940	0652081	-235152	H	3 43757	L	6801	FO	92012317	174700	000400	4X2	G E=3.5X,G=132,B=32
WNPEC	HD 50896	11	5.940	0652081	-235152	H	3 43758	L	6738	FO	92012318	182200	000400	4X2	G E=3.5X,G=132,B=32
WNPEC	HD 50896	11	5.940	0652081	-235152	H	3 43759	L	6700	FO	92012318	185500	000400	3X2	G E=3.5X,G=129,B=32

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43760	L	6780	FO	92012319	193000	000400	5X1	G E=3.5X,C=201,B=25
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43761	L	6713	FO	92012320	200500	000400	5X1	G E=3.5X,C=190,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43762	L	6704	FO	92012320	204000	000400	5X1	G E=3.5X,C=190,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	L	3	43763	L	6694	FO	92012321	211400	000400	5X1	G E=3.5X,C=182,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43764	L	6772	FO	92012321	214700	000400	4?2	G E=3.5,C=180,B=32
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43765	L	6897	FO	92012322	222200	000400	5X1	G E=3.5X,C=192,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	L	3	43766	L	6897	FO	92012322	225600	000400	4X1	G E=3.5X,C=180,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43767	L	6944	FO	92012323	233100	000400	5X0	G E=3.5X,C=179,B=20
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43768	L	7062	FO	92012400	000600	000400	4X2	G E=3.5X,C=179,B=32
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43769	L	7046	FO	92012400	003900	000400	4X2	G E=3.5X,C=181,B=31
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43770	L	7066	FO	92012401	011400	000400	5X2	G E=3.5X,C=190,B=33
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43771	L	6965	FO	92012301	014800	000400	5X2	G E=3.5X,C=190,B=33
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43772	L	7070	FO	92012402	023500	000400	5X1	G E=3.5X,C=195,B=25
WNPEC HD	50896	11	5.940	0652081	-235152	L	3	43785	L	6904	FO	92012413	133700	000400	5X1	G E=3.5X,C=200,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43786	L	6483	FO	92012414	140900	000400	5X1	G E=3.5X,C=200,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43787	L	6544	FO	92012414	144400	000400	5X1	G E=3.5X,C=185,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43788	L	6620	FO	92012415	151700	000400	5X1	G E=3.5X,C=213,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43789	L	6526	FO	92012415	155000	000400	5X1	G E=3.5X,C=196,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43790	L	6495	FO	92012416	162400	000400	5X1	G E=3.5X,C=205,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43791	L	6417	FO	92012416	165800	000400	5X1	G E=3.5X,C=196,B=30
WNPEC HD	50896	11	5.900	0652081	-235152	H	3	43792	L	6443	FO	92012417	173100	000400	5X1	G E=3.5X,C=216,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43793	L	6483	FO	92012418	180500	000400	5X1	G E=3.5X,C=193,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43794	L	6454	FO	92012418	183600	000400	5X1	G E=3.5X,C=195,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43795	L	6452	FO	92012419	191100	000400	5X1	G E=3.5X,C=200,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43796	L	6370	FO	92012419	194300	000400	5X1	G E=3.5X,C=190,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43797	L	6454	FO	92012420	201900	000400	5X1	G E=3.5X,C=209,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43798	L	6416	FO	92012420	205200	000400	5X1	G E=3.5X,C=207,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43799	L	6602	FO	92012421	212700	000400	5X1	G E=3.5X,C=200,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43800	L	2518	FO	92012421	215900	000400	5X1	G E=3.5X,C=200,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43801	L	6713	FO	92012422	223600	000400	5X1	G E=3.5X,C=190,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43802	L	6686	FO	92012423	230900	000400	5X1	G E=3.5X,C=185,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43803	L	6729	FO	92012423	234000	000400	5X1	G E=3.5X,C=200,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43804	L	6797	FO	92012500	001400	000400	5X1	G E=3.5X,C=185,B=30
WNPEC HD	50896	11	5.900	0652081	-235152	H	3	43805	L	6978	FO	92012500	004700	000400	5X1	G E=3.5X,C=193,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43806	L	6912	FO	92012501	012300	000400	5X1	G E=3.5X,C=185,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43807	L	7049	FO	92012401	015600	000400	5X1	G E=3.5X,C=185,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43808	L	6855	FO	92012502	023400	000400	5X1	G E=3.5X,C=195,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43820	L	6605	FO	92012513	135900	000400	3X1	G E=3.5X,C=129,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43821	L	6580	FO	92012514	143300	000400	3X1	G E=3.5X,C=126,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43822	L	6693	FO	92012515	150400	000400	4X1	G E=3.5X,C=131,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43823	L	6631	FO	92012515	153600	000400	3X1	G E=3.5X,C=128,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43824	L	6462	FO	92012516	160700	000400	3X1	G E=3.5X,C=128,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43825	L	6569	FO	92012516	164600	000400	3X2	G E=3.5X,C=126,B=32
WNPEC HD	50896	11	5.900	0652081	-235152	H	3	43826	L	6455	FO	92012517	172900	000400	3X1	G E=3.5X,C=124,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43827	L	6437	FO	92012518	180000	000400	3X1	G E=3.5X,C=124,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43828	L	6455	FO	92012518	183300	000400	3X1	G E=3.5X,C=129,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43829	L	6447	FO	92012519	190400	000400	4X1	G E=3.5X,C=177,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43830	L	6463	FO	92012519	193400	000400	5X1	G E=3.5X,C=186,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43831	L	6420	FO	92012520	200500	000400	5X1	G E=3.5X,C=181,B=30
WNPEC HD	50896	11	5.940	0652081	-235152	H	3	43832	L	6449	FO	92012520	203500	000400	5X1	G E=3.5X,C=190,B=30

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
WNPEC	HD 50896	11	6.940	0652081	-235152	H	3	43833	L	6527	FO	92012521	212000	000400	5X1	G E=3.5X,G=186,B=30
WNPEC	HD 50896	11	6.940	0652081	-235152	H	3	43834	L	6654	FO	92012521	215200	000400	5X1	G E=3.5X,G=201,B=30
WNPEC	HD 50896	11	6.940	0652081	-235152	H	3	43835	L	6602	FO	92012522	222500	000400	5X1	G E=3.5X,G=195,B=30
WNPEC	HD 50896	11	6.940	0652081	-235152	H	3	43836	L	6611	FO	92012522	225700	000400	5X1	G E=3.5X,G=190,B=30
WNPEC	HD 50896	11	6.940	0652081	-235152	H	3	43837	L	6725	FO	92012523	233000	000400	5X1	G E=3.5X,G=207,B=30
WNPEC	HD 50896	11	6.940	0652081	-235152	H	3	43838	L	6754	FO	92012600	000400	000400	5X1	G E=3.5X,G=197,B=30
WNPEC	HD 50896	11	6.940	0652081	-235152	H	3	43839	L	6790	FO	92012600	003600	000400	5X1	G E=3.5X,G=195,B=30
WNPEC	HD 50896	11	6.940	0652081	-235152	H	3	43840	L	6774	FO	92012601	011000	000400	5X1	G E=3.5X,G=203,B=30
WNPEC	HD 50896	11	6.940	0652081	-235152	H	3	43841	L	6665	FO	92012501	014200	000400	5X1	G E=3.5X,G=185,B=30
WNPEC	HD 50896	11	6.900	0652081	-235152	H	3	43842	L	6730	FO	92012602	021800	000400	5X2	G E=3.5X,G=195,B=32
WNPEC	HD 50896	11	6.940	0652081	-235152	H	3	43846	L	6898	FO	92012613	132900	000400		G e=3.5x,c=198,b=30
WNPEC	HD 50896	11	6.940	0652081	-235152	H	3	43847	L	6721	FO	92012614	140900	000400		G e=3.5x,c=202,b=30
WNPEC	HD 50896	11	6.940	0652081	-235152	H	3	43848	L	6573	FO	92012614	144200	000400		G e=3.5,c=201,b=30
WNPEC	HD 50896	11	6.940	0652081	-235152	H	3	43849	L	6560	FO	92012615	151700	000400		G e=3.5x,c=210,b=30
WNPEC	HD 50896	11	6.940	0652081	-235152	H	3	43850	L	6582	FO	92012615	155200	000400		G e=3.5x,c=196,b=30
WNPEC	HD 50896	11	6.940	0652081	-235152	H	3	43851	L	6659	FO	92012616	162600	000400		G e=3.5x,c=200,b=30
WNPEC	HD 50896	11	6.940	0652081	-235152	H	3	43852	L	6541	FO	92012617	170200	000400		G e=3.5x,c=204,b=30
WNPEC	HD 50896	11	6.940	0652081	-235152	H	3	43853	L	6642	FO	92012617	173600	000400	5X1	G E=3.5X,G=214,B=30
WNPEC	HD 50896	11	6.940	0652081	-235152	H	3	43854	L	6597	FO	92012618	180800	000400	5X1	G E=3.5X,G=198,B=30
WNPEC	HD 50896	11	6.940	0652081	-235152	H	3	43855	L	6654	FO	92012618	183900	000400	5X1	G E=3.5X,G=210,B=30
WNPEC	HD 50896	11	6.940	0652081	-235152	H	3	43856	L	6673	FO	92012619	191100	000400	5X1	G E=3.5X,G=184,B=30
WNPEC	HD 50896	11	6.940	0652081	-235152	H	3	43857	L	6703	FO	92012619	194200	000400	4X1	G E=3.5X,G=170,B=30
WNPEC	HD 50896	11	6.940	0652081	-235152	H	3	43858	L	6726	FO	92012620	201300	000400	X1	G E=3.5X,C174,B=30
WNPEC	HD 50896	11	6.940	0652081	-235152	H	3	43859	L	6780	FO	92012620	204500	000400	5X1	G E=3.5X,G=188,B=30
WNPEC	HD 50896	11	6.940	0652081	-235152	H	3	43860	L	6784	FO	92012621	211800	000400	4X1	G E=3.5X,G=180,B=30
WNPEC	HD 50896	11	6.940	0652081	-235152	H	3	43861	L	6973	FO	92012621	215000	000400	4X1	G E=3.5X,G=175,B=30
WNPEC	HD 50896	11	6.940	0652081	-235152	H	3	43862	L	6908	FO	92012622	222100	000400	5X1	G E=3.5X,G=190,B=30
WNPEC	HD 50896	11	6.940	0652081	-235152	H	3	43863	L	7000	FO	92012622	225400	000400	5X1	G E=3.5X,G=195,B=30
WNPEC	HD 50896	11	6.940	0652081	-235152	H	3	43864	L	7093	FO	92012623	232600	000400	5X1	G E=3.5X,G=195,B=25
WNPEC	HD 50896	11	6.940	0652081	-235152	H	3	43865	L	7093	FO	92012623	235900	000400	4X1	G E=3.5X,G=170,B=30
WNPEC	HD 50896	11	6.940	0652081	-235152	H	3	43866	L	7154	FO	92012700	003200	000400	5X1	G E=3.5X,G=185,B=30
WNPEC	HD 50896	11	6.940	0652081	-235152	H	3	43867	L	7068	FO	92012701	011000	000400	4X1	G E=3.5X,G=180,B=30
WNPEC	HD 50896	11	6.940	0652081	-235152	H	3	43868	L	7054	FO	92012701	014100	000400	4X1	G E=3.5X,G=180,B=30
WNPEC	HD 50896	11	6.940	0652081	-235152	H	3	43869	L	6972	FO	92012702	021300	000400	5X2	G E=3.5X,G=190,B=35
NC156	HD 51199	40	04.94	0653275	-200417	L	1	22011	L	26277	FO	91121709	094138	000010	501	V
NC156	HD 51199	40	04.94	0653275	-200417	L	3	43407	L	26277	FO	91121709	095538	003000	730	V PARTIAL READ
NC156	HD 51199	40	04.93	0653275	-200417	L	3	43408	L	26462	FO	91121700	110935	008000	750	V
NC091	HD51424	47	06.74	0654356	-080643	L	3	44164	L	07148	FO	92031304	040435	000200	500	V
NA064	HS0704+615	17	16.80	0704522	+615309	L	3	43969	L	00000	BO	92021206	061306	014000	400	V
CVNES	SKY BKGD	07		0710417	-360118	L	3	44677	L	0		92051612	120100	003000	02	G B=40
CVNES	H709-360	63	15.50	0710454	-360031	L	3	44676	L	0	BO	92051608	080900	012500	339	G E=186,G=175,B=150
NA108	HD 56126	41	08.66	0713253	+100509	L	1	22873	L	01318	FO	92042301	015515	002000	301	V
NA037	GD 84	43	15.20	0714235	+455320	L	3	44035	L	00000	BO	92022105	054241	042500	202	V
NE033	Q 0716+71	87	14.00	0716132	+712613	L	3	43537	L	00000	BO	92010211	111733	009000	300	V
NE033	Q0716+71	87	14.00	0716132	+712613	L	3	43538	L	00000	BO	92010213	131226	009800	300	V
NC091	HD 57146	45	05.77	0716490	-262936	L	3	44235	L	15590	FO	92032603	034803	000600	400	V
NC091	HD 57146	45	05.76	0716490	-262936	H	1	22689	L	15660	FO	92032604	042202	007000	451	V
EINAM	MAC 560	57	10.50	0723279	-073735	L	3	43412	L	235	FO	91121802	021600	004000	500	G G=192,B=18
EINAM	MAC 560	57	10.30	0723279	-073735	L	3	43486	L	294	FO	91122718	181400	004000	500	G G=183,B=18
EINAM	MAC 560	57	10.30	0723279	-073735	L	3	43487	L	491	FO	91122723	235400	004000	500	G G=183,B=18

PRO	Object	CL	MAG	R.A.	DEC	D C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
EINAM	MAC 560	57	10.30	0723279	-073735	L 3	43889	L	186	FO	92012900	004100	004000	400 G	G=130,B=20
EINAM	MAC 560	57	10.30	0723279	-073735	L 3	43924	L	249	FO	92020401	012700	004000	G	G=1.5X,B=19
EINAM	MAC 560	57	10.30	0723279	-073735	L 3	43930	L	221	FO	92020500	005500	002000	400 G	G=121,B=18
EINAM	MAC 560	57	10.30	0723279	-073735	L 3	43943	L	224	FO	92020700	001700	003000	400 G	G=163,B=18
EINAM	MAC 560	57	10.30	0723279	-073735	L 3	43944	L	193	FO	92020701	012800	003700	500 G	G=208,B=20
EINAM	MAC 560	57	10.30	0723279	-073735	L 3	43948	L	220	FO	92020800	003400	003500	500 G	G=213,B=17
EINAM	MAC 560	57	10.30	0723279	-073735	L 3	43952	L	213	FO	92021000	001400	004000	500 G	G=207,B=20
EINAM	MAC 560	57	10.30	0723279	-073735	L 3	43953	L	0		92021001	011700	003500	500 G	G=196,B=17
EINAM	MAC 560	57	10.30	0723279	-073735	L 3	44000	L	247	FO	92021600	005400	004000	501 G	G=205,B=28
EINAM	MAC 560	57	10.30	0723279	-073735	L 3	44041	L	201	FO	92022201	013200	004500	500 G	G=221,B=18
EINAM	MAC 560	57	10.00	0723279	-073735	L 3	44068	L	204	FO	92022621	213800	004000	401 G	G=167,B=25
EINAM	MAC 560	57	10.50	0723279	-073735	L 3	44101	L	251	FO	92030219	194400	004000	400 G	G=162,B=19
EINAM	MAC 560	57	10.30	0723279	-073735	L 3	44159	L	266	FO	92031219	192800	003000	400 G	G=136,B=15
EINAM	MAC 560	57		0723279	-073735	L 3	44191	L	348	FO	92031820	200600	004000	X00 G	G=1.5X,B=17
EINAM	MAC 560	57	10.30	0723279	-073735	L 3	44234	L	364	FO	92032601	014300	004500	X00 G	G=1.5X,B=20
EINAM	MAC 560	57	10.30	0723279	-073735	L 3	44265	L	343	FO	92033001	011300	003000	400 G	G=150,B=20
CD72Y	MAC 560	57	10.00	0723279	-073735	L 3	44618	L	368	FO	92050713	133700	004500	X00 G	G=1.5X,B=17
NA186	HD59612	33	05.13	0727439	-225509	H 1	21952	L	23613	FO	91120609	093453	002000	501 V	
NI018	A0729+10	59	14.50	0728445	+100247	L 1	21914	L	00000	BO	91120214	143041	003000	331 V	
NI018	A0729+10	59	14.50	0728445	+100247	L 3	43295	L	00000	BO	91120210	101133	004500	300 V	
NI018	A0729+10	59	14.50	0728445	+100247	L 1	21912	L	00000	BO	91120211	110322	004500	331 V	
NI018	A0729+10	59	14.50	0728445	+100247	L 3	43296	L	00000	BO	91120211	115735	004500	330 V	
NI018	A0729+10	59	14.50	0728445	+100247	L 1	21913	L	00000	BO	91120212	124945	003000	330 V	
NI018	A0729+10	59	14.50	0728445	+100247	L 3	43297	L	00000	BO	91120213	132653	006000	330 V	
NI018	A0729+10	59	14.50	0728445	+100247	L 3	43298	L	00000	BO	91120215	150534	007500	330 V	
NI018	3A0729+103	59	14.50	0728445	+100247	L 3	43305	L	00000	BO	91120310	100306	006000	330 V	
NI018	3A0729+103	59	14.50	0728445	+100247	L 1	21920	L	00000	BO	91120311	110933	003000	331 V	
NI018	3A0729+103	59	14.50	0728445	+100247	L 3	43306	L	00000	BO	91120311	114433	004500	330 V	
NI018	3A0729+103	59	14.50	0728445	+100247	L 1	21921	L	00000	BO	91120312	123710	003000	331 V	
NI018	3A0729+103	59	14.50	0728445	+100247	L 3	43307	L	00000	BO	91120313	131249	004500	330 V	
NI018	3A0729+103	59	14.50	0728445	+100247	L 3	43308	L	00000	BO	91120314	142501	004500	330 V	
NI018	3A0729+103	59	14.50	0728445	+100247	L 1	21922	L	00000	BO	91120315	151433	003000	331 V	
NI018	3A0729+103	59	14.50	0728445	+100247	L 3	43309	L	00000	BO	91120315	154811	003000	220 V	
NC114	HD59890	45	05.04	0728458	-305122	E 9	02546	2	24954	FO	92052323	234500	016000	V	FES FOR SWP 44747
GSNAB	HD 59890	45	4.650	0728458	-305122	L 3	44728	L	24775	FO	92052016	162100	004000	320 G	E=34,G=79,B=20
NC114	HD59890	45	05.04	0728458	-305122	L 3	44747	L	24954	FO	92052323	232229	044500	751 V	
PGNTA	HD 59643	66	7.800	0728527	+243638	L 3	44188	L	1793	FO	92031723	235400	005000	451 G	E=200,G=143,B=21
NC151	HR2902	51	04.89	0731302	-142451	H 3	44680	L	26990	FO	92051700	001833	005000	560 V	
NC151	HR2902	51	04.96	0731302	-142451	H 1	23117	L	25957	FO	92051701	011648	003000	463 V	
NC151	HR2902	51	04.95	0731302	-142451	H 3	44681	L	26062	FO	92051701	015750	002500	460 V	
NC151	HR2902	51	04.98	0731302	-142451	H 1	23118	L	25696	FO	92051702	023704	001500	462 V	
PHCAL	HD 60753	21	06.86	0732080	-502829	H 3	44244	L	06472	FO	92032704	043137	001800	500 V	
PHCAL	HD 60753	21	06.86	0732080	-502829	H 1	22695	L	06423	FO	92032705	050712	001200	500 V	
PHCAL	HD 60753	21	06.86	0732080	-502829	H 3	44245	L	06435	FO	92032705	053908	001800	500 V	
PHCAL	HD 60753	21	06.87	0732080	-502829	H 1	22696	L	06416	FO	92032706	061347	001200	500 V	
PHCAL	HD60753	21	06.87	0732080	-502829	L 3	44243	L	06415	FO	92032703	034907	000011	500 V	
PHCAL	HD60753	21	06.87	0732080	-502829	L 1	22694	L	06397	FO	92032703	035339	000007	500 V	
PHCAL	HD60753	21	06.86	0732080	-502829	L 3	44246	L	06462	FO	92032706	064810	000011	500 V	
PHCAL	HD60753	21	06.89	0732081	-502829	H 1	22310	L	06286	FO	92013108	081731	001200	601 V	
PHCAL	HD 60753	21	6.690	0732081	-502829	L 2	18614	L	6121	FO	91120717	175000	000042	501 G	G=193,B=25

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	EES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
PHCAL	HD60753	21	06.89	0732081	-502829	H	3	43900	L	06265	FO	92013108	085051	003600	700	V
PHCAL	HD 60753	21	6.690	0732081	-502829	L	2	18615	L	6209	FO	91120718	185100	000016	301	G G=122,B=25
PHCAL	HD60753	21	06.91	0732081	-502829	H	1	22311	L	06192	FO	92013110	103358	002400	701	V
PHCAL	HD 60753	21	6.690	0732081	-502829	L	2	18616	L	6358	FO	91120719	193000	000051	501	G G=214,B=27
PHCAL	HD60753	21	06.91	0732081	-502829	L	3	43901	L	06192	FO	92013111	110502	000011	501	V
PHCAL	HD 60753	21	6.690	0732081	-502829	L	2	18617	L	6229	FO	91120720	201100	000109	501	G G=249,B=27
PHCAL	HD60753	21	06.88	0732081	-502829	L	3	43897	L	06361	FO	92013105	052936	000011	500	V
PHCAL	HD 60753	21	6.690	0732081	-502829	L	2	18618	L	6236	FO	91120720	205100	000042	501	G G=196,B=27
PHCAL	HD60753	21	06.87	0732081	-502829	L	1	22308	L	06379	FO	92013105	053440	000007	501	V
PHCAL	NULL	99		0732081	-502829	L	2	18619	L	0		91120721	212700	000000	01	G B=25
PHCAL	HD60753	21	06.89	0732081	-502829	L	3	43898	L	06259	FO	92013106	063237	000022	700	V
PHCAL	HD 60753	21	6.690	0732081	-502829	L	2	18620	L	6269	FO	91120721	215900	000046	501	G G=203,B=27
PHCAL	HD 60753	21	06.90	0732081	-502829	L	1	22309	L	06234	FO	92013106	063715	000014	701	V
PHCAL	HD 60753	21	6.690	0732081	-502829	L	2	18621	L	6292	FO	91120722	224000	000025	401	G G=155,B=27
PHCAL	HD60753	21	06.88	0732081	-502829	H	3	43899	L	06312	FO	92013107	073942	001800	600	V
PHCAL	HD 60753	21	6.690	0732081	-502829	L	2	18622	L	6333	FO	91120723	232200	000008	301	G G=98,B=28
PHCAL	HD60753	21	06.86	0732081	-502829	H	3	45027	L	06472	FO	92062821	214227	001800	500	V
PHCAL	HD 60753	21	6.690	0732081	-502829	L	2	18623	L	6370	FO	91120800	000200	000125	X01	G G=1.5X,B=26
PHCAL	HD60753	21	06.85	0732081	-502829	H	1	23397	L	06509	FO	92062822	221411	001200	501	V
PHCAL	HD 60753	21	6.690	0732081	-502829	L	2	18624	L	6433	FO	91120800	004200	000042	501	G G=200,B=25
PHCAL	HD60753	21	06.84	0732081	-502829	H	3	45029	L	06558	FO	92062900	000032	003600	700	V
PHCAL	HD 60753	21	6.690	0732081	-502829	L	2	18671	L	6389	FO	92061214	143400	000042	501	G G=184,B=21
PHCAL	HD60753	21	06.83	0732081	-502829	L	3	45028	L	06624	FO	92062823	231604	000011	500	V
PHCAL	HD 60753	21	6.690	0732081	-502829	L	2	18672	L	6416	FO	92061215	153600	000010	401	G G=154,B=21
PHCAL	HD60753	21	06.83	0732081	-502829	L	1	23398	L	06630	FO	92062800	000000	000007	500	V
PHCAL	HD 60753	21	6.690	0732081	-502829	L	2	18672	S	6424	FO	92061215	154100	000028	501	G G=221,B=21
PHCAL	HD 60753	21	6.690	0732081	-502829	L	3	43345	L	6177	FO	91120904	044100	000010	500	G G=170,B=18
PHCAL	HD 60753	21	6.690	0732081	-502829	L	3	43345	S	6183	FO	91120904	044700	000030	500	G G=210,B=18
PHCAL	HD 60753	21	6.690	0732081	-502829	L	3	43346	L	6317	FO	91120906	060700	000040	500	G G=194,B=18
PHCAL	HD 60753	21	6.690	0732081	-502829	L	3	43564	L	6358	FO	92010805	051000	000010	400	G G=170,B=20
PHCAL	HD 60753	21	6.690	0732081	-502829	L	3	43564	S	6337	FO	92010805	051400	000030	500	G G=200,B=20
PHCAL	HD 60753	21	6.690	0732081	-502829	L	3	43565	L	6245	FO	92010806	061700	000040	500	G G=185,B=20
PHCAL	HD 60753	21	6.690	0732081	-502829	L	3	44008	L	6071	FO	92021701	011500	000010	500	G G=190,B=15
PHCAL	HD 60753	21	6.690	0732081	-502829	L	3	44008	S	6044	FO	92021701	012000	000030	500	G G=240,B=18
PHCAL	HD 6075	21	6.690	0732081	-502829	L	3	44186	L	6206	FO	92031720	204700	000010	500	G G=185,B=18
PHCAL	HD 6075	21	6.690	0732081	-502828	L	3	44186	S	6173	FO	92031720	205300	000030	500	G G=224,B=18
PHCAL	HD 60753	21	6.690	0732081	-502829	L	3	44187	L	6298	FO	92031722	222300	000040	500	G G=196,B=16
PHCAL	HD 60753	21	6.690	0732081	-502829	L	3	44281	L	6416	FO	92040117	174300	000010	500	G G=203,B=14
PHCAL	HD 60753	21	6.690	0732081	-502829	L	3	44281	S	6448	FO	92040117	175000	000030	X00	G G=1.5X,B=14
PHCAL	HD 60753	21	6.690	0732081	-502829	L	3	44282	L	6434	FO	92040118	182100	000040	500	G G=208,B=14
PHCAL	HD 60753	21	6.690	0732081	-502829	L	3	44488	L	6526	FO	92042818	180400	000010	500	G G=196,B=14
PHCAL	HD 60753	21	6.690	0732081	-502829	L	3	44489	L	6421	FO	92042819	192100	000010	500	G G=185,B=13
PHCAL	HD 60753	21	6.690	0732081	-502829	L	3	44609	S	6433	FO	92050616	165200	000030	500	G G=171,B=15
PHCAL	HD 60753	21	6.690	0732081	-502829	L	3	44609	L	6400	FO	92050616	165800	000010	500	G G=173,B=15
PHCAL	HD 00060753	21	6.690	0732081	-502829	L	3	44672	L	6312	FO	92051517	171300	000040	502	G G=207,B=39
PHCAL	HD 00060753	21	6.690	0732081	-502829	L	3	44673	L	6377	FO	92051518	182600	000010	401	G G=170,B=21
PHCAL	HD 00060753	21	6.690	0732081	-502829	L	3	44673	S	6304	FO	92051518	183100	000030	501	G G=247,B=21
PHCAL	HD 60753	21	6.690	0732081	-502829	L	3	44911	L	6325	FO	92061113	132900	000010	500	G G=191,B=17
PHCAL	HD 60753	21	6.690	0732081	-502829	L	3	44911	S	6271	FO	92061113	133400	000030	X00	G G=1.5X,B=17
PHCAL	HD 00060753	21	6.690	0732081	-502829	L	3	44912	L	6393	FO	92061115	150200	000040	500	G G=184,B=16

