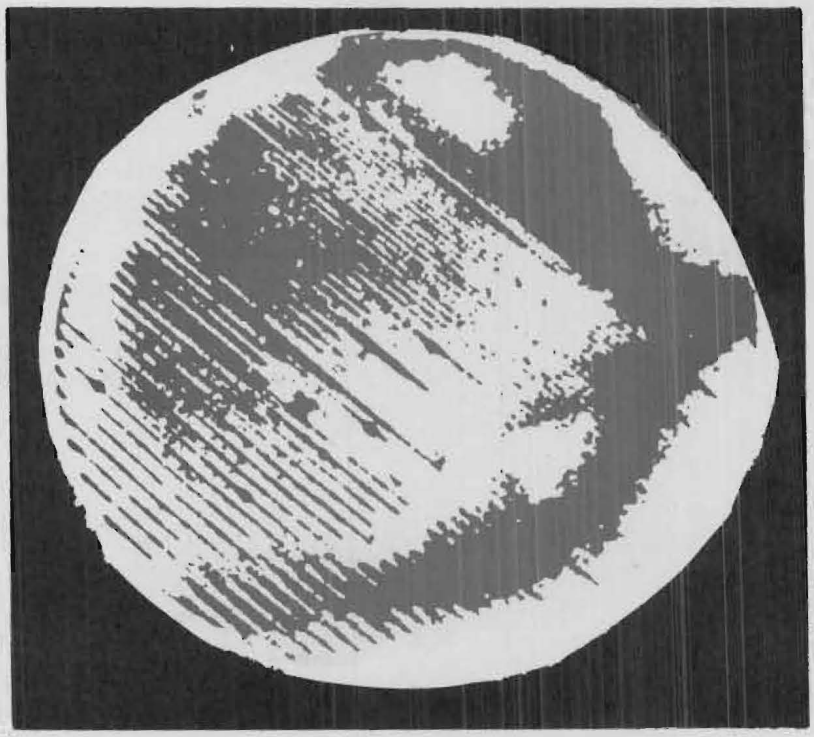
IUE ESA NEWSLETTER

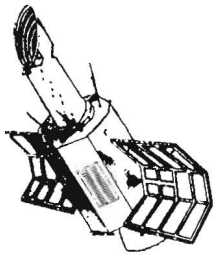


nº 28

July 1987

international ultraviolet explorer observatory

"To keep young
I took some holydays
from the normal
IUE schedule."



IUE esa NEWSLETTER

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IUE OBSERVATORY CONTROLLER'S MESSAGE

When this was written a trace of normality had returned to the ESA IUE Observatory after the rather dramatic impact of the SN 1987A on the schedule of the IUE. It was not only in the observing schedule that this unique event in Astronomy made itself felt, but also in the support of the ToO Team for SN in its activities, that the Observatory staff strongly felt the impact of this SN. I hope that we have fulfilled our professional obligation to the community in attempting to obtain the best possible coverage of this very important event. We hope that the rapid publication of the early results in Astronomy and Astrophysics vol. 177 have contributed to a better understanding of the unique data which have been collected with IUE. A complete special log of SN 1987A and a FES light-curve are included in this NL.

The start up of the 10th year observing has not only been complicated by the continuously changing schedule for this ToO but also by an unexplained mail delay of up to 6 weeks which meant that many people received the time allocation and schedule very late. This has created problems for some observers. I thank the Users involved in these problems for their collaboration in the peaceful settling of the conflicts which arose.

The ESA Science Policy Committee has decided to continue funding the IUE project through 1988. With in this Newsletter you will find the Call for Proposals for the 11th year. At the meeting of the IUEAC the opinion was expressed that many Users do not follow the Instructions for the Proposals any longer. The Committee expressed its wish that if proposals do not conform the instructions they might refuse to review them. The problems encountered were listed as e.g. not matching the page text limit, submitting a copy of an American proposal, no clear estimates of observing time really needed, no description of the actual observations needed, etc...

At VILSPA the opening date for the VSCC to G.O.s has been postponed due to development delays; further news will be given as available. The progress on the creation of a S/W package to support remote access to the ULDA (Uniform Low Dispersion Archive) is progressing on schedule at Vilspa. The community response has been excellent and we expect by the end of 1987 to deliver all this to the respective national centers. Please note that the IUE Log

query facility has been installed on a new computer, and that it is now possible to file dearchiving requests through this facility directly from your institute via remote connection with VILSPA.

The biannual three Agency meeting was held at VILSPA in early June and many detailed discussions were held relating both to the present condition of the IUE Project and also to the future, especially extensive plans were discussed related to the final stage of the Archive. Also serious progress was reported in the detailed design of a 1-gyro attitude and orbit control system in preparation for future gyro failures.

Note also that even though the Lyman Phase A study has had a major redirection, interesting developments in the detector area are taking place which were discussed at a workshop in RGO on which M. Penston reports in this NL.

A very pleasant occurrence marked this three-Agency meeting with the presentation of a basic book on Ultraviolet Astronomy: "Exploring the Universe with the IUE satellite", edited by Y. Kondo and published by D. Reidel publishing Co. (see insert).

A decision which will directly influence the Users has been made on the policy to allow heavy over exposures on the IUE Cameras. The details of this policy which is made to avoid damage to the cameras and to prevent the contamination of subsquent observations can be found on page 33.

Cecile Gry has left the IUE Observatory to return to France to the Observatoire de Marseille. We wish her all the best in her new position and at the same time we welcome Rosario (Charo) Gonzalez who will take up duty as Resident Astronomer on September 1st.

Willem Wamsteker
IUE Observatory Controller

Personnel changes

Departures

Cecile Gry - after four years with IUE Cecile has joined the Observatoire de Marseille and we wish her well in this new position.

DETAILED SPACECRAFT STATUS REPORT
(superseding ESA IUE Newsletter No.25 p4)

I. SCIENTIFIC INSTRUMENT HARDWARE STATUS

A. CAMERAS (4)

i) Long Wavelength Prime (LWP): Standard camera since 16 Oct. 1983. Suffered in the past from READ scan control logic malfunctions, but reset by bad scan detection logic software. This problem has nearly disappeared since March 1984 and has only once been detected since then.

Last BAD SCAN detected: 2 Feb 1985 16:56 UT.

ii) Short Wavelength Prime (SWP): Standard camera. No operational problems.

iii) Long Wavelength Redundant (LWR): Backup camera. Available at 4.5kV since 1 Nov 1985. Since April 1983, this camera has suffered from discharge in the UVC, producing a bright patch (flare) on the image (Lloyd, 1987a). However the flare can be avoided by reducing the UVC voltage to 4.5kV. This results in a sensitivity reduction of 27%. Other camera characteristics remain practically unchanged (Harris 1985; Imhoff 1986).

Guest observers with sufficient scientific justification can use LWR at 4.5kV Added overheads of camera switch ~30 mins.

iv) Short Wavelength Redundant (SWR): Not available, declared inoperative (Lloyd 1987b). Read section grid voltages usually fail.

B. SPECTROGRAPHS (2)

i) Short Wavelength

Entrance Apertures
Large Aperture (SWLA): oval shape. Length for trailed spectra : 21.4 ± 0.4 arcsec.
Area for extended sources: 200 ± 5 sq.arcsec (Panek 1982a).

Small Aperture (SWSA)
Probably non-circular shape with effective area ~ 6.8 sq. arcsec (Panek 1982a). Point source throughput 0.66 at centre, > 0.5 at r<1 arcsec (Talavera 1987).

Orientation is position angle dependent on relative positions of sun and target (Munoz 1985; Schiffer 1980a; Patriarchi 1981).
Non-optimum roll impossible with 2-Gyro FSS system.

Echelle Mode - functional

Low Dispersion Mode - functional

ii) Long Wavelength

Entrance Apertures
Large Aperture (LWLA) - oval shape. Length for trailed spectra : 20.5 ± 1.0 arcsec. Area for extended sources : 203 ± 6 sq. arcsec (Panek 1982a).

Small Aperture (LWSA)
Probably non-circular shape with effective area ~ 6.9 sq. arcsec (Panek 1982a). Point source throughput : 0.49 ± 0.15

Orientation as for SW spectrograph (Munoz 1985).

Echelle Mode - functional

Low dispersion mode - functional

iii) Trailed images
Problem with fast trails (Myslinski 1985) has now been overcome. Trail rates > 60 arcsec/sec are now possible.

C. FINE ERROR SENSORS (2)

i) FES 1 - back-up system. Two magnitudes less sensitive than FES 2. Successfully tested July 1987 for 1-gyro system.

ii) FES 2 - standard. Resolution 0.2680 and 0.2617 arcsec/pixel in x and y respectively. Relative positional accuracy ~3 arcsec near centre much larger near edge. Full distortion map produced by Pitts (1987).

field size: 8 arcmin radius
effective wavelength ~ 5200 A
visual calibration: Holm and Rice 1981; Stickland 1980
sensitivity variation: Barylak et al. 1984; 1985
experiences electronic confusion from aperture closure mechanism and the Sun shutter mechanism

D. TELESCOPE SUN-SHUTTER

Closed spontaneously twice in 1984 and once in 1985, correction performed by ground command.

II. SPACECRAFT HARDWARE STATUS

A. GYROS (6)

Number required for three-axis stabilized attitude control - 2+FSS
Operational gyros - 2
Failed gyros - 4
Gyro-6 stuck since turned off for 1979 shadow season
Gyro-1 failed on 1981 March 2, 19:50 GMT
Gyro-2 failed on 1982 July 27, 07:00 GMT
Gyro-6 stuck since turned off for 1979 shadow season)
Gyro-3 failed on 1985 Aug 17, 05:00 GMT

S/C drift rates - 3 to 20 arcsec/hour (in pitch & yaw) usually largest shortly after slewing.

Maneuver accuracy
In 1981 Nov 21 error/length = 4×10^{-4} (Panek & Baroffio 1982) with the 3-Gyro system. Accuracy has improved with the 2-Gyro FSS system. In Dec 1986 error/length = 1×10^{-4}

B. REACTION WHEELS (4)

Required for slewing - 3 wheels
Operational - 3 wheels (pitch, yaw, and roll)
Backup (skewed) wheel never used in orbit

C. HYDRAZINE SYSTEM

Required for reaction wheel momentum unloading, orbit adjustment (Delta-V) maneuvers, and emergency sun acquisitions. Around 19.8 kg available. Usage rate ~ 0.5 kg/year.

D. SOLAR ARRAYS

Continue to perform well. Average degradation was 3.3% over 1986. Power budget has been recalculated to 165 watts with 1 camera ON, 1 camera STBY, HAPS-2 ON and PM1 ON.

Power positive zone through the year.
January 1987 BETA 24 deg to 117 deg
July 1987 BETA 30 deg to 112 deg
January 1988 BETA 26 deg to 115 deg

E. BATTERIES (2)

Battery-1 showed a failure in 3rd electrode but is still operational. Battery-2 is fully operational. Both batteries performed well in Shadow Season 19; maximum depth of discharge (DOD) was 50.2 % and 49.0%. Battery-1 supplied 0.48% more of the total S/C power. Battery-1 appeared to have experienced a reconditioning effect during the course of this eclipse season. Predicted DOD for Shadow Season 20 (Aug-Sept 1987) are 63.6% and 61.6%.

F. ON-BOARD COMPUTER: 2 PROCESSORS + 3 MEMORY BANKS (4K EACH)

i) PR1 - Standard
Temperature limit 55.8 deg. Last crash 1984 Jan 18.

ii) PR2 - Backup

iii) Memory banks 0+2: 8K memory routinely used for operations. Hold the 2-Gyro FSS control law plus the OBC workers.

iv) Memory bank 1: 4K memory routinely used as parameter storage area for diagnostic purposes.

III. IMAGE PROCESSING SYSTEM STATUS

(Alderman, Turnrose, and Northover 1981)
The current system has evolved through a series of modifications. See ESA IUE Newsletter No.21 (NASA IUE Newsletter No.25) and IUE Image Processing Information Manual Version 2.0 and references therein for a full description. The following list indicates the most significant modifications and their implementation dates.

	GSFC	VILSPA
Averaged Intensity Transfer Function	1978 May 22	- 78 Jun 14
Improved calibration Line Library		
Low dispersion	1978 Sep 21	- 79 Feb 01
High dispersion	1979 Nov 23	- 81 Mar 10
Correct SWP ITF error	1979 Jul 07	- 79 Aug 07
Mean dispersion constants:		
Low dispersion	1979 Oct 30	- 81 Mar 10
High dispersion	1980 Jul 18	- 81 Mar 10
Improved calibration Line Library		
"New" Low dispersion software		
Parameterized low dispersion constants	1980 Nov 04	- 81 Mar 10
Parameterized high dispersion constants	1981 May 19	- 82 Mar 11
"New" High dispersion software	1981 Nov 10	- 82 Mar 11
New LWP ripple correction	1984 Dec 17	- 85 Jun 10
Extended LBL for low dispersion	1985 Oct 01	- 85 Oct 01

IV. INSTRUMENTAL PERFORMANCE

A. NOISE

i) Readout noise ~10 DN/pixel

ii) Periodic noise (microphonics)

SWP: covers entire image. Amplitude generally 1-3 DN. Amplitude may be increased to 10-40 DN by mechanical activity in S/C, incl. roll slews; frequency ~200 Hz (Northover 1979).

LWR: affects a few lines in ~85% of images; amplitude up to 110 DN; amplitude decays ~25% image line (Panek 1981); frequency ~300 HZ (Panek 1981). Occurrence associated with heating of read section of camera and may be modified by delaying the read (Holm and Panek 1982).

LWP: occurrence associated with Roll slews; amplitude up to 7 DN. Affects only the lines when a roll slew is in progress (Faelker 1982)

iii) Bright spots

radioactive disintegrations in phosphor ~30 spots/hr (Coleman et al. 1977)

Permanent blemishes: most pronounced pseudo-emission feature at ~2190 A low dispersion, large aperture LWR only.

Others (Ponz 1980)

iv) Typical signal/noise ratio

for well exposed point source spectra
SWP: 10-30 old software (Cassatella et al. 1980), 7-27 new software.

LWR: 12-21 old software (Settle et al. 1981), 8-15 new software (Barylak 1982).

LWP: 9-25 old software (Settle et al. 1981), 6-18 new software (Barylak, 1982).

v) S/N properties of averaged spectra: Clarke 1981a; West and Shuttleworth 1981

B. BACKGROUND

i) Phosphorescence fogging

During low-radiation shifts
LWR & SWP >6-10 DN/hour/pixel
LWP >4-7 DN/hour/pixel (Ake 1982).
Fogging rate depends on no. and type of PREPS before exposure.

Overexposures cause "ghost" spectrum fogging (Snijders 1983). Phosporescence decay rate $\sim t^{-0.8}$ up to several hours (Coleman 1978); unknown after long time intervals.

ii) Radiation fogging: caused by Cerenkov radiation from electrons in the van Allen belts (Coleman et al. 1977) and may be severe near perigee (US shift 2) Recent experience 22% low fogging shifts 15% high fogging shifts depending on solar activity (Imhoff 1985).

C. PHOTOMETRIC PROPERTIES

i) Upper limits to ITFs (Turnrose 1980) New ITF's (ITF2) - data taken for LWR, SWP, LWP; ITF's generated for LWR and LWP but not operational. ITF in production for SWP.

ii) Linearity errors in processed spectra

SWP -10 to -20 percent for Net DN<20
+10 to +15 percent for ave. DN>220 @ 1300 A (Holm 1981)

LWP mean error +2% for Net DN>100
mean error of-2.5% for Net DN<100
overall RMS error 3%. (Harris 1983a; Settle et al. 1981)

D. ABSOLUTE CALIBRATION

i) Low dispersion SWP and LWR (Holm et al. 1982)

ii) High dispersion SWP and LWR (Cassatella et al. 1981). For new software (Cassatella et al. 1986)

iib) Low dispersion LWP (Cassatella & Harris 1983).

iii) High dispersion LWP as for LWR (Cassatella et al, 1986).

iv) Accuracy of standards ±10% 1300A - 3400 A (Bohlin 1985)

v) Echelle ripple correction (Ake 1981)

E. SENSITIVITY VARIATION

i) Temperature dependence (Schiffer 1982a)
SWP ~ -0.5%/deg of head amplifier temperature (THDA)
LWR ~ -1.1%/deg of THDA
LWP ~ -0.2%/deg of THDA (Harris 1983b; Sonneborn, 1983)

ii) Repeatability (1 after temperature correction)
(Schiffer 1982a)
SWP 2% in 150 A bins
LWR 2.5% in 300 A bins
LWP 2.5% in 200 A bins, negligible temp correction
(Harris & Cassatella, 1983)

iii) Temporal dependence (Schiffer 1982a)

SWP: Complex temporal and wavelength dependence (Gilmozzi et al. 1986; Bohlin 1987)

LWR: Wavelength dependent between -3.5% and 0.8% per year. (Clavel et al 1986;Cacciari and Wamsteker 1982; Sonneborn 1986).

LWP: Wavelength dependent between -0.5% and 0% per year (Sonneborn 1986).

F. RESOLUTION

i) Short wavelength echelle mode

small aperture: FWHM 0.085 A @ 1150 A (Boggess et al. 1978; Imhoff 1983) 0.19 A @ 2100 A (Boggess et al. 1978)
large/small 1.01 (Penston 1979)

ii) Short wavelength low dispersion mode

a) spectral resolution
large aperture FWHM <5A (1400-1600A)
FWHM ~ 7.5A @ 1900A
(Cassatella et al 1985)
gain in resolution using SAP: about 8% mean over lambda
(Cassatella et al, 1985)

b) spatial resolution in LAP from cross-profiles:
FWHM 4.6 to 5.9 arcsec at optimum focus
(Cassatella et al, 1985)

iii) Long wavelength echelle mode

small aperture FWHM 0.20 A
(Boggess et al, 1978; Imhoff 1983)

large/small 1.09 (Penston 1979)

iv) Long wavelength low dispersion mode

a) spectral resolution
LWR large aperture: FWHM ~ 5.8A (2400-2900A);
FWHM ~ 7.7A @ 1900A
gain in resolution using SAP: <3%
(Cassatella et al, 1985)

LWP large aperture: ~10% - better than LWR
(Cassatella et al, 1985)

b) spatial resolution in LAP from cross-profiles.
LWR 4 to 5.6 arcsec at optimum focus
LWP 3.7 to 4.9 arcsec at optimum focus
(Cassatella et al,1985)

G. WAVELENGTH ACCURACY

i) Internal consistency of wavelength calibration determinations (Thompson et al. 1981)

SWP 2.0 km/sec
LWR 2.7 km/sec
LWP unknown

ii) Possible systematic errors

SWP unknown now; early data (Leckrone 1980)
LWR ~10 km/sec
LWP unknown

H. MISCELLANEOUS

i) Grating scattered light: (Clarke 1981b; Stickland 1980; Basri et al 1985; Crivellari et al 1982)

ii) Halation: Backscattering of Electrons from the phosphor decay length ~32±3 pixels (Coleman 1978)

iii) Scattered Light in the Telescope

Fscat $\sim d^{-2.5}$ F (Schiffer 1982b) where d is in arcsec (5<d<40)

Wavelength and distance dependence: de Boer and Cassatella 1986; Cassatella 1986.

iv) Plate scale: 1.51±0.04 pixel/arcsec (Panek 1982a; Bohlin et al 1980)

v) Residual geometric errors in geometrically corrected image: ±0.4 arcsec = ±0.2 pixels (Panek et al, 1982)

vi) Exposure timing: (Schiffer 1980b, Heck 1981)

command units 0.4096 seconds
effective response delay 0.12 seconds LWR, SWP & LWP (LWP : Imhoff, 1983).

vii) Longest uninterrupted exposure to date:
SWP 15293, 1273 minutes

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ACCEPTED EUROPEAN IUE PROPOSALS FOR THE 10TH YEAR 1987-1988

UV observations of Supernovae	Panagia	Baltimore	JE 001
	Macchetto	Baltimore	JE 001
The symbiotic star V 1016 Cyg	Nussbaumer	Zurich	JI 002
	Schmid	Zurich	JI 002
UV observations of Nova Muscae 1983 in the nebular stage	Krautter	Heidelberg	JI 003
	Ogelman	Garching	JI 003
Determination of absolute magnitude and mass limits for the long period cepheid YZ Car	Butler	Armagh	JC 006
	Evans	Toronto	JC 006
			JC 006
The symbiotic star HBV 475	Nussbaumer	Zurich	JI 007
	Vogel	Zurich	JI 007
The symbiotic star HM Sge	Vogel	Zurich	JI 009
	Nussbaumer	Zurich	JI 009
UV spectra of interacting galaxies	Kollatschny	Gottingen	JE 010
	Fricke, KJ	Gottingen	JE 010
	Hartmann	Gottingen	JE 010
Observations of nearly-aligned early-type stars in the disc/ halo interface region	Harris	RAL	JM 012
	Bromage	RAL	JM 012
			JM 012
Chromospheric activity of the RS CVn binary HK Lac	Olah	Budapest	JC 013
	Budding	New-Zealand	JC 013
	Butler	Armagh	JC 013
	Gimenez	Madrid	JC 013
	Zeilik	New-Mexico	JC 013
Spectral photometry of blue stragglers	Schonberner	Kiel	JA 014
	Hunger	Kiel	JA 014
Studies in stellar mass loss and the local interstellar medium	Bates	Belfast	JM 015
	Halliwell	Belfast	JM 015
	Keenan	Belfast	JM 015
UV variability studies of WR stars	Smith	UCL	JA 016
	Willis	UCL	JA 016
Rapid UV spectral variability in HD 45166 (qWR+B8V)	Willis	UCL	JA 017
	Stickland	RAL	JA 017
	S.R. Heap	GSFC	JA 017
The chromospheres of red supergiant maser sources	Chapman	NRAL	JC 018
	Eriksson	Uppsala	JC 018
	Stencel	Colorado	JC 018
Stellar masses	Stickland	RAL	JA 019
	Pike	RGO	JA 019
	Lloyd	VILSPA	JA 019
Wind structure in WR stars	Stickland	RAL	JA 020
	Lloyd	VILSPA	JA 020
	Willis	UCL	JA 020
	Pike	RGO	JA 020
The wind structure of CV Serpentis	Stickland	RAL	JA 021
	Lloyd	VILSPA	JA 021
	Pike	RGO	JA 021
UV emission line binaries in M15	Charles	Oxford	JI 023
	Hassall	Oxford	JI 023
	Naylor	Oxford	JI 023
	Raymond	USA	JI 023
Comparison of normal and superoutburst in Z Cha	Charles	Oxford	JI 024
	Naylor	Oxford	JI 024
	Hassall	Oxford	JI 024
	Bath	Oxford	JI 024
	Sonneborn	USA	JI 024
Observations of the dwarf nova CN Orionis during a complete outburst cycle	la Dous	Cambridge	JI 026
	Pringle	Cambridge	JI 026
	Schoembs	Munich	JI 026
Simultaneous Mg+ and Ca+ observations of active chromospheres	Beckman	Tenerife	JC 028
	Crivellari	Trieste	JC 028
	Foing	Verrieres	JC 028
	Vladilo	Trieste	JC 028
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MULTI-YEAR PROGRAM TO STUDY COMETS AS TARGETS OF OPPORTUNITY				
DR. MICHAEL F. A'HEARN	MARYLAND	U. S.	SPJMA	
PERIODIC COMETS: ENCKE AND BORRELLY				
DR. THOMAS B. AKE, III	CSC	U. S.	HCJTA	
HOT COMPANIONS TO S AND MS STARS				
DR. THOMAS B. AKE, III	CSC	U. S.	CBJTA	
THE ATMOSPHERIC ECLIPSING BINARY HR 2554				
DR. BRUCE M. ALTNER	A. R. CORP.	U. S.	GCJBA	
FURTHER IUE INVESTIGATIONS AT THE CORE OF M 79				
DR. CAROL AMBRUSTER	COLORADO JILA	U. S.	FSJCA	
SIMULTANEOUS IUE AND MAGNETIC FIELD OBSERVATIONS OF HD 17433				
DR. THOMAS R. AYRES	COLORADO CASA	U. S.	RSJTA	
DEEP SWP-HI OF UX ARIETIS				
DR. THOMAS R. AYRES	COLORADO CASA	U. S.	KGJTA	
SHORT-TERM VARIABILITY OF ARCTURUS				
DR. THOMAS R. AYRES	COLORADO CASA	U. S.	DSJTA	
FURTHER STUDIES OF BETA CASSIOPEIAE				
DR. THOMAS R. AYRES	COLORADO CASA	U. S.	LSJTA	
VERY-DEEP SWP-HI OF ALDEBARAN				
DR. SALLIE L. BALIUNAS	CFA SAO	U. S.	LGJSB	
FF AQR				
DR. SALLIE L. BALIUNAS	CFA SAO	U. S.	LSJSB	
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DR. TIMOTHY R. BARKER	WHEATON	U. S.	NPJTB	
THE IONIZATION STRUCTURE OF PLANETARY NEBULAE				
DR. GRAHAM BERRIMAN	ARIZONA	U. S.	IPJGB	
THE NATURE OF THE PULSED LIGHT IN INTERMEDIATE POLARS				
DR. WILLIAM P. BLAIR	JOHNS HOPKINS	U. S.	NSJWB	
A FACE-ON SHOCK IN THE CYGNUS LOOP				
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O-RICH SUPERNOVA REMNANTS IN THE LMC				
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UV SPECTRA OF PKS 1209-52				
DR. ALBERT BOGGESS	GSFC	U. S.	AGJAB	
UV OBSERVATIONS OF SEYFERT GALAXIES				
DR. BRUCE BOHANNAN	COLORADO CASA	U. S.	MCJBB	
SPECTROPHOTOMETRY OF EMISSION-LINE STARS IN THE SMC				
DR. KARL-HEINZ BOHM	WASHINGTON	U. S.	HHJKB	
H2 CONTINUA IN ULTRAVIOLET SPECTRA OF HERBIG-HARO OBJECTS				
DR. ERIKA BOHM-VITENSE	WASHINGTON	U. S.	CCJEB	
TRANSITION LAYERS OF F AND G STARS				

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MASSES FOR FOUR CEPHEIDS				
DR. ERIKA BOHM-VITENSE	WASHINGTON	U. S.	BCJEB	
BLUE COMPANIONS OF LONG PERIOD CEPHEIDS				
DR. HOWARD E. BOND	ST SC. I	U. S.	NBJHB	
THE CLOSE-BINARY NUCLEUS OF THE PLANETARY NEBULA HFG 1				
DR. JAY A. BOOKBINDER	COLORADO JILA	U. S.	CSJJB	
HYDROGEN LYMAN ALPHA EMISSION FROM HIGH RADIAL VELOCITY STARS				
DR. JAY A. BOOKBINDER	COLORADO CASA	U. S.	LSJJB	
TIME DEPENDENT SHOCK STRUCTURE IN THE MIRA S. CARINAE				
DR. BERNARD W. BOPP	TOLEDO	U. S.	IBJBB	TARG OF OPP
INTERACTING F + BE BINARIES				
DR. ROGER J. V. BRISSENDEN	AUSTRALIA	AUSTRALIA	XSJRB	
ULTRAVIOLET OBSERVATIONS OF X-RAY SELECTED SEYFERT 1 GALAXIES				
DR. ALEXANDER BROWN	COLORADO JILA	U. S.	CCJAB	
CHROMOSPHERIC AND TRANSITION REGION STRUCTURE OF AK SCO AND V351 ORI				
DR. ALEXANDER BROWN	COLORADO JILA	U. S.	CSJAB	
HIGH DISPERSION STUDY OF CORONAL K BRIGHT GIANTS				
DR. ALEXANDER BROWN	COLORADO JILA	U. S.	MGJAB	
SIMULTANEOUS ULTRAVIOLET AND RADIO VARIABILITY STUDY OF 4 DRA				
DR. ALEXANDER BROWN	COLORADO JILA	U. S.	TTJAB	
CONTINUED ULTRAVIOLET MONITORING OF RY TAU				
DR. EDWARD W. BRUGEL	COLORADO CASA	U. S.	MGJEB	
MG II EMISSION FROM MIRA VARIABLES				
DR. EDWARD W. BRUGEL	COLORADO CASA	U. S.	NJJEB	
CIRCUMSTELLAR EMISSION NEBULA AND JET ASSOCIATED WITH T TAURI				
DR. EDWARD W. BRUGEL	COLORADO CASA	U. S.	SRJEB	
ATMOSPHERIC STRUCTURE, SHOCKS AND MASS LOSS IN RV TAURI VARIABLES				
DR. FREDERICK C. BRUHWEILER	CATHOLIC	U. S.	CMJFB	
BETA PICTORIS AND OTHER CANDIDATE PROTO-PLANETARY SYSTEMS NEAR THE SUN				
DR. FREDERICK C. BRUHWEILER	CATHOLIC	U. S.	MLJFB	TARG OF OPP
UNUSUAL MASS LOSS/ACCRETION PHENOMENA OF THE O SUBDWARF HD 128220B				
DR. FREDERICK C. BRUHWEILER	CATHOLIC	U. S.	AGJFB	
THE NATURE OF THE STARBURST KNOTS IN NGC 1068				
DR. DAVID BURSTEIN	ARIZONA ST.	U. S.	LDJDB	
DWARF STAR SPECTRA FOR STELLAR POPULATION MODELS				
DR. KENNETH G. CARPENTER	COLORADO CASA	U. S.	MGJKC	
VARIATIONS IN THE CHROMOSPHERE AND STELLAR WIND OF GAMMA CRUCIS				
DR. WEBSTER C. CASH, JR.	COLORADO CASA	U. S.	GDJWC	
SIMULTANEOUS UV/EUV OBSERVATION OF CAPELLA AND G191B2B				

NASA APPROVED IUE PROGRAMS FOR THE TENTH YEAR

NAME / TITLE	INSTITUTION	COUNTRY	PROG ID	REMARKS
DR. JOHN T. CLARKE H LY ALPHA EMISSION FROM NEPTUNE	GSFC	U. S.	SNJJC	
DR. JUDITH G. COHEN O STAR AND PLANETARY NEBULA IN M22	CAL TECH	U. S.	NPJJC	
DR. PETER S. CONTI WOLF-RAYET STARS IN THE MAGELLANIC CLOUDS	COLORADO CASA	U. S.	WRJPC	
DR. D. MICHAEL CRENSHAW NARROW-LINE SEYFERT 1 GALAXIES	CSC	U. S.	SYJDC	
DR. HARRIET L. DINERSTEIN IUE OBSERVATIONS OF NGC 2242	TEXAS	U. S.	NPJHD	
DR. STEPHEN A. DRAKE THE OUTER ATMOSPHERE AND WIND OF DELTA AND	ST-SYSTEMS	U. S.	LSJSD	
DR. REGINALD J. DUFOUR STELLAR ENRICHED AND SHOCKED GAS ASSOCIATED WITH NGC 6888	RICE	U. S.	NEJRD	
DR. REGINALD J. DUFOUR IUE OBSERVATIONS OF THE TRIFID AND LAGOON H II REGIONS	RICE	U. S.	NHJRD	
DR. DOUGLAS K. DUNCAN RAPIDLY ROTATING COOL DWARFS	ST SC. I	U. S.	LDJDD	
DR. ANDREA K. DUPREE MONITORING THE VARIABLE ATMOSPHERE OF ALPHA ORIONIS	CFA SAO	U. S.	LSJAD	
DR. ANDREA K. DUPREE GIANTS IN GLOBULAR CLUSTERS	CFA SAO	U. S.	GCJAD	
DR. JOEL A. EATON CHROMOSPHERIC VARIABILITY IN M GIANTS	INDIANA	U. S.	MGJJE	
DR. JOEL A. EATON INTERACTING BINARIES CONTAINING COOL GIANTS	INDIANA	U. S.	IBJJE	
DR. MARTIN S. ELVIS QSOS WITH IPC X-RAY SPECTRA	CFA SAO	U. S.	XQJME	
DR. NANCY REMAGE EVANS BINARY CEPHEIDS	TORONTO	CANADA	CBJNE	
DR. WALTER A. FEIBELMAN MASS LOSS FROM THE NUCLEUS OF PN 75 + 35 1	GSFC	U. S.	NPJWF	
DR. FRANCIS C. FEKEL UV OBSERVATIONS OF SINGLE CHROMOSPHERICALLY ACTIVE GIANTS	VANDERBILT	U. S.	CCJFF	
DR. PAUL D. FELDMAN OBSERVATIONS OF COMETS WITH THE IUE	JOHNS HOPKINS	U. S.	SCJPF	TARG OF OPP
DR. GARY J. FERLAND SPECTROSCOPY OF PLANETARY NEBULA	OHIO ST.	U. S.	NPJGF	
DR. ROBERT A. FESEN VARIATIONS IN THE ABSORPTION LINES ASSOCIATED WITH SN 1006	COLORADO CASA	U. S.	SRJRF	
DR. ROBERT A. FESEN DETECTING ENRICHED EJECTA IN THE REMNANT OF SN 185 AD	COLORADO CASA	U. S.	NSJRF	

NASA APPROVED IUE PROGRAMS FOR THE TENTH YEAR

NAME	INSTITUTION	COUNTRY	PROG ID	REMARKS
TITLE				
DR. EDWARD L. FITZPATRICK	COLORADO CASA	U. S.	HSJEF	
LOW-DISPERSION OBSERVATIONS OF BRIGHT STARS				
DR. EDWARD L. FITZPATRICK	COLORADO JILA	U. S.	OBJEF	
ENERGY DISTRIBUTIONS OF B SUPERGIANTS IN THE SMALL MAGELLANIC CLOUD				
DR. PRISCILLA C. FRISCH	CHICAGO	U. S.	ISJPF	
INTERSTELLAR CLOUDS NEAR THE SUN, III				
DR. CATHARINE D. GARMANY	COLORADO CASA	U. S.	SBJCG	
BLUE STRAGGLERS IN OPEN CLUSTERS				
DR. CATHARINE D. GARMANY	COLORADO CASA	U. S.	OSJCG	
MASSIVE STARS IN THE MAGELLANIC CLOUDS				
DR. CATHARINE D. GARMANY	COLORADO CASA	U. S.	MLJCG	
UV OBSERVATIONS OF THREE O GIANTS				
DR. C. MARTIN GASKELL	STONY BROOK	U. S.	QFJCG	
UNIQUE FE II QUASARS				
DR. MARK S. GIAMPAPA	NOAO NSO	U. S.	PMJMG	
NON-AXISYMMETRIC WINDS IN T TAURI STARS				
DR. CAROL A. GRADY	CSC	U. S.	PRJCG	
STRONG WIND EPISODES AND NON-RADIAL PULSATION CHANGES IN BE STARS				
DR. RICHARD F. GREEN	KPNO	U. S.	QSJRG	
QUASAR EUV CONTINUA				
DR. RICHARD F. GREEN	KPNO	U. S.	GQJRG	
QUASARS IN RICH CLUSTERS OF GALAXIES				
DR. JOHN A. HACKWELL	AEROSPACE COR	U. S.	ICJJH	
ULTRAVIOLET EXTINCTION AND INFRARED CIRRUS				
DR. J. P. HALPERN	COLUMBIA	U. S.	SYJJH	
BRIGHT SEYFERT 2 GALAXIES				
DR. J. P. HALPERN	COLUMBIA	U. S.	XQJJH	
NEW X-RAY BRIGHT QUASARS				
DR. SARA R. HEAP	GSFC	U. S.	WRJSH	
RAPID UV SPECTRAL VARIABILITY IN HD 45166				
DR. PAUL W. HODGE	WASHINGTON	U. S.	EHJPH	
H II REGIONS IN M31				
DR. JAY B. HOLBERG	ARIZONA	U. S.	XBJJH	
SIMULTANEOUS OBSERVATIONS OF AM HER				
DR. JAY B. HOLBERG	ARIZONA	U. S.	DAJJH	
YOUNGEST DA WHITE DWARFS				
DR. JAY B. HOLBERG	ARIZONA	U. S.	WDJJH	
TESTS IN DIFFUSION THEORY				
DR. BRUCE J. HRIVNAK	VALPARAISO	U. S.	IBJBH	
ULTRAVIOLET OBSERVATIONS OF THE UNIQUE CONTACT BINARY VZ PISCIUM				
DR. ESTHER M. HU	INST ASTRONOM	U. S.	QCJEH	
UV STUDIES OF EXTENDED EMISSION-LINE REGIONS AROUND QSOS				

NASA APPROVED IUE PROGRAMS FOR THE TENTH YEAR

NAME	INSTITUTION	COUNTRY	PROG ID	REMARKS
TITLE				
DR. HOLLIS R. JOHNSON	INDIANA	U. S.	LGJHJ	
THE UPPER ATMOSPHERES OF LATE M STARS				
DR. MINAS C. KAFATOS	GEORGE MASON	U. S.	NJJMK	
LORES OBSERVATIONS OF THE R AQR JET AND NEBULOSITY				
DR. MINAS C. KAFATOS	GEORGE MASON	U. S.	ECJMK	
IUE OBSERVATIONS OF THE COOLING FLOW IN THE CLUSTER A1795				
DR. SCOTT J. KENYON	CFA SAO	U. S.	HCJSK	
ACCRETION IN SY FORNACIS				
DR. SCOTT J. KENYON	CFA SAO	U. S.	PMJSK	
ACCRETION IN FU ORIONIS STARS				
DR. ROBERT KIRSHNER	CFA HARVARD	U. S.	SNJRK	
CONTINUING SPECTROSCOPY OF SN 1987A				
DR. GLORIA KOENIGSBERGER	MEXICO	MEXICO	WRJGK	
WIND STRUCTURES IN THE LARGE MAGELLANIC CLOUD WOLF-RAYET STARS				
DR. DETLEV KOESTER	LOUISIANA	U. S.	WDJDK	
ELEMENT ABUNDANCES IN WHITE DWARFS				
DR. N. PAUL M. KUIN	ST-SYSTEMS	U. S.	PMJNK	
EVOLUTION OF PRE-MAIN SEQUENCE STELLAR ACTIVITY				
DR. JAMES W. LIEBERT	ARIZONA	U. S.	SDJJL	
VERY HOT SUBDWARFS				
DR. JEFFREY L. LINSKY	COLORADO JILA	U. S.	FDJJL	
FIRST OBSERVATIONS OF THE PLEIADES TRANSITION REGION LINE EMISSION				
DR. JEFFREY L. LINSKY	COLORADO JILA	U. S.	RSJJL	
INTRINSIC HYDROGEN LYMAN ALPHA PROFILE OF AR LACERTAE				
DR. MATTHEW A. MALKAN	CAL LA	U. S.	QSJMM	
MULTI-WAVELENGTH SPECTRA OF A COMPLETE SAMPLE OF BRIGHT QUASARS				
DR. MATTHEW A. MALKAN	CAL LA	U. S.	AGJMM	
SIMULTANEOUS UV AND OPTICAL OBSERVATIONS OF BRIGHT SEYFERT 1 GALAXIES				
DR. D. CHRISTOPHER MARTIN	COLUMBIA	U. S.	GPJCM	
ANOMALOUS ULTRAVIOLET EXTINCTION				
DR. DERCK L. MASSA	A. R. CORP	U. S.	IEJDM	
FAR UV EXTINCTION AND THE 2175 ANGSTROM BUMP				
DR. PHILIP L. MASSEY	NOAO KPNO	U. S.	MLJPM	
HOT STARS IN NEARBY GALAXIES				
DR. GORDON MCALPINE	MICHIGAN	U. S.	QSJGM	
BRIGHT HIGH-REDSHIFT BAL QUASAR				
DR. GEORGE E. MCCLUSKEY, JR.	LEHIGH	U. S.	ALJGM	
ULTRAVIOLET LINE EMITTING PLASMA IN ALGOL-TYPE BINARIES				
DR. GEORGE E. MCCLUSKEY, JR.	LEHIGH	U. S.	KGJGM	
EXTENDED ATMOSPHERIC STRUCTURE OF K0 III GIANT IN BINARY AL VELORUM				
DR. RICHARD A. MCCRAY	COLORADO CASA	U. S.	XBJRM	
PULSE-PHASE SPECTROSCOPY OF THE X-RAY BINARY 4U0900-40/HD77581				