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	EEC	Comment
PHCAL	HD 00060753	21	5.690	0732081	-502829	H	3	44913	L	6313	FO	92061116	163200	001300	402	G G=185,B=39
PHCAL	NULL	99		0735542	+344203	L	2	18653	S	0		92030122	223000	000000	08	G B=100
PHCAL	WAVCAL	98		0735542	+344203	L	2	18654	S	0		92030200	000200	000001	?1	G E=10x,B=21
PHCAL	T FLOOD	99		0735542	+344203	L	2	18655	S	0		92030200	003000	000010	08	G B=100
PHCAL	WAVCAL	98		0735542	+344203	H	2	18656	S	0		92030200	005900	000022	31	G E=60X,B=26
PHCAL	WAVCAL	98		0735542	+344203	L	3	44089	S	0		92030121	214600	000002	?0	G E=10X,B=15
PHCAL	TFLOOD	98		0735542	+344203	L	3	44090	S	0		92030122	225800	000005	08	G B=100
PHCAL	WAVCAL	98		0735542	+344203	H	3	44091	S	0		92022923	233000	000200	31	G E=60X,B=28
PENCG	HD 61429	22	4.700	0736131	-251500	H	3	43328	L	356	FU	91120602	025200	000400	502	G G=190,B=38
PENCG	HD 61429	22	4.700	0736131	-251500	L	3	43329	L	348	FU	91120604	040100	000002	400	G G=138,B=18
PHCAL	HD 61421	41	0.340	0736411	+052116	L	3	43428	L	12249	FU	91122001	015100	000003	400	G G=137,B=18
PHCAL	HD 61421	41	0.340	0736411	+052116	H	3	43429	L	13038	FU	91122002	022800	000251	X02	G G=1.5X,B=35
PC091	HD62044	47	04.57	0740112	+290016	H	1	22901	L	00434	FU	92042701	014658	002500	360	V
PC091	HD62044	47	04.57	0740112	+290016	H	3	44485	L	00433	FU	92042702	022006	036700	151	V
PC091	HD62044	47	04.58	0740116	+290013	H	1	22869	L	00430	FU	92042202	020029	002500	361	V
PC091	HD62044	47	04.56	0740116	+290013	H	3	44454	L	00439	FU	92042202	023304	035700	152	V
PENCG	HD 63118	22	5.030	0743417	-433747	H	3	43300	L	10776	FO	91120301	014300	001023	402	G G=153,B=32
PENCG	HD 63118	22	5.030	0743417	-433747	H	3	43304	L	11206	FO	91120308	083400	001423	502	G G=202,B=38
PENCG	HD 63118	22	5.030	0743417	-433747	L	3	43330	L	11219	FO	91120605	051600	000010	500	G G=178,B=18
PENCG	HD 63118	22	5.030	0743417	-433747	H	3	43331	L	11021	FO	91120606	063900	001514	503	G G=215,B=41
GENAB	HD 63700	45	3.340	0747114	-244359	L	3	44744	L	935	FU	92052307	072000	045005	XX5	G E=4X,G=4X,B=70
NC091	HD 63926	47	06.73	0747153	-562042	L	3	44236	L	07185	FO	92032606	063952	000200	500	V
NC091	HD63926	47	06.73	0747153	-562042	H	1	22690	L	07232	FO	92032606	064615	002500	301	V
CD10Z	TU MON	66	10.00	0750491	-025441	L	3	44458	L	156	FO	92042222	223900	012000	331	G E=98,G=72,B=27
FGNEB	HD 66242	45	5.330	0759585	-061148	L	3	44238	L	7269	FO	92032611	115600	030000	X03	G G=5X,B=49
PHCAL	BD+75 325	16	09.64	0804429	+750647	H	3	43321	L	00548	FO	91120510	100853	002500	500	V
PHCAL	BD+75 325	10	09.61	0804430	+750648	H	1	21902	L	00563	FO	91120110	101321	003000	502	V
PHCAL	BD+75 325	10	09.62	0804430	+750648	H	3	43283	L	00555	FO	91120111	110236	002500	501	V
PHCAL	BD+75 325	10	09.61	0804430	+750648	L	1	21903	L	00561	FO	91120112	121227	000020	500	V
PHCAL	BD+75 325	10	09.63	0804430	+750648	L	3	43316	L	00554	FO	91120413	135935	000034	600	V
PHCAL	BD+75 325	10	09.65	0804430	+750648	H	1	21932	L	00545	FO	91120414	140708	006000	602	V
PHCAL	BD+75 325	10	09.64	0804430	+750648	L	1	21933	L	00546	FO	91120416	161154	000040	601	V
PHCAL	BD+75 325	10	09.64	0804430	+750648	H	3	43317	L	00546	FO	91120415	151627	005000	601	V
PHCAL	BD+75 325	16	09.62	0804430	+750648	L	1	21941	L	00558	FO	91120510	104303	003000	502	V
PHCAL	BD+75 325	16	09.62	0804430	+750648	L	3	43322	L	00558	FO	91120511	111935	000017	500	V
PHCAL	BD+75 325	16	09.58	0804430	+750648	L	1	21942	L	00576	FO	91120511	115136	000020	500	V
PHCAL	BD+75 325	16	09.67	0804430	+750648	L	3	43938	L	00534	FO	92020607	070046	000017	500	V
PHCAL	BD+75 325	16	09.69	0804430	+750648	L	1	22344	L	00522	FO	92020608	081307	000020	500	V
PHCAL	BD+75 325	16	09.67	0804430	+750648	H	1	22343	L	00534	FO	92020606	062148	003000	501	V
PHCAL	BD+75 325	16	09.72	0804430	+750648	H	3	43939	L	00512	FO	92020607	073751	002500	400	V
PHCAL	BD+75 325	16	09.70	0804430	+750648	H	1	22345	L	00521	FO	92020608	085017	003000	500	V
PHCAL	BD+75 325	16	09.71	0804430	+750648	H	3	43976	L	00515	FO	92021305	054619	002500	400	V
PHCAL	BD+75 325	16	09.68	0804430	+750648	H	1	22378	L	00530	FO	92021306	062049	003000	502	V
PHCAL	BD+75 325	16	09.69	0804430	+750648	H	3	43977	L	00525	FO	92021306	065847	005000	600	V
PHCAL	BD+75 325	16	09.67	0804430	+750648	H	1	22379	L	00532	FO	92021307	075616	006000	602	V
PHCAL	BD+75 325	16	09.69	0804430	+750648	L	3	43978	L	00523	FO	92021309	093748	000017	500	V
PHCAL	BD+75 325	16	09.65	0804430	+750648	L	1	22380	L	00544	FO	92021309	094224	000020	402	V
PHCAL	BD+75 325	16	09.65	0804430	+750648	L	3	43979	L	00543	FO	92021310	104533	000034	600	V
PHCAL	BD+75 325	16	09.68	0804430	+750648	L	1	22381	L	00530	FO	92021310	105002	000040	602	V
PHCAL	BD+75 325	16	09.59	0804430	+750648	L	1	22724	L	00572	FO	92040102	021506	000020	400	V

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
PHCAL	BD+75 325	16	09.60	0804430	+750648	H	3	44277	L	00567	FO	92040101	014343	002500	400	V
PHCAL	BD+75 325	16	09.60	0804430	+750648	L	3	44278	L	00568	FO	92040103	034023	000017	500	V
PHCAL	BD+75 325	16	09.66	0804430	+750648	H	1	22725	L	00540	FO	92040103	030212	003000	501	V
PHCAL	BD+75 325	16	09.65	0804430	+750648	L	3	44279	L	00543	FO	92040104	041642	000034	700	V
PHCAL	BD+75 325	16	09.61	0804430	+750648	L	1	22726	L	00562	FO	92040104	044850	000040	700	V
PHCAL	BD +75 325	16	9.540	0804432	+750648	L	3	43289	L	569	FO	91120201	015200	000043	400	G G=148,B=18
PHCAL	BD +75 325	16	9.540	0804432	+750648	L	3	43290	L	577	FO	91120203	030900	000014	500	G G=170,B=18
PHCAL	BD +75 325	16	9.540	0804432	+750648	L	3	43290	S	557	FO	91120203	031600	000042	500	G G=222,B=18
PHCAL	BD +75 325	16	9.500	0804432	+750648	L	3	43548	L	583	FO	92010504	045500	000014	500	G G=170,B=15
PHCAL	BD +75 325	16	9.500	0804432	+750648	L	3	43548	S	548	FO	92010505	050000	000042	400	G G=160.B=15
PHCAL	BD +75 0325	16	9.540	0804432	+750648	L	3	43975	L	573	FO	92021301	011800	000014	500	G G=170,B=15
PHCAL	BD +75 0325	16	9.540	0804432	+750648	L	3	43975	S	561	FO	92021301	013500	000042	500	G G=225,B=15
PHCAL	BD +75 0325	16	9.540	0804432	+750648	L	3	44214	L	560	FO	92032320	200200	000014	500	G G=182,B=13
PHCAL	BD +75 0325	16	9.540	0804432	+750648	L	3	44214	S	563	FO	92032320	200800	000042	500	G G=208,B=13
PHCAL	BD +75 0325	16	9.540	0804432	+750648	L	3	44215	L	564	FO	92032321	212500	000043	400	G G=151,B=16
PHCAL	BD +75 0325	16	9.540	0804432	+750648	L	3	44415	L	593	FO	92041523	235500	000043	400	G G=149,B=15
BSNNE	NGC 2539-60	39	10.96	0808020	-123540	L	3	44365	L	171	FO	92040922	225700	011000	01	G B=22
BSNNE	NGC 2539-44	39	10.80	0808140	-124059	L	3	44364	L	191	FO	92040917	173400	006000	301	G G=76,B=28
BSNNE	NGC 2539-38	39	10.50	0808290	-124410	L	3	44363	L	236	FO	92040913	132800	020000	302	G G=121,B=32
NONSS	NOVA PUP	55	10.50	0809440	-345829	L	3	44647	L	0	FO	92051122	222300	002500	40	G E=131,B=15
NITOO	N PUP 91	55	08.66	0809441	-345829	H	1	22233	L	01316	FO	92011007	075120	018000	602	V
NONSS	NOVA PUP	55	3.600	0809441	-345829	L	3	43558	L	1332	FO	92010703	034100	001000	331	G E=123,G=110,B=25
PHCAL	NOVAPUP91	55	08.76	0809441	-345829	H	3	43621	L	01205	FO	92011208	083946	034500	332	V
NONSS	NOVA PUP	55	3.600	0809441	-345829	L	3	43559	L	1387	FO	92010705	050100	005000	X01	G G=3X,B=25
NITOO	NOVA PUP91	55	09.50	0809441	-345829	L	1	22285	L	00618	FO	92012510	100236	000020	241	V
NONSS	NOVA PUP	55	9.000	0809441	-345829	L	3	43586	L	1320	FO	92010923	235100	002000	500	G G=208,B=18
NITOO	NOVA PUP91	55	09.50	0809441	-345829	L	3	43817	L	00621	FO	92012510	100918	001500	250	V
NONSS	NOVA PUP	55	9.500	0809441	-345829	L	3	43698	L	697	FO	92012115	155900	003000	X01	G G=1.5X,B=25
NITOO	NOVA PUP91	55	09.91	0809441	-345829	L	1	22342	L	00430	FO	92020605	052329	000040	350	V
NONSS	NOVA PUP	55	9.600	0809441	-345829	L	3	43699	L	728	FO	92012117	173700	001000	400	G G=135,B=20
NITOO	NOVA PUP91	55	09.91	0809441	-345829	L	3	43937	L	00430	FO	92020604	045034	002500	550	V
NONSS	NOVA PUP	55	10.00	0809441	-345829	L	3	43890	L	547	FO	92012902	020800	002000	500	G G=229,B=20
NI205	NOVA PUP91	55	10.14	0809441	-345829	L	1	22394	L	00349	FO	92021405	053627	000050	361	V
NONSS	NOVA PUP	55	9.800	0809441	-345829	L	3	43903	L	509	FO	92013118	185000	002000	4X0	G E=1.5X,G=160,B=18
NI205	NOVA PUP91	55	10.12	0809441	-345829	L	3	43985	L	00358	FO	92021405	054121	003000	350	V
NONSS	NOVA PUP	55	1.000	0809441	-345829	L	3	43936	L	438	FO	92020601	014300	001000	400	G G=149,B=18
NI205	NOVA PUP91	55	10.13	0809441	-345829	L	1	22385	L	00354	FO	92021406	062206	000230	361	V
NONSS	NOVA PUP	55	10.30	0809441	-345829	L	3	43964	L	379	FO	92021116	163000	002000	500	G G=216,B=20
NI205	NOVA PUP91	55	10.15	0809441	-345829	L	3	43986	L	00347	FO	92021406	065636	006000	570	V
NONSS	NOVA PUP	55	10.50	0809441	-345829	L	3	44018	L	348	FO	92021900	003000	002000	350	G E=177,G=49,B=18
NI205	NOVA PUP91	55	10.15	0809441	-345829	H	1	22386	L	00347	FO	92021408	081331	018500	372	V
NONSS	NOVA PUP	55	10.50	0809441	-345829	L	3	44054	L	345	FO	92022501	011100	002500	340	G E=162,G=67,B=20
NITOO	NOVA PUP91	55	10.47	0809441	-345829	L	3	44065	L	00260	FO	92022610	101829	003500	350	V
NONSS	N PUP 91	55		0809441	-345829	L	3	44153	L	269	FO	92031120	200800	005000	5X1	G E=1.5X,G=182,B=22
NITOO	NOVA PUP91	55	10.41	0809441	-345829	L	1	22463	L	00275	FO	92022611	110503	000400	352	V
NONSS	NOVA PUP	55		0809441	-345829	L	3	44231	L	243	FO	92032520	202600	005000	453	G E=243,G=150,B=44
NITOO	NOVA PUP91	55	10.30	0809441	-345829	L	1	22464	L	00274	FO	92022612	122745	000050	252	V
NONSS	NOVA PUP	55	10.80	0809441	-345829	L	3	44644	L	179	FO	92051116	164800	005000	X09	G G=2X,B=217
NITOO	NOVA PUP91	55	10.42	0809441	-345829	L	3	44066	L	00273	FO	92022611	114032	005000	450	V SEGMENTED:35 + 15 MI
NONSS	NOVA PUP	55	10.50	0809441	-345829	L	3	44646	L	201	FO	92051121	214300	001500	30	G E=81,B=15

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MO	Obs.date	Exptim	mmmsstt	ECC	Comment
NITOO	NOVAFUP91	55	11.03	0809441	-345829	L	1	23208	S	00158	FO	92052923	233645	000400	140	V
NONSS	NOVA FUP	55	10.50	0809441	-345829	L	3	44712	L	181	FO	92051818	183200	002500	338	G E=181,G=125,B=92
NITOO	NOVAFUP91	55	11.03	0809441	-345829	L	1	23208	L	00158	FO	92052923	234443	000100	250	V
NONSS	N FUP 91	55	10.00	0809441	-345829	L	3	44797	L	193	FO	92052808	084200	006000	350	G E=231,G=62,B=16
NITOO	NOVAFUP91	55	11.29	0809441	-345829	L	3	44807	L	00138	FO	92052923	235133	004500	350	V
NONSS	N FUP 91	55	10.00	0809441	-345829	L	3	44798	L	199	FO	92052811	112900	020000	5X2	G E=3.5X,G=197,B=39
NITOO	NOVAFUP91	55	11.25	0809441	-345829	H	1	23209	L	00143	FO	92053000	004335	009000	141	V
CVNSS	CP FUP	55	15.00	0809520	-351202	L	3	44789	L	0	BO	92052709	093900	031500	343	G E=165,G=123,B=49
NONSS	NOVA FUP	55	10.00	0810216	-350225	L	3	43965	L	388	FO	92021118	184200	002000	500	G G=200,B=15
CD07Z	HD 69652	30	7.800	0814148	-490635	L	3	43927	L	2182	FO	92020420	201100	001400	X00	G G=2X,B=18
CD07Z	HD 69652	30	7.800	0814148	-490635	L	3	44181	L	2178	FO	92031523	234400	000800	500	G G=244,B=17
FGNEB	HD 71433	41	5.590	0824496	-061437	L	3	44239	L	5801	FO	92032617	174000	024000	X35	G E=122,G=5X,B=70
VENSA	HR 3348	30	5.180	0828055	+372600	L	3	44619	L	9337	FO	92050715	155100	000135	500	G G=205,B=16
ISNDM	HD 72350	21	5.300	0828579	-443405	H	3	44772	L	8724	FO	92052520	200800	001500	502	G G=197,B=35
ISNDM	HD 72350	21	5.300	0828579	-443405	H	3	44773	L	8734	FO	92052521	211400	001500		G
ISNDM	HD 72350	21	5.300	0828579	-443405	H	3	44774	L	8496	FO	92052522	222100	001500	502	G G=210,B=36
PHOAL	SKY BKGD	07		0829319	-473042	L	3	44707	L	0		92051808	084900	006000	01	G B=23
PHOAL	SKY BKGD	07		0829319	-473042	L	3	44708	L	0		92051811	111600	006000	00	G B=20
PHOAL	SKY BKGD	07		0829319	-473041	L	3	44720	L	0		92051909	094100	018000	02	G B=35
CENUE	47 2347	47	3.600	0829353	-472946	H	3	44376	L	1020	FO	92041020	201800	001800		G
CENUE	47 2347	47	3.600	0829354	-472947	L	3	44374	L	1007	FO	92041017	175000	002500	500	G G=238,B=17
CENUE	47 2347	47	3.600	0829354	-472947	L	3	44375	L	1006	FO	92041018	185300	001000	400	G G=126,B=17
CENUE	-47 2347	47	3.600	0829354	-472947	L	3	44411	L	1050	FO	92041517	175500	002500	500	G G=233,B=15
CENUE	-47 2347	47	3.600	0829354	-472947	L	3	44412	L	1050	FO	92041518	185800	001000	300	G G=115,B=16
CENUE	-47 2347	47	3.600	0829354	-472947	L	3	44413	L	1103	FO	92041519	195400	001800	500	G G=188,B=16
CENUE	47 2347	47	3.600	0829354	-472947	L	3	44443	L	1059	FO	92042017	172600	002500	500	G G=235,B=15
CENUE	47 2347	47	3.600	0829354	-472947	L	3	44444	L	1077	FO	92042018	183000	001000	400	G G=126,B=16
CENUE	47 2347	47	3.600	0829354	-472947	L	3	44445	L	1077	FO	92042019	194000	001800	500	G G=193,B=15
CENUE	47 2347	47	3.600	0829354	-472947	L	3	44477	L	1028	FO	92042518	180300	002500	500	G G=240,B=18
CENUE	47 2347	47	3.600	0829354	-472947	L	3	44478	L	1065	FO	92042519	190700	001000	502	G G=210,B=35
CENUE	47 2347	47	3.600	0829354	-472947	L	3	44479	L	1065	FO	92042520	201600	001800	500	G G=200,B=18
CENUE	47 2347	47	3.600	0829354	-472947	L	3	44706	L	821	FO	92051807	073900	002500	300	G G=49,B=17
CENUE	47 2347	47	3.600	0829354	-472947	L	3	44709	L	908	FO	92051814	140800	002500	300	G G=105,B=15
CENUE	-47 2347	47	3.600	0829354	-472947	L	3	44721	L	1002	FO	92051914	141900	002500	500	G G=198,B=15
CENUE	47 2347	47	3.600	0829354	-472947	L	3	44726	L	1019	FO	92052007	075900	002500	500	G G=221,B=15
CENUE	-47 2347	47	3.600	0829354	-472947	L	3	44727	L	1040	FO	92052014	142600	002500	500	G G=217,B=15
NA027	HD72660	30	6.06	0831299	-015847	H	3	44436	L	12489	FO	92042001	012611	006000	700	V
NA027	HD72660	30	6.05	0831299	-015847	H	1	22853	L	12628	FO	92042002	023446	002000	601	V
NA027	HD72660	30	6.05	0831299	-015847	H	3	44437	L	12665	FO	92042003	030622	002500	500	V
NA027	HD72660	30	6.05	0831299	-015847	L	1	22854	L	12667	FO	92042003	034234	000009	500	V
NA027	HD72660	30	6.03	0831299	-015847	L	3	44438	L	12787	FO	92042004	041423	000045	600	V
CVNGS	SW UMA	54	11.00	0832586	+533904	H	3	44226	L	123	FO	92032423	230400	016500	303	G G=125,B=48
CVNGS	SW UMA	54	11.00	0832586	+533904	L	3	44227	L	131	FO	92032502	024200	000530	400	G G=145,B=16
CVNGS	SW UMA	54	11.00	0832586	+533904	L	3	44264	L	105	FO	92033000	001000	000830	300	G G=100,B=18
CVNGS	SW UMA	54	11.00	0832586	+533904	L	3	44266	L	419	SO	92033002	023300	001500	400	G G=140,B=18
CD07Z	SAO 220151	30	10.20	0833385	-460319	L	3	43928	L	399	FO	92020421	213800	003000	X00	G G=1.5X,B=18
CD07Z	SAO 220151	30	10.20	0833385	-460319	L	3	43929	L	396	FO	92020423	231400	001500	400	G G=152,B=18
WRNPC	HE 2-10	88	12.45	0834080	-261405	L	3	43458	L	0	BO	91122318	183900	037000	335	G E=136,G=115,B=70
WRNPC	HE 2-10	88	12.45	0834080	-261405	L	3	44132	L	0	BO	92030712	122800	038000	305	G G=120,B=70
WDNGB	0836+237	37	16.73	0836379	+234447	L	3	44429	L	0	BO	92041813	131400	018000	502	G G=210,B=38

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	EES	MD	Obs.date	Exptim	mmmsstt	EQC	Comment
NC114	HD74006	45	04.29	0838086	-350747	E	9	02545	2	00557	FU	92052223	231000	016000		V EES FOR SWP 44743
GSNAB	HD 74006	45	3.970	0838086	-350747	L	3	44724	L	562	FU	92051920	202800	003500	320	G E=30,C=93,B=19
NC114	HD74006	45	04.29	0838086	-350747	L	3	44743	L	00557	FU	92052223	232235	043000	742	V
NM079	SWP 44362	00	99.99	0841262	-055103	H	3	44362	L	00000		92040900	000000	000000		V
NC156	HD 74772	44	04.43	0842367	-422802	L	1	22014	L	00493	FU	91121716	161751	000015	351	V
NC156	HD 74772	44	04.40	0842367	-422802	L	3	43410	L	00505	FU	91121715	153243	006100	300	V TWO SEGMENTS (35 + 2
NC137	HD74739	45	04.45	0843405	+285639	L	3	44155	L	00484	FU	92031204	045649	035000	542	V
NC137	HD74739	45	04.45	0843405	+285639	H	1	22575	L	00485	FU	92031204	040900	004000	561	V
NQ142	E0844+377	84	17.30	0844035	+374321	E	9	02531	2	00000	BO	92022400	000000	016000		V EES FOR SWP44053,
AGNEC	X 0844+377	85	17.30	0844036	+374321	L	3	44053	L	0	BO	92022410	103100	050000	35	G E=114,B=70
NT100	H0857-242	59	12.71	0857077	-241712	L	1	22522	L	00141	SO	92030610	103946	001200	330	V PREAD
NTI00	H0857-242	59	12.81	0857077	-241712	L	3	44128	L	00127	SO	92030704	042054	003500	550	V
NTI00	H0857-242	59	12.80	0857077	-241712	L	1	22531	L	00129	SO	92030705	050346	002500	551	V
NTI00	H0857-242	59	12.80	0857077	-241712	L	3	44129	L	00127	SO	92030705	053648	004000	550	V
NTI00	H0857-242	59	12.76	0857077	-241712	L	1	22532	L	00132	SO	92030706	062421	002500	551	V
NTI00	H0857-242	59	13.55	0857077	-241712	L	3	44133	L	00067	SO	92030804	045607	003500	430	V
NTI00	H0857-242	59	13.58	0857077	-241712	L	1	22545	L	00065	SO	92030804	042405	002500	401	V
NTI00	H0857-242	59	13.65	0857077	-241712	L	1	22546	L	00061	SO	92030805	053804	003500	501	V
NTI00	H0857-242	59	13.65	0857077	-241712	L	3	44134	L	00061	SO	92030806	062030	004000	430	V
NTI00	H0857-242	59	13.53	0857077	-241712	L	1	22547	L	00068	SO	92030807	070752	003500	401	V
NTI00	H0857-242	59	13.81	0857077	-241712	L	3	44135	L	00053	SO	92030807	074936	004000	430	V
NTI00	H0857-242	59	13.77	0857077	-241712	L	1	22548	L	00055	SO	92030808	084133	004000	501	V
NTI00	H0857-242	59	13.81	0857077	-241712	L	3	44136	L	00052	SO	92030809	092839	006500	550	V
NTI00	H0857-242	59	14.00	0857077	-241712	L	1	22559	L	00000	BO	92031008	081919	004700	331	V
NTI00	H0857-242	59	14.00	0857077	-241712	L	3	44147	L	00000	BO	92031009	091222	009600	330	V
PPNCG	HD 78045	60	4.000	0901398	-661146	H	3	43301	L	549	FU	91120303	034000	000918	502	G G=192,B=32
NI172	T PYX	55	15.00	0902372	-321047	L	3	43442	L	00000	BO	91122210	102050	026000	401	V
NI172	T PYX	55	15.00	0902372	-321047	L	1	22052	L	00000	BO	91122214	144526	012000	401	V
NI172	T PYX	55	15.20	0902372	-321047	L	3	44182	L	00000	BO	92031603	035548	025000	411	V
NI172	T PYX	55	15.20	0902372	-321047	L	1	22608	L	00000	BO	92031608	080957	016000	402	V
NI172	T PYX	55	15.00	0902372	-321047	L	3	44948	L	00000	BO	92061722	220941	028000	402	V
NI172	TPYX	55	15.00	0902372	-321047	L	1	23317	L	00000	BO	92061802	025433	011500	402	V
WDNOH	PG 0904+512	37	16.30	0904172	+510958	L	3	44013	L	0	BO	92021719	193000	008000	401	G G=138,B=22
VENSA	HR 3685	30	1.680	0912392	-693040	L	3	43459	L	4347	FU	91122401	015200	000003	500	G G=205,B=17
PHCAL	HD 80007	32	1.670	0912396	-693040	H	3	43419	L	4349	FU	91121901	014900	000046	502	G G=188,B=35
PHCAL	A+812666	16	12.10	0913428	+815611	L	3	43893	L	390	SO	92013001	010400	000220	500	G G=200,B=18
FGNEB	HD 79940	41	4.620	0913449	-371214	H	3	44240	L	27419	FO	92032622	223100	006000	X30	G E=98,G=5X,B=20
USSBS	HD 80404	40	2.200	0915451	-590353	H	3	44490	L	2494	FU	92042921	210600	000800	502	G G=232,B=32
MINEB	HD 80781	21	5.280	0918008	-545828	H	3	44241	L	9357	FO	92032700	004900	001500	502	G G=220,B=40
CVNDP	H929+501	59	16.00	0928528	+500413	L	3	44088	L	0	BO	92030112	123400	037400	304	G G=100,B=55
KDNCA	HD 82443	46	7.000	0929499	+271250	L	3	43397	L	3470	FO	91121605	054100	010000	331	G E=62,G=63,B=30
KDNCA	HD 82443	46	7.000	0929499	+271250	L	3	43405	L	3700	FO	91121705	053900	010000	232	G E=64,G=60,B=40
KDNCA	HD 82443	46	7.000	0929499	+271250	L	3	43413	L	4017	FO	91121805	053800	011000	331	G E=59,G=60,B=27
KDNCA	HD 82443	46	7.000	0929499	+271250	L	3	43423	L	3780	FO	91121905	054800	011000	331	G E=73,G=68,B=22
KDNCA	HD 82443	46	7.000	0929499	+271250	L	3	43433	L	3828	FO	91122007	070000	011000	331	G E=62,G=65,B=28
KDNCA	HD 82443	46	7.000	0929499	+271250	L	3	43437	L	3718	FO	91122105	052000	012000	331	G E=71,G=65,B=23
KDNCA	HD 82558	46	7.800	0930010	-105748	L	3	43406	L	1993	FO	91121707	075600	005200	321	G E=42,G=45,B=22
VENSA	HR 3799	30	4.500	0931240	+521626	L	3	44620	L	394	FU	92050717	174100	000036	500	G G=199,B=15
PHCAL	SAFETY -	99		0938380	+313022	L	2	18662	S	0		92033100	000000	000000	00	G B=11
PHCAL	WAVCAL	98		0938380	+313022	L	2	18663	S	0		92033122	220600	000001	?1	G E=10X,B=22

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
PHOAL	TELOOD	99		0938380	+313022	L	2	18664	S	0		92033122	223800	000010	09 G	B=118
PHOAL	WAVCAL	98		0938380	+313022	H	2	18665	S	0		92033123	230700	000022	31 G	E=60X,B=27
PHOAL	WAVCAL	98		0938380	+313022	L	3	44274	S	0		92033120	203100	000002	20 G	E=10X,B=15
PHOAL	TELOOD	99		0938380	+313022	L	3	44275	S	0		92033121	212600	000005	09 G	B=108
PHOAL	WAVCAL	98		0938380	+313022	H	3	44276	S	0		92033121	215200	000200	32 G	E=60X,B=34
PRNUG	HD 84121	60	5.320	0939101	-574520	H	3	43302	L	18042	FO	91120305	052000	004025	504 G	G=225,B=52
WDNGB	0939+262	37	14.65	0939580	+261445	L	3	44431	L	0	BO	92041819	193300	003000	501 G	G=216,B=29
WDNGB	0939+262	37	14.65	0939583	+261445	L	3	43401	L	0	BO	91121700	004800	002500	500 G	G=216,B=17
WDNGB	0939+262	37	14.65	0939583	+261445	L	3	43402	S	0	BO	91121702	021300	006000	301 G	G=103,B=24
WDNGB	0939+262	37	14.65	0939583	+261445	L	3	44430	S	0	BO	92041817	171600	006500	401 G	G=165,B=26
WDNGB	0939+262	37	14.65	0939583	+261445	L	3	44431	S	0	BO	92041820	201000	004000	301 G	G=73,B=29
USSBS	HD 85123	33	2.970	0945517	-645024	H	3	44491	S	1437	FU	92043018	182400	003800	502 G	G=206,B=36
USSBS	HD 85123	33	3.000	0945517	-645024	H	3	45036	L	1424	FU	92062917	173500	001900	503 G	G=222,B=45
GSNAB	HD 85622	45	4.580	0949446	-461845	L	3	44723	L	25360	FO	92051918	183700	004000	331 G	E=93,G=94,B=21
GSNAB	HD 85622	45	4.580	0949446	-461845	L	3	44730	L	25181	FO	92052020	200600	016000	X52 G	E=246,G=1.5X,B=40
NA064	ESO 263	17	16.40	1003440	-440656	L	3	43959	L	00000	BO	92021104	045703	011700	400 V	
NA064	ESO 263	17	16.40	1003448	-440656	L	3	43956	L	00000	BO	92021009	094437	002500	300 V	
NA186	HD87737	32	13.77	1004365	+170026	H	1	21954	L	00890	FU	91120611	115319	000150	601 V	
NA186	HD87737	32	13.77	1004365	+170026	H	1	22044	L	00888	FU	91122113	135031	000140	501 V	
CD16Z	OY CAR	54	11.50	1005168	-695924	L	3	44417	L	365	SO	92041617	175200	002000	331 G	E=78,G=44,B=22
CD16Z	OY CAR	54	11.50	1005168	-695924	L	3	44418	L	366	SO	92041618	185000	002000	331 G	E=87,G=53,B=26
CD16Z	OY CAR	54	11.50	1005168	-695924	L	3	44419	L	281	SO	92041619	194900	002000	332 G	E=97,G=61,B=33
CD16Z	OY CAR	54	11.50	1005168	-695924	L	3	44420	L	367	SO	92041620	205500	002000	332 G	E=91,G=62,B=34
CD16Z	OY CAR	54	11.50	1005168	-695924	L	3	44421	L	361	SO	92041621	215700	002000	331 G	E=82,G=53,B=23
CD16Z	OY CAR	54	11.50	1005168	-695924	L	3	44422	L	348	SO	92041622	225800	002000	332 G	E=92,G=59,B=33
CD16Z	OY CAR	54	11.50	1005168	-695924	L	3	44423	L	370	SO	92041623	235900	002000	331 G	E=95,G=64,B=29
PTI86	OY CAR	54	11.92	1005169	-695927	H	3	44379	L	00285	SO	92041102	022906	004000	210 V	
PTI86	OY CAR	54	12.15	1005169	-695927	H	3	44380	L	00234	SO	92041103	034246	029300	332 V	
TBOIS	HD 88824	31	5.300	1011268	-505904	L	3	45008	L	17890	FO	92062518	182800	000542	501 G	G=231,B=25
USSBS	HD 89025	40	3.400	1013547	+233001	H	3	44827	L	905	FU	92060120	200000	003000	X02 G	G=1.5X,B=40
CM89K	R1016-05	37	14.50	1013576	-050534	L	3	44748	L	0	BO	92052408	081300	002600	X00 G	G=2X,B=17
CM89K	R1016-05	37	14.50	1013576	-050534	L	3	44749	L	0	BO	92052409	090700	001400	500 G	G=189,B=14
ISNDM	HD 89021	30	3.450	1014049	+430959	H	3	44771	L	931	FU	92052519	190600	000600	X02 G	G=1.5X,B=38
NC083	HD 89353	33	15.74	1015499	-284429	L	1	23119	L	15972	FO	92051800	000754	000200	700 V	
NC083	HD 89353	33	15.76	1015499	-284429	L	3	44702	L	15753	FO	92051800	001543	001500	500 V	
TBOIS	HD 90132	31	5.330	1021177	-374520	L	3	45006	L	17435	FO	92062515	153500	000309	401 G	G=173,B=30
PNOSH	NGC 3242	70	11.00	1022215	-182324	L	3	44990	L	482	FO	92062320	201400	000300	540 G	E=136,G=187,B=14
PNOSH	NGC 3242	70	11.00	1022215	-182324	L	3	44991	L	485	FO	92062320	204700	000320	540 G	E=160,G=202,B=15
JSNUC	JUPITER	03	-2.30	1025512	+111340	H	3	44475	S	0	BO	92042423	230300	009500	322 G	E=36,G=70,B=36
JSNUC	JUP SAZ	03	-2.30	1025515	+111331	L	3	44472	S	0	BO	92042414	145800	004000	300 G	G=94,B=20
JSNUC	JUP SML	03	-2.30	1025515	+111333	H	3	44473	S	0	BO	92042416	161300	012000	323 G	E=44,G=100,B=44
JSNUC	JUP SML	03	-2.30	1025515	+111338	H	3	44474	S	0	BO	92042418	184700	019000	306 G	G=100,B=72
JSNUC	JUP SML	03	-2.30	1025515	+111338	L	3	44474	L	0	BO	92042420	205300	002000	X26 G	E=86,G=2X,B=72
JSNUC	JUP SAZ	03	-2.30	1025516	+111329	L	3	44471	S	0	BO	92042413	135000	004000	300 G	G=91,B=20
JSNUC	JUP NAZ	03	-2.30	1025518	+111325	L	3	44470	S	0	BO	92042412	123200	004000	221 G	E=32,G=38,B=23
JSNUC	JUP NAZ	03	-2.30	1025521	+111323	L	3	44469	S	0	BO	92042411	112300	004000	231 G	E=51,G=38,B=23
JSNUC	JUP SML	03	-2.20	1025522	+111322	H	3	44474		0		92042421	212200	007000	G	
JSNUC	JUP NAZ	03	-2.20	1025524	+111322	L	3	44468	S	0	BO	92042410	100700	004000	231 G	E=50,G=42,B=23
SJNHM	JUPITER	03	-2.10	1026156	+110808	L	3	44650	S	0	BO	92051214	145100	012000	X09 G	G=1.5X,B=230
SJNHM	JUPITER	03	-2.10	1026160	+110800	L	3	44651	L	0	BO	92051217	172600	001000	X39 G	E=181,G=5X,B=146