NASA APPROVED IUE PROGRAMS FOR THE TENTH YEAR

NAME	INSTITUTION	COUNTRY	PROG ID	REMARKS
TITLE				
DR. ANDREW G. MICHALITSIANOS	GSFC	U. S.	MPJAM	
HIRES IUE OBSERVATIONS OF THE PECULIAR STARS RX PUPPIS AND R AQUARII				
DR. H. WARREN MOOS	JOHNS HOPKINS	U. S.	SSJHM	
ULTRAVIOLET EMISSIONS FROM SATURN AND URANUS				
DR. H. WARREN MOOS	JOHNS HOPKINS	U. S.	SJJHM	
EXCITATION OF THE JOVIAN UPPER ATMOSPHERE				
DR. H. WARREN MOOS	JOHNS HOPKINS	U. S.	SIJHM	
IO AND THE IO TORUS				
DR. JOY NICHOLS-BOHLIN	CSC	U. S.	ISJJN	
HIGH-VELOCITY GAS TOWARD THE WR STARS HD 96548 AND HD 97152				
DR. NANCY A. OLIVERSEN	CSC	U. S.	WDJNO	
ASTROMETRIC BINARIES: WHITE DWARFS?				
DR. EDWARD C. OLSON	ILLINOIS	U. S.	ALJEO	TARG OF OPP
U CEPHEI IN ITS ACTIVE STATE				
DR. JOSEPH O PATTERSON	COLUMBIA	U. S.	CVJJP	
PSEUDO WHITE DWARFS IN CATACLYSMIC VARIABLES				
DR. GERALDINE J. PETERS	USC	U. S.	BEJGP	
LONG-TERMED FAR UV FLUX VARIABILITY AND MASS LOSS IN BE STARS				
DR. GERALDINE J. PETERS	USC	U. S.	HSJGP	
MULTIFREQUENCY OBSERVATIONS OF THE RAPID VARIABLE BE STARS				
DR. BRADLEY M. PETERSON	OHIO ST.	U. S.	AGJBP	
EMISSION-LINE REGION VARIABILITY				
DR. A. G. DAVIS PHILIP	INST. SP OBS.	U. S.	HBJAP	
UV OBSERVATIONS OF FHB STARS				
DR. RONALD E. PITTS	CSC	U. S.	MSJRP	
FLUXES, TEMPERATURES, AND RADII OF STARS DEFINING THE ZAMS				
DR. RONALD E. PITTS	CSC	U. S.	STJRP	
TRAILED SPECTRA OF BRIGHT SPECTROPHOTOMETRIC STANDARD STARS				
DR. MIREK J. PLAVEC	CAL LA	U. S.	CBJMP	
EMISSIONS FROM INTERACTING NON-DEGENERATE BINARIES				
DR. RONALD S. POLIDAN	ARIZONA	U. S.	IPJRP	
ANOMALOUSLY WEAK C IV ABSORPTION IN INTERACTING BINARIES				
DR. RONALD S. POLIDAN	ARIZONA	U. S.	BEJRP	
A STUDY OF PECULIAR B-EMISSION STARS				
DR. JOHN C. RAYMOND	CFA SAO	U. S.	NSJJR	
NON-THERMAL PRESSURE AND THE EVOLUTION OF SNR SHOCKS				
DR. JOHN C. RAYMOND	CFA SAO	U. S.	XCJJR	
THE X-RAY SOURCE IN M15				
DR. GAIL A. REICHERT	CSC	U. S.	SYJGR	
SEARCH FOR RAPID UV VARIABILITY IN THE SEYFERT 1 NGC 4593				
DR. GAIL A. REICHERT	CSC	U. S.	AGJGR	
SIMULTANEOUS UV AND EUV OBSERVATIONS OF ACTIVE GALAXIES				

NASA APPROVED IUE PROGRAMS FOR THE TENTH YEAR

NAME	INSTITUTION	COUNTRY	PROG ID	REMARKS
TITLE				
DR. RONALD A. REMILLARD	MIT	U. S.	FEJRR	
AGN WITH STRONG FE II EMISSION				
DR. JORGE SAHADE	ARGENTINA	ARGENTINA	CBJJS	
ORIGIN AND MEANING OF RED-DISPLACED 0.00 EV LINES IN GAMMA 1 VELORUM				
DR. BLAIR D. SAVAGE	WISCONSIN	U. S.	GKJBS	
KINEMATICS OF GALACTIC HALO GAS				
DR. BLAIR D. SAVAGE	WISCONSIN	U. S.	GIJBS	
INFALLING GAS TOWARD THE NGP				
DR. DONALD E. SHEMANSKY	ARIZONA	U. S.	SSJDS	
OBSERVATIONS OF HYDROGEN EMISSION FROM SATURN				
DR. DONALD E. SHEMANSKY	ARIZONA	U. S.	SJJDS	
OBSERVATIONS OF HYDROGEN EMISSION FROM JUPITER				
DR. HARRY L. SHIPMAN	DELAWARE	U. S.	WDJHS	
ABUNDANCE OF DBA WHITE DWARF STARS				
DR. STEVEN N. SHORE	N MEXICO TECH	U. S.	HEJSS	
THE SN STARS				
DR. J. MICHAEL SHULL	COLORADO CASA	U. S.	GCJJS	
IUE OBSERVATIONS OF COLLAPSED-CORE GLOBULAR CLUSTERS				
DR. J. MICHAEL SHULL	COLORADO CASA	U. S.	AGJJS	
IUE STUDIES OF SEYFERT GALAXIES				
DR. J. MICHAEL SHULL	COLORADO CASA	U. S.	IGJJS	
UV OBSERVATIONS OF INTERGALACTIC GAS IN THE COMA VOID				
DR. THEODORE SIMON	GSFC	U. S.	ABJTS	
SHORT TERM VARIABILITY OF HD 163296				
DR. THEODORE SIMON	GSFC	U. S.	SDJTS	
ECLIPSE OBSERVATIONS OF HD 185510				
DR. THEODORE SIMON	GSFC	U. S.	CCJTS	
THE ONSET OF CHROMOSPHERIC ACTIVITY				
DR. THEODORE SIMON	GSFC	U. S.	GKJTS	
CHROMOSPHERIC ACTIVITY IN THE PLEIADES CLUSTER				
DR. EDWARD M. SION	VILLANOVA	U. S.	HEJES	
ECHELLE STUDIES OF HELIUM-RICH WHITE DWARFS				
DR. EDWARD M. SION	VILLANOVA	U. S.	WDJES	
IUE ECHELLE INVESTIGATIONS OF V471 TAURI				
DR. THOMAS E. SKINNER	COLORADO LASP	U. S.	SJJTS	TARG OF OPP
SOLAR WIND-JOVIAN AURORA				
DR. THOMAS E. SKINNER	COLORADO CASA	U. S.	SVJTS	
SO 2 ON VENUS				
DR. ANDREW M. SMITH	GSFC	U. S.	GHJAS	
RESONANCE SCATTERING IN GALACTIC CORONAE				
DR. THEODORE P. SNOW, JR	COLORADO CASA	U. S.	BEJTS	
UV OBSERVATIONS OF BE STARS STUDIED WITH IRAS				

NASA APPROVED IUE PROGRAMS FOR THE TENTH YEAR

NAME / TITLE	INSTITUTION	COUNTRY	PROG ID	REMARKS
DR. THEODORE P. SNOW, JR DEPLETIONS IN DENSE DIFFUSE CLOUDS	COLORADO CASA	U. S.	CDJTS	
DR. THEODORE P. SNOW, JR EXTINCTION PROPERTIES OF COOL-STAR CIRCUMSTELLAR GRAINS	COLORADO CASA	U. S.	IGJTS	
DR. THEODORE P. SNOW, JR DEPLETIONS IN 2200 A SCATTERING REGIONS	COLORADO CASA	U. S.	IEJTS	
DR. GEORGE SONNEBORN ULTRAVIOLET SPECTROSCOPY OF DWARF NOVAE IN OUTBURST	CSC	U. S.	CVJGS	TARG OF OPP
DR. GEORGE SONNEBORN SMALL-SCALE STRUCTURE OF THE ISM IN ORION OB1	CSC	U. S.	ISJGS	
DR. SUMNER G. STARRFIELD TARGET OF OPPORTUNITY OBSERVATIONS OF NOVAE IN OUTBURST	ARIZONA ST.	U. S.	CVJSS	TARG OF OPP
DR. SUMNER G. STARRFIELD ULTRAVIOLET OBSERVATIONS OF THREE BRIGHT CLASSICAL NOVAE	ARIZONA ST.	U. S.	CNJSS	
DR. ROBERT E. STENCEL THE ULTRAVIOLET CIRCUMSTELLAR SHELL OF ALPHA ORI	COLORADO CASA	U. S.	CSJRS	
DR. ROBERT E. STENCEL UV OBSERVATIONS OF THE SOUTHERN STAR HR 3126	COLORADO CASA	U. S.	MLJRS	
DR. JOHN T. STOCKE IUE, VOYAGER 2 & GROUNDBASED SPECTROPHOTOMETRY OF PG 1211 + 143	COLORADO CASA	U. S.	QSJJS	
DR. PAULA SZKODY TARGET OF OPPORTUNITY: THE LOW STATES OF NOVALIKE SYSTEMS	WASHINGTON	U. S.	LSJPS	TARG OF OPP
DR. PAULA SZKODY UV COOLING IN LONG OUTBURST PERIOD DWARF NOVAE	WASHINGTON	U. S.	CVJPS	
DR. TRINH X. THUAN BIMODAL STAR FORMATION IN BLUE COMPACT DWARF GALAXIES	VIRGINIA	U. S.	DGJTT	
DR. SILVIA TORRES-PEIMBERT COMPACT PLANETARY NEBULAE. CARBON ABUNDANCES	MEXICO	MEXICO	NPJST	
DR. DAVID A. TURNSHEK LOW REDSHIFT BROAD ABSORPTION LINE QSOS	ST SC. I	U. S.	LZJDT	
DR. DAVID TYTLER QSO LYMAN LIMIT ABSORBERS	COLUMBIA	U. S.	QAJDT	
DR. C. MEGAN URRY COORDINATED OBSERVATIONS OF X-RAY BRIGHT BL LACERTAE OBJECTS	MIT	U. S.	XQJCU	
DR. RICHARD WAGENER A SEARCH FOR NITRILES IN THE STRATOSPHERE OF TITAN	A. R. CORP	U. S.	SPJRW	
DR. J. H. WAITE, JR. PARTICLE INDUCED UV EMISSIONS AT THE OUTER PLANETS	NASA/MSFC	U. S.	SPJJW	
DR. FREDERICK M. WALTER SPECTRAL IMAGING OF HD199178	COLORADO CASA	U. S.	FKJFW	
DR. FREDERICK M. WALTER DELTA SCUTI STARS	COLORADO CASA	U. S.	DSJFW	

NASA APPROVED IUE PROGRAMS FOR THE TENTH YEAR

NAME / TITLE	INSTITUTION	COUNTRY	PROG ID	REMARKS
DR. FREDERICK M. WALTER NAKED-T TAURI STARS	COLORADO CASA	U. S.	TTJFW	
DR. GARY A. WEGNER SPECTRA OF SUBLUMINOUS OBJECTS FOUND IN THE KISO SCHMIDT SURVEY	DARTMOUTH	U. S.	SDJGW	
DR. DONNA E. WEISTROP ARE THE GALAXIES IN THE BOOTES VOID YOUNG?	A. R. CORP	U. S.	EGJDW	
DR. FRANCOIS WESEMAEL HOT WHITE DWARFS IN THE MC SURVEY	CANADA	CANADA	WDJFW	
DR. LEE ANNE WILLSON A STARS IN THE PLEIADES	IOWA	U. S.	MSJLW	
DR. DONALD E. WINGET COORDINATED UV/OPTICAL OBSERVATIONS OF IBWD STARS	TEXAS	U. S.	IBJDW	
DR. CHI-CHAO WU AUGMENTATION OF IUE ULTRAVIOLET SPECTRAL ATLAS	CSC	U. S.	SAJCW	
DR. DONALD G. YORK EDGES OF CLOUDS	CHICAGO	U. S.	ICJDY	
DR. DONALD G. YORK ORIGIN OF CIV IN QSO ABSORPTION LINE SYSTEMS	CHICAGO	U. S.	QAJDY	

IUE IMAGE PROCESSING MANUAL

As most of you are probably aware of, about 150 copies of the IUE Image Processing Manual (version 2.0) have been mailed to the main astronomical institutes in Europe (Attn.: The Director)

By now, the manual should have been made available to you, most probably in the library of your institute. If this is not so, check first with your Director, and if necessary, contact us. Some of the manuals may have been lost in the mail or your laboratory may not be included in our mailing list.

There is still a limited number of copies available. Our intention is to make these manuals available to those of you who are really active in designing software for the analysis and the processing of IUE data. A written request with a few sentences of scientific justification should be submitted to:

J. Clavel
ESA IUE Observatory
Apartado 54065
28080 Madrid
SPAIN

RESTRICTIONS ON HEAVY OVEREXPOSURES

The three Agencies have adopted as of today a policy which limits the frequency with which large overexposures of the IUE cameras may be performed. As Guest Observers continue to push the capabilities of the IUE instrumentation, use of both very long exposures and heavy overexposures has increased in recent years. Since residual phosphorescence is known to contaminate spectra, in particular long exposures of faint objects taken for as much as one week after a heavy overexposure, the Project wants to limit the degree and number of overexposures of the IUE cameras. The new policy is detailed below:

1. Observing programs requiring heavy overexposures will be reviewed by the Project for scientific justification and potential impact on other science programs. The need for such overexposures should be clearly identified in the proposal.

2. No overexposures greater than 1000 times are permitted due to the potential for permanent damage to the camera.

3. A "heavy overexposure" is defined to be a cumulative overexposure of 100 times or greater on one camera during one eight-hour shift. For example, five spectra, each 20 times overexposed, would qualify as a heavy overexposure.

4. No more than 12 eight-hour shifts containing a heavy overexposure are permitted per camera in any 12-month period (8 shifts for GSFC, 4 for VILSPA).

5. Scheduling and detailed exposure information for approved programs planning such overexposures will be exchanged between GSFC and VILSPA, so that the impact of these overexposures can be minimized by appropriate scheduling.

6. The overexposure level of a given image is the ratio of its exposure time and the exposure time required for an optimum exposure (210 DN). If the optimum exposure time for a given object cannot be reliably supplied by the G.O. from previous IUE or other satellite UV flux measurements, a test exposure may be required. Overexposure estimates based on overexposure levels given in the Merged Log may be unreliable and cannot be used for this purpose.

7. Overexposures made outside G.O. programs fall outside the above restrictions, but will have to be scheduled to minimize their impact on Science observations.

Log of IUE Observation of SN 1987A till June 30, 1987

Camera & Image	Stn (1)	Obs.date MonDD	Time (UT)	FES(2) cts/mode		Exp.time (secs)	Dis	Ap.	Max DN	Bkg DN	ECC(3)
FES 1900	G	FEB24	19:13								
LWP 10188	G		19:36:36	322	FU	15	L	L	5X	40	
SWP 30375	G		20:04:11	325	FU	30	L	L	3X	18	
SWP 30376	G		20:53:04	326	FU	10	L	L	228	18	
			20:57:44	331	FU	10	L	S	117	18	
LWP 10189	G		21:04:07	26639	FO	2.1	L	L	1.5X	36	
SWP 30377	G		21:37:11	27195	FO	840	H	L	2X	53	
LWP 10190	G		22:14:00	27234	FO	110	H	L	1.5X	46	
LWP 10191	G		23:22:07	27419	FO	1.3	L	L	230	32	
			23:26:53	27601	FO	5	L	S	2X	32	
SWP 30378	G		23:33:38	27565	FO	8	L	L	182	32	
		FEB24	23:38:26	27694	FO	8	L	S	137	32	
LWP 10192	G	FEB25	00:45:34	26529	FO	100	H	L	1.2X	53	
SWP 30379	G		00:53:30	26642	FO	840	H	L	3X	115	
SWP 30380	V		03:41:41	343	FU	10	L	L			551
SWP 30381	V		04:24:00	351	FU	1800	H	L			771
LWP 10193	V		04:58:40	351	FU	1.3	L	L			561
LWP 10194	V		05:30:23	320	FU	300	H	L			772
SWP 30382	V		06:39:22	370	FU	30	L	L			772
LWP 10195	V		06:42:57	370	FU	3.9	L	L			772
LWP 10196	V		07:52:32	356	FU	480	H	L			772
SWP 30383	V		08:09:03	343	FU	2700	H	L			882
LWP 10197	V		09:01:29	28304	FO	100	H	L			551
SWP 30384	V		09:30:57	356	FU	660	H	L			551
LWP 10198	V		10:08:00	361	FU	1.3	L	L			551
SWP 30385	V		10:33:43	349	FU	10	L	L			551
FES 1902	G		19:23								
LWP 10199	G		19:53:11	349	FU	1.3	L	L	189	36	
			19:57:49	350	FU	5	L	S	1.5X	30	
SWP 30388	G		20:33:22	349	FU	10	L	L	137	17	
			20:37:51	348	FU	40	L	S	241	18	
LWP 10200	G		21:06:25	353	FU	90	H	L	166	38	
SWP 30389	G		21:16:57	356	FU	1500	H	L	1.2X	54	
LWP 10201	G		22:26:18	353	FU	720	H	L	5X	90	
SWP 30390	G		22:44:36	356	FU	18	L	L	192	18	
		FEB25	22:48:57	359	FU	150	L	S	6X	18	
SWP 30394	V	FEB26	04:14:49	362	FU	2400	H	L			661
FES 1903	V										
SWP 30395	V		05:25:40	382	FU	20	L	L			441
			05:31:03			120	L	S			66
LWP 10202	V		05:36:56	362	FU	1.5	L	L			441
			05:40:46			9	L	S			77
LWP 10203	V		06:15:40	365	FU	13	L	L			881
SWP 30396	V		06:55:29	382	FU	1800	H	L			882
			07:48:48	364	FU	3600	H	L			
			09:09:51	359	FU	1800	H	L			
LWP 10204	V		07:38:58	368	FU	180	H	L			551
LWP 10205	V		09:01:47	359	FU	3	L	L			551
LWP 10206	V		09:47:57	360	FU	1320	H	L			882
SWP 30397	V		10:17:37	357	FU	30	L	L			551
		FEB26	10:23:09			360	L	S			881

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FES 1905	V/G	FEB26	11:45								
LWP 10207	G		11:57:41	358	FU	2.5	L	L	220	35	
			12:03:54	358	FU	15	L	S	3X	35	
SWP 30398	G		12:08:52	354	FU	30	L	L	91	25	
			12:13:43	354	FU	150	L	S	194	25	
LWP 10208	G		13:34:44	354	FU	150	H	L	165	38	
SWP 30399	G		13:44:40	356	FU	4500	H	L	205	58	
LWP 10209	G		15:08:22	359	FU	1800	H	L	8X	72	
SWP 30400	G		15:46:03	359	FU	10800	H	L	2.5X	166	
LWP 10210	G		19:25:31	360	FU	3	L	L	180	34	
			19:31:05	360	FU	30	L	S	4X	30	
SWP 30401	G		19:35:56	355	FU	60	L	L	138	17	
LWP 10211	G		20:32:19	359	FU	90	L	L	20X	40	
SWP 30402	G	FEB26	20:39:17	358	FU	1500	L	L	10X	33	
SWP 30405	V	FEB27	07:51:46	359	FU	1320	H	L			301
			08:42:35			1500	H	L			
LWP 10215	V		08:34:25	367	FU	3	L	L			301
			08:37:09			3	L	L			
LWP 10216	V		09:17:06	375	FU	5	L	L			501
SWP 30406	V		09:47:48	361	FU	90	L	L			301
LWP 10217	V		10:24:21	362	FU	480	H	L			401
FES 1906	G		11:44								
LWP 10218	G		11:53:27	359	FU	6	L	L	180	34	
			11:58:50	359	FU	48	L	S	4X	34	
SWP 30407	G		12:06:42	359	FU	270	L	L	88	25	
SWP 30408	G		12:48:19	361	FU	5400	L	L	10X	40	
LWP 10219	G		13:59:11	361	FU	600	H	L	175	3	
LWP 10220	G		14:50:52	364	FU	180	L	L	20X	40	
FES 1907	G		15:05								
LWP 10221	G		21:31:53	351	FU	8	L	L	155	30	
			21:38:30	350	FU	64	L	S	4X	30	
SWP 30410	G		21:52:17	354	FU	600	L	L	174	25	
SWP 30411	G	FEB27	22:44:48	347	FU	5400	L	L	6X	55	
LWP 10222	G	FEB28	00:22:00	355	FU	240	L	L	20X	40	
FES 1908	V		03:45			9600					
SWP 30412	G/V		03:50:40	345	FU	32400	H	L	219	125	
			03:50:40	345	FU	17358	H	L			
			09:09:23			1626	H	L			
			10:38:56			18480	H	L			
LWP 10223	V		08:49:44	348	FU	840	H	L			402
FES 1909	G		11:25								
LWP 10224	G		11:34:59	340	FU	1500	H	L	150	38	
LWP 10225	G		14:17:55	337	FU	1800	H	L	153	45	
LWP 10226	G		15:28:48	336	FU	18000	H	L	8X	130	
SWP 30413	G		20:55:19	334	FU	1200	L	L	129	25	
LWP 10227	G		21:47:45	328	FU	28	L	L	200	35	
			22:00:30	326	FU	240	L	S	4X	35	
SWP 30414	G	FEB28	22:38:20	329	FU	5400	L	L	2X	65	
LWP 10228	G	MAR01	00:15:49	326	FU	720	L	L	20X	62	
SWP 30415	G		00:45:26	327	FU	2400	L	L	205	55	
SWP 30416	V	MAR01	03:57:42	325	FU	2400	L	L			441

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LWP 10229	V	MAR01	04:50:45	:362 FU	30	L	L			551
			04:55:57		30	L	L			
SWP 30417	V		05:23:53	:352 FU	1800	L	L			
			06:09:13		1500	L	L			
			07:00:44		1800	L	L			
			07:45:57	26770 FO	1800	L	L			
			08:41:56		2700	L	L			
			09:46:14		600	L	L			778
LWP 10230	V		05:59:01	:328 FU	38	L	L			551
			06:04:53		38	L	L			
LWP 10231	V		06:48:32	331 FU	120	L	L			881
			06:54:56		120	L	L			
LWP 10232	V		07:35:51	:330 FU	38	L	L			551
			07:40:56		38	L	L			
LWP 10233	V		08:29:21	27302 FO	390	L	L			881
LWP 10234	V		09:32:07	:357 FU	38	L	L			551
			09:36:40		38	L	L			
LWP 10235	V		10:17:34	:359 FU	40	L	L			551
			10:22:20		40	L	L			
FES 1910	G		10:57							
LWP 10236	G		11:32:53	326 FU	24300	H	L	10X	160	
SWP 30421	G	MAR01	23:44:07	319 FU	5400	L	L			
LWP 10240	G	MAR02	00:20:43	318 FU	70	L	L	240	35	
FES 1911	V		03:45		9600					
SWP 30422	V		03:59:32	:323 FU	1320	L	L			
			04:38:48		1620	L	L			
			05:34:08		1800	L	L			
			06:23:55	:372 FU	1620	L	L			551
LWP 10241	V		04:26:34	:326 FU	70	L	L			551
			04:32:12	:357 FU	70	L	L			
LWP 10242	V		05:12:02	317 FU	75	L	L			551
			05:17:40	:352 FU	75	L	L			
LWP 10243	V		06:11:26	:318 FU	75	L	L			551
			06:16:54	:352 FU	75	L	L			
LWP 10244	V		06:57:58	323 FU	240	L	L			771
LWP 10248	G		19:39:37	311 FU	85	L	L	190	32	
			19:45:18	311 FU	85	L	L	190	32	
SWP 30426	G		19:55:34	309 FU	10800	L	L	1.5X	83	
LWP 10249	G		20:33:38	26638 FO	600	L	L	5X	40	
LWP 10250	G	MAR02	23:30:15	26884 FO	5100	H	L	225	138	
LWP 10251	V	MAR03	03:29:46	27997 FO	85	L	L			441
SWP 30427	V		03:46:03	26298 FO	1620	L	L			
	V		04:28:41	27369 FO	1620	L	L			
	V		06:37:46	28340 FO	3000	L	L			
	V		07:41:09	27047 FO	1800	L	L			
	V		08:24:57		1620	L	L			551
LWP 10252	V		04:18:58	27891 FO	120	L	L			551
LWP 10253	V		05:01:06	27454 FO	5400	L	L			882
LWP 10254	V		07:32:59	324 FU	130	L	L			551
LWP 10255	V		08:16:42	27437 FO	150	L	L			551
LWP 10256	V		08:58:49	27219 FO	6000	H	L			442
SWP 30428	G		19:35:31	318 FU	10800	L	L	206	70	
LWP 10258	G		20:16:30	318 FU	120	L	L	190	35	
			20:23:09		120	L	L			
LWP 10259	G	MAR03	23:10:19	321 FU	2400	L	L	15X	70	

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LWP 10260	G	MAR04	00:44:25	321	FU	150	L	L	210	38	
			00:49:01			150	L	L			
LWP 10261	V		03:16:08	27205	FO	180	L	L			551
SWP 30429	V		03:27:35	27035	FO	2160	L	L			
			04:16:09	26947	FO	1680	L	L			
			04:57:38	27128	FO	1740	L	L			
			05:39:01	26920	FO	1740	L	L			
			06:21:58	26904	FO	1860	L	L			
			07:13:03			2700	L	L			441
LWP 10262	V		04:09:11	26819	FO	180	L	L			551
LWP 10263	V		04:50:33	26907	FO	180	L	L			551
LWP 10264	V		05:32:10	27188	FO	180	L	L			551
LWP 10265	V		06:15:04	26602	FO	180	L	L			551
LWP 10267	G		11:33:54	316	FU	150	L	L	188	33	
			11:42:17				L	L			
LWP 10268	G		12:29:47	27714	FO	11400	H	L	208	80	
LWP 10269	G		16:23:03	26350	FO	14400	H	L	240	103	
LWP 10270	G		21:00:02	27004	FO	180	L	L	205	35	
			21:05:21			180	L	L			
LWP 10271	G		21:43:13	325	FU	900	L	L	5X	40	
LWP 10272	G	MAR04	22:33:42	321	FU	3600	L	L	20X	80	
SWP 30433	V	MAR05	07:14:35	317	FU	3600	L	L			402
			08:25:06			8100	L	L			
LWP 10277	V	MAR05	08:08:17	27551	FO	220	L	L			501
SWP 30440	G	MAR06	11:53:43	26738	FO	18000	L	L	240	105	
LWP 10287	G		13:04:01	27179	FO	260	L	L	200	35	
LWP 10288	G		17:28:13	26778	FO	7200	L	L	22X	125	
LWP 10289	G	MAR06	20:20:47	27466	FO	1080	L	L	3.5X	45	
FES 1912	V	MAR08	09:59			9600					
LWP 10299	V/G		10:12:23	345	FU	21600	H	L	245	135	
LWP 10300	G		17:13:12	352	FU	360	L	L	225	40	
LWP 10301	G	MAR08	17:57:18	351	FU	3000	L	L	8X	93	
SWP 30472	V	MAR09	05:16:35	351	FU	1800	L	L			402
			06:07:09			7200	L	L			
			08:21:52			1800	L	L			
LWP 10302	V		05:51:57	348	FU	420	L	L			501
LWP 10303	V		08:09:22	349	FU	360	L	L			501
LWP 10304	V		08:58:06	353	FU	6000	L	L			802
LWP 10305	G	MAR09	18:17:38	356	FU	420	L	L	225	40	
LWP 10312	G	MAR10	22:25:03	370	FU	480	L	L	238	45	
LWP 10314	V	MAR11	03:54:26	361	FU	24120	H	L			405
LWP 10315	G	MAR11	18:11:52	367	FU	510	L	L	1.3X	35	
LWP 10317	G	MAR12	19:49:05	371	FU	465	L	L	240	35	
FES 1913	G	MAR13	11:36								
LWP 10318	G		11:48:26	372	FU	420	L	L	222	34	
SWP 30512	G		12:03:28	371	FU	14400	L	L	200	75	
LWP 10319	G		13:10:05	373	FU	1440	L	L	3X	39	
LWP 10320	G	MAR13	16:49:16	384	FU	7200	L	L	15X	80	

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LWP 10321	V	MAR14	03:59:42	:400 FU	450	L	L			502
SWP 30522	V		04:17:09	:377 FU	1800	L	L			
			05:14:30	385 FU	1740	L	L			
			06:03:38	392 FU	2100	L	L			
			08:35:06	:412 FU	3600	L	L			
			09:55:59	:401 FU	1620	L	L			401
LWP 10322	V		04:52:50	:388 FU	900	L	L			601
LWP 10323	V		05:48:56	377 FU	420	L	L			501
LWP 10324	V		06:56:18	389 FU	5400	L	L			704
LWP 10325	V		09:41:21	392 FU	420	L	L			501
LWP 10326	V		10:29:41	:387 FU	420	L	L			501
LWP 10328	G	MAR14	19:45:56	387 FU	420	L	L	225	33	
LWP 10332	V	MAR15	09:27:21	398 FU	405	L	L			501
LWP 10334	G	MAR15	19:39:17	392 FU	380	L	L	205	35	
LWP 10340	V	MAR16	04:21:57	394 FU	405	L	L			501
LWP 10344	G		11:25:15	403 FU	420	L	L	206	34	
LWP 10345	G		12:08:38	404 FU	1440	L	L	3X	39	
SWP 30547	G		12:38:58	407 FU	14400	L	L	198	81	
LWP 10346	G	MAR16	16:46:40	401 FU	6600	L	L	15X	80	
LWP 10349	V	MAR17	03:41:08	406 FU	405	L	L			502
LWP 10350	V		04:24:27	401 FU	3000	L	L			704
SWP 30551	V		05:21:06	406 FU	3240	L	L			301
			06:34:03	:411 FU	1980	L	L			
LWP 10351	V		06:21:14	:419 FU	415	L	L			501
LWP 10352	V	MAR17	07:18:00	405 FU	5400	L	L			704
LWP 10358	G	MAR18	02:39:09	416 FU	420	L	L	180	30	
LWP 10363	G	MAR18	19:32:34	421 FU	390	L	L	160	35	
LWP 10369	G	MAR19	11:03:56	427 FU	420	L	L	214	33	
LWP 10371	G		19:32:42	437 FU	420	L	L	210	35	
LWP 10372	G	MAR19	20:20:05	437 FU	1440	L	L	3X	42	
LWP 10373	V	MAR20	05:40:58	431 FU	420	L	L			
LWP 10376	G	MAR20	19:53:19	438 FU	420	L	L	210	38	
SWP 30584	V	MAR21	03:18:34	447 FU	600	L	L			201
LWP 10379	V	MAR21	03:45:10	442 FU	450	L	L			503
LWP 10386	V	MAR22	03:10:36	452 FU	450	L	L			503
SWP 30591	V		03:33:10	448 FU	1500	L	L			201
LWP 10387	V		04:19:18	451 FU	22680	H	L			406
SWP 30592	G		11:00:02	453 FU	18000	L	L	200	85	
LWP 10388	G		11:30:48	448 FU	420	L	L	160	35	
LWP 10389	G		12:24:16	454 FU	1440	L	L	3X	40	
LWP 10390	G	MAR22	17:11:31	453 FU	5400	L	L	8X	72	
LWP 10398	V	MAR23	03:48:15	463 FU	420	L	L			502
LWP 10401	G		19:43:23	461 FU	420	L	L	215	35	
LWP 10402	G	MAR23	20:36:11	467 FU	1440	L	L	3X	50	

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LWP 10414	V	MAR24	03:45:51	478	FU	420	L	L			502
			04:00:10			420					
LWP 10408	G	MAR24	19:27:21	471	FU	420	L	L	234	38	
LWP 10424	G	MAR26	02:16:30	496	FU	360	L	L	218	33	
LWP 10431	G	MAR26	23:03:13	495	FU	390	L	L	240	38	
LWP 10435	G	MAR27	11:47:52	509	FU	21600	H	L	242	120	
FES 1915	G		11:50								
LWP 10436	G	MAR27	18:29:31	:577	FU	360	L	L	210	38	
LWP 10441	V	MAR28	03:19:20	511	FU	13800	L	L			901
SWP 30637	V		07:17:26	513	FU	11100	L	L			402
LWP 10442	V		10:27:31	519	FU	360	L	L			501
LWP 10445	G		22:44:17	525	FU	360	L	L	225	52	
LWP 10446	G	MAR28	23:32:46	523	FU	1200	L	L	3X	69	
LWP 10448	V	MAR29	03:42:30	518	FU	20400	H	L			343
SWP 30652	V		09:31:23	556	FU	3960	L	L			300
LWP 10449	G	MAR29	19:40:35	540	FU	360	L	L	218	39	
LWP 10454	G	MAR30	19:37:27	561	FU	360	L	L	222	38	
SWP 30666	V	MAR31	03:24:53	551	FU	900	L	S			303
			03:42:08			1200					
			04:08:21			900					
			04:26:35			18000					
			09:31:06			900					
			09:51:36			600					
FES 1917	V		10:10								
LWP 10463	G	MAR31	22:22:20	571	FU	360	L	L	205	47	
LWP 10470	G	APR01	21:30:56	583	FU	360	L	L	190	39	
LWP 10472	V	APR02	05:11:15	586	FU	360	L	L			501
LWP 10477	G	APR03	00:35:36	610	FU	360	L	L	190	35	
LWP 10483	G	APR03	21:47:08	617	FU	360	L	L	218	40	
LWP 10486	G	APR04	18:15:41	639	FU	360	L	L	205	32	
LWP 10491	V	APR05	08:34:05	644	FU	360	L	L			501
LWP 10496	G	APR05	18:04:31	654	FU	360	L	L	237	35	
LWP 10501	G	APR06	10:14:31	663	FU	18000	H	L	198	92	
LWP 10502	G		15:55:34	673	FU	300	L	L	180	42	
		APR06	16:18:39	677	FU	1980	L	S	42	42	
LWP 10509	G	APR07	17:35:20	688	FU	330	L	L	210	38	
LWP 10518	G	APR08	09:58:44	694	FU	330	L	L	198	32	
SWP 30743	G		10:16:22	710	FU	13500	L	L	80	65	
LWP 10519	G		12:24:13	704	FU	1200	L	L	3X	37	
LWP 10520	G	APR08	14:57:18	713	FU	6900	L	L	17X	75	
LWP 10531	G	APR09	17:53:03	729	FU	330	L	L	201	30	
SWP 30750	G	APR09	18:17:03	720	FU	10800	L	S	140	85	

Log of IUE Observation of SN 1987A till June 30, 1987

Camera & Image	Stn (1)	Obs.date MonDD	Time (UT)	FES(2) cts/mode	Exp.time (secs)	Dis	Ap.	Max DN	Bkg DN	ECC(3)
FES 1921	G	APR10	00:09							
LWP 10532	V		01:31:13	742 FU	330	L	L			501
SWP 30751	V		01:43:43	740 FU	1800	L	L			300
LWP 10533	V		02:20:54	741 FU	23040	L	L			504
SWP 30752	G		09:37:20	746 FU	10800	L	S	80	42	
LWP 10534	G		12:47:12	741 FU	330	L	L	197	35	
SWP 30753	G	APR10	13:41:09	758 FU	10800	L	S	87	53	
SWP 30760	G	APR12	17:54:48	780 FU	10200	L	S	125	82	
LWP 10546	G	APR12	20:56:05	788 FU	330	L	L	190	35	
LWP 10550	G	APR13	19:11:04	830 FU	330	L	L	207	35	
LWP 10562	G	APR14	17:43:04	816 FU	330	L	L	215	35	
LWP 10571	G	APR15	10:23:55	828 FU	330	L	L	210	35	
SWP 30789	G	APR15	10:52:30	829 FU	22500	L	S	157	95	
SWP 30795	V	APR16	02:43:43	837 FU	19200	L	S			03
LWP 10586	G		09:20:15	875 FU	18000	H	L	218	101	
LWP 10587	G		15:04:36	855 FU	330	L	L	213	33	
LWP 10588	G	APR16	15:46:44	856 FU	7200	L	L	15X	70	
LWP 10598	G	APR18	00:46:02	890 FU	330	L	L	187	30	
LWP 10611	G	APR19	15:46:53	924 FU	340	L	L	218	38	
LWP 10616	V	APR20	08:44:37	:1070 FU	390	L	L			552
LWP 10617	G		09:43:57	936 FU	340	L	L	249	39	
LWP 10618	G	APR20	16:59:13	948 FU	315	L	L	210	35	
LWP 10622	G	APR21	18:04:08	970 FU	300	L	L	201	33	
LWP 10626	G	APR22	17:08:34	983 FU	300	L	L	229	33	
SWP 30841	G	APR22	17:24:12	986 FU	2700	L	L	66	23	
LWP 10632	V	APR23	08:51:12	995 FU	300	L	L			501
LWP 10633	G	APR23	17:51:59	1010 FU	255	L	L	210	33	
LWP 10643	G	APR24	17:38:58	1007 FU	225	L	L	204	33	
LWP 10644	G	APR25	18:33:40	1056 FU	205	L	L	200	35	
LWP 10646	G	APR26	14:20:54	1046 FU	185	L	L	148	33	
SWP 30871	G		14:31:48	1054 FU	2400	L	L	55	20	
LWP 10647	G		15:21:42	1051 FU	240	L	L	180	35	
LWP 10648	G	APR26	16:02:27	1060 FU	3300	L	L	8X	50	
LWP 10651	G	APR27	17:26:07	1088 FU	225	L	L	197	35	
LWP 10654	V	APR28	02:08:39	1087 FU	270	L	L			501
LWP 10660	G	APR29	00:30:12	1099 FU	225	L	L	204	32	
LWP 10661	V		01:23:57	1112 FU	270	L	L			502
LWP 10664	G		17:44:47	1111 FU	215	L	L	182	34	
SWP 30882	G		18:03:15	1104 FU	6600	L	L	116	32	
LWP 10665	G	APR29	20:03:33	1102 FU	3300	L	L	12X	49	

Log of IUE Observation of SN 1987A till June 30, 1987

Camera & Image	Stn (1)	Obs.date MonDD	Time (UT)	FES(2) cts/mode	Exp.time (secs)	Dis	Ap.	Max DN	Bkg DN	ECC(3)
LWP 10669	G	APR30	17:06:15	1122 FU	215	L	L	220	35	
LWP 10670	G	APR30	17:48:35	1115 FU	1500	L	L	6X	45	
LWP 10674	G	MAY01	15:30:13	1123 FU	205	L	L	230	32	
LWP 10683	G	MAY02	19:44:07	1118 FU	180	L	L	215	35	
LWP 10684	G	MAY02	20:29:26	1157 FU	1500	L	L	7X	40	
LWP 10688	G	MAY03	19:19:07	1152 FU	165	L	L	191	35	
LWP 10691	G	MAY04	07:30:45	1156 FU	10800	H	L	198	65	
SWP 30907	G		10:41:18	1150 FU	13800	L	L	209	61	
LWP 10692	G		14:08:59	1183 FU	165	L	L	202	30	
LWP 10693	G		14:58:21	1178 FU	1320	L	L	8X	40	
LWP 10695	V	MAY04	23:32:08	1171 FU	240	L	L			602
LWP 10706	G	MAY07	16:12:09	1208 FU	150	L	L	195	22	
SWP 30929	G		16:24:56	1213 FU	3600	L	L	78	36	
LWP 10707	G		17:31:36	1177 FU	1200	L	L	8X	36	
LWP 10711	V	MAY07	23:51:39	1180 FU	210	L	L			501
SWP 30932	V	MAY08	00:03:29	1179 FU	1800	L	L			300
			02:22:20		1800					
LWP 10712	V		00:45:48	1180 FU	5400	L	L			603
LWP 10717	G	MAY08	19:46:40	1200 FU	145	L	L	8X	32	
LWP 10723	G	MAY09	15:30:53	1213 FU	150	L	L	180	32	
LWP 10724	G	MAY09	16:14:59	1200 FU	1200	L	L	8X	38	
LWP 10734	G	MAY10	15:23:02	1210 FU	150	L	L	180	32	
LWP 10743	G	MAY11	15:47:04	1213 FU	150	L	L	195	35	
LWP 10754	G	MAY12	23:01:11	1219 FU	140	L	L	178	30	
LWP 10755	G	MAY13	14:41:08	1223 FU	140	L	L	180	30	
FES 1939	G		15:33							
LWP 10756	G	MAY13	15:34:54	1226 FU	1020	L	L	178	30	
LWP 10765	G	MAY14	19:56:30	1223 FU	140	L	L	8X	38	
LWP 10766	G		21:14:54	1236 FU	1200	L	L	7X	40	
SWP 30974	G		21:44:43	1250 FU	7200	L	L	130	45	
LWP 10767	V		23:11:19	1231 FU	160	L	L			501
LWP 10768	V	MAY14	23:50:42	1220 FU	8400	H	L			402
LWP 10771	G	MAY15	15:22:14	1226 FU	140	L	L	205	32	
LWP 10780	G	MAY16	22:26:16	1235 FU	140	L	L	181	32	
LWP 10783	G	MAY17	22:45:12	1243 FU	140	L	L	200	35	
LWP 10784	G	MAY18	07:23:54	1247 FU	140	L	L	180	33	