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
SJNHM	JUPITER	03	-2.10	1026160	+110800	L	3	44652	L	0	BO	92051218	180500	001000	X39	G E=224,C=5X,B=190
SJNHM	JUPITER	03	-2.10	1026160	+110800	L	3	44653	L	0	BO	92051219	190300	001000	X39	G E=204,C=5X,B=161
SJNHM	JUPITER	03	-2.10	1026160	+110800	L	3	44654	L	0	BO	92051219	194000	001000	X36	G E=154,C=5X,B=78
SJNHM	JUPITER	03	-2.10	1026160	+110800	L	3	44655	L	0		92051220	202000	001500	X41	G E=167,C=5X,B=25
SJNHM	JUPITER	03	-2.10	1026160	+110800	L	3	44656	L	0	BO	92051221	210300	001500	X50	G E=178,C=5X,B=16
SJNHM	JUPITER	03	-2.10	1026250	+110655	L	3	44657	L	0	BO	92051221	214500	001500	X40	G E=161,C=5X,B=16
SJNHM	JUPITER	03	-2.10	1027062	+110207	L	3	44691	1	0		92051714	142000	001500	X41	G E=157,C=2X,B=30
SJNHM	SKY BKGD	07		1027063	+110207	L	3	44683	L	0		92051707	074100	003000	33	G E=103,B=45
SJNHM	JUPITER	03	-2.10	1027063	+110207	L	3	44684	L	0	BO	92051708	084100	001500	X42	G E=181,C=5X,B=40
SJNHM	JUPITER	03	-2.10	1027063	+110207	L	3	44685	L	0	BO	92051709	092700	001500	X41	G E=178,C=5X,B=30
SJNHM	JUPITER	03	-2.10	1027063	+110207	L	3	44686	L	0	BO	92051710	101200	001500	X42	G E=190,C=5X,B=40
SJNHM	JUPITER	03	-2.10	1027063	+110207	L	3	44687	L	0	BO	92051710	105500	001500	X52	G E=221,C=5X,B=35
SJNHM	SKY BKGD	07		1027063	+110207	L	3	44688	L	0		92051711	114400	003000	53	G E=218,B=45
SJNHM	JUPITER	03	-2.10	1027063	+110207	L	3	44689	L	0	BO	92051712	124300	001500	X52	G E=203,C=5X,B=35
SJNHM	JUPITER	03	-2.10	1027063	+110207	L	3	44690	L	0	BO	92051713	132900	001500	X42	G E=184,C=5X,B=35
SJNHM	JUPITER	03	-2.10	1027063	+110207	L	3	44692	L	0	BO	92051715	150700	001500	X42	G E=162,C=2X,B=36
SJNHM	JUPITER	03	-2.10	1027092	+110142	L	3	44695	L	0		92051717	172100	001200	X38	G E=181,C=2X,B=98
SJNHM	JUPITER	03	-2.10	1027099	+110142	L	3	44693	L	0		92051715	155200	001500	X43	G E=174,C=2X,B=47
SJNHM	JUPITER	03	-2.10	1027099	+110142	L	3	44694	L	0		92051716	163500	001200	X35	G E=160,C=2X,B=67
SJNHM	JUPITER	03	-2.10	1027099	+110142	L	3	44696	L	0	BO	92051718	180300	001200	X39	G E=187,C=3X,B=120
SJNHM	SKYBKGND	07		1027099	+110142	L	3	44697	L	0	BO	92051718	184600	002000	?9	G E=155,B=160
SJNHM	JUPITER	03	-2.10	1027099	+110142	L	3	44698	L	0	BO	92051719	193800	001500	X47	G E=200,C=3X,B=88
SJNHM	JUPITER	03	-2.10	1027099	+110142	L	3	44699	L	0	BO	92051720	202400	001500		G
SJNHM	JUPITER	03	-2.10	1027099	+110142	L	3	44700	L	0		92051721	211300	001500	X50	G E=180,C=2X,B=18
SJNHM	JUPITER	03	-2.10	1027099	+110142	L	3	44701	L	0	BO	92051721	215700	001800	X50	G E=184,C=3X,B=19
CONTA	HD 90839	41	4.840	1027257	+561413	L	3	43973	L	22573	FO	92021219	192600	022500	X02	G C=5X,B=40
LANUC	JUPITER	03	-2.00	1028009	+105606	H	3	44734	S	0		92052116	165400	014500	332	G E=120,C=100,B=38
JSNUC	JUPITER	03	-2.40	1029178	+105648	L	3	44344	S	0	BO	92040522	223100	012000	332	G E=75,C=55,B=32
JSNUC	JUPITER	03	-2.40	1029200	+105632	H	3	44343	S	0		92040518	184100	017000	324	G E=63,C=80,B=55
JSNUC	JUPITER	03	-2.40	1029257	+105545	H	3	44340	L	0		92040509	095000	013000	X46	G E=219,C=1.5X,B=71
JSNUC	JUPITER	03	-2.40	1029259	+105544	L	3	44341	S	0		92040512	124300	002300	330	G E=76,C=39,B=16
JSNUC	JUPITER	03	-2.40	1029259	+105544	H	3	44342	L	0		92040513	134300	026500	XX8	G E=2X,C=3X,B=100
NS059	JUPITER	03	00.00	1029325	+105520	L	3	44335	L	00000	BO	92040502	022846	001500	740	V SOUTH AURORA; TRACKI
NS059	JUPITER	03	00.00	1029325	+105520	L	3	44336	L	00000	BO	92040503	031943	001500	740	V SOUTH AURORA; TRACKI
NS059	JUPITER	03	00.00	1029325	+105520	L	3	44337	L	00000	BO	92040504	041047	001500	730	V SOUTH AURORA; TRACKI
LANUC	JUPITER	03	-2.40	1029361	+105500	H	3	44334	S	0	BO	92040420	202600	025000	436	G E=103,C=180,B=71
LANUC	JUPITER	03	-2.40	1029380	+105448	L	3	44333	S	0	BO	92040418	180700	011000	302	G C=99,B=32
NS059	JUPITER	03	00.00	1029607	+105340	L	3	44323	L	00000	BO	92040402	022412	001500	740	V NORTH AURORA; TRAKIN
NS059	JUPITER	03	00.00	1029607	+105340	L	3	44324	L	00000	BO	92040403	030951	001500	740	V NORTH AURORA; TRAKIN
NS059	JUPITER	03	00.00	1029607	+105340	L	3	44325	L	00000	BO	92040403	035508	001500	740	V NORTH AURORA; TRACKI
NS059	JUPITER	03	00.00	1029607	+105340	L	3	44326	L	00000	BO	92040404	043817	001500	740	V NORTH AURORA; TRACKI
NS059	JUPITER	03	-02.40	1029607	+105340	L	3	44327	L		BO	92040405	052209	001500	740	V NORTH AURORA;TRACKIN
NS059	JUPITER	03	-02.40	1029607	+105340	L	3	44328	L		BO	92040406	061029	001500	740	V NORTH AURORA;TRACKIN
NS059	JUPITER	03	-02.40	1029607	+105340	L	3	44329	L		BO	92040406	065359	002500	750	V NORTH AURORA;TRACKIN
NS059	JUPITER	03	-02.40	1029607	+105340	L	3	44330	L		BO	92040407	074833	002500	750	V NORTH AURORA;TRACKIN
SJNHM	JUPITER	03	-2.40	1029570	+105309	L	3	44321	L	0		92040316	160400	002000	X00	G C=5X,B=18
SJNHM	JUPITER	03	-2.40	1030003	+105236	L	3	44313	L	0		92040309	092700	001500	X41	G E=128,C=5X,B=22
SJNHM	JUPITER	03	-2.40	1030003	+105236	L	3	44314	L	0		92040310	101100	002000	X50	G E=169,C=5X,B=15
SJNHM	JUPITER	03	-2.40	1030003	+105236	L	3	44315	L	0		92040311	110200	002000	X40	G E=152,C=5X,B=15
SJNHM	JUPITER	03	-2.40	1030003	+105236	L	3	44316	L	0		92040311	115000	002500	X50	G E=204,C=5X,B=16

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	nnnnsstt	ECC	Comment
SINHM	JUPITER	03	-2.40	1030003	+105236	L	3	44317	L	0		92040312	124100	002500	X50	G E=226,G=5X,B=16
SINHM	JUPITER	03	-2.40	1030003	+105236	L	3	44318	L	0		92040313	133300	002500	XX0	G E=255,G=5X,B=16
SINHM	JUPITER	03	-2.40	1030003	+105236	L	3	44319	L	0		92040314	142500	002500	XX0	G E=255,G=5X,B=15
SINHM	JUPITER	03	-2.40	1030003	+105236	L	3	44320	L	0		92040315	151700	002000	X50	G E=224,G=5X,B=15
NS059	JUPITER	03	00.00	1030051	+105214	L	3	44309	L	00000	BO	92040306	062835	001500	740	V NORTH AURORA; TRACKI
NS059	JUPITER	03	00.00	1030051	+105214	L	3	44310	L	00000	BO	92040307	071414	001500	740	V NORTH AURORA; TRACKI
NS059	JUPITER	03	00.00	1030051	+105214	L	3	44311	L	00000	BO	92040307	075757	001500	740	V NORTH AURORA; TRACKI
LANUC	JUPITER	03	-2.40	1030120	+105149	H	3	44306	L	0	BO	92040221	211700	020000	331	G E=51,G=117,B=23
SINHM	JUPITER	03	-2.40	1030150	+105053	L	3	44295	L	0	BO	92040209	091200	001500	X40	G E=142,G=5X,B=16
SINHM	JUPITER	03	-2.40	1030150	+105053	L	3	44296	L	0	BO	92040209	095500	001500	X40	G E=152,G=5X,B=16
SINHM	JUPITER	03	-2.40	1030150	+105053	L	3	44297	L	0	BO	92040210	104100	002000	X40	G E=165,G=5X,B=16
SINHM	JUPITER	03	-2.40	1030150	+105053	L	3	44298	L	0	BO	92040211	112700	002000	X50	G E=180,G=5X,B=15
SINHM	JUPITER	03	-2.40	1030150	+105053	L	3	44299	L	0	BO	92040212	123000	001500	X50	G E=166,G=5X,B=15
SINHM	JUPITER	03	-2.40	1030150	+105053	L	3	44300	L	0	BO	92040213	131400	001500	X50	G E=192,G=5X,B=15
SINHM	JUPITER	03	-2.40	1030150	+105053	L	3	44301	L	0	BO	92040213	135700	002000	X50	G E=236,G=5X,B=16
SINHM	JUPITER	03	-2.40	1030150	+105053	L	3	44302	L	0	BO	92040214	144900	002000	X50	G E=214,G=5X,B=15
SINHM	JUPITER	03	-2.40	1030150	+105128	L	3	44303	L	0	BO	92040215	154100	003000	500	G G=246,B=18
NS059	JUPITER	03	00.00	1030208	+105050	L	3	44291	L	00000	BO	92040206	061417	001500	740	V SOUTH AURORA; TRACKI
NS059	JUPITER	03	00.00	1030208	+105050	L	3	44292	L	00000	BO	92040206	065613	001500	740	V SOUTH AURORA; TRACKI
NS059	JUPITER	03	00.00	1030208	+105050	L	3	44293	L	00000	BO	92040207	073914	001500	740	V SOUTH AURORA; TRACKI
NS059	JUPITER	03	00.00	1030208	+105050	L	3	44294	L	00000	BO	92040208	082237	001500	740	V SOUTH AURORA;TRACKIN
NS059	JUPITER	03	-02.40	1030281	+105018	L	3	44286	L	00000	BO	92040202	020451	002000	750	V SOUTH AURORA; TRACKI
NS059	JUPITER	03	-02.40	1030281	+105018	L	3	44287	L	00000	BO	92040202	025625	002500	750	V SOUTH AURORA; TRACKI
NS059	JUPITER	03	00.00	1030281	+105018	L	3	44288	L	00000	BO	92040203	034908	002500	740	V SOUTH AURORA; TRACKI
NS059	JUPITER	03	00.00	1030281	+105018	L	3	44289	L	00000	BO	92040204	044100	001500	740	V SOUTH AURORA; TRACKI
NS059	JUPITER	03	-02.40	1030281	+105018	L	3	44290	L	00000	BO	92040205	052329	001500	740	V SOUTH AURORA; TRACKI
SINHM	JUPITER	03	-2.00	1033398	+101951	L	3	44884	L	0	BO	92060720	201400	002200	X50	G E=193,G=3X,B=19
SINHM	JUPITER	07	-2.00	1033398	+101951	L	3	44886	L	0	BO	92060813	133100	003000	230	G E=77,G=31,B=16
SINHM	JUPITER	03	-2.00	1033398	+101951	L	3	44887	L	0		92060814	143800	001500	540	G E=150,G=193,B=15
SINHM	JUPITER	03	-2.00	1033398	+101951	L	3	44888	L	0	BO	92060815	152000	001500	540	G E=150,G=200,B=16
SINHM	JUPITER	03	-2.00	1033398	+101951	L	3	44889	L	0	BO	92060816	160600	001500	540	G E=147,G=205,B=15
SINHM	JUPITER	03	-2.00	1033398	+101951	L	3	44890	L	0	BO	92060816	164700	001500	540	G E=149,G=202,B=15
SINHM	JUPITER	03	-2.00	1033398	+101951	L	3	44891	L	0	BO	92060817	172900	001400	540	G E=161,G=192,B=16
SINHM	JUPITER	03	-2.00	1033398	+101951	L	3	44892	L	0	BO	92060818	181300	001200	540	G E=148,G=252,B=16
SINHM	JUPITER	03	-2.00	1033398	+101951	L	3	44893	L	0	BO	92060818	185200	001200	540	G E=134,G=230,B=16
SINHM	JUPITER	03	-2.00	1033398	+101951	L	3	44894	L	0	BO	92060819	193100	001500	540	G E=156,G=198,B=15
SINHM	JUPITER	03	-2.00	1033398	+101951	L	3	44895	L	0	BO	92060820	201300	001600	550	G E=171,G=212,B=15
PHCAL	SKY BKGD	07		1036003	+535547	L	3	43883	L	0		92012815	152100	004500	40	G E=126,B=20
PHCAL	SKY BKGD	07		1036003	+535547	L	3	43884	L	0		92012816	163100	003500	41	G E=131,B=22
PHCAL	SKY BKGD	07		1036003	+535547	L	3	43885	L	0		92012817	172900	003000	40	G E=142,B=20
PHCAL	SKY BKGD	07		1036003	+535547	L	3	43886	L	0		92012818	182200	002000	40	G E=136,B=20
PHCAL	SKY BKGD	07		1036003	+535547	L	3	43887	L	0		92012819	190600	001200	30	G E=101,B=20
PC029	HR4180	45	04.48	1037187	-552033	E	9	02551	2	00472	FU	92061703	035000	016000		V FES FOR IWP23313
MLOAB	HD 92449	45	4.280	1037187	-552033	L	3	44940	L	444	FU	92061706	060700	040000	XX5	G E=2X,G=5X,B=63
MINEB	HD 92938	21	4.820	1040273	-641216	H	3	44242	L	26768	FO	92032702	020500	000145	401	G G=170,B=30
PHCAL	NULL	99		1040443	-585713	L	2	18648	L	0		92013121	215500	000000	00	G B=10
PHCAL	WAVCAL	98		1040443	-585713	L	2	18649	S	0		92013123	231600	000001	?0	G E=10X,B=20
PHCAL	T FLOOD	99		1040443	-585713	H	2	18650	S	0		92013123	234600	000010	07	G B=90
PHCAL	WAVCAL	98	5.400	1040443	-585713	H	2	18651	S	0		92020100	001300	000022	22	G E=50X,B=33
PHCAL	WAVCAL	98		1040443	+585713	L	3	43904	S	0		92013121	211700	000002	?0	G E=10X,B=18

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	rmmmsstt	ECC	Comment
PHCAL	T FLOOD	99		1040443	-585713	H	3	43905	S	0		92013122	222000	000005	08 G	B=100
PHCAL	WAVCAL	98		1040443	-585713	H	3	43906	S	0		92013122	224400	000200	32 G	B=60X,B=35
USSBS	HD 92964	23	5.400	1040443	-585713	H	3	43907	L	16501	FO	92020100	005500	001400	402 G	G=170,B=33
SAMOW	HD 93027	12	3.720	1041183	-595240	L	3	44046	L	1055	FO	92022304	041900	000230	500 G	G=170,B=18
SAMOW	HD 93027	12	3.720	1041183	-595240	L	3	44046	S	1063	FO	92022304	043200	000100	400 G	G=140,B=18
SANOW	HD 93129AB	13	7.100	1042009	-591705	L	3	44139	L	4547	FO	92030823	234300	000215	X50 G	B=247,G=3X,B=18
SANOW	HD 93129AB	13	7.100	1042009	-591705	L	3	44140	S	4737	FO	92030901	011400	000120	500 G	G=177,B=20
SANOW	HD 93129AB	13	7.100	1042009	-591705	L	3	44140	L	4565	FO	92030901	012000	000020	500 G	G=234,B=20
SAOOW	HD 93160	12	7.820	1042107	-591844	L	3	44925	L	2618	FO	92061415	150400	000055	300 G	G=95,B=15
SAOOW	HD 93160	12	7.820	1042107	-591844	L	3	44925	S	2554	FO	92061415	152800	000120	300 G	G=114,B=15
SAOOW	HD 93160	12	7.820	1042107	-591844	L	3	44926	L	2577	FO	92061416	165700	000115	500 G	G=246,B=15
SAOOW	HD 93160	12	7.820	1042107	-591844	L	3	44926	S	2552	FO	92061417	171800	000400	X00 G	G=2X,B=15
EXNOM	TR16-94	20	9.860	1042322	-592452	L	3	44354	L	427	FO	92040722	225700	000600	300 G	G=95,B=14
SAOOW	HD 93222	12	8.110	1042404	-594940	L	3	44927	L	1862	FO	92061418	183400	000209	500 G	G=197,B=15
SAOOW	HD 93222	12	8.110	1042404	-594940	L	3	44927	S	1828	FO	92061418	185400	000110	500 G	G=178,B=15
SAOOW	HD 93249	13	8.420	1042468	-590536	L	3	44928	L	0	BO	92061420	202800	000200	500 G	G=247,B=15
SAOOW	HD 93249	13	8.420	1042468	-590536	L	3	44928	S	0	BO	92061420	203500	000300	G	
SANOW	HD 93249	13	8.420	1042469	-590537	L	3	44141	S	1748	FO	92030902	021900	000115	400 G	G=121,B=17
SANOW	HD 93249	13	8.400	1042469	-590537	L	3	44141	L	1747	FO	92030902	022500	000055	400 G	G=146,B=17
SANOW	HD 93249	13	8.420	1042469	-590537	L	3	44178	L	1724	FO	92031421	210500	000730	X00 G	G=1.5X,B=19
SAOOW	HD 93249	13	8.420	1042469	-590537	L	3	44924	L	1778	FO	92061413	134200	000110	400 G	G=147,B=15
SAOOW	HD 93249	13	8.420	1042469	-590537	L	3	44924	S	1764	FO	92061413	134600	000400	400 G	G=134,B=15
EXNOM	TR16-73	20	10.90	1043087	-592657	L	3	44386	L	113	FO	92041221	213900	006000	401 G	G=158,B=30
EXNOM	TR16-74	20	11.70	1043120	-592726	L	3	44385	L	509	SO	92041218	185100	006000	403 G	G=179,B=48
EXNOM	TR16-76	20	11.19	1043160	-592716	L	3	44352	L	163	FO	92040718	183200	006000	401 G	G=133,B=26
EXNOM	TR16-115	12	10.15	1043220	-592730	L	3	44353	L	359	FO	92040720	205600	001200	400 G	G=153,B=19
PHCAL	HD 00093521	12	7.040	1045336	+375004	L	2	18673	L	5191	FO	92061216	165400	000004	401 G	G=166,B=22
PHCAL	HD 93521	12	7.040	1045336	+375004	L	3	43291	L	5102	FO	91120204	043800	000012	500 G	G=175,B=18
PHCAL	HD 93521	12	7.040	1045336	+375004	L	3	43292	L	5082	FO	91120205	054800	000003	500 G	G=174,B=18
PHCAL	HD 93521	12	7.040	1045336	+375004	L	3	44220	L	5084	FO	92032411	115400	000003	400 G	G=166,B=17
PHCAL	HD 93521	12	7.040	1045336	+375004	H	3	44221	L	5181	FO	92032413	130900	000430	402 G	G=160,B=33
PHCAL	HD 93521	12	7.040	1045336	+375004	L	3	44610	L	4964	FO	92050618	182200	000003	500 G	G=167,B=11
PHCAL	HD 93521	12	7.040	1045336	+375004	L	3	44735	L	4934	FO	92052120	202300	000012	400 G	G=160,B=18
PHCAL	HD 93521	12	7.040	1045336	+375004	L	3	44736	L	5083	FO	92052121	214400	000003	400 G	G=160,B=18
PHCAL	HD 00093521	12	7.000	1045336	+375004	H	3	44900	L	4895	FO	92060916	162300	000430	402 G	G=163,B=34
PHCAL	HD 00093521	12	7.040	1045336	+375004	H	3	44914	L	4940	FO	92061118	181100	000430	402 G	G=157,B=31
NQ072	NGC3393	84	13.90	1046000	-245348	L	3	43870	L	00049	SO	92012705	050713	037000	333 V	
TRADE	BD+382182	20	11.36	1046229	+381607	H	3	43649	L	00118	FO	92011508	081128	039500	403 V	
NA030	HE 3-519	14	11.00	1051598	-601044	L	3	43590	L	00000	BO	92011013	133619	007000	300 V	
NC176	HD94910	23	07.29	1054105	-601111	L	3	43910	L	04444	FO	92020109	090254	000400	500 V	
NC176	HD94910	23	07.30	1054105	-601111	H	1	22317	L	04407	FO	92020109	091446	004500	501 V	
NA030	AG CAR	23	07.21	1054106	-601111	L	3	43570	S	04744	FO	92010814	144307	000300	300 V	
LENSS	AG CAR	27	7.200	1054106	-601111	L	3	44710	L	5141	FO	92051815	153800	000400	500 G	G=228,B=15
NA030	AG CAR	23	07.21	1054106	-601111	L	3	43570	L	04744	FO	92010814	144840	000300	500 V	
LENSS	AG CAR	27	7.200	1054106	-601111	L	3	44711	L	5147	FO	92051816	165500	000600	X01 G	G=1.5X,B=26
LENSS	AG CAR	27	7.200	1054106	-601111	H	3	44713	L	4956	FO	92051820	200700	012000	403 G	G=179,B=44
NC176	HD94910-NE	73	14.00	1054122	-601100	L	3	43911	L	00000	BO	92020110	102022	004500	200 V	NEBULA NEAR HD94910
SSNUC	JUP. N.	03	-2.30	1056300	+081054	L	3	43916	S	0		92020222	220900	019500	533 G	B=92,G=210,B=45
SSNUC	JUP. N.	03	-2.30	1056300	+081054	L	3	43916	L	0		92020300	000300	002000	X42 G	B=190,G=4X,B=40
SSNUC	JUP. S.	03	-2.30	1056350	+081031	L	3	43915	S	0	BO	92020217	172700	021000	434 G	B=125,G=180,B=55

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MO	Obs.date	Exptim	nnnnsstt	ECC	Comment
SSNUC	JUP. S.	03	-2.30	1056350	+081031	L	3	43915	L	0	BO	92020219	193200	002000	X33	G E=102,G=4X,B=45
SSNUC	JUPTIER	03	-2.30	1056405	+080949	L	3	43914	S	0	BO	92020212	120500	024500	XX2	G E=3X,G=2X,B=35
SSNUC	JUPTIER	03	-2.30	1056405	+080949	L	3	43914	L	0	BO	92020214	140600	002000	XX2	G E=5X,G=5X,B=32
SSNUC	JUPTIER	03	-2.00	1056534	+080820	L	3	43913	S	0		92020121	215400	022500	334	G E=124,G=125,B=60
SSNUC	JUPTIER	03	-2.00	1056534	+080820	L	3	43913	L	0		92020123	232900	002000	X33	G E=108,G=3X,B=45
SSNUC	IO TORUS	07		1057021	+080722	L	3	43912	L	0	BO	92013112	122000	048000	336	G E=139,G=120,B=75
BENSA	HD 95418	30	2.370	1058495	+563902	L	3	43471	L	2439	FU	91122508	080700	000004	500	G G=205,B=17
NSO58	IO TORUS	07	99.99	1100253	+074338	L	3	43697	L	00000	BO	92012106	060132	030000	033	V GUIDING ON IO
ICNMM	JUP S AU	03	-2.40	1100260	+074329	L	3	43696	L	0	BO	92012102	022000	001800	X01	G G=3X,B=25
ICNMM	JUP S AU	03	-2.40	1100310	+074254	L	3	43693	L	0	BO	92012023	234400	001300	X00	G G=3X,B=18
ICNMM	JUP S AU	03	-2.40	1100310	+074254	L	3	43694	L	0	BO	92012100	004200	001300	X00	G G=3X,B=18
ICNMM	JUP S AU	03	-2.40	1100310	+074254	L	3	43695	L	0	BO	92012101	013100	001500	X01	G G=3X,B=21
ICNMM	IO	04	5.200	1100361	+074219	L	3	43692	L	0	BO	92012008	085100	076000	327	G E=10X,G=155,B=90
NSO58	IO TORUS	07	99.90	1100408	+074144	L	3	43691	L	00000	BO	92012005	051310	018000	130	V 50% OVEREXPOSED
NSO59	JUPTIER	03		1101170	+073716	L	3	43669	L	0	BO	92011712	124400	001500	X41	G E=124,G=1.5X,B=22
NSO59	JUPTIER	03		1101170	+073716	L	3	43670	L	0	BO	92011713	133300	001500	X40	G E=130,G=1.5X,B=20
NSO59	JUPTIER	03	99.99	1101177	+073716	L	3	43669	L	00000		92011711	000000	001500	600	V
NSO59	JUPTIER	03	-32.30	1101177	+073716	L	3	43670	L	00000	BO	92011713	133340	001500	600	V
NSO59	JUPTIER	03	-32.30	1101178	+073717	L	3	43665	L	00000	BO	92011708	082413	001500	600	V
NSO59	JUPTIER	03	-32.30	1101178	+073717	L	3	43666	L	00000	BO	92011709	090631	001500	600	V
NSO59	JUPTIER	00	-32.30	1101178	+073717	L	3	43667	L	00000	BO	92011709	095314	001500	600	V
NSO59	JUPTIER	03	-32.30	1101178	+073717	L	3	43668	L	00000	BO	92011710	104222	001500	600	V
NSO59	JUPTIER	03	-32.30	1101178	+073717	L	3	43671	L	00000	BO	92011714	142153	001500	600	V
SJNHM	JUPTIER	03	-2.30	1102091	+073023	L	3	43620	L	0	BO	92011206	062600	001000	X40	G E=138,G=2X,B=19
SJNHM	JUPTIER	03	-2.30	1102119	+073000	L	3	43611	L	0	BO	92011200	000300	001500	X50	G E=197,G=3X,B=20
SJNHM	JUPTIER	07		1102119	+073000	L	3	43612	L	0	BO	92011200	004700	002500	30	G E=65,B=15
SJNHM	JUPTIER	03	-2.30	1102119	+073000	L	3	43613	L	0	BO	92011201	013800	001500	X50	G E=171,G=3X,B=20
SJNHM	JUPTIER	03	-2.30	1102119	+073000	L	3	43614	L	0	BO	92011202	021700	001500	X50	G E=183,G=3X,B=20
SJNHM	JUPTIER	03	-2.30	1102119	+073000	L	3	43615	L	0	BO	92011202	025900	001500	X50	G E=187,G=3X,B=20
SJNHM	JUPTIER	03	-2.30	1102119	+073000	L	3	43616	L	0	BO	92011203	034300	001800	X50	G E=205,G=3X,B=20
SJNHM	JUPTIER	03	-2.30	1102119	+073000	L	3	43617	L	0	BO	92011204	042500	001800	X50	G E=207,G=3X,B=20
SJNHM	JUPTIER	03	-2.30	1102119	+073000	L	3	43618	L	0	BO	92011205	050700	002000	X50	G E=210,G=3X,B=20
SJNHM	JUPTIER	03	-2.30	1102119	+073000	L	3	43619	L	0	BO	92011205	055100	001200	X40	G E=169,G=3X,B=20
NAO24	HD 96548	11	07.89	1104180	-651421	H	3	43783	L	02605	FO	92012411	111922	002500	440	V
CM88K	HD 96548	11	7.850	1104180	-651421	H	3	43717	L	2586	FO	92012212	124900	003500	352	G E=232,G=115,B=38
NAO24	HD 96548	11	07.91	1104180	-651421	H	3	43748	L	02569	FO	92012311	110029	003500	450	V
WNPC	HD 96548	11	7.850	1104180	-651421	H	3	43749	L	2539	FO	92012312	122100	003500	352	G E=244,G=132,B=40
WNPC	HD 96548	11	7.850	1104180	-651421	H	3	43784	L	2598	FO	92012412	122500	002500	452	G E=198,G=160,B=35
WNPC	HD 96548	11	7.850	1104180	-651421	H	3	43819	L	2496	FO	92012512	124700	003500	452	G E=220,G=142,B=38
WNPC	HD 96548	11	7.850	1104180	-651421	H	3	43845	L	2437	FO	92012612	121100	003500		G e=218,c=180,b=35
ISNIS	HD 96715	12	8.300	1105257	-594134	H	3	43980	L	1582	FO	92021312	122800	015000	X04	G G=2.5X,B=58
ISNIS	HD 96715	12	8.300	1105257	-594134	H	3	43981	L	1524	FO	92021316	165000	015000	206	G G=10X,B=72
NAO50	HD97048	30	08.76	1106396	-772301	L	1	22331	L	01200	FO	92020410	101620	000500	501	V
NAO50	HD97048	30	08.73	1106396	-772301	L	3	43926	L	01238	FO	92020410	102557	002500	500	V
NAO50	HD97048	30	08.74	1106396	-772301	L	1	22332	L	01223	FO	92020410	105745	000500	501	V
NAO50	HD97048	30	08.87	1106396	-772301	L	3	43933	L	01084	FO	92020510	103150	002500	500	V
ISNIS	HD 96946	13	8.500	1106450	-602917	H	3	43941	L	1215	FO	92020612	123100	025000	X06	G G=2X,B=80
DAOIL	HR 4343	32	4.480	1109117	-223304	L	3	44752	L	396	FU	92052414	140400	000050	X00	G G=5X,B=14
DAOIL	HR 4343	32	4.480	1109117	-223304	L	3	44752	S	397	FU	92052414	141100	000230	X00	G G=5X,B=14
DAOIL	HR 4343	32	4.480	1109117	-223304	L	3	44753	L	411	FU	92052414	144600	000140	200	G G=10X,B=20

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MO	Obs.date	Exptim	mmmsstt	ECC	Comment
DAOIL	HR 4343	32	4.480	1109117	-223304	L	3	44753	S	403	FU	92052414	145300	000500	?00	G G=10X,B=20
NQ020	3C254	85	18.00	1111533	+405342	L	1	22410	L	00000	BO	92021807	071711	012000	302	V
NQ020	3C254	85	18.00	1111533	+405342	L	3	44016	L	00000	BO	92021809	092206	020500	201	V
NE057	NGC 3610	81	11.80	1115308	+590334	L	3	43547	L	0	BO	92010408	083000	060000	207	G G=110,B=90
NE057	NGC 3610	81	11.80	1115309	+590335	E	9	02522	2	00000	BO	92010407	075100	016000		V FES FOR SWP 43547
WDNSK	PG 1116+026	37	14.57	1116382	+023656	L	3	43654	L	0	BO	92011615	151700	033000	404	G G=190,B=60
NE057	NGC3640	81	11.40	1118324	+033032	E	9	02523	2	00000	BO	92010607	074500	016000		V FOR SWP43555
NE057	NGC 3640	81	11.40	1118324	+033032	L	3	43555	L	273	SO	92010608	080800	060000	3X5	G E=4X,G=105,B=65
XINCS	A1118-61	59	12.00	1118452	-613831	L	3	44077	L	353	SO	92022821	215600	012000	302	G G=80,B=32
IGNLD	FEIGE 40	21	11.10	1118540	+113600	H	3	43288	L	148	FO	91120118	180100	031000	306	G G=165,B=73
TBOIS	HD 99211	31	4.100	1122229	-172433	L	3	44997	L	531	FU	92062415	152500	000102	501	G G=210,B=23
WDNGB	1123+189	37	14.06	1123419	+185547	L	3	44427	L	65	SO	92041810	102500	001500	400	G G=165,B=15
WDNGB	1123+189	37	14.06	1123419	+185547	L	3	44428	S	65	SO	92041811	113300	004000	400	G G=160,B=20
WRNPC	NGC 3690	88	12.10	1125415	+585016	L	3	44449	L	295	SO	92042109	095300	036000	305	G G=160,B=70
PHCAL	WAVCAL	98		1126412	-041032	L	2	18667	S	0		92060117	173800	000001	?0	G E=10X,B=20
PHCAL	TFLOOD	99		1126412	-041032	L	2	18668	S	0		92060118	180600	000010	09	G B=125
PHCAL	WAVCAL	98		1126412	-041032	H	2	18669	S	0		92060118	183500	000022	31	G E=60X,B=27
PHCAL	WAVCAL	98		1126412	-041032	L	3	44824	S	0		92060115	155000	000002	?0	G E=10X,B=16
PHCAL	TFLOOD	99		1126412	-041032	L	3	44825	S	0		92060116	164900	000005	09	G B=110
PHCAL	WAVCAL	98		1126412	-041032	H	3	44826	S	0		92060117	171900	000200	32	G E=60X,B=35
XROBW	PG 1126-041	84	15.40	1126436	-040735	L	3	44822	L	0	BO	92060107	073000	009000	331	G E=96,G=56,B=26
XROBW	PG 1126-041	84	15.40	1126436	-040735	L	3	44823	L	0	BO	92060112	121900	011000	341	G E=139,G=65,B=30
NI014	SYMUS	57	10.51	1129550	-650836	H	3	43560	L	00251	FO	92010707	074800	009000	160	V
NI014	SYMUS	57	10.51	1129550	-650836	L	1	22205	L	00251	FO	92010709	092045	002500	661	V
NI014	SYMUS	57	10.51	1129550	-650836	L	3	43561	L	00251	FO	92010709	095135	003000	360	V
NI014	SYMUS	57	10.50	1129550	-650836	L	1	22206	L	00254	FO	92010710	105152	000500	351	V
NI014	SYMUS	57	10.53	1129550	-650836	L	3	43562	L	00247	FO	92010711	111125	000500	160	V
NI014	SYMUSCAE	57	10.61	1129550	-650836	L	1	22776	L	00230	FO	92041001	014425	000800	341	V
NI014	SYMUSCAE	57	10.66	1129550	-650836	L	3	44366	L	00220	FO	92041002	021311	000800	250	V
NI014	SYMUSCAE	57	10.56	1129550	-650836	L	1	22777	L	00240	FO	92041002	025520	003000	562	V
NI014	SYMUSCAE	57	10.61	1129550	-650836	L	3	44367	L	00231	FO	92041003	033202	003000	360	V
NI014	SYMUSCAE	57	10.60	1129550	-650836	H	3	44368	L	00233	FO	92041004	043013	006500	510	V
SANOW	HD 101205	13	6.480	1135599	-630545	L	3	44138	L	7627	FO	92030821	214300	000014	400	G G=165,B=17
SANOW	HD 101205	13	6.480	1135599	-630545	L	3	44138	L	7665	FO	92030821	215000	000030	500	G G=204,B=17
NQ022	NGC3783	84	13.99	1136329	-372741	L	3	43472	L	00045	SO	91122510	100436	008500	350	V
NQ022	NGC3783	84	13.99	1136329	-372741	L	1	22078	L	00045	SO	91122511	113622	004500	451	V
NQ022	NGC3783	84	13.99	1136330	-372742	L	3	43473	L	00045	SO	91122512	122556	003300	340	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	43539	L	238	SO	92010216	161000	008000	351	G E=211,G=95,B=28
NQ022	NGC3783	84	13.00	1136330	-372742	L	3	43438	L	00000	BO	91122110	100504	008000	350	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	43540	L	227	SO	92010218	182400	008000	351	G E=230,G=100,B=27
NQ022	NGC 3783	84	13.00	1136330	-372742	L	1	22043	L	00000	BO	91122111	113454	005000	560	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	43541	L	216	SO	92010220	203500	008000	351	G E=223,G=105,B=27
NQ022	NGC3783	84	13.00	1136330	-372742	L	3	43439	L	00000	BO	91122112	123013	003000	330	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	43556	L	220	SO	92010623	233200	008000	341	G E=143,G=80,B=25
NQ022	NGC3783	84	13.44	1136330	-372742	L	3	43435	L	00074	SO	91122714	140643	008500	351	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	43557	L	214	SO	92010701	014700	006000	341	G E=178,G=90,B=30
NQ022	NGC3783	84	13.55	1136330	-372742	L	1	22101	L	00067	SO	91122715	154335	004500	461	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	43587	L	171	SO	92011003	033800	008000	340	G E=147,G=59,B=18
NQ022	NGC3783	84	13.55	1136330	-372742	L	3	43676	L	00067	SO	92011808	080122	008000	350	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	43598	L	169	SO	92011005	055600	005000	340	G E=147,G=59,B=18

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
NQ022	NGC3783	84	13.55	1136330	-372742	L	1	22269	L	00067	SO	92011809	092844	005000	350	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	43636	L	229	SO	92011403	035000	008000	351	G E=214,G=82,B=26
NQ022	NGC 3783	84	12.19	1136330	-372742	L	3	43716	L	00225	SO	92012210	101502	006000	340	V PREAD
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	43637	L	229	SO	92011406	060800	004000	330	G E=117,G=49,B=20
NQ022	NGC3783	84	13.55	1136330	-372742	L	3	43894	L	00067	SO	92013005	053129	008000	351	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	43871	L	245	SO	92012720	200900	008000	351	G E=207,G=97,B=25
NQ022	NGC3783	84	13.53	1136330	-372742	L	1	22304	L	00068	SO	92013007	070140	004000	452	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	43872	L	249	SO	92012722	221900	006000	351	G E=182,G=74,B=25
NQ022	NGC3783	84	13.51	1136330	-372742	L	3	43895	L	00069	SO	92013007	075131	008000	351	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	43922	L	253	SO	92020316	164900	008000	351	G E=235,G=92,B=25
NQ022	NGC 3783	84	13.77	1136330	-372742	L	3	44176	L	00055	SO	92031409	091224	007500	340	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	43945	L	207	SO	92020712	121900	007500	351	G E=200,G=97,B=25
NQ022	NGC 3783	84	13.00	1136330	-372742	L	1	22594	L	00000	BO	92031410	103225	001800	331	V PREAD
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	43946	L	220	SO	92020714	142900	005000	341	G E=166,G=70,B=21
NQ022	NGC3783	84	13.58	1136330	-372742	L	3	44189	L	00065	SO	92031804	041717	010000	350	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	43962	L	213	SO	92021112	123100	007500	351	G E=214,G=80,B=24
NQ022	NGC3783	84	13.58	1136330	-372742	L	1	22624	L	00065	SO	92031806	060209	004500	451	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	43963	L	226	SO	92021114	143100	006000	351	G E=184,G=75,B=25
NQ022	NGC 3783	84	13.73	1136330	-372742	L	3	44208	L	00056	SO	92032204	043031	010000	350	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	43995	L	200	SO	92021511	115400	007500	351	G E=184,G=73,B=25
NQ022	NGC 3783	84	13.73	1136330	-372742	L	1	22659	L	00056	SO	92032206	061653	004500	352	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	43996	L	213	SO	92021514	140800	007500	351	G E=228,G=73,B=25
NC091	NGC 3783	84	13.56	1136330	-372742	L	3	44237	L	00066	SO	92032607	075946	011000	350	V PREAD
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44020	L	195	SO	92021913	135500	007500	351	G E=221,G=81,B=25
NC091	NGC 3783	84	13.00	1136330	-372742	L	1	22691	L	00000	BO	92032609	095612	004500	451	V PREAD
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44021	L	200	SO	92021916	160300	006000	341	G E=172,G=70,B=25
NQ022	NGC 3783	84	13.39	1136330	-372742	L	3	44267	L	00077	SO	92033004	044310	010000	450	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44048	L	177	SO	92022317	175400	007500	351	G E=188,G=90,B=25
NQ022	NGC 3783	84	13.44	1136330	-372742	L	1	22713	L	00074	SO	92033006	063145	004500	340	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44049	L	162	SO	92022320	200500	004500	341	G E=143,G=63,B=25
NQ022	NGC3783	84	13.53	1136330	-372742	L	3	44307	L	00068	SO	92040301	015046	010000	350	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44072	L	35	FO	92022718	184900	007500	350	G E=194,G=100,B=20
NQ022	NGC3783	84	13.51	1136330	-372742	L	1	22743	L	00069	SO	92040303	033722	004500	341	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44099	L	124	SO	92030216	160900	007500	341	G E=174,G=74,B=24
NQ022	NGC3783	84	13.51	1136330	-372742	L	3	44308	L	00069	SO	92040304	042945	003000	330	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44100	L	124	SO	92030218	182200	002700	330	G E=91,G=42,B=19
NQ022	NGC3783	84	13.42	1136330	-372742	L	3	44682	L	00075	SO	92051704	040842	008500	350	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44126	L	106	SO	92030616	164700	008000	351	G E=183,G=70,B=25
NQ022	NGC 3783	84	13.67	1136330	-372742	L	3	44731	L	00060	SO	92052100	004220	008500	350	V
AGNEP	NGC 3783	84	13.50	1136330	+372741	L	3	44149	L	89	SO	92031016	162100	010000	351	G E=215,G=89,B=26
NQ022	NGC 3783	84	13.51	1136330	-372742	L	1	23144	L	00069	SO	92052023	235311	004000	451	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44349	L	73	SO	92040709	093700	009000	351	G E=197,G=99,B=25
NQ022	NGC 3783	84	13.60	1136330	-372742	L	1	23145	L	00064	SO	92052102	021749	004000	450	V 4 MF MISSING
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44350	L	74	SO	92040712	120500	004800	341	G E=133,G=66,B=22
NQ022	NGC3783	84	13.48	1136330	-372742	L	1	23169	L	00071	SO	92052501	014442	004500	450	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44381	L	74	SO	92041111	112000	009000	352	G E=207,G=108,B=35
NQ022	NGC3783	84	13.51	1136330	-372742	L	3	44760	L	00069	SO	92052500	000547	009000	350	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44408	L	73	SO	92041510	102800	009000	351	G E=230,G=100,B=30
NQ022	NGC3783	84	13.39	1136330	-372742	L	3	44803	L	00077	SO	92052903	034709	009000	350	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44409	L	73	SO	92041513	130000	007500	351	G E=187,G=80,B=27

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	EES	MD	Obs.date	Exptim	uuuuusstt	ECC	Comment
NQ022	NGC3783	84	13.33	1136330	-372742	L	1	23204	L	00081	SO	92052905	052401	004500	451	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44410	L	75	SO	92041515	151700	009000	351	G B=220,G=95,B=26
NQ022	NGC3783	84	13.42	1136330	-372742	L	3	44804	L	00075	SO	92052906	061714	003000	330	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44434	L	79	SO	92041910	100500	007500	341	G B=178,G=100,B=30
NA170	NGC3783	84	13.00	1136330	-372742	L	3	44830	L	00000	BO	92060202	022551	009000	351	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44435	L	80	SO	92041912	121600	004000	340	G B=127,G=65,B=20
NA170	NGC3783	84	13.00	1136330	-372742	L	1	23241	L	00000	BO	92060204	040056	004500	451	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44461	L	80	SO	92042309	095700	009000	351	G B=199,G=85,B=27
NQ022	NGC3783	84	13.51	1136330	-372742	L	3	44873	L	00069	SO	92060601	014849	009000	350	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44486	L	81	SO	92042710	105900	009000	351	G B=201,G=85,B=28
NQ022	NGC3783	84	13.48	1136330	-372742	L	1	23260	L	00071	SO	92060603	032703	004500	451	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44492	L	99	SO	92050114	141500	010000	351	G B=225,G=100,B=25
NQ022	NGC 3783	84	13.48	1136330	-372742	L	3	44874	L	00071	SO	92060604	042103	002700	330	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44581	L	111	SO	92050508	081300	009000	352	G B=222,G=104,B=32
NQ022	NGC 3783	84	13.42	1136330	-372742	L	3	44992	L	00075	SO	92062322	220304	008500	350	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44627	L	148	SO	92050907	073100	009000	351	G B=250,G=99,B=26
NQ022	NGC 3783	84	13.00	1136330	-372742	L	3	44993	L	00000	BO	92062400	002458	006000	340	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44628	L	148	SO	92050910	100400	008500	351	G B=213,G=94,B=25
NQ022	NGC3783	84	13.51	1136330	-372742	L	3	45010	L	00069	SO	92062522	221722	009000	350	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44629	L	147	SO	92050912	123800	008500	351	G B=186,G=100,B=27
NQ022	NGC3783	84	13.45	1136330	-372742	L	1	23376	L	00073	SO	92062522	225508	004500	461	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44659	L	185	SO	92051308	081300	008500	354	G B=218,G=130,B=53
NQ022	NGC3783	84	13.00	1136330	-372742	L	3	45011	L	00000	BO	92062600	004529	003000	230	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44660	L	182	SO	92051310	103100	003000	330	G B=95,G=60,B=20
NQ022	NGC 3783	84	13.00	1136330	-372742	L	3	45038	L	00000	BO	92062922	221431	009000	350	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44907	L	371	SO	92061010	100000	009000	351	G B=233,G=100,,B=25
NQ022	NGC 3783	84	13.00	1136330	-372742	L	1	23406	L	00000	BO	92062923	235011	004500	453	V
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44908	L	372	SO	92061012	122300	002500	330	G B=93,G=48,B=17
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44918	L	424	SO	92061210	100100	009000	351	G B=218,G=125,B=26
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44921	L	402	SO	92061406	060600	009000	351	G B=195,G=100,B=22
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44922	L	396	SO	92061408	083000	002900	330	G B=90,G=54,B=15
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44936	L	389	SO	92061616	162300	002500	331	G B=91,G=55,B=26
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44949	L	350	SO	92061805	054500	008500	351	G B=214,G=91,B=23
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44960	L	364	SO	92061808	081500	003500	330	G B=114,G=49,B=20
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44962	L	389	SO	92062005	054000	008500	351	G B=185,G=91,B=26
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44963	L	383	SO	92062008	080300	008500	351	G B=224,G=92,B=27
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44964	L	386	SO	92062010	102400	008500	351	G B=210,G=98,B=29
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	44974	L	366	SO	92062205	054400	008500	351	G B=221,G=91,B=27
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	45024	L	502	SO	92062806	060500	008500	351	G B=198,G=99,B=26
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	45025	L	495	SO	92062808	083400	009000	351	G B=243,G=96,B=29
AGNEP	NGC 3783	84	13.50	1136330	-372741	L	3	45026	L	399	SO	92062811	110800	009000	351	G B=223,G=110,B=30
AGNEP	NGC 3783	84	13.50	1136331	-372741	L	3	43921	L	61	FU	92020314	142700	008000	351	G B=200,G=100,B=28
PC029	HR4522	45	04.79	1144050	-605401	L	3	44939	L	00356	FU	92061622	222358	030000	751	V
GSNAB	HD 102350	45	4.110	1144050	-605401	L	3	44722	L	484	FU	92051916	163700	004000	321	G B=41,G=117,B=22
NC156	HD 102328	47	05.66	1144156	+555423	L	1	22012	L	16844	FO	91121713	132232	000120	301	V
NC156	HD 102328	47	05.62	1144156	+555423	L	3	43409	L	17406	FO	91121713	133335	004500	100	V PREPD
NC156	HD 102328	47	05.65	1144156	+555423	L	1	22013	S	17040	FO	91121714	144426	000200	201	V
NC156	HD 102328	47	05.65	1144156	+555423	L	1	22013	L	17040	FO	91121714	143353	000500	401	V
PPNCG	HD 102647	30	2.140	1146306	+145106	H	3	43327	L	2780	FU	91120601	013600	000200	502	G G=247,B=39
PPNCG	HD 102647	30	2.140	1146306	+145106	L	3	43332	L	2904	FU	91120608	080600	000001	400	G G=150,B=19

PRO	Object	CL	MAG	R.A.	DEC	D C	Image	A	FES	MD	Obs.date	Exptim	nnnnsstt	ECC	Comment
USSBS	HD 102870	41	3.600	1148054	+020248	H 3	43652	L	751	FU	92011609	094200	010500	502 G	G=200,B=40
NA048	NOVA GQMUS	55	16.00	1149349	-665432	E 9	02539	2	00000	BO	92041601	015000	016000	V	FES FOR SWP 44416
CWSS	GQ MUS	55		1149350	-665539	L 3	44416	L	0	BO	92041602	020400	088000	309 G	G=180,B=101
USSBS	HD 104565	13	9.400	1159536	-575752	L 3	43420	L	619	FO	91121902	024600	000130	300 G	G=47,B=18
USSBS	HD 104565	13	9.400	1159536	-575752	L 3	43420	S	608	FO	91121902	025400	000100	200 G	G=36,B=18
USSBS	HD 104565	13	9.400	1159536	-575752	L 3	44009	L	672	FO	92021704	040600	001000	550 G	E=197,G=210,B=18
NQ100	NGC4051	84	12.30	1200364	+444835	L 3	44482	L	00000	BO	92042605	052353	020300	330 V	
NQ072	NGC 4051	84	13.65	1200364	+444835	L 1	23153	L	00061	SO	92052200	000444	012000	461 V	
NC083	HD 104901	25	07.64	1202112	-614306	L 1	23122	L	03263	FO	92051805	050605	000200	700 V	
NC083	HD104901	25	07.64	1202113	-614306	L 3	44705	L	03246	FO	92051804	042335	000700	600 V	
NC083	CPD-612934	20	10.27	1202124	-614242	L 1	23120	L	00312	FO	92051802	021644	002000	700 V	
NC083	CPD-612934	20	10.26	1202124	-614242	L 1	23123	L	00314	FO	92051805	054610	000500	500 V	
NC083	GC 16500	48	08.28	1202130	-614325	L 3	44703	L	01840	FO	92051801	013958	002000	330 V	
NC083	GC16500	48	08.25	1202130	-614325	L 3	44704	L	01883	FO	92051802	025546	004000	550 V	
NC083	GC 16500	48	08.24	1202130	-614325	L 1	23121	L	01914	FO	92051803	034220	000300	301 V	
TBOIS	HD 105452	40	4.000	1205497	-242700	L 3	44996	L	562	FU	92062413	135500	000147	501 G	G=200,B=22
NQ148	NGC 4151	84	12.32	1208004	+394101	L 3	43340	L	00201	SO	91120709	095813	006000	360 V	
NQ148	NGC 4151	84	12.32	1208004	+394101	L 1	21965	L	00201	SO	91120711	110841	003500	461 V	
NQ148	NGC4151	84	12.33	1208004	+394101	L 3	43341	L	00198	SO	91120711	115941	004000	350 V	
NQ148	NGC4151	84	12.33	1208004	+394102	L 1	21966	L	00198	SO	91120712	124526	002000	350 V	
NQ148	NGC 4151	84	12.34	1208010	+394102	L 3	43285	L	00197	SO	91120113	131151	006000	360 V	
NQ148	NGC 4151	84	12.34	1208010	+394102	L 1	21904	L	00196	SO	91120114	142541	003500	461 V	
NQ148	NGC 4151	84	12.39	1208010	+394102	L 3	43286	L	00189	SO	91120115	150811	003500	350 V	
NQ148	NGC 4151	84	12.39	1208010	+394102	L 1	21905	L	00188	SO	91120115	155143	002700	360 V	
NQ148	NGC 4151	84	12.41	1208010	+394102	L 3	43287	L	00185	SO	91120116	162741	002000	340 V	
PHOAL	NGC4151	84	12.32	1208010	+394102	L 3	43323	L	00200	SO	91120512	125212	007000	360 V	
PHOAL	NGC4151	84	12.34	1208010	+394102	L 1	21943	L	00197	SO	91120514	141052	003500	461 V	
PHOAL	NGC4151	84	12.34	1208010	+394102	L 3	43324	L	00196	SO	91120514	145423	005000	360 V	
PHOAL	NGC4151	84	12.33	1208010	+394102	L 1	21944	L	00198	SO	91120515	155110	002000	352 V	
PHOAL	NGC4151	84	12.34	1208010	+394102	L 3	43325	L	00197	SO	91120516	162230	002500	340 V	
NQ148	NGC4151	84	12.30	1208010	+394102	L 3	43314	L	00204	SO	91120409	095511	006000	360 V	
NQ148	NGC4151	84	12.29	1208010	+394102	L 1	21930	L	00205	SO	91120411	110304	003500	461 V	
NQ148	NGC4151	84	12.37	1208010	+394102	L 3	43315	L	00192	SO	91120411	114628	004500	350 V	
NQ148	NGC4151	84	12.32	1208010	+394102	L 1	21931	L	00200	SO	91120412	123856	002000	351 V	
NQ148	NGC4151	84	12.30	1208010	+394102	L 3	43333	L	00203	SO	91120613	134618	007000	460 V	
NQ148	NGC4151	84	12.34	1208010	+394102	L 1	21956	L	00197	SO	91120615	150348	003500	461 V	
NQ148	NGC4151	84	12.30	1208010	+394102	L 3	43334	L	00204	SO	91120615	154703	003500	350 V	
NQ148	NGC4151	84	12.32	1208010	+394102	L 1	21957	L	00200	SO	91120616	162406	002500	451 V	
NQ148	NGC4151	84	12.17	1208010	+394102	L 3	43373	L	00228	SO	91121315	150739	003000	350 V	
NQ148	NGC4151	84	12.21	1208010	+394102	L 3	43392	L	00221	SO	91121516	161023	003700	360 V	
PHOAL	BD+75 325	10	09.64	1208122	+393606	L 3	43284	L	00546	FO	91120112	121817	000017	500 V	
USSBS	HD 105937	21	4.200	1209017	-520524	H 3	44211	L	659	FU	92032212	121200	000048	502 G	G=195,B=35
PQ101	PG 1211+14	84	14.00	1211449	+141953	L 3	44962	L	00000	BO	92061921	215934	010000	351 V	
PQ101	PG 1211+14	84	14.00	1211449	+141953	L 1	23329	L	00000	BO	92061923	234430	007000	302 V	
PQ101	PG1211+143	84	14.00	1211449	+141953	L 3	44963	L	00000	BO	92062001	010018	009000	351 V	
WRNAF	NGC 4214	82	10.80	1213090	+363616	L 3	44098	L	0	BO	92030212	122800	014200	402 G	G=152,B=34
WRNAF	NGC 4214	82	10.80	1213090	+363616	L 3	44125	L	0	BO	92030613	135200	009000	301 G	G=118,B=30
WRNAF	NGC 4214	82	10.80	1213090	+363616	L 3	44148	L	541	FU	92031012	120800	016500	402 G	G=186,B=38
WRNAF	NGC 4214	82	10.80	1213091	+363617	L 3	44047	L	0	BO	92022313	135900	016000	302 G	G=110,B=35
WRNAF	NGC 4214	82	10.80	1213091	+363617	L 3	44071	L	0	BO	92022714	143100	012042	301 G	G=73,B=24

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
NC083	SAO239853	40	09.77	1217338	-533853	L	1	23124	L	00489	FO	92051805	054126	001200	300 V	PREAD
NA013	PG1220-056	16	14.40	1220246	-053628	L	3	44814	L	00000	BO	92053100	000606	010000	701 V	
NA013	PG1220-056	16	14.40	1220246	-053628	L	1	23226	L	00000	BO	92053101	015128	003000	401 V	
PNOSH	NGC 4361	70	12.80	1221550	-183032	L	3	44988	L	401	SO	92062318	182300	001500	X30 G	E=88,G=3X,B=16
PNOSH	NGC 4361	70	12.80	1221550	-183032	L	3	44989	L	401	SO	92062319	192100	000500	530 G	E=43,G=224,B=13
IGNLD	BD+49 2137	22	10.87	1222347	+492507	H	3	44356	L	00182	FO	92040802	021908	038900	402 V	OFFSET REF.PNT=-165,
PHCAL	HD 108248	20	1.300	1223480	-624919	H	3	44493	L	11702	FU	92050117	173100	000002	X03 G	G=2X,B=50
USSBS	HD 108483	21	3.900	1225195	-495714	H	2	18652	L	709	FU	92020101	014200	000036	501 G	G=200,B=30
NQ113	3C273	85	13.17	1226332	+021943	L	3	43342	L	00094	SO	91120713	135906	003000	340 V	
NQ113	3C273	85	13.08	1226332	+021943	L	3	43343	L	00102	SO	91120715	152501	005000	360 V	
NQ113	3C273	85	13.17	1226332	+021943	L	1	21967	L	00094	SO	91120714	144258	003000	401 V	
NQ113	3C273	85	13.08	1226332	+021943	L	1	21968	L	00102	SO	91120716	162018	002500	400 V	
NQ113	3C 273	85	13.02	1226332	+021943	L	3	43424	L	00107	SO	91121909	094821	003000	350 V	
NQ113	3C 273	85	13.06	1226332	+021943	L	1	22032	L	00102	SO	91121910	103149	003000	501 V	
NQ113	3C 273	85	13.07	1226332	+021943	L	3	43425	L	00103	SO	91121911	111646	008000	460 V	
NQ113	3C 273	85	13.13	1226332	+021943	L	1	22033	L	00097	SO	91121912	124359	004000	601 V	
NQ113	3C 273	00	99.99	1226332	+021942	L	3	43550	L	00000	BO	92010511	110610	004050	V	
NQ113	3C 273	00	99.99	1226332	+021942	L	1	22191	L	00000	BO	92010511	002958	004002	V	
NQ113	3C273	85	13.20	1226332	+021943	L	3	43677	L	00091	SO	92011811	111953	003000	350 V	
NQ113	3C273	85	13.20	1226332	+252143	L	1	22270	L	00091	SO	92011812	120122	003000	500 V	
NQ113	3C273	85	12.96	1226332	+021942	L	3	43908	L	00113	SO	92020106	060121	003000	350 V	
NQ113	3C273	85	12.95	1226332	+021942	L	1	22316	L	00114	SO	92020106	064148	003000	351 V	
NQ113	3C273	85	12.95	1226332	+021943	L	3	43909	L	00114	SO	92020107	071549	004000	350 V	
NQ113	3C 273	85	12.94	1226332	+021943	L	1	22395	L	00115	SO	92021508	082347	003000	400 V	
NQ113	3C 273	85	13.00	1226332	+021943	L	3	43994	L	00109	SO	92021509	090502	003000	350 V	
NQ113	3C273	85	13.00	1226332	+021943	L	1	22396	L	00109	SO	92021510	100137	002500	400 V	
NQ113	3C273	85	12.71	1226332	+021943	L	1	22192	L	00141	SO	92010511	114136	004000	601 V	
NQ113	3C 273	85	13.02	1226332	+021943	L	3	43551	L	00107	SO	92010512	124339	008000	560 V	
NQ113	3C 273	85	13.25	1226332	+021943	L	1	22193	L	00087	SO	92010514	141135	003500	501 V	
NQ113	3C273	85	12.99	1226332	+021943	L	3	44480	L	00110	SO	92042601	015024	003000	350 V	
NQ113	3C273	85	12.97	1226332	+021943	L	1	22889	L	00112	SO	92042602	022729	003000	552 V	
NQ113	3C273	85	12.95	1226332	+021943	L	3	44481	L	00114	SO	92042603	031255	006000	460 V	
NQ113	3C273	87	12.83	1226332	+021941	L	3	44608	L	00127	SO	92050605	052518	003000	350 V	
NQ113	3C273	87	12.83	1226332	+021941	L	1	23036	L	00127	SO	92050605	055956	003000	500 V	
NQ113	3 C 273	87	12.92	1226332	+021943	L	3	44732	L	00117	SO	92052103	035309	003000	350 V	
NQ113	3 C 273	87	12.88	1226332	+021943	L	1	23146	L	00121	SO	92052104	043035	003000	500 V	
NQ113	3 C 273	87	12.87	1226332	+021943	L	3	44733	L	00123	SO	92052105	050942	006000	350 V	
NQ113	3 C 273	87	12.87	1226332	+021943	L	1	23147	L	00123	SO	92052106	061736	003000	600 V	
NQ113	3C273	85	12.99	1226332	+021943	L	3	44871	L	00110	SO	92060522	220207	003000	450 V	
NQ113	3C 273	85	12.90	1226332	+021943	L	1	23258	L	00119	SO	92060522	224104	003000	601 V	
NQ113	3C 273	85	12.96	1226332	+021943	L	3	44872	L	00113	SO	92060523	231853	006000	560 V	
NQ113	3C 273	85	12.96	1226332	+021943	L	1	23259	L	00113	SO	92060600	002712	003000	601 V	
NQ113	3C 273	85	13.07	1226332	+021943	L	3	44967	L	00103	SO	92062102	024820	003000	450 V	
NQ113	3C 273	85	12.92	1226332	+021943	L	1	23342	L	00117	SO	92062103	033032	003000	602 V	
NQ113	3C 273	85	12.66	1226332	+021943	L	3	44968	L	00148	SO	92062104	040722	004300	460 V	
NQ113	3C 273	85	12.70	1226333	+021942	L	3	43550	L	269	SO	92010511	110600	003000	350 G	E=212,G=93,B=20
NC121	UV CET	48	12.50	1226350	-181219	L	3	43549	L	510	SO	92010508	082200	004000	00 G	B=15
PHCAL	HD 108903	49	1.630	1228230	-565012	H	3	44137	L	5329	FU	92030811	114900	027000	333 G	E=85,G=108,B=49
NM095	HD109573	30	05.97	1233192	-393539	H	3	43917	L	13391	FO	92020305	052831	002200	500 V	NO GUIDING
PPNG	HD 109573	30	5.810	1233192	-393538	L	3	44202	L	12496	FO	92032020	202200	000027	500 G	G=232,B=16