Log of IUE Observation of SN 1987A till June 30, 1987

Camera & Image	Stn (1)	Obs.date MonDD	Time (UT)	FES(2) cts/mode		Exp.time (secs)	Dis	Ap.	Max DN	Bkg DN	ECC(3)
LWP 10796	V	MAY19	06:40:29	1230	FU	160	L	L			500
LWP 10787	G		07:25:19	1260	FU	10800	L	L	205	65	
SWP 31000	G		10:36:57	1260	FU	10800	L	L	189	43	
LWP 10788	G		11:43:50	1235	FU	140	L	L	210	38	
LWP 10789	G	MAY19	13:03:24	1247	FU	1200	L	L	8X	39	
LWP 10803	G	MAY21	07:41:58	1243	FU	140	L	L	205	35	
LWP 10811	G	MAY22	15:49:53	1220	FU	140	L	L	205	33	
LWP 10812	G	MAY22	16:30:37	1214	FU	1200	L	L	8X	39	
LWP 10817	G	MAY23	17:32:43	1231	FU	140	L	L	218	35	
LWP 10826	V	MAY24	23:46:25	1209	FU	150	L	L			500
SWP 31040	V		23:56:50	1222	FU	1800	L	L			502
		MAY25	03:01:20			9900					
LWP 10827	V	MAY25	00:34:26	1234	FU	8400	H	L			402
LWP 10828	V		05:52:11	1241	FU	3600	L	L			802
LWP 10833	G		19:21:41	1220	FU	140	L	L	182	33	
LWP 10834	G	MAY25	19:59:58	1214	FU	900	L	L	5X	42	
LWP 10854	G	MAY28	16:03:07	1168	FU	140	L	L	200	35	
LWP 10873	G	MAY30	07:45:24	1161	FU	390	L	L	190	30	
LWP 10874	G		08:36:51	1156	FU	2340	L	L	6X	40	
LWP 10875	G		10:05:43	1155	FU	7200	L	L	50X	90	
SWP 31064	G		12:13:51	1150	FU	10800	L	L	214	65	
LWP 10876	V	MAY30	23:24:47	1137	FU	140	L	L			500
LWP 10883	G	MAY31	15:56:55	1114	FU	155	L	L	213	30	
LWP 10888	G	JUN01	16:59:45	1095	FU	155	L	L	185	30	
LWP 10889	G	JUN01	17:48:30	1098	FU	900	L	L	4X	45	
LWP 10909	G	JUN04	17:19:49	1013	FU	7240	L	L	210	35	
LWP 10910	G	JUN04	18:02:16	1012	FU	780	L	L	4X	43	
LWP 10920	G	JUN05	05:36:26	980	FU	7240	H	L	2X	127	
LWP 10921	G	JUN05	13:24:28	1014	FU	160	L	L	200	30	
LWP 10939	G	JUN07	13:55:45	920	FU	7240	L	L	201	28	
LWP 10940	G	JUN07	14:46:39	926	FU	7240	L	L	4X	33	
LWP 10959	V	JUN08	21:40:39	833	FU	8400	H	L			404
SWP 31125	V	JUN09	00:05:16	869	FU	1800	L	L			502
			00:50:23			10200					
LWP 10960	V		00:41:20	886	FU	150	L	L			503
LWP 10961	V		03:45:53	878	FU	3600	L	L			703
LWP 10965	G	JUN09	18:15:59	867	FU	160	L	L	100	35	
SWP 31132	V	JUN10	01:10:47	800	FU	9000	L	L			502
LWP 10972	V		03:50:23	795	FU	160	L	L			501
LWP 10970	G		22:14:39	807	FU	170	L	L	190	35	
LWP 10971	G	JUN10	22:55:03	809	FU	1020	L	L	5X	40	

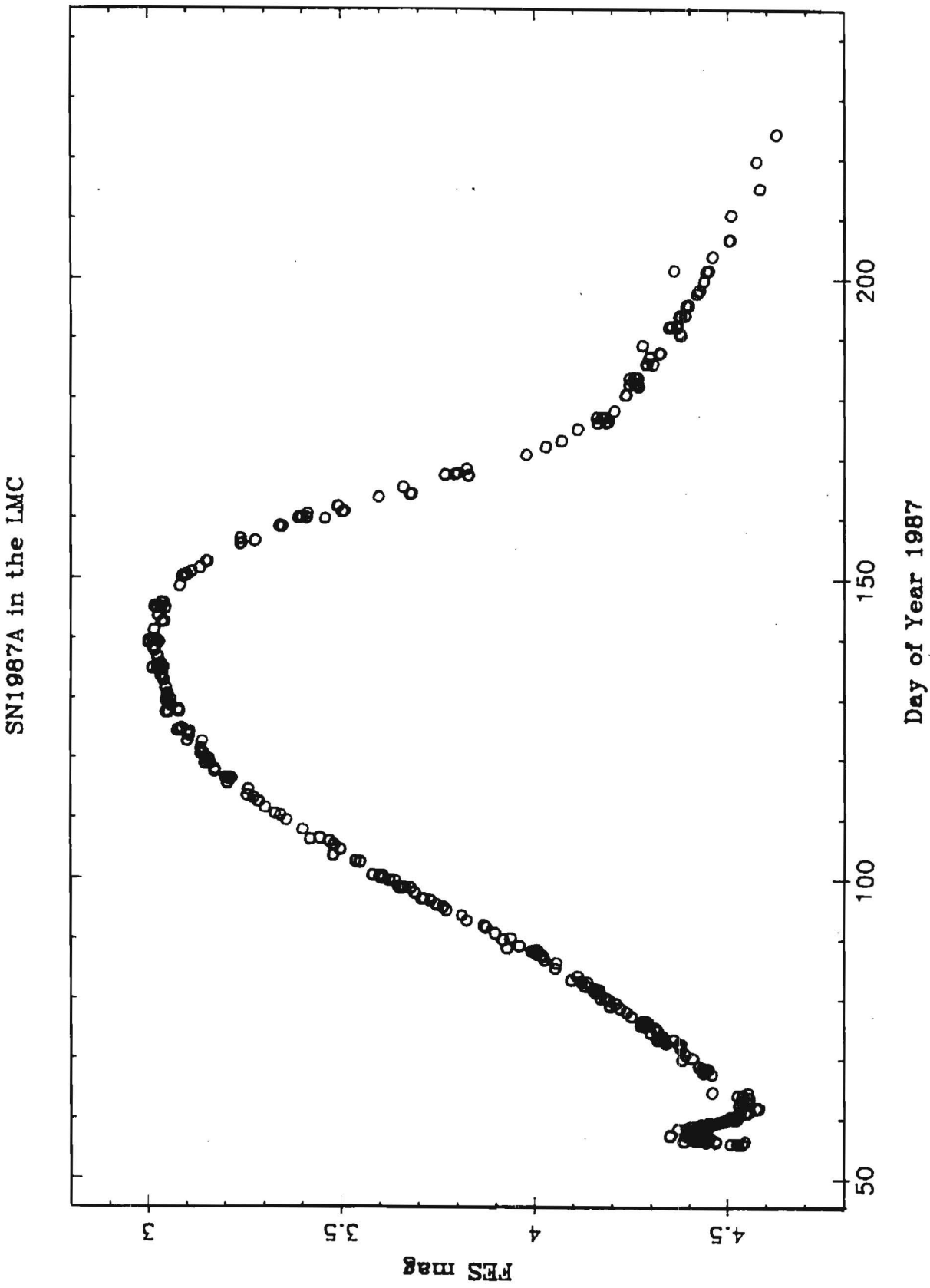
Log of IUE Observation of SN 1987A till June 30, 1987

Camera & Image	Stn (1)	Obs.date MonDD	Time (UT)	FES(2) cts/mode	Exp.time (secs)	Dis	Ap.	Max DN	Bkg DN	ECC(3)
LWP 10991	G	JUN12	13:51:44	734 FU	180	L	L	180	40	
SWP 31154	V	JUN13	01:23:25	682 FU	2400	L	L			501
			02:26:01		8400					
LWP 11006	V	JUN13	02:10:32	679 FU	180	L	L			501
LWP 11007	G	JUN14	05:10:49	693 FU	210	L	L	230	35	
LWP 11028	V	JUN16	02:13:51	594 FU	220	L	L			500
SWP 31177	V		02:38:48	595 FU	7680	L	L			501
SWP 31166	G		05:48:03	628 FU	10800	L	L	240	53	
LWP 11024	G		08:54:10	614 FU	13200	H	L	200	80	
LWP 11025	G	JUN16	13:10:46	609 FU	200	L	L	191	35	
LWP 11029	G	JUN17	05:08:19	597 FU	205	L	L	206	32	
LWP 11041	G	JUN19	13:39:11	519 FU	210	L	L	185	32	
LWP 11049	V	JUN20	21:19:40	495 FU	230	L	L			501
LWP 11060	G	JUN21	20:28:27	477 FU	245	L	L	227	33	
LWP 11073	G	JUN23	20:04:06	459 FU	240	L	L	213	35	
LWP 11080	V	JUN24	21:56:40	438 FU	250	L	L			503
SWP 31245	V	JUN24	22:25:14	429 FU	15600	L	L			653
LWP 11081	V	JUN25	02:56:31	427 FU	6600	L	L			803
LWP 11086	G		18:04:14	430 FU	245	L	L	210	36	
SWP 31249	G		18:14:53	439 FU	6900	L	L	105	40	
LWP 11087	G	JUN25	18:56:34	434 FU	1200	L	L	4X	37	
LWP 11095	V	JUN26	21:34:13	421 FU	250	L	L			501
LWP 11116	G	JUN29	13:39:21	409 FU	250	L	L	193	35	
LWP 11129	V	JUN30	22:08:46	397 FU	25140	H	L			506

(1) Observing station: V = VILSPA (ESA/SERC)
G = GSFC (NASA)
The observations at VILSPA are made under the responsibility of Target of Opportunity Team for Supernovae (Convener: N. Panagia, STScI). These were made under the program id. IETOO and JETOO.
The observation at GSFC were made under the programs SNIRK, OD17Y and SNIRK (P.I. R. Kirschner, CfA).
Any queries about these observations can be directed to these two people. Further information can also be obtained from the IUE Observatories through R. Gilmozzi for VILSPA and G. Sonneborn for GSFC.

(2) Note that FU and FO indicate different scan modes of the FES. The FES data marked with ': ' were not taken at the ref. point and are not reliable (normally too high).

(3) For images taken at GSFC: Maximal datanumber (DN) and DN for background; for images taken at VILSPA: Exposure Classification Code - see the Merged Log for an explanation.


SN1987A in the LMC
FES mag
3
3.5
4
4.5
50
100
150
200
Day of Year 1987

Detectors for LYMAN and SOHO

Report by Michael Penston (RGO)
Leader, ESA's LYMAN Science Working Group

A recent workshop at Herstmonceux Castle on 17-19th November 1986 hosted by the Royal Greenwich Observatory brought together some 40 leading experts from all over the world to study "Open-window Detectors for Ultraviolet Astronomy". Workshop participants undertook scientific and technical discussions of detector concepts and designs for the wavelength region 100-2000 Angstroms. The meeting was particularly timely in the context of two potential space projects in this wavelength region: SOHO which is directed toward solar observations and Lyman, a proposed Far and Extreme Ultraviolet observatory for cosmic astronomy. The meeting concentrated on the physical principles underlying each detector as well as performance data. Scientists from commercial research laboratories were present as well as those from universities and government laboratories. Described by one participant as the biggest collection of "detector sharks" ever assembled, the meeting also included a leavening of observing astronomers to provide a stong interest in the eventual use of the detectors.

The workshop started with brief overviews of the Lyman and SOHO missions, covering the general requirements that the foreseen instruments put on detectors. Panoramic photon counting systems are required by both missions. The Lyman requirements are most severe for detector size and number of pixels: detectors 15-25 cm in length with a few million pixels are needed. SOHO is more demanding in its maximum count-rate requirements: a velocity spectrometer covering the Lyman alpha line might need to handle 10 million counts per second over a few pixels. Both missions would like to push pixel sizes as small as feasible toward 10 micron pixels and twenty micron resolution. High quantum efficiency in the wavelength region of interest is always needed but both missions also require good rejection of visible and near ultraviolet light: a ratio in sensitivity of one hundred thousand. There was some mirth however at the application of the phrase "solar-blind" (commonly used in cosmic ultraviolet astronomy) to the SOHO detectors.

After this introduction the meeting covered three main topics. The first was microchannel plates and photocathodes. Microchannel plates (MCPs) are leading contenders for the amplification stage in detectors for this wavelength region. Workshop participants heard of ways of decreasing dark-count by removing radioactive potassium from the glass, of new ways of twisting the channels to avoid ion feedback and of the prospects for MCPs with finer bore sizes less than the

currently available 8 micron channel separation. There was considerable discussion of the way MCPs should be prepared by "scrubbing" and bake-out. There is a gain loss after exposure to some thousand million photoelectrons but, after increasing the voltage to retain the same gain, eventually a stable detector results.

In the ultraviolet the photoelectrons to be amplified in the MCPs must come from a photocathode. Currently the best developed photocathode for the far ultraviolet is CsI. It offers quantum efficiencies at least up to 30 per cent and can be deposited on the web and in the channels of MCPs. The alternative of KBr photocathodes were also discussed at the meeting and these may have a somewhat better quantum efficiency below 1050 Angstroms. In addition MgF and CuI may be useful photocathodes for some SOHO experiments. There was much debate as to whether CsI photocathodes on a solid substrate had better quantum efficiency that those deposited on an MCP. The workshop concluded that there was no conclusive evidence in favour of this at present but that the issue needed study.

The second main area covered in the workshop was the ways in which the pulses emerging at the back of an MCP or other amplification stage can be read-out. These include wedge-and-strip anodes, coded anodes, multi-anodes, delay-line technology and television techniques. Wedge-and-strip anodes provide an analogue method of locating and centroiding a photon and can achieve very high resolution (15 microns) in small formats (5 millimetres). Predictions of 20 micron full width at half maximum (FWHM) resolution over a 50mm detector was made but the wedge-and-strips are limited in the count rate they can achieve so that a partitioned system would be necessary for the largest formats. It was noted that for special applications the anode pattern can be shaped individually to match the format of the spectrum. Anodes can also be coded to give a direct binary readout of the photon location.

The same effect with additional centroiding possibilities are available with multi-wire anodes (MAMAs). Space qualified variants of the MAMA detector now exist and a large (four million pixel) version is under developement for a second generation Space Telescope instrument. Currently the MAMA pixels are large and laboratory experiments into the best attainable resolution are still in progress but smaller pixels may be possible.

A new exciting possibility of using a delay-line method for locating photons was presented at the meeting. This uses a pair of zigzag delay lines to read out the MCP charge cloud in the spectral direction and wedge-and-strip techniques in the orthogonal spatial direction where the resolution demanded is cruder. Developments will be watched with

interest.

Finally television techniques of read-out are available in which the charge image is transfered directly or indirectly to a charge-coupled device (CCD). One scheme employing a photocathode on a solid substrate uses electromagnetic focussing to accelerate and transfer the photoelectrons to the CCD. A small version has been demonstrated in a rocket flight and study of extending the concept to the much larger Lyman format is under way. Design of a suitable permanent magnet assembly is in progress and it is believed that this can be done without a severe weight penalty. An alternative well-developed concept involves the use of a phosphor and fibre-optic boules to transfer the MCP output to the CCD. This solid and physically stable device is a developement in regular use in ground-based astronomy and a space-qualification programme is in progress. Current pixel sizes give a 50 per cent modulation at 20 line pairs per millimetre.

The third main topic at the workshop was the capabilities offered by direct CCDs. The key to the use of CCD detectors in the far and extreme ultraviolet lies in understanding and improving the electrical properties of the surface layer of back-illuminated CCDs. Normal CCDs have a dead layer on the surface some 1000 Angstroms deep, controlled by the oxide that traps negative charges and grows on the surface in hours. Ideas to remove this include charging the backside by an ultraviolet flood, implanting a conducting layer of boron and using an electron donor layer (e.g. platinum) to fill the electron traps. In these ways CCDs with 20 to 30 per cent quantum efficiencies near 1000 Angstroms can be made but the main problem is that the CCDs also are excellent detectors of optical photons. Various ideas to make CCDs optically-blind were proposed but this field obviously needs further work.

In a final general discussion, other concerns emerged. The radiation environment of the detectors and their associated electronics was discussed since both missions may operate above the Earth's radiation belts. What is known from previous missions suggests problems are not severe if the detectors are shut down during transit of the belts themselves but data on the effects on the ultraviolet spectrometer on Voyager during its passage through planetary radiation belts might be useful. Another general concern was whether some of the types of detectors presented might show fringing effects between the MCP pores and the pixel spacing: fourier transforms of flat-field calibration exposures should reveal any such micro-nonuiformities. Maximum count-rate limits are a concern in two areas. Firstly the time required for high signal-to-noise flat-field calibration frames is of order of hours and a stable detector therefore has the important advantage that

Some people were asking if they could access the VILSPA database via telephone modem. VILSPA is considering providing access via telephone modems. All people interested in this kind of access are kindly asked to contact me. In principle modem access to VILSPA is already available via ESOC. Depending on the requirements of the user community, suitable arrangements will be made.

At this point I would like to draw your attention to the X.32 interface recommended by CCITT. This interface which connects the normal telephone network with the public data net (X.25) might be offered as a service by your national telephone company. Hence instead of having a dedicated access to the X.25 net (with all necessary equipment) you could use a cheap modem to access X.25 nodes (like VILSPA). I am looking forward to hear about your experiences.

Finally it is worth mentioning that the user's guides of the VILSPA database will be shipped out to all users and institutes registered around the end of August 1987.

M. Barylak

EARN: LX@DDAESA10 (read daily)
SPAN: ECD1::323VILSPA (read weekly)
IBERPAC no. 02145 212 022 029 and VMS Mail (user MB)

STUDY OF THE TRANSMISSION OF THE SHORTWAVELENGTH SMALL APERTURE.

PRELIMINARY REPORT.

A. Talavera. VILSPA.

We have performed a series of observations of the IUE standard star BD+28 4211 in order to study the transmission of the small aperture of the Short-wavelength spectrograph at different distances from its center.

The observational procedure was as follows. After having trimmed the spacecraft gyros to avoid any drift,we took a series of SWP images in the small aperture using different offsets from the standard reference point in order to get distances from the center of the aperture up to 2.5 arc.sec. from it. These reference points were aligned along a radius of the aperture.

In order to check that there was not any drift during the exposure which migth have brought the star out of the aperture, a FESPNT was performed at each reference point both before and after each exposure. The average position of the two FESPNT was used to obtain the real offset from the center of the aperture. Since the difference between the two FESPNT was always equal or smaller than a pixel, we adopt half a pixel (0.13 arc.sec.) as the indetermination for the measured offset from the center of the aperture.

We obtained two spectra in the large aperture as well, to be used as the reference value for the small aperture. All the spectra were processed with the standard IUESIPS . Then the net spectra were rebinned to 2A step and absolutely calibrated. Then all the small aperture spectra were divided by the average of the large aperture spectra. We computed the mean value of these ratios in three spectral bands, 1300-1400A, 1700-1800A and 1300-1900A. We computed in the same way the ratios between the small aperture spectra and the small aperture spectrum taken at the center of the aperture. All these ratios are given in Table 1.

The analysis of Table 1 shows that the throughput of the SWSA is independent of the wavelength. In Fig.1 we represent the transmission of the small aperture normalised to the large one and to the center of the small aperture itself.

May 31, 1987.

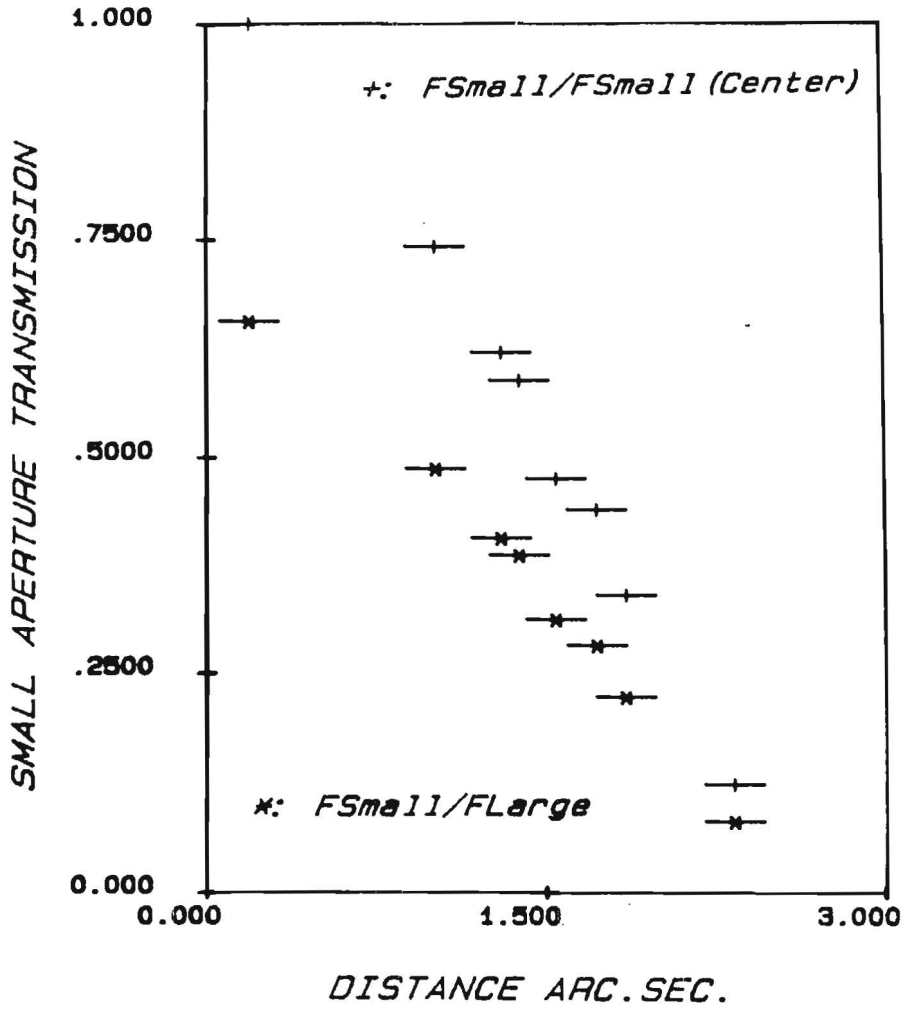


Figure 1.

TABLE 1.

DIST.	FL SMAP / FL LGAP			FL SMAP/FL SMAP CENTER		
Arc.Sec.	1	2	3	1	2	3
0.19	.674	.661	.656	1.	1.	1.
1.01	.483	.491	.486	.719	.744	.741
1.30	.421	.412	.406	.626	.624	.620
1.38	.394	.392	.386	.586	.593	.588
1.54	.324	.312	.311	.482	.473	.475
1.72	.286	.288	.281	.426	.436	.439
1.85	.227	.225	.222	.337	.340	.339
2.33	.082	.083	.081	.122	.126	.123

1: Flux 1300A-1400A
2: Flux 1700A-1800A
3: Flux 1300A-1900A

The estimated error in the distance from the center of the aperture is 0.13 arc.sec. (0.5 FES pixel).

IUE Low Dispersion Sensitivty Monitoring. XII.

Introduction

Analysis of IUE low dispersion sensitivity monitoring data for the three active cameras has been updated to November 1986 for the LWR and to May 1987 for the LWP and SWP. The SWP camera sensitivty is monitored by analyzing data from four standard stars:

BD +28 4211, HD 93521, HD 60753, BD +33 2642.

The LWP and LWR camera sensitivity changes have been analyzied using the following four standard stars:

BD +28 4211, HD 93521, HD 60753, BD +75 325.

In Figures 1-5 the data for the four stars for each camera are represented, respectively, by:

plus sign, asterisk, diamond, square.

The method of analysis is the same as that used in previous reports (Holm and Schiffer, 1980; Sonneborn and Garhart 1986). For the SWP and LWR cameras, each spectrum is ratioed to a reference spectrum and placed into three wavelength bins. The binned flux ratios are then fit with a multiple linear regression to find the percent change per year in sensitivity (the time dependence) for each bandpass and the overall temperature dependence of the camera. The LWP fluxes are binned into six bandpasses 150A wide. The flux ratios for each bandpass and star are normalized to 1.0 at the initial epoch.

Results

Table 1 lists the temperature and time dependence for the three cameras along with the same parameters from previous reports. Figures 1-4 show the results for the different bandpasses for each camera. The plotted flux ratios have been normalized to 1978 and corrected for camera temperature (THDA) dependence. The temperature correction was applied relative to the THDA of the reference spectrum for each star.

The LWP results are plotted in Figures 1 and 2. The addition of recent data strengthens the view that there was an abrupt jump in LWP sensitivity in late 1983 when the camera usage increased dramatically. Since that time there appears to have been either no change or a gradual downward trend in LWP sensitivity in most bandpasses. The short wavelength end of the camera (2075-2225 A) still shows a slight rise in sensitivty, although not as much as in prior analyses.

The LWR sensitivity degradation, as shown in Figure 3, shows little change over previous values. However, the scatter in the last two years' data is significant. In the 2400 and 2900 A bandpasses the points for 1986 lie systematically above the regression line, although this could be just a statistical fluctuation.

SWP sensitivity data (Figure 4) shows a decrease in sensitivity for all wavelength regions. The rate of degradation is now statistically larger in all bandpasses than in the last report. The starting date for the linear regression was 1980.0.

The camera head amplifier temperatures (THDA) have also been monitored for temporal variations. There is a general trend for rising spacecraft temperatures since launch. The current mean THDA values for the three cameras are:

LWP (1987.3) = 9.8 °C -399.35±117.59 + 0.2059±0.0593 t
LWR (1986.9) = 14.9 °C -542.60±83.76 + 0.2806±0.0423 t
SWP (1987.3) = 9.6 °C -308.54±82.85 + 0.1601±0.0418 t

The equations, to the right of the mean THDA values above, are the linear, least squares fits to the THDA data (1978-1987.4), where t is the date in decimal years. These regression lines are shown in Figure 5. However, when the least-squares analysis is restricted to dates after 1980 we find that there is little statistical evidence for the THDA increasing with time; the only significant changes appear to have taken place in 1978-1980. The linear least-square fits to the THDA data (LWR,SWP: 1981-1987.4, LWP: 1983-1987.4) are:

LWP THDA(t) = -22.47±166.05 + 0.0161±0.0836 t
LWR THDA(t) = -225.62±146.52 + 0.1209±0.0739 t
SWP THDA(t) = 118.45±126.86 - 0.0550±0.0639 t

We conclude that the mean camera temperatures have been constant for the past 6 years (4 years for the LWP).

George Sonneborn and Matthew P. Garhart
28 May 1987

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Sonneborn, G. and Garhart, M.P. 1986. "Low-Dispersion Quick-Look Sensitivity Monitoring. XI.", NASA IUE Newsletter No.31, p.29

Table 1.

Results of LWP, LWR, and SWP sensitivity analysis - June 1987

LWP CAMERA

Temperature dependence = -0.29 ± 0.04 %/°C
RMS error for a single observation = 2.8 %
220 Data points used in regression

Wavelength region (A)	Time dependence (%/yr.) 1980.4 through 1987.3	1986.4	1985.3	1984.2
2075 - 2225	+0.11±0.07	+0.20±0.09	+0.29±0.11	-0.09±0.15
2225 - 2375	-0.30±0.06	-0.22±0.09	-0.06±0.11	-0.61±0.15
2375 - 2525	-0.44±0.07	-0.42±0.09	-0.27±0.11	-1.05±0.15
2525 - 2675	-0.61±0.06	-0.48±0.09	-0.13±0.11	-0.84±0.15
2675 - 2825	-0.33±0.07	-0.11±0.09	+0.24±0.11	-0.03±0.15
2825 - 2975	-0.03±0.06	+0.11±0.09	+0.39±0.11	+0.15±0.15

LWR CAMERA

Temperature dependence = -0.73 ± 0.04 %/°C
RMS error for a single observation = 3.3 %
254 Data points used in regression

Wavelength region (A)	Time dependence (%/yr.) 1978.6 through 1986.9	1986.4	1985.3	1984.2
2250 - 2550	-2.39±0.06	-2.49±0.08	-2.23±0.10	-2.45±0.09
2550 - 2650	-1.70±0.06	-1.73±0.08	-1.69±0.10	-1.36±0.09
2750 - 3050	-1.63±0.06	-1.73±0.08	-1.84±0.10	-1.35±0.09

SWP CAMERA

Temperature dependence = -0.49 ± 0.04 %/°C
RMS error for a single observation = 3.2 %
255 Data points used in regression

Wavelength region (A)	Time dependence (%/yr.) 1980.0 through 1987.3	1986.3	1985.3	1984.2
1225 - 1375	-0.80±0.06	-0.66±0.06	-0.69±0.08	-0.72±0.13
1475 - 1625	-0.44±0.06	-0.22±0.06	-0.17±0.08	-0.16±0.13
1775 - 1925	-0.80±0.06	-0.69±0.06	-0.63±0.08	-0.86±0.13

Figure 1

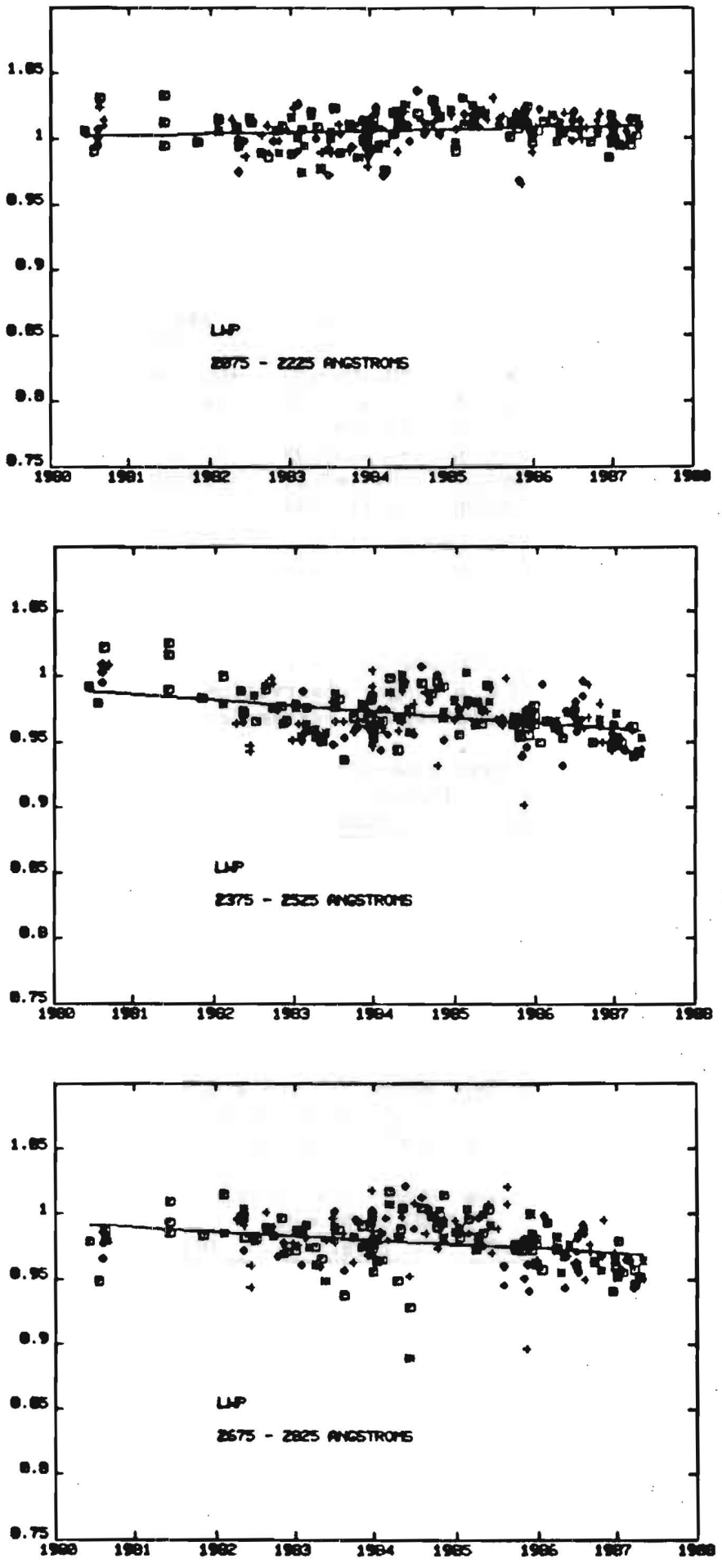
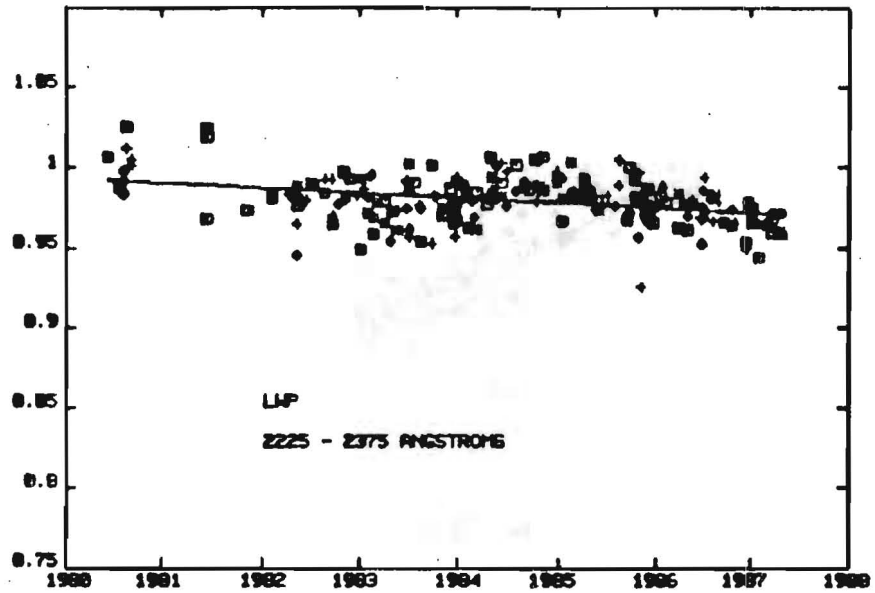
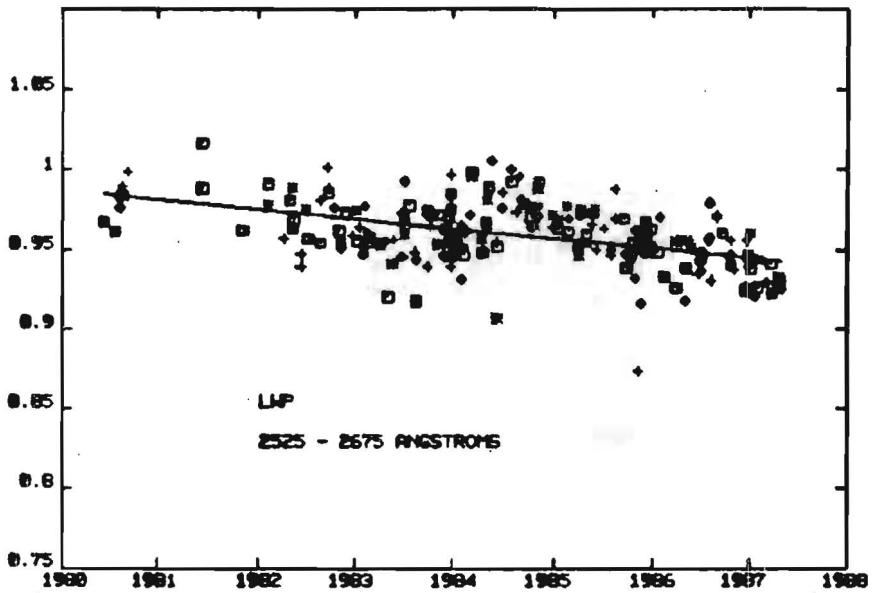

1.05
1
0.95
0.9
0.85
0.8
0.75
1980
1981
1982
1983
1984
1985
1986
1987
LWP
2075 - 2225 ANGSTROMS
LWP
2375 - 2525 ANGSTROMS
LWP
2675 - 2825 ANGSTROMS

Figure 2


1.05
1
0.95
0.9
0.85
0.8
0.75
LWP
2225 - 2375 ANGSTROMS
1980
1981
1982
1983
1984
1985
1986
1987
1988


1.05
1
0.95
0.9
0.85
0.8
0.75
LWP
2525 - 2675 ANGSTROMS
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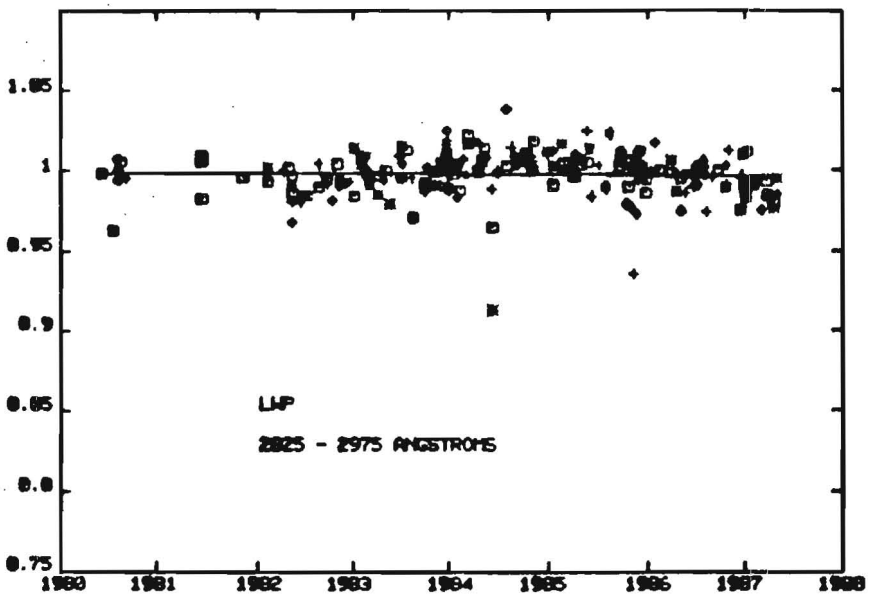
1981
1982
1983
1984
1985
1986
1987
1988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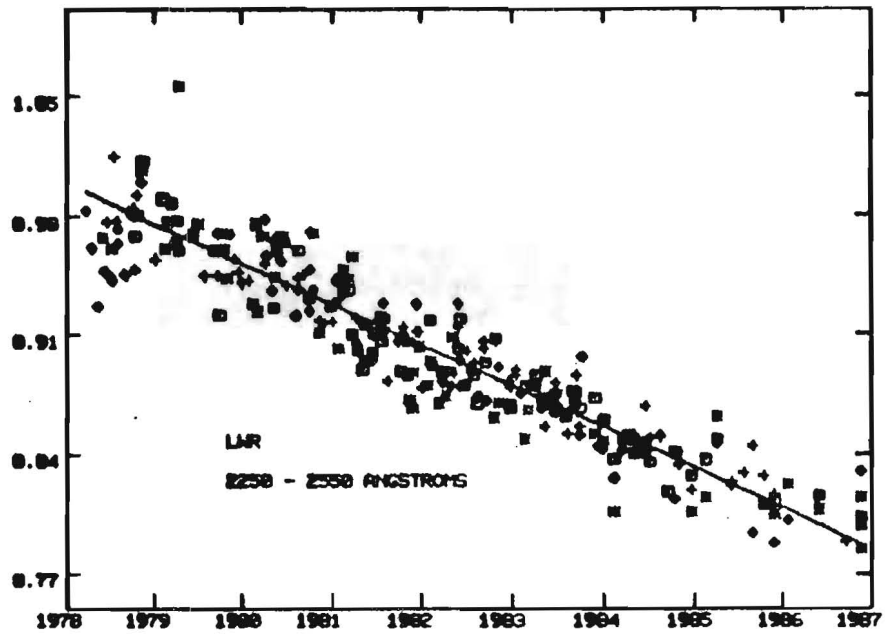
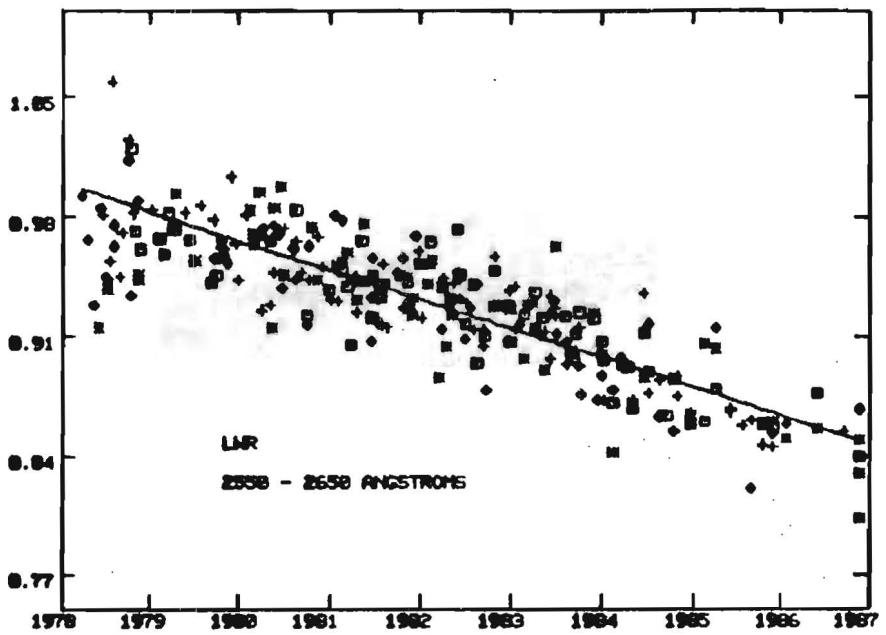
1
0.95
0.9
0.85
0.8
0.75
LWP
2825 - 2975 ANGSTROMS
1980
1981
1982
1983
1984
1985
1986
1987
1988