PRO	Object	CL	MAG	R.A.	DEC	D C	Image	A	FES	MD	Obs.date	Exptim	nummesstt	ECC	Comment
NM095	HD109573	30	05.98	1233192	-393539	H	1 22322	L	13332	FO	92020305	055831	001300	501	V NO GUIDING
PENIG	HD 109573	30	5.810	1233192	-393538	L	3 44203	L	12888	FO	92032020	205800	003900	X03	G G=1.5X,B=50
PENIG	HD 109573	30	5.810	1233192	-393538	H	3 44204	L	13539	FO	92032022	222500	002600	503	G G=217,B=41
PQ076	IC 3599	84	15.70	1235128	+265856	L	3 44956	L	00000	BO	92061822	222301	017000	201	V
PHOAL	40% CALLV	99	99.99	1235532	-665506	H	1 22960	L	00000		92043001	014741	000151	009	V
PHOAL	NULL	99		1235532	-665506	H	3 44495	S	0		92050200	000000	000000	00	G B=19
PHOAL	240%CALLV	99	99.99	1235532	-665506	H	1 22961	L	00000		92043002	022743	001105	009	V
PHOAL	NULL	99		1235532	-665506	H	3 44496	S	0		92050200	000000	000000	01	G B=21
PHOAL	100%CALLV	99	99.99	1235532	-665506	H	1 22962	L	00000		92043003	031506	000437	009	V
PHOAL	100% UV	99		1235532	-665506	H	3 44497	S	0		92050221	214400	000358	09	G B=113
PHOAL	80% CALLV	99	99.99	1235532	-665506	H	1 22963	L	00000		92043003	035614	000342	009	V
PHOAL	100% UV	99		1235532	-665506	H	3 44498	S	0		92050222	222700	000453	09	G B=130
PHOAL	20% CALLV	99	99.99	1235532	-665506	H	1 22964	L	00000		92043004	043830	000055	009	V
PHOAL	200% UV	99		1235532	-665506	H	3 44507	S	0		92050307	070700	000946	09	G B=197
PHOAL	170%CALLV	99	99.99	1235532	-665506	H	1 22965	L	00000		92043005	053025	000751	009	V
PHOAL	340% UV	99		1235532	-665506	H	3 44508	S	0		92050307	074300	001636	09	G B=244
PHOAL	60%CALLV	99	99.99	1235532	-665506	H	1 22966	L	00000		92043006	062754	000246	009	V
PHOAL	100% UV	99		1235532	-665506	H	3 44509	S	0		92050308	083500	000453	09	G B=137
PHOAL	280% CALLV	99	99.99	1235532	-665506	H	1 22967	L	00000		92043007	070324	001255	009	V
PHOAL	100% UV	99		1235532	-665506	H	3 44510	S	0		92050309	092000	000420	09	G B=126
PHOAL	80% CALLV	99	99.99	1235532	-665506	H	1 22968	L	00000		92043008	080121	000342	009	V
PHOAL	280% UV	99		1235532	-665506	H	3 44511	S	0		92050310	100500	001208	09	G B=233
PHOAL	40% UV	99		1235532	-665506	H	3 44512	S	0		92050310	105400	000144	05	G B=63
PHOAL	80% UV	99		1235532	-665506	H	3 44513	S	0		92050311	112900	000328	09	G B=107
PHOAL	20% UV	99		1235532	-665506	H	3 44514	S	0		92050312	120600	000052	02	G B=39
PHOAL	100% UV	99		1235532	-665506	H	3 44515	S	0		92050312	123900	000420	09	G B=126
PHOAL	200% UV	99		1235532	-665506	H	3 44516	S	0		92050313	131800	000840	09	G B=197
PHOAL	60% UV	99		1235532	-665506	H	3 44517	S	0		92050313	135900	000236	07	G B=86
PHOAL	280% UV	99		1235532	-665506	H	3 44518	S	0		92050314	142900	001208	09	G B=232
PHOAL	130% UV	99		1235532	-665506	H	3 44519	S	0		92050315	151400	000538	09	G B=151
PHOAL	100% UV	99		1235532	-665506	H	3 44520	S	0		92050315	155000	000420	09	G B=125
PHOAL	240% UV	99		1235532	-665506	H	3 44521	S	0		92050316	162700	001024	09	G B=217
PHOAL	80% UV F	99		1235532	-665506	H	3 44522	S	0		92050317	170800	000328	09	G B=106
PHOAL	100% UV	99		1235532	-665506	H	3 44523	S	0		92050318	181400	000420	09	G B=123
PHOAL	NULL	99		1235532	-665506	H	3 44524	S	0		92050300	000000	000000	00	G B=18
PHOAL	NULL	99		1235532	-665506	H	3 44525	S	0		92050300	000000	000000	00	G B=18
PHOAL	100% UV	99		1235532	-665506	H	3 44526	S	0		92050319	194000	000430	09	G B=126
PHOAL	NULL	99		1235532	-665506	H	3 44527	S	0		92050300	000000	000000	00	G B=17
PHOAL	340% UV	99		1235532	-665506	H	3 44528	S	0		92050320	204800	001518	09	G B=243
PHOAL	40% UV F	99		1235532	-665506	H	3 44529	S	0		92050321	213600	000148	05	G B=63
PHOAL	160% UV	99		1235532	-665506	H	3 44530	S	0		92050322	221200	000712	09	G B=173
PHOAL	80% UV	99		1235532	-665506	H	3 44544	S	0		92050407	071100	000336	09	G B=103
PHOAL	100% UV	99		1235532	-665506	H	3 44545	S	0		92050407	074700	000430	09	G B=122
PHOAL	20% UV	99		1235532	-665506	H	3 44546	S	0		92050408	082500	000054	02	G B=38
PHOAL	200% UV	99		1235532	-665506	H	3 44547	S	0		92050408	085500	000900	09	G B=193
PHOAL	60% UV	99		1235532	-665506	H	3 44548	S	0		92050409	094000	000242	07	G B=83
PHOAL	340% UV	99		1235532	-665506	H	3 44549	S	0		92050410	101400	001518	09	G B=241
PHOAL	100% UV	99		1235532	-665506	H	3 44550	S	0		92050411	110000	000430	09	G B=120
PHOAL	100% UV	99		1235532	-665506	H	3 44551	S	0		92050411	114100	000445	09	G B=125
PHOAL	130% UV	99		1235532	-665506	H	3 44552	S	0		92050412	121800	000610	09	G B=149

PRO	Object	CL	MAG	R.A.	DEC	D C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
PHCAL	40% UV	99		1235532	-665506	H	3	44553	S		0	92050412	125700	000154	05 G B=63
PHCAL	NULL	99		1235532	-665506	H	3	44554	S		0	92050400	000000	000000	G b=16
PHCAL	240% UV	99		1235532	-665506	H	3	44555	S		0	92050414	140100	001124	09 G B=215
PHCAL	160% UV	99		1235532	-665506	H	3	44556	S		0	92050414	144200	000736	09 G B=172
PHCAL	100% UV	99		1235532	-665506	H	3	44557	S		0	92050415	152100	000445	09 G B=124
PHCAL	20% UV F	99		1235532	-665506	H	3	44558	S		0	92050415	155900	000057	02 G B=38
PHCAL	80% UV F	99		1235532	-665506	H	3	44559	S		0	92050417	170600	000348	09 G B=104
PHCAL	60% UV F	99		1235532	-665506	H	3	44560	S		0	92050417	174200	000251	07 G B=85
PHCAL	200% UV	99		1235532	-665506	H	3	44561	S		0	92050418	181300	000930	09 G B=194
PHCAL	NULL	99		1235532	-665506	H	3	44562	S		0	92050400	000000	000000	00 G B=18
PHCAL	100% UV	99		1235532	-665506	H	3	44563	S		0	92050419	191700	000445	09 G B=123
PHCAL	NULL	99		1235532	-665506	H	3	44564	S		0	92050300	000000	000000	00 G B=18
PHCAL	NULL	99		1235532	-665506	H	3	44565	S		0	92050420	203100	000454	09 G B=123
PHCAL	40% UV F	99		1235532	-665506	H	3	44566	S		0	92050421	210900	000157	09 G B=231
PHCAL	280% UV	99		1235532	-665506	H	3	44567	S		0	92050421	214000	001343	09 G B=231
PHCAL	20% UV F	99		1235532	-665506	H	3	44568	S		0	92050422	223000	000058	02 G B=38
PHCAL	100% UV	99		1235532	-665506	H	3	44582	S		0	92050511	115300	000454	09 G B=117
PHCAL	NULL	99		1235532	-665506	H	3	44583	S		0	92050500	000000	000000	00 G B=17
PHCAL	100% UV	99		1235532	-665506	H	3	44584	S		0	92050513	130700	000515	09 G B=126
PHCAL	NULL	99		1235532	-665506	H	3	44585	S		0	92050500	000000	000000	00 G B=18
PHCAL	130% UV	99		1235532	-665506	H	3	44586	S		0	92050514	141200	000649	09 G B=152
PHCAL	240% UV	99		1235532	-665506	H	3	44587	S		0	92050514	145100	001236	09 G B=219
PHCAL	20% UV	99		1235532	-665506	H	3	44588	S		0	92050515	153800	000103	02 G B=38
PHCAL	NULL	99		1235532	-665506	H	3	44589	S		0	92050500	000000	000000	00 G B=17
PHCAL	280% UV	99		1235532	-665506	H	3	44590	S		0	92050516	163800	001442	09 G B=237
PHCAL	60% UV	99		1235532	-665506	H	3	44591	S		0	92050517	172600	000309	07 G B=87
PHCAL	100% UV	99		1235532	-665506	H	3	44592	S		0	92050518	180500	000515	09 G B=126
PHCAL	NULL	99		1235532	-665506	H	3	44593	S		0	92050400	000000	000000	00 G B=17
PHCAL	NULL	99		1235532	-665506	H	3	44594	S		0	92050400	000000	000000	00 G B=17
PHCAL	160% UV	99		1235532	-665506	H	3	44595	S		0	92050519	193200	000824	09 G B=173
PHCAL	80% UV	99		1235532	-665506	H	3	44596	S		0	92050520	201500	000412	09 G B=107
PHCAL	160% UV	99		1235532	-665506	H	3	44597	S		0	92050520	205100	000824	09 G B=176
PHCAL	NULL	99		1235532	-665506	H	3	44598	S		0	92050500	000000	000000	00 G B=17
PHCAL	100% UV	99		1235532	-665506	H	3	44599	S		0	92050521	215800	000515	09 G B=125
PHCAL	NULL	99		1235532	-665506	H	3	44600	S		0	92050400	000000	000000	00 G B=17
PHCAL	HD 110335	22	4.900	1239030	-592441	H	3	44487	L	24132	FO	92042719	192800	000640	502 G G=214,B=39
NA098	HD110411	30	05.12	1239212	+103039	H	3	43603	L	23854	FO	92011107	073421	002000	500 V
NA098	HD110411	30	05.03	1239212	+103039	H	3	43604	L	25018	FO	92011108	083415	006000	700 V
NC049	UW CEN	52	14.00	1240265	-541515	L	1	22759	L	00000	BO	92040706	064927	012000	301 V
NA013	PG1242-106	28	15.00	1242168	-103443	L	3	44819	L	00000	BO	92060100	003714	005000	201 V
NA013	PG1242-106	28	15.00	1242169	-103443	L	1	23234	L	00000	BO	92060101	013554	003000	301 V
NA013	PG1245-042	28	13.60	1245391	-041427	L	3	44820	L	00000	BO	92060102	025010	003000	300 V NO TRACKING, 2 SEGME
NA027	HD112028	32	05.54	1248460	+834105	H	3	43919	L	18332	FO	92020309	094414	003000	500 V BRIGHTEST MEMBER OF
NA027	HD112028	32	05.53	1248460	+834105	H	1	22324	L	18453	FO	92020310	102051	002000	501 V
NA027	HD112028	32	05.56	1248460	+834105	H	3	43920	L	18111	FO	92020310	105504	002300	500 V
NA098	HD111786	30	06.40	1249172	-262801	H	3	43606	L	09515	FO	92011110	105010	012000	500 V
NC184	SA0181196	41	10.70	1250383	-224028	L	2	18659	L	00834	SO	92030906	062520	004500	403 V
NC189	ABELL 35	70	10.02	1250526	-223607	L	3	44093	L	00385	FO	92030205	050816	002400	500 V
NC189	ABELL 35	70	10.02	1250526	-223607	L	1	22492	L	00391	FO	92030205	054512	002400	451 V
NC189	ABELL 35	70	10.02	1250526	-223607	L	3	44094	L	00389	FO	92030206	063315	002400	500 V

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
NI189	ABELL 35	70	10.04	1250526	-223607	L	3	44095	L	00381	FO	92030207	075604	002400	500	V
NI189	ABELL 35	70	10.03	1250526	-223607	L	1	22491	L	00386	FO	92030204	042951	002400	561	V
NI189	ABELL 35	70	10.05	1250526	-223607	L	1	22493	L	00383	FO	92030207	070905	002400	461	V
NI189	ABELL 35	70	10.10	1250526	-223607	L	3	44120	L	00363	FO	92030603	034535	002400	500	V TRACK LOST EXP. TIME
NI189	ABELL 35	70	10.08	1250526	-223607	L	1	22518	L	00369	FO	92030604	045023	002400	460	V
NI189	ABELL 35	70	10.09	1250526	-223607	L	3	44121	L	00365	FO	92030605	052654	002400	500	V
NI189	ABELL 35	70	10.07	1250526	-223607	L	1	22519	L	00373	FO	92030606	060623	002400	460	V
NI189	ABELL 35	70	10.09	1250526	-223607	L	3	44122	L	00368	FO	92030606	063916	002400	500	V
NI189	ABELL 35	70	10.09	1250526	-223607	L	1	22520	L	00367	FO	92030607	071530	002400	461	V
NI189	ABELL 35	70	10.07	1250526	-223607	L	3	44123	L	00373	FO	92030607	075141	002400	500	V
NI189	ABELL 35	70	10.09	1250526	-223607	L	1	22521	L	00367	FO	92030608	082716	002400	461	V
NI189	ABELL 35	70	10.05	1250527	-223608	L	1	22494	L	00379	FO	92030208	083402	002400	461	V
NI189	ABELL 35	70	10.07	1250527	-223608	L	3	44096	L	00373	FO	92030209	090653	002400	500	V
NI189	ABELL 35	70	10.08	1250527	-223608	L	1	22495	L	00371	FO	92030209	094250	002400	461	V
NI189	ABELL 35	70	10.06	1250527	-223608	L	3	44097	L	00377	FO	92030210	101557	002400	500	V
NI189	ABELL 35	70	10.10	1250527	-223608	L	3	44124	L	00363	FO	92030609	090020	002400	500	V
NC184	SAO181203	41	08.76	1251020	-225017	L	2	18660	L	01195	FO	92030907	075014	003000	703	V
SAMOW	HD 112244	13	5.420	1252594	-563354	L	3	44045	L	17553	FO	92022301	014500	000011	500	G G=241,B=18
SAMOW	HD 112244	13	5.420	1252594	-563354	L	3	44045	S	17585	FO	92022302	020600	000010	X00	G G=1.5X,B=18
NC184	SAO181236	40	10.55	1253124	-224100	L	2	18661	L	00244	FO	92030909	091002	005000	602	V
CD19Z	3C 279	85	13.75	1253359	-053108	L	3	44806	L	0	EO	92052916	160900	018000	306	G G=115,B=80
NE127	NGC 4874	81	12.60	1257108	+281342	L	3	43480	L	00000	EO	91122609	095238	041500	102	V
NA013	PG1257-026	28	14.40	1257393	-023344	L	1	23242	L	00000	EO	92060223	232601	004000	111	V
USSBS	HD 113139	40	4.930	1258354	+563808	H	3	45041	L	21724	FO	92063020	201200	003500	402	G G=132,B=31
CD14Z	SS 2883	20	10.00	1259385	-633359	L	3	44271	L	319	FO	92033016	162100	033000	307	G G=155,B=90
CD14Z	SS 2883	26	10.00	1259385	-633359	L	3	44272	L	326	FO	92033022	224200	001000	300	G G=59,B=14
CONTA	HD 113226	45	2.830	1259412	+111340	L	3	44036	L	1387	FU	92022113	135600	026500	X42	G E=157,G=2X,B=40
WDMES	GD323	29	14.40	1302297	+594334	H	3	43344	L	0	EO	91120810	102600	096000	309	G G=180,B=115
USSBS	HD 113791	21	4.300	1303587	-493820	H	3	44645	L	495	FU	92051119	195000	000040	402	G G=181,B=36
CONTA	HD 115617	44	4.740	1315473	-180159	L	3	44029	L	22580	FO	92022017	174500	018500	501	G G=227,B=28
NM003	HD116084	23	06.15	1319129	-515518	H	3	44794	L	11670	FO	92052802	020526	001140	400	V
NM003	HD116084	23	06.13	1319129	-515518	H	1	23192	L	11838	FO	92052802	024653	000820	601	V
NM003	HD116084	23	06.12	1319129	-515518	H	3	44795	L	11903	FO	92052803	032153	002500	700	V
NM003	HD116226	22	06.63	1320025	-481806	H	1	23190	L	07843	FO	92052800	000909	002000	701	V
NM003	HD116226	22	06.63	1320025	-481806	H	3	44793	L	07827	FO	92052800	003636	003700	700	V
NM003	HD116226	22	06.63	1320026	-481806	H	1	23191	L	07859	FO	92052801	012105	001200	501	V
NI107	V803 CEN	63	14.00	1320499	-412851	L	1	22482	L	00000	EO	92030103	035846	006000	401	V
CVNES	V803 CEN	66	13.50	1320499	-412851	L	3	44118	L	172	SO	92030501	011400	006000	500	G G=185,B=19
NI107	V803 CEN	63	14.00	1320499	-412851	L	3	44085	L	00000	EO	92030105	050316	012000	400	V
CVNES	V803 CEN	66	13.05	1320499	-412851	H	3	44119	L	172	SO	92030502	024000	099959	309	G G=244,B=161
NI107	V803 CEN	63	13.97	1320499	-412851	L	1	22558	L	00046	SO	92031004	042552	006000	601	V
NI107	V803 CEN	63	13.97	1320499	-412851	L	3	44146	L	00046	SO	92031005	053524	009000	500	V
USSBS	HD 116657	30	4.000	1321558	+551057	H	3	44784	L	5079	FU	92052620	204700	000600	401	G G=141,B=25
USSBS	HD 116657	30	3.950	1321558	+551057	H	3	44785	L	5193	FU	92052622	220800	002700	X03	G G=2X,B=46
USSBS	HD 116842	30	4.020	1323135	+551453	H	3	44201	L	559	FU	92032015	151800	001145	502	G G=185,B=31
CONTA	HD 117176	44	4.980	1325590	+140244	L	3	43982	L	19986	FO	92021320	201800	018000	452	G E=240,G=180,B=37
EMMSS	EQ VIR	46	9.400	1332070	-080506	L	3	43958	L	564	FO	92021100	001500	009500	02	G B=40
NA081	M3-621	38	16.60	1339376	+283801	L	3	44258	L	00000	EO	92032804	040507	040200	302	V
NA081	M3-843	38	17.40	1340091	+283620	L	3	44262	L	00000	EO	92032904	041109	021000	201	V
NA081	M3-843	38	17.00	1340091	+283620	L	3	44280	L	00000	EO	92040106	061116	015600	300	V PARTIAL READ

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
NA081	M3-352	38	17.00	1340105	+283939	L	3	44273	L	00000	BO	92033104	042144	034800	301	V
NA081	M3-352	38	17.00	1340105	+283939	L	3	44263	L	00000	BO	92032908	081246	015700	101	V
VENSA	HR 5169	30	6.020	1341584	+521857	L	3	44173	L	10691	FO	92031402	024100	000137	500	G G=182,B=14
NM003	HD119644	25	08.32	1342194	-450554	H	1	23193	L	01770	FO	92052804	042145	006000	601	V
PHCAL	HD 00120315	21	1.840	1345343	+493344	H	2	18674	L	4164	FU	92061217	175800	000008	502	G G=204,B=32
PHCAL	HD 120315	21	1.840	1345343	+493344	H	3	43293	L	4177	FU	91120207	071400	000006	402	G G=168,B=35
PHCAL	HD 00120315	21	1.840	1345343	+493344	L	3	43435	L	4066	FU	91122102	022500	000000	500	G G=208,B=18
PHCAL	HD 00120315	21	1.840	1345343	+493344	L	3	43436	L	4108	FU	91122103	034400	000000	X00	G G=2X,B=18
PHCAL	HD 120315	21	1.840	1345343	+493344	H	3	43546	L	4122	FU	92010406	061600	000006	402	G G=160,B=32
PHCAL	HD 00120315	21	1.840	1345343	+493344	H	3	43972	L	4200	FU	92021217	174800	000006	401	G G=170,B=30
PHCAL	HD 00120315	21	1.840	1345343	+493344	H	3	44457	L	4092	FU	92042219	190100	000006	402	G G=163,B=31
PHCAL	HD 00120315	21	1.840	1345343	+493344	H	3	44483	L	4149	FU	92042622	225100	000006	402	G G=170,B=32
PHCAL	HD 00120315	21	1.840	1345343	+493344	H	3	44611	L	4190	FU	92050619	193900	000006	09	G B=164,B=32
PHCAL	HD 00120315	21	1.840	1345343	+493344	H	3	44783	L	4116	FU	92052620	200000	000006	402	G G=174,B=32
PHCAL	HD 00120315	21	1.840	1345343	+493344	H	3	44899	L	4161	FU	92060914	145900	000006	402	G G=173,B=32
NC184	SAO181974	40	10.27	1345486	-282945	L	2	18658	L	00290	FO	92030904	041858	006000	603	V
NCI00	BB VIR	53	11.32	1349100	+064039	L	3	43993	L	00489	SO	92021507	072810	001000	200	V
NCI00	BB VIR	53	11.40	1349106	+064039	L	3	44113	L	00454	SO	92030408	085224	011600	300	V
NQ022	BB VIR	53	11.59	1349106	+064039	L	3	44994	L	00096	FO	92062402	022836	014000	300	V
AGNUS	PG 1351+64	84	14.80	1351461	+640028	L	3	44114	L	0	BO	92030412	120700	027500	345	G E=172,G=157,B=62
NQ142	E1352+183	84	15.50	1352126	+181959	L	3	44052	L	00000	BO	92022406	060256	018000	230	V
AGNUS	SKY/UNKN	84	14.80	1353159	+634546	L	3	44106	L	0	BO	92030312	120400	027500		G
NE076	E1401+098	84	16.60	1401428	+095206	D	9	02536	2	00000	BO	92031912	121500	016000		V FES FOR IMP22638
AGNFC	E 1401+0	85	16.60	1401428	+095206	L	3	44058	L	0	BO	92022512	120100	052800	336	G E=123,G=105,B=75
NQ142	E1401+098	84	16.60	1401439	+095206	E	9	02532	2	00000	BO	92022511	111000	016000		V FES FOR SWP44058,
USSBS	HD 123299	32	3.600	1403020	+643651	H	3	43326	L	766	FU	91120523	231500	000430	X02	G G=1.5X,B=40
VENSA	HR 5332	30	5.430	1412386	-175800	L	3	44171	L	15841	FO	92031323	234600	000101	500	G G=204,B=15
NQ072	NGC5548	84	14.34	1415432	+252200	L	3	43678	L	00033	SO	92011813	132248	008500	340	V
AGORM	NGC 5548	84	13.50	1415435	+252201	L	3	44906	L	259	SO	92061006	065100	008000	331	G E=121,G=60,B=25
AGORM	NGC 5548	84	13.50	1415435	+252201	L	3	44917	L	295	SO	92061206	062300	014500	352	G E=227,G=117,B=38
PGOUS	PG 1416-129	85	15.40	1416213	-125658	L	3	45019	L	0	BO	92062705	055400	041500	336	G E=173,G=110,B=80
PHCAL	HD 00125924	21	9.700	1420037	-080116	L	3	43873	L	492	FO	92012800	001000	000100	500	G G=210,B=20
NQ142	E1423+201	84	16.00	1423541	+200852	L	3	44057	L	00000	BO	92022506	062414	024000	331	V
AENIS	HD 126661	40	5.390	1424077	+192703	L	3	45000	L	16358	FO	92062419	192300	000514	501	G G=200,B=23
AENIS	HD 126661	40	5.390	1424077	+192703	L	3	45001	L	16488	FO	92062420	204100	000500	X00	G G=3X,B=20
CD05Z	PROXIMA	52	11.05	1425570	+000000	L	3	44079	L	242	FO	92022914	145700	006000	00	G B=17
CD05Z	PROX CEN	52	11.05	1425570	-622732	L	3	44080	L	232	FO	92022917	171000	006000	00	G B=18
CD05Z	PROX CEN	52	11.05	1425570	-622732	L	3	44081	L	229	FO	92022919	191600	006000	200	G G=40,B=20
CD05Z	PROX CEN	52	11.05	1425570	-622732	L	3	44082	L	224	FO	92022921	212200	006000	00	G B=20
CD05Z	PROX CEN	52	11.05	1425570	-622732	L	3	44083	L	237	FO	92022923	233300	006000	00	G B=20
CD05Z	PROX CEN	52	11.05	1425570	-622732	L	3	44084	L	245	FO	92030101	014400	006000	00	G B=20
CAOSB	HR 5420	45	5.590	1426550	+500406	L	3	44259	L	12768	FO	92032812	121100	015000	302	G G=74,B=35
VENSA	HR 5422	30	6.060	1427411	+320047	L	3	44172	L	10549	FO	92031401	012000	000141	500	G G=169,B=14
USSBS	HD 127762	33	3.000	1430038	+383134	L	3	43430	L	1257	FU	91122003	033300	000700	300	G G=80X,B=18
PHCAL	NULL	99		1430038	+383134	L	3	43431	L	0		91122004	041800	000000	00	G B=18
USSBS	HD 127762	33	3.000	1430038	+383134	H	3	43432	L	1257	FU	91122004	045500	000400	402	G G=147,B=32
USSBS	HD 127762	33	3.000	1430038	+383134	L	3	44484	L	1251	FU	92042700	003500	000700	402	G G=180,B=33
NC049	NSV 6708	40	10.46	1431415	-392013	L	1	22758	L	00264	FO	92040702	020515	018000	332	V
PCNBW	V854 CEN	52	7.100	1431415	-392013	L	3	43888	L	1373	FO	92012821	213200	011000	332	G E=64,G=67,B=32
NC049	NSV 6708	40	10.44	1431415	-392013	L	3	44348	L	00269	FO	92040705	051231	003000	110	V