Figure 3


LWR
2250 - 2550 ANGSTROMS
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987


LWR
2550 - 2650 ANGSTROMS
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1979
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1982
1983
1984
1985
1986
1987

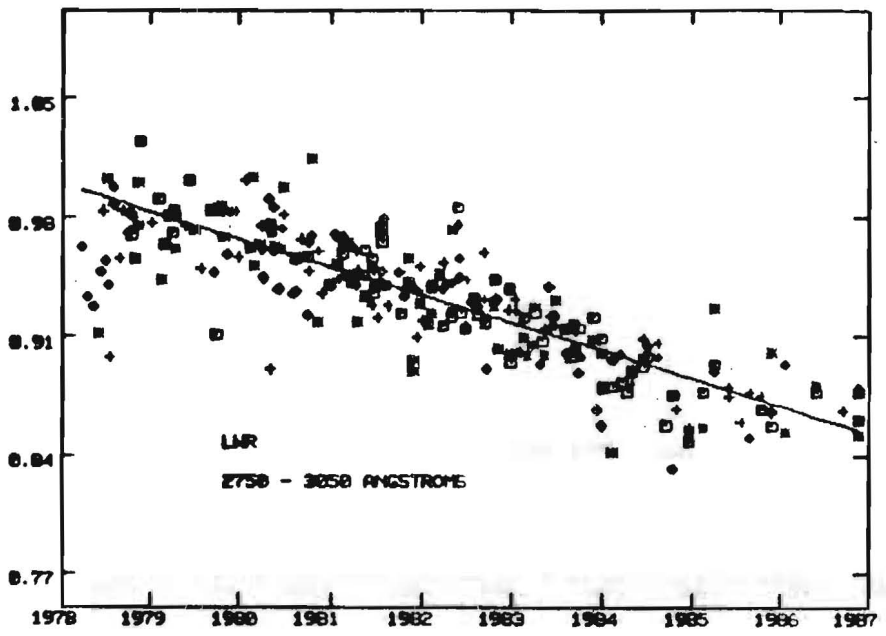
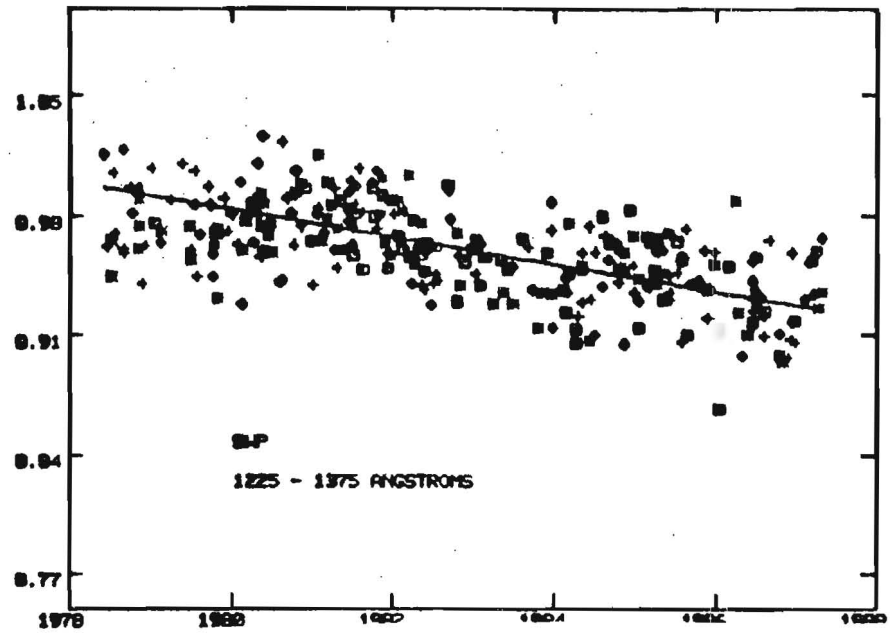
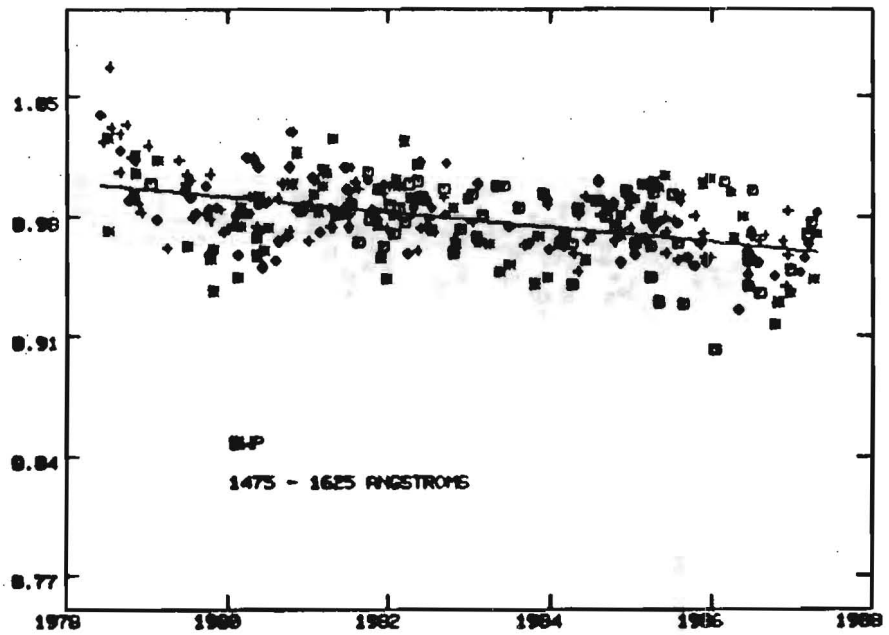

LWR
2750 - 3050 ANGSTROMS
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987

Figure 4


1.05
0.98
0.91
0.84
0.77
1978
1980
SWP
1225 - 1375 ANGSTROMS


1.05
0.98
0.91
0.84
0.77
1978
1980
1982
1984
1986
1988
SWP
1475 - 1625 ANGSTROMS

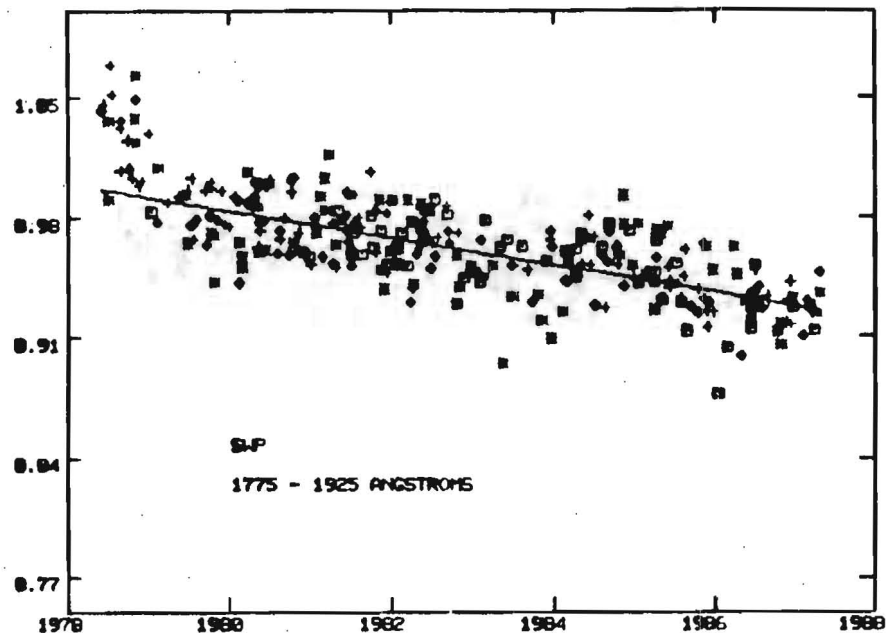
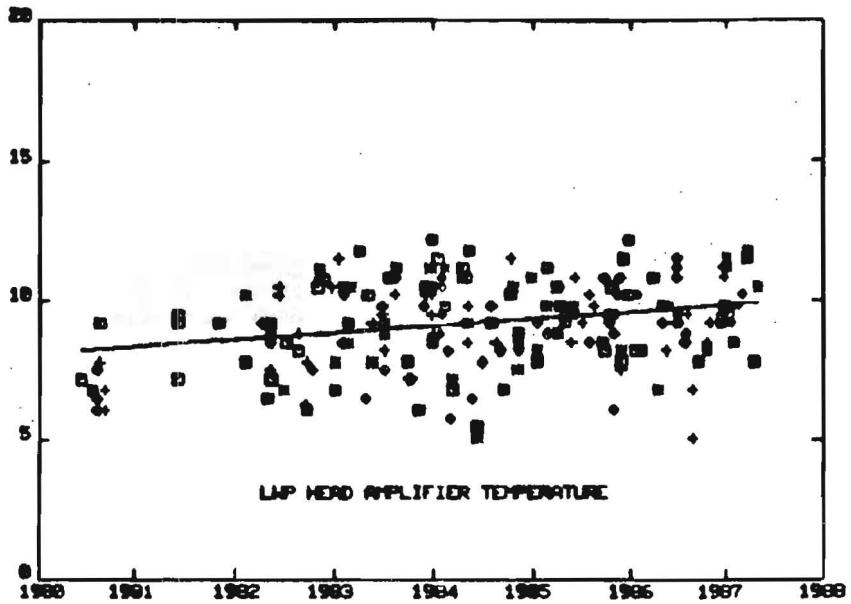
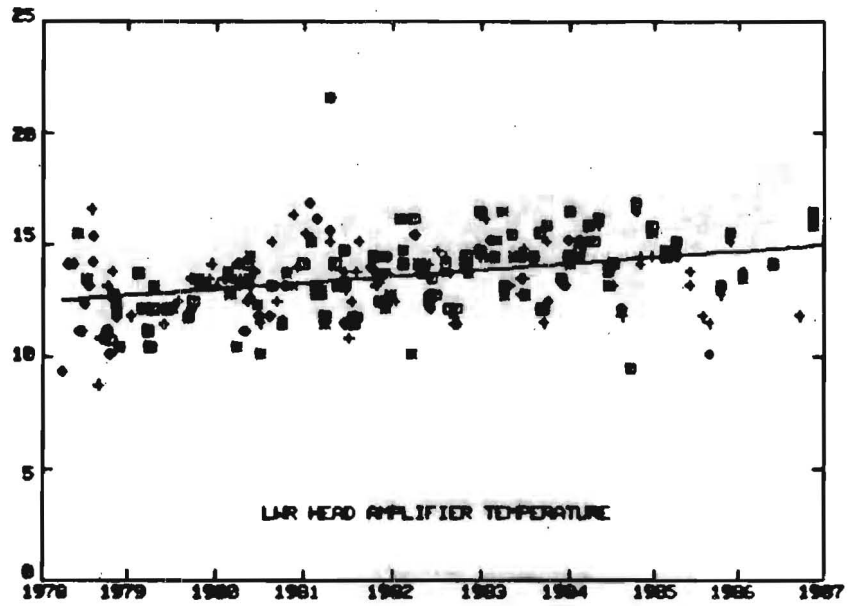

1.05
0.98
0.91
0.84
0.77
1978
1980
1982
1984
1986
1988
SWP
1775 - 1925 ANGSTROMS

Figure 5


LWP HEAD AMPLIFIER TEMPERATURE
0
5
10
15
20
1980
1981
1982
1983
1984
1985
1986
1987
1988


LWR HEAD AMPLIFIER TEMPERATURE
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10
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25
1978
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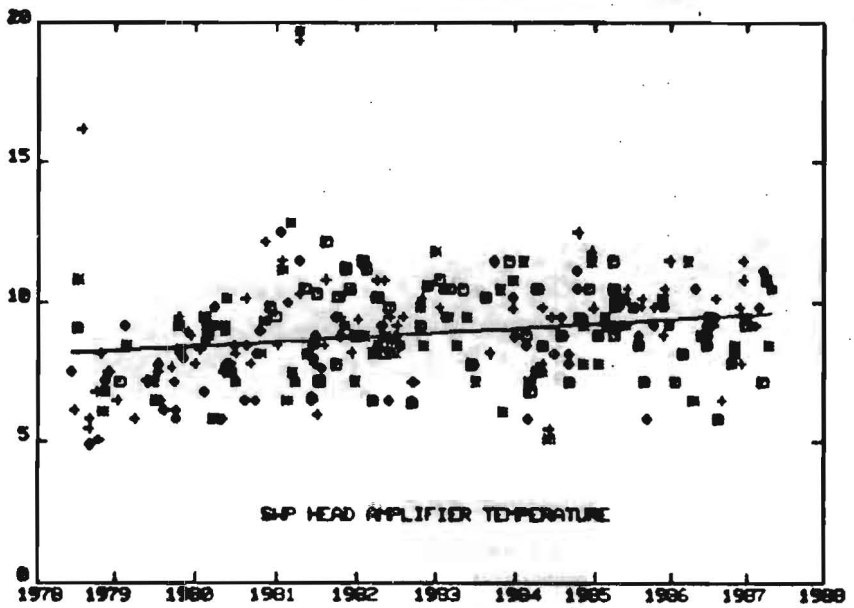
1981
1982
1983
1984
1985
1986
1987


SWP HEAD AMPLIFIER TEMPERATURE
0
5
10
15
20
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988

VILSPA PUBLICATIONS LIST

IN MAIN JOURNALS

Published 1 July 1986 - 31 April 1987

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

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

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

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

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Rodono, M., Cutispoto, G., Pazzani, V., Catalano, S., Byrne, P.B., Doyle, J.G., Butler, C.J., Andres, A.D., Blanco, C., Marilli, E., Linsky, J.L., Scaltriti, F., Busso, M., Cellino, A., Hopkins, J.L., Okazaki, A. Hayashi, S.S., Zeilik, M., Helston, R., Henson, G., Smith, P., Simon, T.
Rotational modulation and flares on RS CVn and BY Dra-type stars
Astron. Astrophys., 165, 135-156, 1986