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
RCNEW	V854 CEN	52	9.500	1431415	-392013	L	3	44361	L	281	FO	92040714	145000	012000	231	G E=58,G=48,B=30
DEOSC	V854 CEN	52	13.50	1431416	-392012	L	3	44920	L	0	BO	92061306	060200	040500	335	G E=125,G=87,B=61
GHOUD	22871019	16	13.25	1431420	-190820	L	3	45020	L	212	SO	92062714	141700	001100	401	G G=157,B=22
TBOIS	HD 128167	40	4.460	1432041	+295741	L	3	45009	L	408	FU	92062520	201900	000305	501	G G=196,B=23
EFNSA	HD 128167	40	4.460	1432300	+295744	L	3	43470	L	378	FU	91122506	061600	000255	500	G G=192,B=20
PHCAL	HD 00128801	28	8.800	1436203	+080739	L	3	43874	L	1023	FO	92012801	012500	000530	500	G G=208,B=20
SUNEG	HD 129333	44	7.530	1437563	+643025	L	3	44158	L	2341	FO	92031211	114300	031000	435	G E=118,G=182,B=66
SUNEG	HD 129333	44	7.520	1437563	+643025	L	3	44817	L	2508	FO	92053110	100100	032000	437	G E=141,G=206,B=85
PHCAL	109 PUP91	30	03.98	1443431	+020609	L	1	22392	L	00733	FU	92021504	045732	000001	300	V
PHCAL	109 VIR	30	03.95	1443431	+020609	L	1	22393	L	00755	FU	92021505	053718	000010	700	V
PHCAL	109 VIR	30	03.93	1443431	+020609	L	1	22394	L	00766	FU	92021506	061748	000030	800	V
PHCAL	109 VIR	30	03.97	1443431	+020609	L	1	22421	L	00740	FU	92022010	102018	000005	801	V
PHCAL	109 VIR	30	03.97	1443431	+020609	L	1	22422	L	00739	FU	92022010	105217	000001	401	V
PHCAL	109 VIR	30	03.97	1443431	+020609	L	1	22423	L	00742	FU	92022011	114559	000010	801	V
PHCAL	109 VIR	30	03.96	1443431	+020609	L	1	22424	L	00751	FU	92022012	123227	000002	501	V
PHCAL	109 VIR	30	03.99	1443431	+020609	L	1	22507	L	00731	FU	92030404	042430	000002	500	V
PHCAL	109 VIR	30	04.00	1443431	+020609	L	1	22508	L	00722	FU	92030405	050726	000005	701	V
PHCAL	109 VIR	30	04.00	1443431	+020609	L	1	22509	L	00720	FU	92030405	054145	000010	801	V
PHCAL	109 VIR	30	04.09	1443431	+020609	L	1	22510	L	00668	FU	92030406	065447	000020	801	V
NQ020	3C309	85	16.80	1458566	+715211	L	3	44019	L	00000	BO	92021906	065747	035000	301	V
BSNNE	NGC 5822	39	9.950	1500340	-541407	L	3	44361	L	317	FO	92040823	235700	005000	301	G G=57,B=24
NC083	HD132947	30	09.18	1500506	-625615	L	3	44714	L	00823	FO	92051823	235205	000500	400	V
AGMFB	MRK 841	84	15.20	1501363	+103756	L	3	43679	L	0	BO	92011817	171400	020000	354	G E=251,G=125,B=58
USSBS	HD 133955	21	4.050	1505280	-450517	H	3	45037	L	579	FU	92062919	194000	000050	502	G G=204,B=40
AGNDW	NGC 5929	84	13.00	1524189	+415041	L	3	43434	L	0	BO	91122018	180000	040500	305	G G=102,B=65
AFNIS	HD 137909	40	3.680	1525459	+291637	L	3	44998	L	747	FU	92062417	170900	000058	500	G G=210,B=18
QROAP	1542+541	85	16.70	1542419	+540826	L	3	45004	L	0	BO	92062506	060600	040000	305	G G=114,B=61
RCMBW	R CRB	52	5.800	1546307	+281832	L	3	43892	L	10488	FO	92012921	211100	003000	400	G G=125,B=20
CCNTA	HD 141714	45	4.630	1547297	+261316	L	3	44028	L	330	FU	92022013	131100	019000	X52	G E=200,G=1.5X,B=35
PHCAL	BD +33 2642	20	10.83	1550019	+330528	L	2	18675	L	201	FO	92061218	185900	000420	401	G G=171,B=23
PHCAL	BD 33 2642	20	10.83	1550019	+330528	L	3	43622	L	198	FO	92011216	161300	000400	500	G G=195,B=20
PHCAL	BD 33 2642	20	10.83	1550019	+330528	H	3	43623	L	204	FO	92011217	171600	033000	406	G G=220,B=78
PHCAL	BD +33 2642	20	10.83	1550019	+330528	L	3	43971	L	182	FO	92021216	164100	000400	500	G G=195,B=20
PHCAL	BD +33 2642	20	10.83	1550019	+330528	L	3	44217	L	193	FO	92032400	002100	000400	500	G G=179,B=15
PHCAL	BD +33 2642	20	10.83	1550019	+330528	L	3	44612	L	173	FO	92050621	211300	000400	500	G G=191,B=13
PHCAL	BD +33 2642	20	10.83	1550019	+330528	L	3	44782	L	180	FO	92052619	191400	000400	500	G G=197,B=13
PHCAL	BD +33 2642	20	10.83	1550019	+330528	L	3	44915	L	196	FO	92061119	195600	000400	500	G G=182,B=15
DCNNE	SY Nor	53	9.500	1550490	-542506	L	3	44357	L	514	FO	92040809	095900	027000	304	G G=125,B=58
CD11Z	PG 1553+11	87	14.50	1553209	+112004	L	3	44177	L	0	BO	92031411	115300	024000	303	G G=112,B=44
NA201	HD142926	26	06.05	1553495	+424238	H	3	44981	L	12672	FO	92062223	234355	002000	600	V
NA201	HD 142926	26	06.08	1553495	+424238	H	1	23359	L	12294	FO	92062300	001844	001200	600	V
NC091	HD142691	47	06.19	1554058	-360229	L	3	44167	L	11274	FO	92031310	102535	000200	500	V
NC091	HD142691	47	06.17	1554058	-360229	H	1	22584	L	11501	FO	92031309	094839	004800	401	V SEGMENTED 32 + 16 MI
AFNIS	HD 143466	40	4.950	1556360	+545325	L	3	45005	L	22657	FO	92062514	140000	000311	501	G G=176,B=24
AENMP	HD 144668	34	7.100	1605128	-385823	L	3	44183	L	4527	FO	92031618	184300	001300	X00	G G=1.5X,B=15
PNOSH	IC4593	70	10.60	1609233	+121208	L	3	44945	L	181	FO	92061718	184300	000400	500	G G=236,B=16
PNOSH	IC4593	70	10.60	1609233	+121208	L	3	44946	L	183	FO	92061719	193800	000330	500	G G=223,B=15
PNOSH	IC4593	70	10.60	1609233	+121208	L	3	44947	L	185	FO	92061720	204000	000330	500	G G=218,B=15
NQ152	E1615+061	84	15.60	1615182	+061112	L	3	44105	L	00000	BO	92030304	041621	039500	352	V
CCNTA	HD 148048	41	4.900	1618577	+755213	L	3	43990	L	21235	FO	92021420	202800	009000	200	G G=25X,B=20

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
NA128	LSIV -12 1	28	11.43	1620574	-120536	H	3	44425	L	00111	FO	92041801	015833	019100	401	V
NA128	LSIV -12 1	28	11.40	1620574	-120536	H	3	44426	L	00114	FO	92041805	054545	018500	401	V
NA128	LSIV -12 1	28	11.48	1620574	-120536	H	3	44432	L	00423	SO	92041901	013534	021000	401	V
NA128	LSIV-12 1	28	11.35	1620574	-120536	H	3	44433	L	00475	SO	92041905	053630	019200	401	V
PHOAL	HD 149438	20	2.840	1632459	-280651	H	3	44007	L	1921	FU	92021700	002200	000006	402	G G=182,B=32
PHOAL	HD 00149438	20	2.840	1632459	-280651	H	3	44218	L	1947	FU	92032401	015200	000006	502	G G=188,B=32
PHOAL	HD 00149438	20	2.840	1632459	-280651	H	3	44456	L	1847	FU	92042217	173000	000006	402	G G=179,B=32
NA108	HD 149427	70	12.70	1633377	-553625	L	3	44460	L	00000	BO	92042305	054401	012000	230	V
NA108	HD 149427	70	12.70	1633377	-553625	L	1	22875	L	00000	BO	92042307	074916	006000	300	V
NA064	KUW1636+35	37	14.70	1636365	+350604	L	3	43960	L	00000	BO	92021108	083756	003600	500	V
WDNDH	K 433-03	37	14.91	1636366	+350603	L	3	44011	L	0	BO	92021715	152500	004200	500	G G=212,B=18
DANDH	KUV 433	37	14.91	1636366	+350603	L	3	44751	L	0	BO	92052412	123500	004000	500	G G=188,B=17
FGNEB	HD 150331	45	5.870	1638310	-330301	L	3	44251	L	11024	FO	92032715	153600	020000	X33	G E=66,G=1.5X,B=41
NC115	HD150798	47	02.32	1643210	-685620	H	1	22565	L	03216	FU	92031103	035322	000800	361	V
CONAB	HD 150798	47	1.920	1643210	-685620	L	3	44746	L	3415	FU	92052319	191800	004000	340	G E=1.5X,G=100,B=19
NC115	HD150798	47	02.33	1643210	-685620	H	1	22566	L	03204	FU	92031104	044105	003300	571	V
NC115	HD 150798	47	02.32	1643210	-685620	H	1	22567	L	03237	FU	92031105	055931	009000	781	V
NC115	HD 150798	47	02.32	1643210	-685620	H	1	22568	L	03226	FU	92031109	090522	000800	361	V
NC115	HD 150798	47	02.32	1643210	-685620	L	3	44152	L	03226	FU	92031107	074123	007000	460	V
NC115	HD 150798	47	02.32	1643210	-685620	H	1	22569	L	03236	FU	92031109	095219	003300	571	V
NA106	GD358	29	13.60	1645252	+323348	L	3	44613	L	00000	BO	92050700	002908	003555	500	V EXP. IN 6 SEGMENTS
NA106	GD358	29	13.60	1645252	+323348	L	1	23051	L	00000	BO	92050701	014836	003000	503	V EXP IN 5 SEGMENTS
NA106	GD358	29	13.60	1645252	+323348	L	3	44614	L	00000	BO	92050703	034201	003500	500	V EXP IN 6 SEGMENTS
NA106	GD358	29	13.60	1645252	+323348	L	1	23052	L	00000	BO	92050705	051737	003000	503	V EXP.IN 6 SEGMENTS
NA106	GD358	29	13.60	1645253	+323349	L	3	44623	L	00000	BO	92050802	025114	003600	500	V EXPO IN 6 SEGMENTS
NA106	GD358	29	13.60	1645253	+323349	L	1	23063	L	00000	BO	92050800	005716	003000	502	V EXPO IN 6 SEGMENTS
NA106	GD358	29	13.60	1645253	+323349	L	3	44624	L	00000	BO	92050805	050623	003600	300	V
NA106	GD358	29	13.60	1645253	+323349	L	1	23064	L	00000	BO	92050805	054934	004000	502	V
NA013	PG1647+253	16	14.00	1647051	+251515	L	3	44802	L	00000	BO	92052901	012524	004500	400	V
NA013	PG1647+253	16	14.00	1647051	+251515	L	1	23203	L	00000	BO	92052902	021556	004000	401	V
NA004	HD152314	24	08.11	1651011	-414329	H	3	44388	L	02140	FO	92041303	035526	006000	300	V
NA064	1657+3423	17	16.10	1657014	+342320	L	3	43961	L	00000	BO	92021110	102852	005000	400	V
SANDW	HD 153808	30	3.920	1658225	+305955	L	3	44679	L	629	FU	92051622	223300	000013	500	G G=209,B=14
XENSK	HD 154791	59	7.500	1704297	+240214	L	3	44198	L	2592	FO	92032000	001000	007000	231	G E=42,G=30,B=21
XENSK	HD 154791	59	7.500	1704297	+240214	L	3	44213	L	2544	FO	92032312	124300	036500	334	G E=89,G=81,B=51
PHOAL	HD 155763	25	3.170	1708382	+654634	H	3	43653	L	1277	FU	92011613	131500	000045	502	G G=191,B=35
NA048	NOVA OPH88	55	14.00	1708508	-293358	E	9	02540	2	00000	BO	92041701	014500	016000		V FES FOR SWP44424
CWNSS	N OPH 88	55	15.00	1708508	-293358	L	3	44424	L	0	BO	92041702	021200	087500	309	G G=166,B=106
NA108	HEN 1357	26	11.61	1711563	-592604	L	3	44459	L	0091	FO	92042303	035200	002000	350	V
NA108	HEN1357	26	11.22	1711563	-592604	L	1	22874	L	00134	FO	92042304	041956	001000	340	V
CAOSB	HR 6409	41	5.550	1713487	-323627	L	3	44260	L	14247	FO	92032816	163600	013500	X01	G G=2X,B=25
NA013	PG1722+286	16	13.50	1722142	+283806	L	3	44301	L	00000	BO	92052900	001003	001500	500	V
NA013	PG1722+286	16	13.50	1722142	+283806	L	1	23202	L	00000	BO	92052900	003108	001500	501	V
WDNDH	PG 1725+587	37	15.45	1725581	+583957	L	3	44012	L	0	BO	92021717	173800	005500	500	G G=219,B=19
ISNDM	HD 158094	22	3.620	1726347	-603841	H	3	44127	L	854	FU	92030622	225600	000125	502	G G=200,B=35
BENDG	HD 158643	26	4.800	1728217	-235533	H	3	44400	L	25458	FO	92041417	174600	002800		G
BENDG	HD 158643	26	4.800	1728217	-235533	H	3	44401	L	25746	FO	92041418	185800	001400	502	G G=188,B=36
BENDG	HD 158643	26	4.800	1728220	-235527	H	3	44205	L	26442	FO	92032100	004000	001000	402	G G=165,B=37
BENDG	HD 158643	26	4.800	1728220	-235527	H	3	44206	L	26494	FO	92032101	015100	001330	502	G G=195,B=35
BENDG	HD 158643	26	4.800	1728220	-235527	H	3	44252	L	25579	FO	92032719	193700	001330	502	G G=200,B=40

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	EES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
BRNGG	HD 158643	26	4.800	1728220	-235527	H	3	44253	L	25970	FO	92032720	202900	002700	X04	G G=2X,B=59
BRNGG	HD 158643	26	4.800	1728220	-235527	L	3	44254	L	26173	FO	92032722	221700	000009	400	G G=145,B=15
BRNGG	HD 158643	26	4.800	1728220	-235527	H	3	44393	L	25311	FO	92041317	174200	002800	X03	G G=2X,B=45
BRNGG	HD 158643	26	4.800	1728220	-235527	H	3	44394	L	25193	FO	92041319	190600	001400	502	G G=200,B=40
BRNGC	HD 158643	26	4.800	1728220	-235527	H	3	44463	L	25667	FO	92042319	192900	002908	X05	G G=4X,B=63
BRNGC	HD 158643	26	4.800	1728220	-235527	H	3	44464	L	25643	FO	92042320	204300	001430	502	G G=210,B=40
FGNEB	HD 160365	41	6.120	1736399	+132120	L	3	44250	L	8983	FO	92032711	115400	018000	X32	G E=116,G=2X,B=38
VENSA	HR 6629	30	3.750	1745230	+024334	L	3	44169	L	718	EU	92031319	194900	000017	500	G G=196,B=16
NA201	HD 162732	26	06.99	1748447	+482424	H	3	44980	L	05744	FO	92062222	220151	003000	500	V
NA201	HD 162732	26	06.96	1748447	+482425	H	1	23358	L	05893	FO	92062222	224123	002000	500	V
PHCAL	200%CALIV	99	99.99	1748535	-344715	H	1	22914	L	00000		92042801	012621	000842	00X	V
PHCAL	80% CALIV	99	99.99	1748535	-344715	H	1	22915	L	00000		92042802	021317	000328	009	V
PHCAL	120%CALIV	99	99.99	1748535	-344715	H	1	22916	L	00000		92042802	025637	000513	009	V
PHCAL	60% CALIV	99	99.99	1748535	-344715	H	1	22917	L	00000		92042803	034033	000236	009	V
PHCAL	280%CALIV	99	99.99	1748535	-344715	H	1	22918	L	00000		92042804	041743	001210	009	V
PHCAL	170%CALIV	99	99.99	1748535	-344715	H	1	22919	L	00000		92042805	050556	000723	009	V
PHCAL	80% CALIV	99	99.99	1748535	-344715	H	1	22920	L	00000		92042806	060044	000328	009	V
PHCAL	240%CALIV	99	99.99	1748535	-344715	H	1	22921	L	00000		92042806	063915	001027	009	V
PHCAL	40% CALIV	99	99.99	1748535	-344715	H	1	22922	L	00000		92042807	072240	000144	009	V
PHCAL	100%CALIV	99	99.99	1748535	-344715	H	1	22923	L	00000		92042808	081428	000421	009	V
VENSA	HR 6668	22	5.960	1751075	-342728	L	3	44170	L	9761	FO	92031321	215600	000243	501	G G=200,B=22
NM159	M2-23	70	14.10	1758327	-282546	L	3	44207	L	00000	BO	92032103	034408	042300	302	V
NA108	HD34617	31	11.13	1806163	+241012	L	3	44446	L	0088	FO	92042102	023318	002000	401	V
NA108	HD34617	31	11.63	1806163	+241011	L	1	22865	L	0089	FO	92042103	030304	000500	401	V
NM159	M2-30	70	14.00	1809251	-275858	L	3	44212	L	00000	BO	92032304	040601	040500	332	V
BROWF	IRAS 180	70	10.40	1809310	+270430	L	3	44671	L	262	FO	92051512	122900	004500	304	G G=90,B=60
CVNSS	V533 HER	55	15.00	1812464	+415021	L	3	44805	L	0	BO	92052907	075200	030000	454	G E=216,G=164,B=55
AGDOR	AM HER	63	13.50	1814587	+495055	L	3	44841	L	0	BO	92060312	122400	002700	300	G G=44,B=18
AGDOR	AM HER	63	13.50	1814587	+495055	L	3	44842	L	0	BO	92060313	132700	002700	300	G G=46,B=18
AGDOR	AM HER	63	15.00	1814587	+495055	L	3	44843	L	0	BO	92060314	142000	002700	300	G G=58,B=19
AGDOR	AM HER	63	15.00	1814587	+495055	L	3	44844	L	0	BO	92060315	151100	002700	301	G G=57,B=23
AGDOR	AM HER	63	15.00	1814587	+495055	L	3	44845	L	0	BO	92060316	160200	002900	301	G G=62,B=30
AGDOR	AM HER	63	15.00	1814587	+495055	L	3	44846	L	0	BO	92060316	165500	002700	302	G G=76,B=37
AGDOR	AM HER	63	15.00	1814587	+495055	L	3	44847	L	0	BO	92060317	174500	002900	302	G G=86,B=39
AGDOR	AM HER	63	15.00	1814587	+495055	L	3	44848	L	0	BO	92060318	183800	002900	301	G G=57,B=23
AGDOR	AM HER	63	15.00	1814587	+495055	L	3	44849	L	0	BO	92060319	193100	002700	300	G G=46,B=18
AGDOR	AM HER	63	15.00	1814587	+495055	L	3	44850	L	0	BO	92060320	202300	002500	300	G G=58,B=19
DAOJH	FR1820+58	37	13.80	1819428	+580313	L	3	44764	L	70	FO	92052507	072400	001500	500	G G=191,B=16
ISNDM	HD 169022	25	1.850	1820512	-342437	H	3	44754	L	3942	EU	92052416	161500	000050	502	G G=200,B=35
PNOSH	K1-16	70	15.10	1821369	+642018	L	3	44986	L	0	BO	92062315	154500	002000	500	G G=173,B=14
PNOSH	K1-16	70	15.10	1821369	+642018	L	3	44987	L	0	BO	92062316	165200	002500	500	G G=228,B=15
BSNNE	NGC 6633	39	8.200	1824390	+063022	L	3	44360	L	1413	FO	92040822	223900	002000	300	G G=87,B=16
NM159	VV2-1	70	14.00	1824533	-260843	L	3	44200	L	00000	BO	92032007	072353	020400	321	V
NM003	HD170978	24	07.02	1830109	-240852	H	3	44788	L	05612	FO	92052705	051735	004700	600	V
NM003	HD170978	24	06.99	1830109	-240852	H	1	23185	L	05748	FO	92052706	061459	002800	702	V
NA064	HS1830+720	17	16.60	1830566	+720901	L	3	43970	L	00000	BO	92021210	100132	007500	100	V
BSNNE	I4756 25	39	9.260	1835046	+051444	L	3	44359	L	564	FO	92040819	190300	004500	303	G G=71,B=47
NM003	HD171961	25	06.03	1835281	-233257	H	3	44786	L	12801	FO	92052700	001558	002300	700	V
NM003	HD171961	25	06.03	1835281	-233257	H	1	23182	L	12821	FO	92052700	005027	001000	601	V
PHCAL	HD 172883	36	6.000	1838438	+520854	L	3	43421	L	10643	FO	91121904	040100	000017	500	G G=190,B=18

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	EES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
PHCAL	HD 172883	36	6.000	1838438	+520854	H	3	43422	L	10761	FO	91121904	043200	002200	504	G G=245,B=59
NC091	HD172991	45	05.85	1841288	-394418	H	1	22583	L	14679	FO	92031307	075538	004000	500	V
NC091	HD177991	45	05.82	1841288	-394418	L	3	44166	L	09146	FO	92031308	084215	000100	500	V
DONE	V350 Sgr	53	7.600	1842190	-204201	L	3	44358	L	2234	FO	92040815	155800	012000	301	G G=127,B=29
NM159	M3-33	70	14.50	1845072	-253214	L	3	44199	L	00000	BO	92032004	042638	012000	340	V
NA201	HD174237	26	06.18	1845360	+525556	H	3	44982	L	11400	FO	92062301	013952	000800	500	V
NA201	HD 174237	26	06.16	1845360	+525556	H	1	23360	L	11581	FO	92062302	022206	000330	501	V
NQ072	3C390.3	86	14.40	1845378	+794305	L	3	43951	L	00000	BO	92020905	051820	036000	351	V
NQ072	3C390.3	86	13.40	1845379	+794306	E	9	02527	2	00000	BO	92011314	144000	016000		V EES FOR SWP 43634
NQ072	3C390.3	86	13.40	1845379	+794306	L	3	43634	L	00000	BO	92011308	081453	038500	352	V
NQ072	3C390.3	86	14.00	1845379	+794306	L	3	44725	L	00000	BO	92052000	001951	038800	352	V
NI167	V603 AQL	55	11.64	1846215	+003136	L	3	44247	L	00368	SO	92032708	081808	001400	550	V
NI167	V603 AQL	55	11.71	1846215	+003136	L	1	22697	L	00086	FO	92032708	084958	001200	600	V
NI167	V603 AQL	55	11.93	1846215	+003136	L	3	44248	L	00071	FO	92032709	092459	001600	550	V
NI167	V603 AQL	55	11.87	1846215	+003136	L	1	22698	L	00075	FO	92032710	100047	001000	500	V
NI167	V603 AQL	55	11.85	1846215	+003136	L	3	44249	L	00076	FO	92032710	103052	001600	550	V
NA157	N SCO89	55	15.50	1846581	-061444	L	3	44219	L	00000	BO	92032404	043837	036000	222	V NO SPECTRUM VISIBLE
NM003	HD174632	22	07.03	1849290	-304743	H	1	23183	L	05556	FO	92052702	023002	002500	501	V
NM003	HD174632	22	07.00	1849290	-304743	H	3	44787	L	05708	FO	92052703	030245	006320	600	V
NM003	HD174632	22	07.00	1849291	-304743	H	1	23184	L	05708	FO	92052704	041314	003200	701	V
GHOD	22959140	16	14.80	1850431	-630851	L	3	45015	L	0	BO	92062611	115500	006000	501	G G=190,B=30
ISNM	HD 175362	22	5.380	1853171	-372432	H	3	44755	L	17497	FO	92052417	174300	000315	402	G G=160,B=32
ISNM	HD 175362	22	5.380	1853171	-372432	H	3	44756	L	17642	FO	92052419	190300	000415	502	G G=195,B=35
ISNM	HD 175362	22	5.380	1853171	-372432	H	3	44757	L	17806	FO	92052420	201400	000435	502	G G=230,B=35
BENG	HD 175638	31	4.800	1853439	+040813	H	3	44255	L	26348	FO	92032723	233700	005600	X04	G G=2X,B=60
BENG	HD 175638	00	4.800	1853439	+040813	H	3	44256	L	0	FO	92032801	010300	002800	X02	G G=1.5X,B=40
BENG	HD 175638	00	4.800	1853439	+040813	H	3	44257	L	0	FO	92032802	020300	002100	502	G G=210,B=35
NI075	V446 HER	55	00.15	1855031	+131027	L	1	22752	L	00000	BO	92040602	022219	012000	201	V
NI075	V446 HER	55	00.15	1855031	+131027	L	3	44346	L	00000	BO	92040604	042825	026000	301	V
VENS	A HR 7178	25	3.240	1856600	+323715	L	3	44621	L	1178	FU	92050720	205300	000010	500	G G=209,B=15
CD09	Z HD 177827	30	9.400	1900479	+703938	L	3	44145	L	849	FO	92031002	021100	003700	X00	G G=1.5X,B=20
CD07	Z HD 177827	30	9.400	1900479	+703938	L	3	44180	L	839	FO	92031519	195800	002000	500	G G=177,B=20
EXNM	HD 177752	20	8.400	1903287	+005457	L	3	44355	L	1395	FO	92040800	003100	001200	400	G G=143,B=14
PHCAL	170%CALLV	99	99.99	1912112	-664501	H	1	22936	L	00000		92042901	011549	000724	009	V
PHCAL	60%CALLV	99	99.99	1912112	-664501	H	1	22937	L	00000		92042902	020439	000236	009	V
PHCAL	240%CALLV	00	99.99	1912112	-664501	H	1	22938	L	00000		92042902	024717	001026	009	V
PHCAL	120%CALLV	99	99.99	1912112	-664501	H	1	22939	L	00000		92042903	034757	000513	009	V
PHCAL	80%CALLV	99	99.99	1912112	-664501	H	1	22940	L	00000		92042904	043812	000328	009	V
PHCAL	200%CALLV	99	99.99	1912112	-664501	H	1	22941	L	00000		92042905	051800	000842	009	V
PHCAL	100%CALLV	99	99.99	1912112	-664501	H	1	22942	L	00000		92042906	060332	000421	009	V
PHCAL	280%CALLV	99	99.99	1912112	-664501	H	1	22943	L	00000		92042906	065406	001211	009	V
PHCAL	80%CALLV	99	99.99	1912112	-664501	H	1	22944	L	00000		92042907	074503	000328	009	V
PHCAL	40%CALLV	99	99.99	1912112	-664501	H	1	22945	L	00000		92042908	082523	000144	009	V
NS092	URANUS	03	06.20	1914446	-224455	L	3	44675	S	11219	FO	92051602	023130	022500	332	V LARGE APERTURE CLOSE
BENG	HD 180968	26	5.430	1915366	+225603	H	3	44404	L	16487	FO	92041423	235700	000630	502	G G=230,B=40
ISNM	HD 181869	22	3.970	1920250	-404243	H	3	44758	L	601	FU	92052421	215500	000215	502	G G=210,B=35
ISNM	HD 181869	22	3.970	1920250	-404243	H	3	44759	L	601	FU	92052422	224700	000215	502	G G=210,B=40
NI015	BF CYGNI	57	11.07	1921550	+293434	L	3	44369	L	00153	FO	92041006	064028	000800	350	V
NI015	BF CYGNI	57	11.01	1921550	+293434	L	1	22778	L	00161	FO	92041006	065501	001000	441	V
NI015	BF CYGNI	57	10.93	1921550	+293434	L	3	44370	L	00173	FO	92041007	072334	004000	460	V

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	EES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
NI015	BF CYGNI	57	11.17	1921550	+293434	L	1	22779	L	00140	FO	92041008	080849	004000	660	V
ZANMK	CH CYG	57	7.000	1923142	+500831	L	3	44615	L	3100	FO	92050707	073400	003000	XX1	G E=6X,C=5X,B=22
ZANMK	CH CYG	57		1923142	+500831	L	3	44616	L	2970	FO	92050708	084400	000500	551	G E=237,C=174,B=23
ZANMK	CH CYG	57	7.000	1923142	+500831	H	3	44617	L	3014	FO	92050709	094900	010000	3X2	G E=1.5X,C=118,B=40
NA201	HD 183656	26	06.42	1928029	+032019	H	3	44983	L	09387	FO	92062303	032341	002000	500	V
NA201	HD 183656	26	06.43	1928029	+032019	H	1	23361	L	09298	FO	92062304	040834	001300	501	V
GHOD	22891227	16	14.10	1931339	-590028	L	3	45021	L	0	BO	92062716	160400	003100	305	G G=115,B=70
GHOD	Unknown	65	12.30	1937104	-525359	L	3	45016	L	370	SO	92062615	155400	000600	01	G B=22
PHCAL	16 CYG A	44	06.35	1940284	+502423	L	1	22079	L	09885	FO	91122514	143235	000100	500	V
PHCAL	16 CYG A	44	06.36	1940284	+502423	L	1	22080	L	09861	FO	91122515	150636	000145	700	V
PHCAL	16 CYG A	44	06.34	1940285	+502424	L	1	22207	L	09979	FO	92010712	124247	000100	501	V
PHCAL	16 CYG A	44	06.32	1940285	+502424	L	1	22210	L	10136	FO	92010714	142513	000200	601	V
PHCAL	16 CYG A	44	06.37	1940285	+502424	L	1	22442	L	09772	FO	92022306	063606	000100	501	V
PHCAL	16 CYG A	44	06.38	1940285	+502424	L	1	22443	L	09642	FO	92022310	104357	000200	601	V
PHCAL	16 CYG A	49	06.21	1940285	+502424	L	1	22625	L	11136	FO	92031808	081024	000100	500	V
PHCAL	16 CYG A	44	06.30	1940285	+502424	L	1	22626	L	10314	FO	92031809	090429	000200	700	V
PHCAL	16 CYG B	44	06.52	1940314	+502357	L	1	22082	L	08583	FO	91122516	161919	000155	700	V
PHCAL	16 CYG B	44	06.53	1940314	+502357	L	1	22081	L	08523	FO	91122515	154642	000100	500	V
PHCAL	16 CYG B	44	06.59	1940314	+502357	L	1	22208	L	08128	FO	92010713	131711	000100	501	V
PHCAL	16CYG B	44	06.58	1940314	+502357	L	1	22209	L	08189	FO	92010713	134912	000200	601	V
PHCAL	16 CYG B	44	06.61	1940314	+502357	L	1	22444	L	07996	FO	92022311	111830	000100	501	V
PHCAL	16 CYG B	44	06.61	1940314	+502357	L	1	22445	L	07982	FO	92022311	115139	000200	501	V
PHCAL	16 CYG B	44	06.61	1940314	+502357	L	1	22446	L	07958	FO	92022312	122555	000100	501	V
PHCAL	16 CYG B	44	06.57	1940314	+502357	L	1	22627	L	08263	FO	92031809	094858	000100	500	V
PHCAL	16 CYG B	44	06.52	1940314	+502357	L	1	22628	L	08608	FO	92031810	104030	000200	700	V
NC083	HD186438	41	08.27	1941056	+373328	L	1	23132	L	01859	FO	92051903	032031	000300	401	V
NC083	HD 186438	41	08.00	1941056	+373328	L	3	44716	L	00000	BO	92051903	032825	002000	300	V
CONAB	HD 186791	47	2.720	1943529	+102924	L	3	44799	L	1619	FU	92052816	163600	004000	341	G E=129,C=58,B=24
NA108	HD187885	41	09.12	1950008	-170939	L	3	44448	L	00874	FO	92042106	062416	012000	401	V
NA108	HD187885	41	09.11	1950008	-170939	L	1	22867	L	00876	FO	92042108	083215	001000	400	V
PHCAL	V1016CYG	57	10.60	1955199	+394139	L	3	43444	L	202	FO	91122302	023900	000200	X0	G E=1.5X,B=17
PHCAL	V1016CYG	57	10.60	1955199	+394139	L	3	43444	L	204	FO	91122302	025000	000400	50	G E=252,B=17
PHCAL	V1016CYG	57	10.60	1955199	+394139	L	3	43445	L	203	FO	91122304	040100	001000	X1	G E=4X,B=25
PHCAL	V1016CYG	57	10.60	1955199	+394139	L	3	43445	S	202	FO	91122304	042300	002000		G
PHCAL	V1016CYG	57	10.60	1955199	+394139	H	3	43446	L	208	FO	91122306	060300	003000	X1	G E=1.5X,B=23
PHCAL	V1016CYG	57	10.60	1955199	+394139	L	3	43447	L	205	FO	91122308	080100	000200		G
PHCAL	V1016CYG	57	10.60	1955199	+394139	L	3	43447	S	205	FO	91122308	081200	000400		G
NA004	LSIV-12111	27	11.34	1959029	-124939	L	3	44387	L	00118	FO	92041301	013316	006000	670	V
NA108	LS IV-12 1	27	11.64	1959029	-124938	L	3	44447	L	0088	FO	92042104	044807	003000	501	V
NA108	LS IV-12 1	27	11.59	1959029	-124938	L	1	22866	L	0093	FO	92042105	052505	001000	500	V
NA004	LSIV-12111	27	11.52	1959030	-124940	L	1	22799	L	00100	FO	92041302	023931	003000	661	V
NA004	LSIV-12111	27	11.55	1959030	-124940	L	1	22823	L	00097	FO	92041506	060341	001500	601	V
NA004	LSIV-12111	27	11.60	1959030	-124940	L	3	44406	L	00092	FO	92041506	063243	003000	500	V
NA004	LSIV-12111	27	11.60	1959030	-124940	L	1	22824	L	00092	FO	92041507	071153	001000	500	V
NA004	LSIV-12111	27	11.65	1959030	-124940	L	3	44407	L	00087	FO	92041507	075252	003000	500	V
NA004	LSIV-12111	27	11.57	1959030	-124940	L	1	22825	L	00095	FO	92041508	083054	001000	500	V
AGOUR	QQ VUL	65	15.00	2003307	+223128	L	3	44832	L	0	BO	92060214	140100	002500	00	G B=17
AGOUR	QQ VUL	63	15.00	2003320	+223121	L	3	44834	L	0	BO	92060216	164700	002500	322	G E=59,C=61,B=40
AGOUR	QQ VUL	63	15.00	2003320	+223121	L	3	44835	L	0	BO	92060217	173700	002500	333	G E=116,C=69,B=44
AGOUR	QQ VUL	63	15.00	2003320	+223121	L	3	44836	L	0	BO	92060218	183700	002500	331	G E=67,C=55,B=29

PRO	Object	CL	MAG	R.A.	DEC	D C	Image	A	EES	MD	Obs.date	Exptim	nnnnsstt	ECC	Comment
AGOR	QQ VUL	63	15.00	2003320	+223121	L	3 44837	L	0	BO	92060219	192700	002500	231	G E=58,G=41,B=23
AGOR	QQ VUL	63	15.00	2003320	+223121	L	3 44838	L	0	BO	92060220	201600	002500	231	G E=47,G=35,B=21
AGOR	QQ VUL	63	15.00	2003320	+223121	L	3 44855	L	0	BO	92060413	135000	002500	231	G E=77,G=40,B=22
AGOR	QQ VUL	63	15.00	2003320	+223121	L	3 44856	L	0	BO	92060414	144000	002500	231	G E=86,G=42,B=23
AGOR	QQ VUL	63	15.00	2003320	+223121	L	3 44857	L	0	BO	92060415	152800	002500	331	G E=58,G=47,B=26
AGOR	QQ VUL	63	15.00	2003320	+223121	L	3 44858	L	0	BO	92060416	161800	002500	332	G E=65,G=54,B=32
AGOR	QQ VUL	63	15.00	2003320	+223121	L	3 44859	L	0	BO	92060417	170600	002600	332	G E=68,G=60,B=38
AGOR	QQ VUL	63	15.00	2003320	+223121	L	3 44860	L	0	BO	92060417	175600	002500	332	G E=100,G=58,B=34
AGOR	QQ VUL	63	15.00	2003320	+223121	L	3 44861	L	0	BO	92060418	184500	002500	231	G E=64,G=44,B=24
AGOR	QQ VUL	63	15.00	2003320	+223121	L	3 44862	L	0	BO	92060419	193300	002600	331	G E=71,G=44,B=23
AGOR	QQ VUL	63	15.00	2003320	+223121	L	3 44863	L	0	BO	92060420	202600	002400	221	G E=36,G=42,B=22
AGOR	QQ VUL	65	15.00	2003326	+223128	L	3 44833	L	0	BO	92060215	151800	002500	00	G B=20
ISNIS	HD 192281	12	7.550	2010450	+400651	H	3 44636	L	2843	FO	92051008	082500	017000	544	G B=179,G=222,B=56
ISNIS	HD 192281	12	7.550	2010450	+400651	H	3 44637	L	2747	FO	92051012	120600	016500	544	G B=166,G=219,B=55
IENE	HD 192577	47	3.730	2012033	+463520	H	3 44414	L	670	FU	92041522	220100	001200	503	G G=237,B=41
NA170	HD192641	10	08.19	2012394	+363028	L	3 44829	L	01998	FO	92060201	011609	000235	550	V
NA170	HD192641	10	08.22	2012394	+363028	L	1 23240	L	01947	FO	92060201	011040	000040	501	V
NA170	HD 192641	10	08.22	2012394	+363028	L	3 44966	L	01946	FO	92062101	012035	000235	450	V
NA170	HD 192641	10	08.22	2012394	+363028	L	1 23341	L	01943	FO	92062101	012705	000040	500	V
VENSA	HR 7736	25	4.970	2012396	+363911	L	3 44622	L	22419	FO	92050722	223100	000121	500	G G=201,B=20
ISNIS	HD 192660	23	7.540	2012396	+401034	H	3 44625	L	2733	FO	92050808	082100	031000	405	G G=188,B=70
PNOSH	NGC 6891	70	12.00	2012480	+123254	L	3 44984	L	139	FO	92062313	132400	002000	550	G E=216,G=220,B=15
PNOSH	NGC 6891	70	12.00	2012480	+123254	H	3 44985	L	136	FO	92062314	143500	002000	550	G E=211,G=218,B=16
PHCAL	SKY BKGD	07		2013193	+232220	H	3 44630	L	0	BO	92050915	155800	004000	01	G B=21
CD90Y	HD 192713	39	5.200	2013205	+232117	H	3 44626	L	17581	FO	92050815	151500	011000	403	G G=175,B=47
CD90Y	HD 192713	39	5.200	2013205	+232117	H	3 44631	L	16673	FO	92050917	173300	007500	303	G G=141,B=46
LPORS	HD 192909	66	4.400	2013560	+473300	H	3 44869	L	637	FU	92060516	163900	003000	403	G G=185,B=50
PC029	ALPHA CAP	45	04.71	2014256	-123951	E	9 02550	2	00382	FU	92061522	220000	016000		V EES FOR SWP44933 + L
PC029	ALPHA CAP	45	04.71	2014256	-123951	L	3 44933	L	00382	FU	92061522	221600	036000	762	V
GSNAB	HD 192876	45	4.240	2014526	-123951	L	3 44745	L	465	FU	92052317	172900	003000	X30	G E=43,G=2X,B=18
PONIS	HD 193237	23	4.800	2015565	+375236	H	3 43337	L	24939	FO	91120705	054600	002200	X02	G G=1.5X,B=40
PONIS	HD 193237	23	4.800	2015565	+375236	H	3 43338	L	24829	FO	91120706	065900	002200	X02	G G=1.5X,B=35
PONIS	HD 193237	23	4.800	2015565	+375236	H	3 43339	L	24367	FO	91120708	081400	001200	401	G G=178,B=28
SFOGC	BERK86#1	23	9.500	2018196	+382959	L	3 44347	L	505	FO	92040612	122700	020000	?03	G G=10X,B=41
NA170	HD 193793	10	07.20	2018467	+434143	L	1 22034	L	04801	FO	91121914	142300	000022	551	V
NA170	HD 193793	10	07.20	2018467	+434143	H	3 43426	L	04812	FO	91121914	143016	012000	500	V
NA170	HD193793	10	07.16	2018467	+434143	L	1 23239	L	04957	FO	92060121	215645	000022	501	V
NA170	HD193793	10	07.16	2018467	+434143	H	3 44828	L	04957	FO	92060122	222043	012000	500	V
NA170	HD 193793	10	07.17	2018467	+434143	H	3 44965	L	04900	FO	92062021	214311	012000	500	V
NA170	HD193793	10	07.16	2018467	+434143	L	1 23340	L	04965	FO	92062023	235438	000022	551	V
SFOGC	BE87 #25	12	10.46	2019465	+371538	L	3 44875	L	293	FO	92060606	060200	040000	305	G G=121,B=63
NE126	AM2020-504	81	14.00	2020146	-504849	L	3 44916	L	00000	BO	92061122	222747	038000	302	V EES IMAGE FOR SWP449
NE126	AM2020.504	81	14.00	2020146	-504849	L	3 44919	L	00000	BO	92061222	225617	035100	201	V
NE126	AM2020.404	81	14.00	2020146	-504849	L	1 23297	L	00000	BO	92061422	223747	037000	203	V
NE127	AM 2020.50	81	99.99	2020146	-504849	L	1 23304	L	00000		92061422	220550	040200	203	V
NE126	AM2020-504	81	14.00	2020495	-504354	E	9 02549	2	00000	BO	92061122	221100	016000		V EES IMAGE FOR SWP449
SFOGC	HD 229227	23	9.370	2022043	+381812	L	3 44462	L	547	FO	92042313	134400	018000	402	G G=150,B=32
CD13Z	LANNING	63	17.00	2022090	+462040	L	3 44270	L	0	BO	92033011	115800	018000	02	G B=32
SFOGC	HD 229234	12	8.920	2022106	+382104	L	3 44331	L	800	FO	92040411	110300	020000	X03	G G=8X,B=42
SFOGC	HD 229234	12	8.920	2022106	+382104	L	3 44332	L	750	FO	92040416	161700	003000	300	G G=93,B=17

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
SPOSC	HD 229238	23	8.880	2022140	+382230	L	3	44476	L	809	FO	92042513	132300	020500	502	G G=230,B=40
NONSS	N CYG 92	55	5.800	2029070	+522743	L	3	44102	L	14777	FO	92030223	233600	000020	400	G G=136,B=15
NONSS	N CYG 92	55	5.700	2029070	+522744	L	3	44102	S	14718	FO	92030223	234500	000020	300	G G=77,B=15
NONSS	N CYG 92	55	5.700	2029070	+522744	H	3	44103	L	14067	FO	92030300	004300	004500	502	G G=251,B=38
NONSS	N CYG 92	55	5.700	2029070	+522744	H	3	44104	L	13572	FO	92030302	020700	004000	502	G G=253,B=36
NONSS	N CYG 92	55	6.100	2029070	+522744	L	3	44115	S	12459	FO	92030419	193800	000200	500	G G=213,B=18
NONSS	N CYG 92	55	6.100	2029070	+522744	L	3	44115	L	12449	FO	92030419	194600	000035	X00	G G=1.5X,B=18
NONSS	N CYG 92	55	6.100	2029070	+522744	H	3	44116	L	12421	FO	92030420	202600	004000	502	G G=236,B=38
NONSS	N CYG 92	55	6.100	2029070	+522744	H	3	44117	L	12280	FO	92030421	215300	006000	X04	G G=1.5X,B=52
NONSS	N CYG 92	55		2029070	+522744	H	3	44154	L	7498	FO	92031122	223800	004000	504	G G=241,B=51
NONSS	N CYG 92	55		2029070	+522744	L	3	44155	L	7249	FO	92031200	000400	000035	500	G G=240,B=18
NONSS	N CYG 92	55		2029070	+522744	L	3	44155	S	7373	FO	92031200	001800	000400	X00	G G=2X,B=18
NONSS	N CYG 92	55		2029070	+522744	H	3	44156	L	7436	FO	92031201	015000	005800	X03	G G=1.5X,B=44
NONSS	N CYG 92	55		2029070	+522744	H	3	44192	L	6780	FO	92031822	223600	004000	X02	G G=1.5X,B=35
NONSS	N CYG 92	55		2029070	+522744	L	3	44193	L	6550	FO	92031823	235800	000035	X00	G G=1.5X,B=17
NONSS	N CYG 92	55		2029070	+522744	L	3	44193	S	5506	FO	92031800	000800	000500	X00	G G=5X,B=17
NONSS	N CYG 92	55		2029070	+522744	H	3	44194	L	6671	FO	92031901	012900	006500	X03	G G=2X,B=50
NONSS	NOVA CYG	55		2029070	+522744	H	3	44232	L	5716	FO	92032522	223300	004000	X03	G G=1.5X,B=44
NONSS	NOVA CYG	55		2029070	+522744	L	3	44233	L	5442	FO	92032600	001300	000030	X0	G E=1.5X,B=15
NONSS	NOVA CYG	55		2029070	+522744	L	3	44233	S	5398	FO	92032600	002100	000500	X0	G E=3X,B=15
NONSS	N CYG 92	55	7.300	2029070	+522744	H	3	44304	L	4291	FO	92040218	181000	004000	5X2	G E=2X,G=208,B=38
NONSS	N CYG 92	55	7.300	2029070	+522744	L	3	44305	L	3894	FO	92040219	194400	000030	500	G G=234,B=14
NONSS	N CYG 92	55	7.300	2029070	+522744	L	3	44305	S	3931	FO	92040219	195400	000500	X00	G G=5X,B=14
NITOO	NOVACYG92	55	08.35	2029072	+522742	H	3	44763	L	01736	FO	92052505	052907	004000	350	V
NITOO	NOVACYG92	55	08.37	2029072	+522742	H	1	23171	L	01703	FO	92052506	061634	001000	350	V
NQ022	NOVA CYG 9	55	08.36	2029072	+522742	L	3	44761	S	01716	FO	92052504	040033	000200	250	V
NQ022	NOVA CYG 9	55	08.36	2029072	+522742	L	3	44761	L	01716	FO	92052504	040625	000030	360	V
NITOO	NOVACYG92	55	08.37	2029072	+522742	L	3	44762	L	01695	FO	92052504	045657	000045	360	V
NITOO	NOVACYG92	55	08.36	2029072	+522742	L	1	23170	S	01715	FO	92052503	035102	000020	360	V
NITOO	NOVACYG92	55	08.36	2029072	+522742	L	1	23170	L	01715	FO	92052503	035611	000004	250	V
NITOO	NOVA CYG92	55	05.56	2029073	+522743	L	3	44086	S	18039	FO	92030108	081259	000100	550	V
NONSS	N CYG 92	55	0.800	2029073	+522743	H	3	44633	L	1972	FO	92050920	203000	004000	352	G E=240,G=74,B=31
NITOO	NOVA CYG92	55	05.56	2029073	+522743	L	3	44086	L	18039	FO	92030108	080436	000050	560	V
NONSS	N CYG 92	55	0.800	2029073	+522743	L	3	44634	S	2046	FO	92050921	215900	000500	3?0	G E=10X,G=97,B=14
NITOO	NOVA CIG92	55	05.55	2029073	+522743	L	1	22483	S	18233	FO	92030109	090016	000003	331	V
NITOO	NOVA CIG92	55	05.55	2029073	+522743	L	1	22483	L	18233	FO	92030108	084521	000002	561	V
NITOO	NOVA CYG92	55	05.57	2029073	+522743	H	3	44087	L	17994	FO	92030109	090832	003000	350	V
NITOO	NOVA CYG92	55	05.64	2029073	+522743	H	1	22484	L	17125	FO	92030109	095410	000300	351	V
NITOO	NOVA CYG92	55	05.64	2029073	+522743	L	1	22485	L	17132	FO	92030110	104347	000001	350	V
NITOO	NOVA CIG92	55	05.16	2029073	+522743	H	3	44063	L	23198	FO	92022605	053648	012000	470	V
NITOO	NOVA CIG92	55	05.16	2029073	+522743	H	1	22461	L	23239	FO	92022607	074401	001500	471	V
NITOO	NOVA CIG92	55	05.15	2029073	+522743	L	3	44064	L	23380	FO	92022608	084354	000100	450	V
NITOO	NOVA CIG92	55	05.15	2029073	+522743	L	1	22462	L	23385	FO	92022608	084848	000005	561	V
NITOO	NOVA CYG 9	55	06.02	2029073	+522743	L	3	44130	S	12876	FO	92030708	081818	000200	560	V
NITOO	NOVA CYG 9	55	06.02	2029073	+522743	L	3	44130	L	12876	FO	92030708	082442	000035	350	V
NITOO	NOVA CYG92	55	06.01	2029073	+522743	L	1	22533	S	13014	FO	92030708	082950	000005	350	V
NITOO	NOVA CYG92	55	06.01	2029073	+522743	L	1	22533	L	13014	FO	92030708	083455	000001	460	V
NITOO	NOVA CYG 9	55	06.05	2029073	+522743	H	1	22534	L	12671	FO	92030709	095609	000200	450	V
NITOO	NOVA CYG 9	55	06.00	2029073	+522743	H	3	44131	L	13097	FO	92030709	090754	004000	560	V
NITOO	NOVA CYG 92	55	06.08	2029073	+522743	H	1	22535	L	12367	FO	92030710	103219	000700	560	V

PRO	Object	CL	MAG	R.A.	DEC	D C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
NTT00	NOVA CYG92	55	06.45	2029073	+522743	L 3	44174	S	09148	FO	92031404	044314	000400	780 V	
NTT00	NOVA CYG92	55	06.45	2029073	+522743	L 3	44174	L	09148	FO	92031404	043515	000035	550 V	
NTT00	NOVA CYG92	55	06.45	2029073	+522743	L 1	22592	S	09128	FO	92031404	042823	000004	351 V	
NTT00	NOVA CYG92	55	06.45	2029073	+522743	L 1	22592	L	09128	FO	92031404	042238	000001	361 V	
NTT00	NOVA CYG92	55	06.48	2029073	+522743	H 3	44175	L	08883	FO	92031405	052354	004000	350 V	
NTT00	NOVA CYG92	55	06.48	2029073	+522743	H 1	22593	L	08921	FO	92031406	061932	001000	581 V	
NTT00	N CYG92	55	06.81	2029073	+522743	L 1	22660	S	06732	FO	92032209	090930	000004	341 V	
NTT00	N CYG92	55	06.81	2029073	+522743	L 1	22660	L	06732	FO	92032209	090417	000001	351 V	
NTT00	N CYG92	55	06.81	2029073	+522743	L 3	44209	S	06732	FO	92032208	085720	000200	460 V	
NTT00	N CYG92	55	06.81	2029073	+522743	L 3	44209	L	06732	FO	92032208	083131	000035	460 V	
NTT00	N CYG92	55	06.88	2029073	+522743	H 1	22661	L	06333	FO	92032210	102242	000200	351 V	
NTT00	N CYE92	55	06.87	2029073	+522743	H 3	44210	L	06388	FO	92032210	102847	002000	V	READ AT GSFC
NTT00	N CYG92	55	07.13	2029073	+522743	L 1	22714	S	05105	FO	92033008	084000	000004	100 V	
NTT00	N CYG92	55	07.13	2029073	+522743	L 1	22714	L	05105	FO	92033008	083537	000001	240 V	
NTT00	N CYG92	55	07.13	2029073	+522743	L 3	44268	S	05090	FO	92033009	093445	000200	350 V	
NTT00	N CYG92	55	07.13	2029073	+522743	L 3	44268	L	05090	FO	92033009	092940	000030	560 V	
NTT00	N CYG92	55	07.08	2029073	+522743	L 1	22715	L	05334	FO	92033009	092302	000005	360 V	
NTT00	N CYG92	55	07.08	2029073	+522743	H 3	44269	L	05343	FO	92033010	100537	003000	450 V	
NTT00	N CYG92	55	07.08	2029073	+522743	H 1	22716	L	05343	FO	92033010	103916	000300	350 V	
NTT00	N GYG92	55	07.18	2029073	+522743	L 3	44338	S	04867	FO	92040506	064329	000200	500 V	GUIDE FOR SWSA O
NTT00	N GYG92	55	07.18	2029073	+522743	L 3	44338	L	04867	FO	92040506	063202	000030	500 V	GUIDE FOR SWSA O
NTT00	N CYG92	55	07.20	2029073	+522743	L 1	22750	S	04794	FO	92040506	062709	000010	351 V	
NTT00	N CYG92	55	07.20	2029073	+522743	L 1	22750	L	04794	FO	92040506	061949	000002	361 V	
NTT00	N CYG92	55	07.14	2029073	+522743	H 3	44339	L	05037	FO	92040507	072306	004000	360 V	
NTT00	N CYG92	55	07.11	2029073	+522743	H 1	22751	L	05198	FO	92040508	081828	000400	341 V	
NTT00	NOVACYG-9	55	07.55	2029073	+522743	L 1	22800	S	03511	FO	92041306	060022	000010	350 V	
NTT00	NOVACYG-9	55	07.55	2029073	+522743	L 1	22800	L	03511	FO	92041306	060554	000002	340 V	
NTT00	NOVACYG-9	55	07.56	2029073	+522743	L 3	44389	S	03498	FO	92041306	061105	000200	560 V	
NTT00	NOVACYG-9	55	07.56	2029073	+522743	L 3	44389	L	03498	FO	92041306	061733	000030	450 V	
NTT00	NOVACYG-9	55	07.57	2029073	+522743	H 1	22801	L	03465	FO	92041307	072038	000430	350 V	
NTT00	NOVACYG-9	55	07.57	2029073	+522743	H 3	44390	L	03471	FO	92041307	073248	004000	450 V	
NTT00	NOVACYG-9	55	07.60	2029073	+522743	H 1	22802	L	03366	FO	92041308	082013	001500	461 V	
NTT00	NOVACYG92	55	07.85	2029073	+522743	L 1	22855	S	02697	FO	92042005	055050	000014	361 V	
NTT00	NOVACYG92	55	07.85	2029073	+522743	L 1	22855	L	02697	FO	92042005	054707	000003	351 V	
NTT00	NOVACYG92	55	07.81	2029073	+522743	L 3	44439	S	02804	FO	92042005	055051	000230	350 V	
NTT00	NOVACYG92	55	07.81	2029073	+522743	L 3	44439	L	02804	FO	92042006	060352	000040	560 V	
NTT00	NOVACYG92	55	07.89	2029073	+522743	H 1	22856	L	02605	FO	92042007	070453	000500	341 V	
NTT00	NOVACYG92	55	07.87	2029073	+522743	H 3	44440	L	02656	FO	92042007	071654	004000	350 V	
NTT00	NOVACYG92	55	07.90	2029073	+522743	H 1	22857	L	02587	FO	92042008	080234	001500	360 V	
NTT00	NOVACYG92	55	07.93	2029073	+522743	H 3	44441	L	02510	FO	92042008	083411	001700	330 V	
NTT00	NOVA CYG92	55	08.28	2029073	+522743	L 3	44717	S	01847	FO	92051904	045445	000200	130 V	GDE SAP (361,684
NTT00	NOVA CYG92	55	08.28	2029073	+522743	L 3	44717	L	01847	FO	92051904	044915	000030	250 V	
NTT00	NOVA CYG92	55	08.26	2029073	+522743	H 1	23133	L	01871	FO	92051905	050441	002000	371 V	
NTT00	NOVA CYG92	55	08.28	2029073	+522743	L 1	23134	S	01843	FO	92051906	063103	000020	361 V	
NTT00	NOVA CYG92	55	08.28	2029073	+522743	L 1	23134	L	01843	FO	92051906	062352	000003	231 V	
NTT00	NOVA CYG92	55	08.28	2029073	+522743	H 3	44718	L	01839	FO	92051905	053734	004000	150 V	
NTT00	NOVACYG 92	55	08.38	2029073	+522743	L 1	23210	S	01690	FO	92053003	032053	000050	150 V	
NTT00	NOVACYG 92	55	08.38	2029073	+522743	L 1	23210	L	01690	FO	92053003	032512	000005	360 V	
NTT00	NOVACYG 92	55	08.35	2029073	+522743	L 3	44808	S	01736	FO	92053003	032808	000400	150 V	
NTT00	NOVACYG 92	55	08.35	2029073	+522743	L 3	44808	L	01736	FO	92053003	033526	000030	360 V	

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	EES	MD	Obs.date	Exptim	nnnnsstt	ECC	Comment
NITOO	NOVACYG 92	55	08.36	2029073	+522743	H	1	23211	L	01707	FO	92053004	040812	001000	151 V	
NITOO	NOVACYG 92	55	08.36	2029073	+522743	H	3	44809	L	01720	FO	92053004	044514	004000	351 V	
NITOO	NOVACYG 92	55	08.37	2029073	+522743	H	1	23212	L	01701	FO	92053005	053220	003000	371 V	
NITOO	NOVACYG 92	55	08.50	2029073	+522743	H	3	44810	L	00000	EO	92053006	060637	004000	351 V	
NITOO	NOVA CYG 9	55	08.70	2029073	+522743	L	3	44970	S	01261	FO	92062122	223546	000300	360 V	GUIDE FOR SWSA E
NITOO	NOVA CYG 9	55	08.70	2029073	+522743	L	3	44970	L	01261	FO	92062122	222821	000035	250 V	GUIDE FOR SWSA E
NITOO	NOVA CYG 9	55	08.71	2029073	+522743	L	1	23348	S	01260	FO	92062122	222254	000030	371 V	
NITOO	NOVA CYG 9	55	08.71	2029073	+522743	L	1	23348	L	01260	FO	92062122	221741	000007	351 V	
NITOO	NOVA CYG 9	55	08.73	2029073	+522743	H	3	44971	L	01230	FO	92062123	232215	004000	350 V	
NITOO	NOVA CYG 9	55	08.66	2029073	+522743	H	1	23349	L	01310	FO	92062200	001142	001000	351 V	
NITOO	NOVA CYG 9	55	08.68	2029073	+522743	H	3	44972	L	01291	FO	92062200	004721	010000	360 V	
NITOO	NOVA CYG 9	55	99.99	2029073	+522743	H	1	23350	L	00000		92062202	023420	004000	372 V	
NITOO	NOVA CYG92	55	08.67	2029073	+522743	L	3	44973	S	01300	FO	92062203	033012	000130	350 V	GUIDE FOR SWSA E
NITOO	NOVA CYG92	55	08.67	2029073	+522743	L	3	44973	L	01300	FO	92062203	032222	000035	350 V	GUIDE FOR SWSA E
NITOO	NOVA CYG 9	55	08.67	2029073	+522743	L	1	23351	S	01299	FO	92062204	041356	000015	250 V	
NITOO	NOVA CYG 9	55	08.67	2029073	+522743	L	1	23351	L	01299	FO	92062204	040843	000007	250 V	
NONSS	N CYG 92	55	4.400	2029078	+522742	L	3	44044	S	419	FU	92022219	190500	000800	501 G	G=200,B=30
NONSS	N CYG 92	55	0.800	2029078	+522742	H	3	44634	L	2079	FO	92050922	220900	000020	250 G	E=173,G=29,B=14
NONSS	N CYG 92	55	5.000	2029079	+522743	L	3	44030	L	27021	FO	92022022	220000	000010	300 G	G=60,B=18
NONSS	N CYG 92	55	5.000	2029079	+522743	L	3	44031	L	26215	FO	92022023	231000	000045	400 G	G=145,B=18
NONSS	N CYG 92	55	5.000	2029079	+522732	H	3	44032	L	26170	FO	92022101	013200	006500	402 G	G=178,B=40
NONSS	N CYG 92	55	4.600	2029079	+522743	L	3	44039	L	419	FU	92022121	214000	000040	300 G	G=46,B=18
NONSS	N CYG 92	55	4.600	2029079	+522743	L	3	44040	L	441	FU	92022122	225200	000700	500 G	G=218,B=18
NONSS	N CYG 92	55	4.400	2029079	+522743	L	3	44043	L	402	FU	92022216	165000	000800	X00 G	G=1.5X,B=18
NONSS	N CYG 92	55	4.400	2029079	+522743	L	3	44044	L	408	FU	92022218	182100	003500	X01 G	G=6X,B=30
NONSS	NOVA CYG	55	4.600	2029079	+522743	L	3	44050	S	421	FU	92022322	220600	002000	X00 G	G=3X,B=20
NONSS	NOVA CYG	55	4.600	2029079	+522743	L	3	44050	L	419	FU	92022322	224100	000300	X00 G	G=6X,B=20
NONSS	NOVA CYG	55	4.500	2029079	+522743	L	3	44051	L	402	FU	92022404	044000	000100	540 G	E=154,G=191,B=20
NONSS	NOVA CYG	55	4.500	2029079	+522743	L	3	44051	S	397	FU	92022404	044800	000100	300 G	G=93,B=20
NONSS	NOVA CYG	55	4.700	2029079	+522743	L	3	44055	L	360	FU	92022502	024400	000030	300 G	G=102,B=20
NONSS	NOVA CYG	55	4.700	2029079	+522743	L	3	44055	S	363	FU	92022502	025000	000100	300 G	G=63,B=20
NONSS	NOVA CYG	55	4.700	2029079	+522743	L	3	44056	L	349	FU	92022503	035900	000200	X00 G	G=1.5X,B=20
NONSS	NOVA CYG	55	5.100	2029079	+522743	L	3	44060	L	23921	FO	92022601	015800	000050	500 G	G=182,B=18
NONSS	NOVA CYG	55	5.100	2029079	+522743	L	3	44060	S	23877	FO	92022602	021000	000300	X00 G	G=1.5X,B=18
NONSS	NOVA CYG	55	5.100	2029079	+522743	H	3	44061	L	24159	FO	92022602	024400	006800	X02 G	G=1.5X,B=40
NONSS	NOVA CYG	55	5.100	2029079	+522732	L	3	44062	L	23800	FO	92022604	043300	000300	X00 G	G=3X,B=18
NONSS	N CYG 92	55	4.900	2029079	+522743	L	3	44073	L	25407	FO	92022722	223000	000040	501 G	G=195,B=21
NONSS	N CYG 92	55	4.900	2029079	+522743	L	3	44073	S	25445	FO	92022722	223500	000040	400 G	G=130,B=20
NONSS	N CYG 92	55	4.900	2029079	+522743	H	3	44074	L	25694	FO	92022723	230900	005000	X03 G	G=1.5X,B=41
NONSS	N CYG 92	55	7.800	2029079	+522743	L	3	44377	L	3636	FO	92041022	222400	000030	500 G	G=200,B=14
NONSS	N CYG 92	55	7.800	2029079	+522743	L	3	44377	S	3593	FO	92041022	223100	000500	X00 G	G=5X,B=18
NONSS	N CYG 92	55	7.800	2029079	+522743	H	3	44378	L	3599	FO	92041023	235400	004500	502 G	G=250,B=36
NONSS	N CYG 92	55	7.000	2029079	+522743	L	3	44632	L	1916	FO	92050919	193400	000040	300 G	G=37,B=13
NONSS	N CYG 92	55	7.000	2029079	+522743	L	3	44632	S	1922	FO	92050919	194200	000230	300 G	G=48,B=14
NONSS	NOVA CYG	55	8.400	2029079	+522743	L	3	44790	L	1671	FO	92052719	192700	000030	350 G	E=213,G=39,B=16
NONSS	NOVA CYG	55	8.400	2029079	+522743	L	3	44790	S	1689	FO	92052719	194400	000500	3X0 G	E=1.5X,G=70,B=16
NONSS	NOVA CYG	55	8.400	2029079	+522743	H	3	44791	L	1721	FO	92052720	203300	004000	351 G	E=235,G=72,B=27
NONSS	NOVA CYG	55	8.400	2029079	+522743	H	3	44792	L	1685	FO	92052721	215600	005500	3X2 G	E=1.5X,G=122,B=31
NONSS	N CYG 92	55	8.300	2029079	+522743	L	3	44901	L	1454	FO	92060918	182500	000035	350 G	E=214,G=36,B=15
NONSS	N CYG 92	55	8.300	2029079	+522743	L	3	44901	S	1461	FO	92060918	183400	000500	3X0 G	E=5X,G=54,B=15

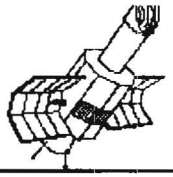
PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
NONSS	N CYG 92	55	8.500	2029079	+522743	H	3	44902	L	1508	FO	92060919	194700	006500	3X2	G E=1.5X,C=82,B=33
NONSS	N CYG 92	55		2029079	+522743	L	3	44937	L	1428	FO	92061617	174800	000038	250	G E=221,C=28,B=16
NONSS	N CYG 92	55		2029079	+522743	H	3	44938	L	1410	FO	92061618	185900	011000	3X3	G E=2X,C=122,B=43
VWNEG	VW CEP	66	7.950	2038028	+752457	L	3	44812	L	2510	FO	92053010	102700	010800	331	G E=79,C=60,B=28
VWNEG	VW CEP	66	7.950	2038029	+752458	L	3	44811	L	2963	FO	92053007	073300	007000	331	G E=58,C=49,B=21
VWNEG	VW CEP	66	7.950	2038029	+752458	L	3	44813	L	2334	FO	92053013	132300	008500	332	G E=71,C=60,B=35
AGNDC	MRK 509	84	13.00	2041263	-105418	L	3	44975	L	57	SO	92062209	091400	005000	341	G E=142,C=72,B=23
NC199	HD197890	46	09.93	2044339	-364645	L	1	23251	L	00424	FO	92060500	000000	000800	331	V PREADMENTS,R.P. (-126
RFNRR	HD 197890	46	9.300	2044339	-364641	L	3	44371	L	471	FO	92041009	095900	003000	00	G B=18
NC195	HD 197890	46	09.89	2044339	-364645	L	3	44853	L	00437	FO	92060403	030454	010300	230	V
RFNRR	HD 197890	46	9.300	2044339	-364641	L	3	44373	L	472	FO	92041014	144900	012500	302	G G=64,B=35
RFNRR	HD 197890	46	9.300	2044339	-364641	L	3	44383	L	538	FO	92041210	102700	018000	332	G E=82,C=62,B=36
RFNRR	HD 197890	46	9.300	2044339	-364641	L	3	44384	L	507	FO	92041214	140600	017200	233	G E=87,C=67,B=48
RFNRR	HD 197890	46	9.300	2044339	-364641	L	3	44391	L	469	FO	92041310	101600	018000	333	G E=82,C=74,B=41
RFNRR	HD 197890	46	9.300	2044339	-364641	L	3	44392	L	482	FO	92041314	140400	016500	232	G E=65,C=55,B=40
PHCAL	NULL	99	5.750	2058114	+591433	H	2	18610	S	0		91120104	043700	000000	02	G B=40
PHCAL	WAVCAL	98	5.750	2058114	+591433	L	2	18611	S	0		91120105	054900	000001	?1	G E=10X,B=25
PHCAL	WAVCAL	98		2058114	+591433	H	2	18613	S	0		91120106	064400	000022	31	G E=60X,B=28
PHCAL	WAVCAL	98	5.750	2058114	+591433	L	3	43280	S	0		91120104	041300	000002	?0	G E=10X,B=17
PHCAL	TFLOOD	99	5.750	2058114	+591433	L	3	43281	S	0		91120105	050200	000005	09	G B=105
PHCAL	WAVCAL	98		2058114	+591433	H	3	43282	S	0		91120105	052600	000200	32	G E=60X,B=35
NA013	PG2059+013	28	15.00	2059416	+011900	L	3	44840	L	00000	BO	92060301	015227	008000		V
NA013	PG2059+013	28	15.00	2059466	+011900	L	1	23243	L	00000	BO	92060301	013655	001000		V
NC199	HD200391	44	07.73	2100167	+273634	L	1	23249	L	02992	FO	92060500	000510	000230	651	V R.P. (-216,-181)
NC199	HD200391	44	07.74	2100167	+273634	L	3	44865	L	02967	FO	92060500	001625	005000	330	V R.P. (-128,-181)
NC199	HD200391	44	07.80	2100167	+273634	L	1	23250	L	02822	FO	92060502	022043	000230	551	V R.P. (-126,-181)
NC199	HD200391	44	07.75	2100167	+273634	L	3	44866	L	02959	FO	92060501	014514	010000	330	V 3 SEGMENTS,R.P. (-126
NC195	HD200391	44	07.76	2100167	+273634	L	3	44851	L	02918	FO	92060323	230130	005000	330	V R.P. (-126,-181)
NC195	HD200391	44	07.73	2100167	+273634	H	1	23247	L	03008	FO	92060321	214057	007000	331	V
NC195	HD200391	44	07.71	2100167	+273634	L	1	23248	L	03054	FO	92060400	000019	000600	651	V R.P. (-126,-181) AND
NC195	HD200391	44	07.79	2100167	+273634	L	3	44852	L	02836	FO	92060400	003429	005000	330	V 2 SEGMENTS OF 25 MIN
DANCH	KUV21168	37	14.87	2116487	+733803	L	3	44750	S	0	BO	92052410	102300	006600	330	G E=103,C=63,B=19
PROMF	SKY BKGD	07		2117180	+460710	L	3	44670	L	0		92051508	080700	003000	02	G B=40
PROMF	M1-77	70	12.50	2117190	+460605	L	3	44643	L	345	SO	92051108	080400	040500	409	G C=235,B=129
NS092	SATURN	03	00.70	2121534	-161730	L	3	44674	L	00000	BO	92051600	000008	006000	750	V GUIDING ON TITAN
SSNMM	SATURN	03	0.600	2122094	-162002	L	3	44878	L	0	BO	92060705	054700	012000	X51	G E=185,C=2X,B=24
SSNMM	SATURN	03	0.600	2122094	-162002	L	3	44879	L	0	BO	92060708	081100	012000		G
SSNMM	SATURN	03	0.600	2122094	-162002	L	3	44880	L	0	BO	92060710	105000	009000	X41	G E=150,C=2X,B=26
SSNMM	SATURN	03	0.600	2122094	-162002	L	3	44881	L	0	BO	92060712	124800	012000	X51	G E=195,C=2X,B=28
SSNMM	SATURN	03	0.600	2122094	-162002	L	3	44882	L	0	BO	92060715	151400	011000	X52	G E=235,C=2X,B=37
SSNMM	SAT BKGD	07	0.600	2122094	-162002	L	3	44883	L	0	BO	92060717	173900	006000	51	G E=245,B=22
NI080	HD204188	20	06.40	2124072	+190929	L	3	43374	L	09495	FO	91121316	161932	003000	700	V
AFNIS	HD 204188	33	6.000	2124072	+190929	L	3	44999	L	9572	FO	92062418	180800	002000	X00	G C=4X,B=13
BFNSA	HD 204485	40	5.800	2125594	+320016	L	3	43469	L	12712	FO	91122504	044100	000320	500	G C=194,B=18
SANOW	HD 204770	22	5.430	2126483	+663526	L	3	43554	L	16986	FO	92010602	020100	000025	500	G C=220,B=15
SANOW	HD 204770	22	5.430	2126483	+663526	L	3	43554	S	16973	FO	92010602	021100	000014	500	G C=210,B=20
CUNAB	HD 204867	45	2.910	2128557	-054732	L	3	44729	L	1409	FU	92052018	183200	003500	530	G E=112,C=238,B=20
PNOLA	HIL - 2	70	12.50	2131069	+392440	H	3	44662	L	340	SO	92051408	080400	040500	349	G E=245,C=175,B=121
PNOSH	ABELL78	70	13.20	2133201	+312818	L	3	44941	L	379	SO	92061713	135400	001000	550	G E=220,C=200,B=16
PNOSH	ABELL78	70	13.20	2133201	+312818	L	3	44942	L	382	SO	92061714	145200	001000	550	G E=200,C=198,B=18

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	EES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
PNOSH	NGC 7094	70	13.60	2134279	+123349	L	3	44943	L	343	SO	92061716	163200	001500	500	G G=225,B=18
PNOSH	NGC 7094	70	13.60	2134279	+123349	L	3	44944	L	391	SO	92061717	173700	001500	500	G G=225,B=17
PHCAL	BD+65 1637	26	10.59	2141415	+655249	H	1	22058	L	00234	FO	91122310	100037	040000	404	V
PHCAL	LK234	58	11.97	2141576	+655307	L	3	43465	L	00274	SO	91122410	101556	039000	302	V
GSNAB	HD 206859	45	4.340	2142085	+170711	L	3	44742	L	405	FU	92052218	184800	015000	442	G E=150,G=135,B=35
GHOUD	22944066	16	14.80	2145104	-124949	L	3	45014	L	0	BO	92062608	081100	006000	330	G E=87,G=81,B=20
PHCAL	BD+28 4211	16	10.33	2148560	+283734	H	1	23377	L	00295	FO	92062602	025200	006500	502	V
PHCAL	BD+28 4211	16	10.37	2148560	+283734	H	3	45012	L	00285	FO	92062604	040209	004500	500	V
PHCAL	BD +28 4211	16	10.53	2148574	+283734	L	2	18676	L	288	FO	92061219	195700	000122	501	G G=177,B=22
PHCAL	BD +28 4211	16	10.53	2148574	+283734	L	3	43312	L	235	FO	91120406	062600	000026	500	G G=201,B=19
PHCAL	BD +28 4211	16	10.53	2148574	+283734	L	3	43313	L	232	FO	91120407	075600	000118	400	G G=166,B=18
PHCAL	BD +28 4211	16	10.53	2148574	+283734	L	3	44780	L	255	FO	92052615	154700	000026	500	G G=202,B=15
PHCAL	BD +28 4211	16	10.53	2148574	+283734	L	3	44781	L	251	FO	92052617	171300	000118	500	G G=171,B=14
PHCAL	BD +28 4211	16	10.53	2148574	+283734	L	3	44898	L	284	FO	92060913	134400	000026	500	G G=191,B=16
CWPS	S193	63	12.00	2149331	+135247	L	3	44678	L	374	SO	92051614	141000	004000	X03	G G=1.5X,B=43
ISNOM	HD 207971	25	3.010	2150540	-373604	H	3	44768	L	1478	FU	92052515	152700	000100	502	G G=234,B=37
ISNOM	HD 207971	25	3.010	2150540	-373604	H	3	44769	L	1460	FU	92052516	160500	000052	502	G G=212,B=35
NA088	RE 2156-54	37	14.30	2152583	-545239	L	3	44775	L	00000	BO	92052600	000543	002700	500	V
NA088	RE 2156-54	37	14.30	2152583	-545239	L	3	44776	S	00000	BO	92052601	010950	005400	500	V
IPCRS	HD 208816	66	4.800	2155140	+632314	H	3	44867	L	23262	FO	92060513	131600	009000	342	G E=181,G=102,B=40
IPCRS	HD 208816	66	4.800	2155140	+632314	L	3	44868	L	22744	FO	92060515	155200	000300	351	G E=192,G=93,B=25
IPCRS	HD 208816	66	4.800	2155140	+632314	H	3	44870	L	22951	FO	92060518	182200	009000	343	G E=178,G=114,B=46
CCNAB	HD 209750	45	2.960	2203129	+003349	L	3	44800	L	1313	FU	92052819	190500	004000	50	G E=183,B=17
ISNOM	HD 210129	22	5.780	2205292	+212732	H	3	44770	L	13042	FO	92052517	173300	000820	502	G G=195,B=36
NA186	HD210221	32	06.57	2205342	+530345	H	1	22046	L	08243	FO	91122116	163127	001700	301	V
NC078	AR LAC	44	07.13	2206390	+452945	H	1	22124	L	05076	FO	91122913	134514	006000	341	V
NC078	AR LAC	44	06.54	2206390	+452945	H	1	22121	L	08494	FO	91122908	081920	006000	442	V
NC078	AR LAC	44	06.55	2206390	+452945	H	1	22122	L	08417	FO	91122910	101833	006000	451	V
NC078	AR LAC	44	06.81	2206390	+452945	H	1	22123	L	06722	FO	91122912	120407	005500	341	V
NC078	AR LAC	44	06.54	2206390	+452945	L	3	43502	L	08466	FO	91122909	094008	003000	350	V
NC078	AR LAC	44	06.66	2206390	+452945	L	3	43503	L	07682	FO	91122911	112732	002500	340	V
NC078	AR LAC	44	07.11	2206390	+452945	L	3	43504	L	05166	FO	91122913	130530	005500	251	V 30 + 25 MIN ; 14:51
NC078	AR LAC	44	06.55	2206390	+452945	H	1	22134	L	08390	FO	91123008	084715	006000	451	V
NC078	HD210334	44	06.50	2206395	+452945	L	3	43491	L	08760	FO	91122809	092318	003000	350	V
ARNUN	HD 210334	46	6.100	2206395	+452945	L	3	43488	L	9378	FO	91122803	035400	003000	330	G E=102,G=70,B=18
NC078	HD210334	44	06.53	2206395	+452945	L	3	43492	L	08566	FO	91122811	111006	003000	350	V
ARNUN	HD 210334	46	6.100	2206395	+452945	L	3	43489	L	9145	FO	91122805	054100	003000	330	G E=69,G=65,B=18
NC078	HD210334	44	06.78	2206395	+452945	L	3	43493	L	06932	FO	91122813	131656	002500	340	V
ARNUN	HD 210334	46	6.100	2206395	+452945	L	3	43490	L	9053	FO	91122807	073100	003000	330	G E=78,G=62,B=18
NC078	HD210334	44	06.84	2206395	+452945	L	3	43494	L	06575	FO	91122815	150020	003000	350	V
ARNUN	HD 210334	46	6.100	2206395	+452945	L	3	43495	L	8027	FO	91122817	170000	003000	330	G E=65,G=67,B=18
NC078	HD210334	44	06.48	2206395	+452945	H	1	22108	L	08936	FO	91122808	081307	006000	451	V
ARNUN	HD 210334	46	6.100	2206395	+452945	L	3	43496	L	8788	FO	91122818	184900	006000	330	G E=62,G=71,B=18
NC078	HD210334	44	06.50	2206395	+452945	H	1	22109	L	08749	FO	91122810	100201	006000	451	V
ARNUN	HD 210334	46	6.100	2206395	+452945	L	3	43497	L	8834	FO	91122822	222800	006000	330	G E=61,G=65,B=18
NC078	HD210334	44	06.57	2206395	+452945	H	1	22110	L	08225	FO	91122811	114808	007500	451	V
ARNUN	HD 210334	46	6.100	2206395	+452945	L	3	43498	L	8675	FO	91122902	021100	003000	330	G E=68,G=58,B=18
NC078	HD210334	44	06.83	2206395	+452945	H	1	22111	L	06614	FO	91122813	135218	006000	451	V
ARNUN	HD 210334	46	6.100	2206395	+452945	L	3	43499	L	8696	FO	91122904	040500	003000	330	G E=62,G=68,B=18
NC078	AR LAC	44	06.56	2206395	+452945	L	3	43512	L	08339	FO	91123009	095712	003000	350	V

PRO	Object	CL	MAG	R.A.	DEC	D C	Image	A	EES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
ARNUN	HD 210334	46	6.100	2206395	+452945	L 3	43500	L	8576	FO	91122905	055300	003000	330	G E=69,C=66,B=18
NC078	AR LAC	44	06.63	2206395	+452945	L 3	43513	L	07877	FO	91123011	114413	004000	350	V
ARNUN	HD 210334	46	6.100	2206395	+452945	L 3	43501	L	8486	FO	91122907	074000	003000	330	G E=63,C=65,B=18
NC078	AR LAC	44	06.81	2206395	+452945	L 3	43514	L	06744	FO	91123013	134230	003000	240	V
ARNUN	HD 210334	46	6.100	2206395	+452945	L 3	43505	L	7598	FO	91122916	164500	006000	330	G E=61,C=72,B=18
NC078	AR LAC	44	06.74	2206395	+452945	L 3	43515	L	07167	FO	91123015	153753	003000	340	V
ARNUN	HD 210334	46	6.100	2206395	+452945	L 3	43506	L	8938	FO	91122919	192300	006000	330	G E=65,C=75,B=18
NC078	AR LAC	44	06.56	2206395	+452945	H 1	22135	L	08301	FO	91123010	103544	006000	451	V
ARNUN	HD 210334	46	6.100	2206395	+452945	L 3	43507	L	8832	FO	91122923	230000	006000	330	G E=60,C=66,B=18
NC078	AR LAC	44	06.72	2206395	+452945	H 1	22136	L	07246	FO	91123012	123426	006000	451	V
ARNUN	HD 210334	46	6.100	2206395	+452945	L 3	43508	L	8588	FO	91123002	023900	003000	330	G E=59,C=70,B=18
NC078	AR LAC	44	06.82	2206395	+452945	H 1	22137	L	06680	FO	91123014	141956	006000	351	V
ARNUN	HD 210334	46	6.100	2206395	+452945	L 3	43509	L	8570	FO	91123004	043100	003000	330	G E=52,C=59,B=18
NC078	AR LAC	44	07.09	2206395	+452945	H 1	22149	L	05289	FO	91123112	124041	006000	341	V
ARNUN	HD 210334	46	6.100	2206395	+452945	L 3	43510	L	8504	FO	91123006	061900	003000	330	G E=67,C=65,B=18
NC078	AR LAC	44	06.55	2206395	+452945	H 1	22147	L	08378	FO	91123108	084309	006000	451	V
ARNUN	HD 210334	46	6.100	2206395	+452945	L 3	43511	L	8402	FO	91123008	080800	003000	330	G E=75,C=62,B=18
NC078	AR LAC	44	06.61	2206395	+452945	H 1	22148	L	08016	FO	91123110	103908	006000	441	V
ARNUN	HD 210334	46	6.100	2206395	+452945	L 3	43516	L	8551	FO	91123017	172400	006000	330	G E=58,C=73,B=18
NC078	AR LAC	44	07.11	2206395	+452945	H 1	22150	L	05188	FO	91123100	000000	006000	331	V
ARNUN	HD 210334	46	6.100	2206395	+452945	L 3	43517	L	8632	FO	91123021	210100	006000	330	G E=67,C=77,B=18
NC078	AR LAC	44	06.56	2206395	+452945	L 3	43522	L	08330	FO	91123109	095301	004000	350	V
ARNUN	HD 210334	46	6.100	2206395	+452945	L 3	43518	L	8924	FO	91123100	004000	006000	330	G E=82,C=72,B=18
NC078	AR LAC	44	06.86	2206395	+452945	L 3	43523	L	06419	FO	91123111	115030	004000	250	V
ARNUN	HD 210334	46	6.100	2206395	+452945	L 3	43519	L	8535	FO	91123104	042200	003000	330	G E=74,C=60,B=18
NC078	AR LAC	44	07.09	2206395	+452945	L 3	43524	L	05259	FO	91123113	134706	005000	340	V
ARNUN	HD 210334	46	6.100	2206395	+452945	L 3	43520	L	8470	FO	91123106	061100	003000	330	G E=56,C=60,B=18
ARNUN	HD 210334	46	6.100	2206395	+452945	L 3	43521	L	8396	FO	91123108	080300	003000	330	G E=69,C=65,B=18
ARNUN	HD 210334	46	6.100	2206395	+452945	L 3	43525	L	6249	FO	91123115	154800	004000	331	G E=81,C=63,B=21
ARNUN	HD 210334	46	6.100	2206395	+452945	L 3	43526	L	8523	FO	91123117	175000	006000	331	G E=58,C=76,B=25
ARNUN	HD 210334	46	6.100	2206395	+452945	L 3	43527	L	8543	FO	91123121	211900	006000	330	G E=67,C=71,B=20
ARNUN	HD 210334	46	6.100	2206395	+452945	L 3	43528	L	8454	FO	92010100	004400	003000	330	G E=72,C=61,B=20
ARNUN	HD 210334	46	6.100	2206395	+452945	L 3	43529	L	8466	FO	92010102	023500	003000	331	G E=85,C=58,B=22
ARNUN	HD 210334	46	6.100	2206395	+452945	L 3	43530	L	8495	FO	92010104	042500	004500	331	G E=108,C=81,B=22
NC137	HD 210807	45	05.10	2208507	+720541	L 3	45042	L	24131	FO	92063023	230135	030500	501	V
NC137	HD 210807	45	05.15	2208507	+720541	H 1	23410	L	23410	FO	92063022	221414	004000	502	V
WDOJH	R2214-49	37	11.00	2211003	-493420	L 3	44765	L	147	FO	92052509	090800	000242	X00	G C=1.5X,B=16
WDOJH	R2214-49	37	11.00	2211030	-493420	L 3	44765	S	148	FO	92052509	092900	000524	X00	G C=1.5X,B=16
WDOJH	R2214-49	37	11.00	2211030	-493420	H 3	44766	L	148	FO	92052510	101000	012000	503	G C=200,B=49
WDOJH	R2214-49	37	11.00	2211030	-493420	H 3	44767	L	147	FO	92052512	124200	012000	503	G C=214,B=48
GHOLD	22892051	16	14.66	2213214	-173440	L 3	45013	L	0	BO	92062605	054400	003600	430	G E=86,C=135,B=15
NA013	PG2214+184	28	13.60	2214403	+182254	L 3	44816	L	00000	BO	92053106	063201	002000	300	V
GHOLD	22881069	16	13.89	2216026	-413832	L 3	45017	L	0	BO	92062617	172400	002700	01	G B=30
NA186	HD212593	25	04.82	2222290	+491321	H 1	21955	L	00347	FU	91120612	125020	000400	601	V
NM003	HD212593	25	04.74	2222290	+491321	H 3	43688	L	00374	FU	92011909	090729	033700	805	V
NC083	HD 213985	32	09.29	2232460	-173059	L 1	23131	L	00749	FO	92051900	005451	002000	501	V
NC083	HD 213985	32	09.29	2232460	-173059	L 3	44715	L	00747	FO	92051901	012838	006000	500	V GDE SAP(361,684)
NM003	HD214240	21	06.52	2233484	+494842	H 1	22274	L	08611	FO	92011907	075524	001040	500	V
NM003	HD214240	21	06.48	2233484	+494842	H 3	44796	L	08902	FO	92052806	062611	002200	600	V
SANOW	HD 214994	30	4.790	2239243	+290246	L 3	43441	L	25902	FO	91122204	045800	000040	500	G C=199,B=18

PRO	Object	CL	MAG	R.A.	DEC	D C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
SANCW	HD 214994	30	4.790	2239243	+290246	L 3	43441	S	26188	FO	91122205	051900	000200	G	C=5X
NM003	HD209961	21	06.72	2240546	+465423	H 1	22275	L	07255	FO	92011908	084625	000810	300	V
IMMEB	HD 216898	12	8.040	2253420	+620205	H 3	43934	L	1645	FO	92020512	122300	024000	405	G C=190,B=65
NA013	PG2259+134	28	14.50	2259161	+132229	L 3	44821	L	00000	BO	92060105	052620	004100	400	V
NA013	PG2259+134	28	14.50	2259162	+132229	L 1	23244	L	00000	BO	92060304	042422	002200	401	V
IMMEB	HD 217979	20	8.600	2301219	+631647	H 3	43935	L	1072	FO	92020517	170500	013500	303	G C=115,B=43
NI080	HD218066	20	07.92	2302010	+630737	H 3	43370	L	02534	FO	91121308	083741	009000	401	V
NI080	HD218066	20	07.92	2302010	+630737	H 3	43371	L	02544	FO	91121310	104529	009000	400	V
NI080	HD218066	20	07.92	2302010	+630737	H 3	43372	L	02547	FO	91121312	125310	009000	301	V
NI080	HD218066	20	07.99	2302010	+630737	H 3	43380	L	02389	FO	91121407	074409	009000	401	V
NI080	HD218066	20	07.98	2302010	+630737	H 3	43381	L	02397	FO	91121409	094830	009000	401	V
NI080	HD218066	20	08.04	2302010	+630737	H 3	43388	L	02288	FO	91121507	075458	009000	400	V STARTED AT GSFC
NI080	HD218066	20	08.04	2302010	+630737	H 3	43389	L	02288	FO	91121509	095937	009000	400	V
NI080	HD218066	20	08.04	2302010	+630737	H 3	43390	L	02288	FO	91121511	115646	009000	400	V
NI080	HD218066	20	07.98	2302015	+630737	H 3	43382	L	02397	FO	91121411	114426	009000	401	V
NI080	HD218066	20	07.98	2302015	+630737	H 3	43383	L	02397	FO	91121413	133641	009000	401	V
NI080	HD218066	20	07.98	2302015	+630737	H 3	43384	L	02397	FO	91121415	152913	008000	401	V
NI080	HD218066	20	08.04	2302015	+630737	H 3	43391	L	02288	FO	91121513	134953	009000	400	V
NI080	HD218066	20	08.34	2302015	+630737	H 3	43940	L	01748	FO	92020609	095258	008500	400	V
CENRK	HD 218066	20	7.430	2302020	+630731	H 3	43368	L	2534	FO	91121305	050800	006000	302	G C=100,B=35
CENRK	HD 218066	20	7.430	2302020	+630731	H 3	43369	L	2589	FO	91121306	063800	009000	402	G C=140,B=40
CENRK	HD 218066	20	7.430	2302020	+630731	H 3	43377	L	2450	FO	91121401	013500	009000	402	G C=140,B=40
CENRK	HD 218066	20	7.430	2302020	+630731	H 3	43378	L	2470	FO	91121403	034000	009000	404	G C=160,B=60
CENRK	HD 218066	20	7.400	2302020	+630731	H 3	43379	L	2397	FO	91121405	054200	009000	402	G C=140,B=40
CENRK	HD 218066	20	7.430	2302020	+630731	H 3	43385	L	2310	FO	91121501	014200	009000	302	G C=125,B=40
CENRK	HD 218066	20	7.400	2302020	+630731	H 3	43386	L	1903	FO	91121503	034200	009000	305	G C=150,B=70
CENRK	HD 218066	20	7.430	2302020	+630731	H 3	43387	L	1878	FO	91121505	054300	010000	303	G C=140,B=45
GHOLD	22938073	16	14.20	2307510	-631939	L 3	45022	L	0	BO	92062718	181500	004600	X00	G C=1.5X,B=20
DAOLH	F2324-54	37	15.40	2321419	-545804	L 3	44779	L	0	BO	92052613	135900	005500	X00	G C=1.5X,B=18
WDOLH	F2334-47	37	13.00	2331202	-473059	H 3	44778	L	0	BO	92052505	053700	044000	X08	G C=1.5X,B=93
GHOLD	22894018	16	13.25	2333077	+001408	L 3	45018	L	0	BO	92062619	195700	001300	200	G C=29,B=15
WDNGB	2333-002	37	16.00	2333080	+001416	L 3	43398	L	0		91121618	180500	007000	400	G C=140,B=20
NA088	RE 2334-47	00	13.00	2334064	-474240	E 9	02547	2	00000	BO	92052605	054000	016000		V FES FOR SWP 44778
NA088	RE 2334-47	37	13.00	2334064	-474240	L 3	44777	L	00000	BO	92052604	045341	000900	400	V
BFNSA	HD 222368	41	4.130	2337226	+052119	L 3	43464	L	417	FU	91122408	084300	000003	00	G B=17
BFNSA	HD 222368	41	4.130	2337226	+052119	L 3	43468	L	474	FU	91122503	032100	000441	400	G C=145,B=20
NA013	PG2337+070	28	13.50	2337303	+070025	L 1	23227	L	00000	BO	92053104	044023	002000	111	V
NA013	PG2337+070	28	13.50	2337303	+070025	L 3	44815	L	00000	BO	92053104	040712	002500	111	V
SANCW	HD 222439	22	4.150	2337563	+440325	L 3	43553	L	515	FU	92010600	000800	000011	500	G C=220,B=15
SANCW	HD 222439	22	4.150	2337563	+440325	L 3	43553	S	517	FU	92010600	001600	000006	400	G C=145,B=20
GSNAB	SKY BKGD	07		2339083	-180437	L 3	44741	L	0		92052216	163500	003000	00	G B=18
MLCAB	HD 222574	45	4.820	2339101	-180538	L 3	44934	L	24054	FO	92061605	055400	041500	?46	G E=196,C=3x,B=72
RUNMK	R AQR	57		2341142	-153343	L 3	43375	L	23146	FO	91121318	182000	003000	X0	G E=2X,B=20
RUNMK	R AQR NEB	57		2341156	-153445	L 3	43376	L	0		91121320	200200	025500	02	G B=39
CD98Y	NEBR AQR	57	6.500	2341170	-153337	L 3	43411	L	0	BO	91121718	180000	041000	326	G E=92,C=100,B=73
CSMRU	HD 223075	50	5.000	2343501	+031234	L 3	43544	L	25600	FO	92010305	051400	006000	00	G B=18

esa



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IUE Data Request

Data Tape: _____ (filled in by VILSPA)

Tape Density: O 800 bpi O 1600 bpi O 6250 bpi

Requested Data: O Raw data only O Extracted high resolution spectra only
O Line by line + extracted low dispersion spectra
O Complete: raw image + extracted spectra

Cam#	Imagenumber	Cam#	Imagenumber	Cam#	Imagenumber	Cam#	Imagenumber

Camera numbers: 1 = LWP / 2 = LWR / 3 = SWP / 9 = FES
(for FES Photometric data use date (YYMMDD) and shift (G1/G2/VI) e.g. 920302VI (6250 bpi only)

Request Reason (mark corresponding circle):
O Normal Release (6 months rule)
O Special Release o Data from my program . . . . . .
o others (give details) _____

Requested by: _____ Date of Request: _____

Mailing Address: _____

_____

e-Mail / Tel. / FAX: _____

VILSPA Database Administrator: _____ Date: _____

Errors in Foregoing VILSPA Log

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