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#####################################
#                                   #
#  MERGED LOG OF IUE OBSERVATIONS   #
#                                   #
#       1 May - 31 August 1986      #
#                                   #
#####################################
```

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

The programme reference codes (column 1) identifying the ESA and NASA programmes for the eighth round in ESA IUE Newsletter No.23 p11 and 17, and for the ninth round in IUE ESA Newsletter No.26 p13 and p21 respectively.

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).

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

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

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

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
HI042	NULL READ	99	99.99	0000000	+000000	L	1	08155	L			86050706	062200	000000		V
PHCAL	TFLOOD	99	0.0	0000000	000000	L	3	28330	S			86051719	193300	000005		G E=20X,B=105
PHCAL	NULL	99	99.99	0000000	+000000	L	1	08449	L			86062201	011400	000000	000	V
PHCAL	WAVCAL	98	0.0	0000000	000000	L	3	28330	S			86051719	193500	000002		G E=20X,B=105
PHCAL	NULL	99	10.50	0000000	+000000	L	1	08463		254	FO	86062301	010115	000000	002	V
IC187	NULL	99	99.99	0000000	+000000	H	1	08574				86070823	232700	000000	000	V LWP SWITCH ON
HA196	NULL	99	99.99	0000000	-000000	H	1	08588				86071200	005700	000000	110	V TO CHECK LWP8587
PHCAL	WAVCAL	98	99.99	0000000	+000000	H	1	08816	S			86080300	003523	000041	197	V STANDARD WAVCAL
IC166	NULL	99	99.99	0000000	+000000	L	2	17907	L			86062122	221100	000000	200	V LWR 5KV
PHCAL	WAVCAL	98	99.99	0000000	-000000	H	3	28809	L			86080120	203928	000200	271	V STANDARD WAVCAL
RSHLR HD	28	47	4.6	0002465	-055914	L	3	28401	L	23833	FO	86053018	181100	006000		G C=58,B=45
LGIHJ HD	26	50	8.22	0002473	+083036	L	1	08731	L	1264	FO	86072514	142800	001100		G C=187,B=35
WDIJH	GD 2	37	13.8	0004580	+330048	L	3	28884	L	44	SO	86081001	014800	001200		G C=190,B=20
WDIJH	GD 2	37	13.8	0004580	+330048	L	3	28884	S	44	SO	86081002	021100	002000		G C=135,B=20
IBIJE HD	352	47	6.2	0005383	-024333	H	1	08501	L	9427	FO	86062908	082000	027000		G E=3X,C=225,B=140
IBIJE HD	352	47	6.2	0005383	-024333	H	1	08748	L	8441	FO	86072806	060500	028500		G E=5X,C=233,B=145
IBIJE HD	352	47	6.2	0005384	-024334	L	1	08500	L	8885	FO	86062905	054900	000600		G E=2X,C=180,B=35
IBIJE HD	352	47	6.2	0005384	-024334	L	1	08500	S	8972	FO	86062906	061100	000400		G E=121,C=70,B=35
IBIJE HD	352	47	6.2	0005384	-024334	L	3	28576	L	9152	FO	86062906	064300	009000		G E=71,C=170,B=45
IBIJE HD	352	47	6.2	0005384	-024334	L	1	08693	L	8395	FO	86072304	040800	000600		G E=1.5X,C=157,B=35
IBIJE HD	352	47	6.2	0005384	-024334	L	1	08693	L	8436	FO	86072304	042100	000400		G E=123,C=67,B=32
IBIJE HD	352	47	6.2	0005384	-024334	L	3	28739	L	8464	FO	86072304	043400	009000		G E=217,C=208,B=28
IBIJE HD	352	47	6.2	0005384	-024334	H	1	08694	L	8656	FO	86072306	061100	027500		G E=5X,C=179,B=88
IBIJE HD	352	47	6.2	0005384	-024334	L	1	08747	L	7802	FO	86072803	034900	000600		G E=3X,C=200,B=35
IBIJE HD	352	47	6.2	0005384	-024334	L	1	08747	S	7802	FO	86072804	041500	000400		G E=133,C=70,B=35
IBIJE HD	352	47	6.2	0005384	-024334	L	3	28761	L	8033	FO	86072804	042700	009000		G C=220,B=40
WDIJH	KPD 0005	37	13.3	0005573	+510731	L	3	28890	L	79	SO	86081015	155200	001000		G C=1.2X,B=18
CEITS BD	+61 0008	39	0.0	0006580	+622324	L	1	08965	L	533	FO	86082901	010600	002000		G C=170,B=35
CEITS BD	+61 0008	39	0.0	0006580	+622324	L	3	29066	L	530	FO	86082901	013600	004500		G C=90,B=20
RSISD HD	1061	40	5.8	0012241	+083236	L	3	28804	L	10545	FO	86080106	061900	001500		G C=2.5X,B=38
LDIDB HD	1461	44	6.5	0016074	-081943	L	1	08444	T	6395	FO	86062115	151100	000710		G C=238,B=40
GCHRB	47 TUC	83	6.	0021519	-722127	L	1	08251	L		BO	86052214	144000	010000		G C=1.2X,B=60
GCHRB	47 TUC	83	6.	0021519	-722128	L	1	08252	L		BO	86052216	165200	008000		G C=246,B=68
GCHRB	47 TUC	83	6.	0021519	-722127	D	9	01818	2			86052216	165900	016000		G NO COMMENTS
IC187	HD 2151	44	03.14	0023093	-773208	H	2	17924	L	1553	FU	86070821	213609	002030	772	V LWR:4.5KV
IC187	HD2151	44	03.18	0023093	-773208	H	2	17925	L	1501	FU	86070822	223202	002030	772	V LWR:4.5KV
IC187	HD2151	44	03.18	0023093	-773208	H	2	17926	L	1494	FU	86070823	232538	002030	772	V LWR:4.5KVH
PHCAL	TFLOOD	99	0.0	0025270	-331659	L	1	08660	S			86072011	113500	000025		G E=10X,B=101
PHCAL	WAVCAL	98	0.0	0025270	-331659	L	1	08660	S			86072011	113600	000001		G E=10X,B=101
PHCAL	TFLOOD	99	0.0	0025270	-331659	H	1	08661	S			86072012	120500	000025		G E=50X,B=109
PHCAL	WAVCAL	98	0.0	0025270	-331659	H	1	08661	S			86072012	120700	000016		G E=50X,B=109
PHCAL	NULL	99	0.0	0025270	-331659	H	2	17927				86072012	124400	000000		G C=50,B=14
PHCAL	TFLOOD	99	0.0	0025270	-331659	L	3	28718	S			86072013	130700	000005		G E=10X,B=101
PHCAL	WAVCAL	98	0.0	0025270	-331659	L	3	28718	S			86072013	130800	000002		G E=10X,B=101
PHCAL	TFLOOD	99	0.0	0025270	-331659	H	3	28719	S			86072013	133200	000005		G E=60X,B=128

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
PHCAL	WAVCAL	98	0.0	0025270	-331659	H	3	28719	S			86072013	133400	000200		G E=60X,B=128
PHCAL	TFLOOD	99	0.0	0025270	-331659	L	2	17928	S			86072014	142000	000007		G E=10X,B=84
PHCAL	WAVCAL	98	0.0	0025270	-331659	L	2	17928	S			86072014	142200	000001		G E=10X,B=84
PHCAL	TFLOOD	99	0.0	0025270	-331659	H	2	17929	S			86072014	144700	000007		G E=50X,B=108
PHCAL	WAVCAL	98	0.0	0025270	-331659	H	2	17929	S			86072014	144800	000016		G E=50X,B=108
IC034	HD2665	46	08.12	0027580	+564723	E	9	01850	2	2123	FO	86081017	174600	016000		V FES FOR LWP8864
MLIAD	HD 2665	47	7.7	0027580	+564723	H	1	08864	L	2123	FO	86081017	175500	089000		G C=3X,B=160
IC034	HD2796	45	08.91	0028459	-170412	E	9	01851	2	1046	FO	86081119	195800	016000		V LWP8872
MLIAD	HD 2796	47	8.5	0028459	-170412	H	1	08872	L	1046	FO	86081120	200400	075500		G C=1.5X,B=158
PHCAL	TFLOOD	99	0.0	0034102	+533718	H	2	17935	S			86081413	135300	000010		G E=50X,B=120
PHCAL	WAVCAL	98	0.0	0034102	+533718	H	2	17935	S			86081413	135400	000022		G E=50X,B=120
PHCAL	HD 3360	20	3.7	0034103	+533719	H	2	17918	L	833	FU	86062316	163900	000029		G C=210,B=30
PHCAL	HD 3360	20	3.7	0034103	+533719	H	1	08558	L	820	FU	86070712	121500	000021		G C=227,B=45
PHCAL	HD 3360	20	3.7	0034103	+533719	H	3	28627	L	825	FU	86070712	122000	000024		G C=190,B=32
PHCAL	HD 3360	20	3.7	0034103	+533719	H	3	28830	L	828	FU	86080416	162200	000024		G C=208,B=31
PHCAL	HD 3360	20	3.7	0034103	+533719	H	1	08830	L	822	FU	86080416	163300	000021		G C=230,B=45
PHCAL	HD 3360	20	3.7	0034103	+533719	H	2	17933	L	928	FU	86081412	125100	000029		G C=168,B=35
PHCAL	TFLOOD	99	0.0	0034103	+533719	L	2	17934	S			86081413	132600	000010		G E=8X,B=83
PHCAL	WAVECAL	98	0.0	0034103	+533719	L	2	17934	S			86081413	132800	000001		G E=8X,B=83
CCIJL	00000W28	CS	7.4	0038050	+395453	L	1	08441	M	3345	FO	86062109	091400	003000		G C=1.3X,B=38
XCILC	A85	88	15	0039185	-093438	L	3	28717	L		BO	86072004	042300	038500		G B=64
IE218	NGC 221	81	10.50	0039582	+403530	L	1	08413	L	254	FO	86061722	220644	018000	504	V
KGIJG	HD 4128	45	2.0	0041047	-181538	H	1	08622	L	2907	FU	86071418	180400	000400		G E=193,C=175,B=32
KGIJG	HD 4128	45	2.0	0041049	-181537	H	1	08602	L	2814	FU	86071404	040400	000400		G E=188,C=145,B=35
KGIJG	HD 4128	45	2.0	0041049	-181537	H	1	08603	L	2864	FU	86071404	044500	000400		G E=165,C=145,B=30
KGIJG	HD 4128	45	2.0	0041049	-181537	H	1	08604	L	2884	FU	86071405	052800	000400		G E=166,C=153,B=37
KGIJG	HD 4128	45	2.0	0041049	-181537	H	1	08605	L	2935	FU	86071406	061000	000400		G E=177,C=147,B=37
KGIJG	HD 4128	45	2.0	0041049	-181537	H	1	08606	L	284	FU	86071406	065200	000400		G E=170,C=152,B=37
KGIJG	HD 4128	45	2.0	0041049	-181537	H	1	08607	L	2922	FU	86071407	073400	000400		G E=175,C=155,B=35
KGIJG	HD 4128	45	2.0	0041049	-181537	H	1	08608	L	2869	FU	86071408	081600	000400		G E=165,C=152,B=37
KGIJG	HD 4128	45	2.0	0041049	-181537	H	1	08609	L	2886	FU	86071408	085800	000400		G E=166,C=158,B=38
KGIJG	HD 4128	45	2.0	0041049	-181537	H	1	08610	L	2935	FU	86071409	094000	000400		G E=179,C=152,B=37
KGIJG	HD 4128	45	2.0	0041049	-181537	H	1	08611	L	2883	FU	86071410	102200	000400		G E=164,C=165,B=33
KGIJG	HD 4128	45	2.0	0041049	-181537	H	1	08612	L	2893	FU	86071411	110400	000400		G E=157,C=162,B=35
KGIJG	HD 4128	45	2.0	0041049	-181537	H	1	08613	L	2909	FU	86071411	114600	000400		G E=164,C=165,B=35
KGIJG	HD 4128	45	2.0	0041049	-181537	H	1	08614	L	2888	FU	86071412	122800	000400		G E=159,C=170,B=38
KGIJG	HD 4128	45	2.0	0041049	-181537	H	1	08615	L	2880	FU	86071413	130900	000400		G E=163,C=165,B=32
KGIJG	HD 4128	45	2.0	0041049	-181537	H	1	08616	L	2907	FU	86071413	135200	000400		G E=171,C=160,B=40
KGIJG	HD 4128	45	2.0	0041049	-181537	H	1	08617	L	2857	FU	86071414	143400	000400		G E=179,C=160,B=35
KGIJG	HD 4128	45	2.0	0041049	-181537	H	1	08618	L	2865	FU	86071415	151600	000400		G E=184,C=165,B=35
KGIJG	HD 4128	45	2.0	0041049	-181537	H	1	08619	L	2871	FU	86071415	155800	000400		G E=176,C=170,B=40
KGIJG	HD 4128	45	2.0	0041049	-181537	H	1	08620	L	2862	FU	86071416	164000	000400		G E=193,C=180,B=40
KGIJG	HD 4128	45	2.0	0041049	-181537	H	1	08621	L	2876	FU	86071417	172200	000400		G E=193,C=165,B=30
LDIDB	HD 4307	44	6.1	0042580	-130904	L	1	08442	T	8336	FO	86062113	132700	000430		G C=1.2X,B=37
LDIDB	HD 4307	44	6.1	0042580	-130904	L	1	08443	L	8362	FO	86062114	142400	000050		G C=225,B=36

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
WDHFB	GD 659	37	13.4	0050540	-331612	H	3	28384	L	66	SO	86052708	083200	037000		G C=180,B=98
IA080	HD5394	26	02.35	0053403	+602647	H	1	08536	L	3150	FU	86070322	223214	000006	503	U
IA080	HD5394	26	02.28	0053403	+602647	H	1	08662	L	3334	FU	86072020	202202	000006	501	U
IA080	HD5394	26	02.31	0053403	+602647	H	1	08840	L	3258	FU	86080518	183701	000006	501	U
IA080	HD5394	26	02.26	0053403	+602647	H	3	28555	L	3396	FU	86062704	044757	000008	500	U
IA080	HD5394	26	02.35	0053403	+602647	H	3	28602	L	3149	FU	86070322	222743	000008	501	U
IA080	HD5394	26	02.31	0053403	+602647	H	3	28724	L	3260	FU	86072020	201733	000008	501	U
IA080	HD5394	26	02.18	0053403	+602647	H	3	28841	L	3643	FU	86080518	182317	000008	500	U
OD92K	HD 5679	66	6.8	0057448	+813623	H	3	28429	L	4424	FO	86060417	173800	003000		G C=180,B=78
OD92K	HD 5679	66	6.8	0057448	+813623	H	1	08337	L	4306	FO	86060418	181500	002500		G E=247,C=247,B=112
OD92K	HD 5679	66	6.8	0057448	+813623	H	3	28430	L	4160	FO	86060418	184900	003500		G C=198,B=85
OD92K	HD 5679	66	6.8	0057448	+813623	H	1	08338	L	4006	FO	86060419	193200	002500		G E=204,C=200,B=70
OD92K	HD 5679	66	6.8	0057448	+813623	H	3	28431	L	3938	FO	86060420	200500	004000		G C=159,B=38
OD92K	HD 5679	66	8	0057448	+813623	H	1	08343	L	1382	FO	86060620	204100	001500		G C=85,B=37
PHCAL	BD +28 4211	16	10.5	0057448	+813623	H	3	28491	L	217	FO	86061512	120200	004500		G C=165,B=40
OD92K	HD 5679	66	6.90	0057448	+813623	H	1	08395	L	4209	FO	86061517	171900	002500		G C=180,B=58
OD92K	HD 5679	66	6.90	0057448	+813623	H	3	28494	L	4256	FO	86061517	175100	003500		G C=145,B=45
OD92K	HD 5679	66	6.90	0057448	+813623	H	1	08396	L	4281	FO	86061518	183200	003000		G C=190,B=58
OD92K	HD 5679	66	6.90	0057448	+813623	H	3	28495	L	4129	FO	86061519	191000	005500		G C=165,B=42
OD92K	HD 5679	66	6.90	0057448	+813623	H	1	08397	L	4304	FO	86061520	201100	004000		G C=195,B=41
OD92K	HD 5679	66	6.90	0057448	+813623	H	1	08401	L	4089	FO	86061613	134300	003000		G C=230,B=50
OD92K	HD 5679	66	6.90	0057448	+813623	H	3	28502	L	4904	FO	86061614	141800	004500		G C=200,B=41
OD92K	HD 5679	66	9.20	0057448	+813623	L	3	28503	L	773	FO	86061620	202600	002000		G E=2X,C=100,B=28
OD92K	HD 5679 CO	66	6.95	0057448	+813623	H	3	28931	L	5040	FO	86081814	140600	007500		G C=3X,B=95
OD92K	HD 5679 CO	66	6.95	0057448	+813623	L	1	08922	L	4931	FO	86081815	152700	000900		G C=20X,B=55
OD92K	HD 5679 CO	66	6.95	0057448	+813623	L	3	28932	L	4701	FO	86081816	161000	000100		G C=2X,B=15
OD92K	HD 5679 CO	66	6.95	0057448	+813623	L	1	08923	L	4907	FO	86081816	163800	000030		G C=2X,B=33
XBIJL	HD 8357	44	7.3	0120199	+070927	L	3	28524	L	3141	FO	86062110	103600	013000		G E=128,C=67,B=44
RSISD	HD 8435	44	8.8	0120209	-565933	L	3	28854	L	802	FO	86080701	015300	018000		G E=142,C=75,B=51
IQ138	FAIRALL 9	84	14.21	0121512	-590359	L	1	08562	L	37	SO	86070722	221418	010000	564	U
EGHSS	F 9	84	13.0	0121512	-590359	L	3	28306	L	36	SO	86051408	082500	006000		G E=205,C=82,B=25
IQ138	FAIRALL 9	84	14.27	0121512	-590359	L	1	08563	L	35	SO	86070801	014649	006000	453	U
EGHSS	F 9	84	13.0	0121512	-590359	L	1	08197	L	37	SO	86051409	093400	004000		G E=158,C=119,B=40
IQ138	FAIRALL 9	84	14.34	0121512	-590359	L	3	28632	L	33	SO	86070720	200634	012000	462	U
EGHSS	F 9	84	13.0	0121512	-590359	L	3	28307	L	38	SO	86051410	102400	012000		G E=2X,C=139,B=45
IQ138	FAIRALL 9	84	14.27	0121512	-590359	L	3	28633	L	35	SO	86070800	000027	010000	362	U
IC034	FAIRALL 9	84	14.13	0121520	-590359	L	3	28891	L	40	SO	86081117	175726	007000	350	U SERENDIPITY
EGHCB	MINKOWSK	88	17.5	0123226	-013751	L	3	28626	L		BO	86070705	050800	032000		G C=105,B=75
IA028	VAR C (M33	61	15.00	0130459	+302038	E	9	01856	2		BO	86082400	000000	000000		U FIELD FOR LWP8961
OD94K	M33 VARC	61	15.2	0130459	+302038	L	1	08961	L		BO	86082416	162300	068500		G C=215,B=145
OD94K	M33 VARC	61	15.2	0130459	+302038	D	9	01857	2			86082501	014200	002000		G NO COMMENTS
GHIBS	BA092627	12	12.2	0133489	+112433	H	3	28676	L	166	SO	86071504	041000	040000		G C=188,B=91
DAIJH PG	0134+181	37	16.1	0134404	+180727	L	3	28885	L		BO	86081003	032000	012000		G C=100,B=32
FGILW	ALPH UMA	53	2.0	0148485	+890143	L	1	08491	L	3011	FU	86062711	112900	000002		G C=130,B=30
FGILW	ALPH UMA	53	2.0	0148485	+890143	L	3	28557	L	3043	FU	86062711	113600	006500		G E=66,C=20X,B=50

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmssit	ECC	Comment
CEITS	HD 12401	39	0.0	0159472	+545932	L	1	08964	L	2352	FO	86082823	230500	001300		G C=105,B=38
CEITS	HD 12401	39	0.0	0159472	+545932	L	1	08964	S	2360	FO	86082823	233300	001000		G B=38
CEITS	HD 12401	39	0.0	0159472	+545932	L	3	29065	L	2409	FO	86082823	234900	004000		G C=65,B=25
CCIJL	00000086	46	6.1	0208330	-510342	L	1	08414	M	9533	FO	86061813	132400	001800		G E=5X,C=6X,B=40
CCIJL	00000086	46	6.1	0208330	-510342	L	1	08416	M	9597	FO	86061816	161600	000430		G E=163,C=1.5X,B=36
RSISD	HD 17084	44	8.0	0241258	-380824	L	3	28864	L	1566	FO	86080801	014500	012000		G E=82,C=68,B=45
MGIEB	R HOR	51	8	0252129	-500538	L	1	08351	L	1852	FO	86060719	193400	001500		G E=54,B=36
MGIEB	R HOR	51	7.4	0252129	-500538	L	1	08539	L	3555	FO	86070412	125700	003000		G E=93,B=69
MGIEB	R HOR	51	5.40	0252129	-500538	L	1	08869	L	17033	FO	86081114	143600	003000		G C=120,B=90
SRHLW	R HOR	51	8.5	0252130	-500539	L	1	08153	L	1279	FO	86050620	204400	002000		G E=98,B=60
IC187	HD 20301	41	6.9	0312419	-354433	L	3	28636	L	4875	FO	86070819	195400	067300		G E=205,C=8X,B=125
IC187	HD 20301	41	6.9	0312419	-354433	L	3	28643	L	3897	FO	86071003	035500	041500		G E=124,C=2.5X,B=90
IC187	NULL	99	99.99	0312420	-354434	H	2	17923				86070819	000000	000000	000	V LWR:4.5KV SWITCHED O
IC171	HD20630	44	05.15	0316442	+031117	H	1	08709	L	23334	FO	86072400	000132	006000	662	V
WDIJH	LB 1663	37	13.6	0320540	-535553	L	3	28887	L		BO	86081008	084000	003000		G C=165,B=40
WDIJH	LB 1663	37	13.6	0320540	-535553	L	3	28887	S		BO	86081008	084000	007500		G C=180,B=40
MGIKC	TFLOOD	99		0329006	-473241	H	1	08335	S			86060412	124800	000025		G E=60X,B=102
MGIKC	WAVCAL	98		0329006	-473241	H	1	08335	S			86060412	125000	000016		G 60X,B=102
IC171	HD22049	46	04.13	0330344	-093735	H	1	08710	L	643	FU	86072401	015450	002000	561	V
IC171	HD22049	47	04.14	0330344	-093735	H	1	08742	L	638	FU	86072720	200812	001500	563	V EXPOSURE TIME UNCERT
RSISD	HD 22124	40	6.6	0331540	+315103	L	3	28865	L	6210	FO	86080804	043200	003800		G E=39,C=4X,B=22
BEIGP	HD 22192	26	4.2	0332555	+480141	H	3	28871	L	490	FU	86080812	121300	000210		G C=220,B=35
BEIGP	HD 22192	26	4.2	0332555	+480141	H	1	08859	L	496	FU	86080812	122000	000107		G C=215,B=42
IE218	NGC 1399	81	10.57	0336347	-353641	E	9	01830	2	239	FO	86061804	040000	004000		V FOR SWP 28507,TARGET
EGIDB	NGC 1399	81	10.8	0336347	-353641	L	3	28507	L	239	FO	86061802	023700	060500		G C=159,B=110
IC171	HD23817	47	04.26	0343340	-645750	H	1	08745	L	570	FU	86072800	004133	002000	333	V
NRITS	HD 23630	24	2.9	0344304	+235708	H	1	08974	L	1747	FU	86083109	095600	000030		G C=230,B=45
NRITS	HD 23630	24	2.9	0344304	+235708	H	3	29095	L	1754	FU	86083110	100200	000045		G C=180,B=30
NRITS	HD 23630	24	2.9	0344304	+235708	H	1	08975	L	1568	FU	86083111	110500	000030		G C=225,B=45
NRITS	HD 23630	24	2.9	0344304	+235708	H	3	29096	L	1568	FU	86083111	111100	000045		G C=185,B=35
NRITS	HD 23630	24	2.9	0344304	+235708	H	3	29097	L	1765	FU	86083111	115400	000100		G C=240,B=50
NRITS	HD 23630	24	2.9	0344304	+235708	H	3	29098	L	1594	FU	86083112	122700	000100		G C=240,B=60
WDIJH	GD 50	37	14.0	0346171	-010733	L	3	28886	L	36	SO	86081006	061800	001400		G C=180,B=21
WDIJH	GD 50	37	14.0	0346171	-010733	L	3	28886	S	36	SO	86081006	064300	002800		G C=120,B=21
CMIES	V471 TAU	37	9.8	0347340	+170624	H	1	08826	L	428	FO	86080402	022500	011500		G E=104,C=105,B=58
CMIES	V471 TAU	37	9.8	0347340	+170624	H	3	28826	L	432	FO	86080404	043700	025000		G C=125,B=73
IA045	NGC1501	70	14.10	0402406	+604715	L	1	08948	L	41	SO	86082116	164442	015000	452	V
IA045	NGC1501	70	13.87	0402406	+604715	L	3	28952	L	50	SO	86082115	154201	005500	230	V EFFECTIVE TIME INTO
IA045	NGC1501	70	14.07	0402406	+604715	L	3	28953	L	42	SO	86082119	192110	016600	341	V
RSISD	HD 26354	46	8.8	0406123	-524208	L	3	28794	L	950	FO	86073109	094900	006000		G B=32
SBITA	HD 26630	39	4.1	0411129	+481704	L	3	29092	L	437	FU	86083022	225600	000340		G C=203 B=17
IM118	HH 29	69	16.00	0428333	+175956	L	1	08959	L		BO	86082316	162647	034000	234	V
IM118	HH 29	69	16.00	0428333	+175956	L	3	28962	L		BO	86082216	164631	030400	302	V EXPO 37+267 MIN
OBIEF	SK001-66	24	11.6	0452160	-664826	L	1	08787	L	303	SO	86073115	155000	000700		G C=215,B=89
OBIEF	SK001-66	24	11.6	0452160	-664826	L	3	28797	L	288	SO	86073116	164400	002000		G C=213,B=30

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
OBIEF	SK001-66	24	11.6	0452160	-664826	L	1	08788	L	276	SO	86073117	171700	000800		G C=224,B=38
OBIEF	SK043-69	23	11.9	0456260	-692017	L	3	28763	L	232	SO	86072813	131400	001700		G C=190,B=60
OBIEF	SK043-69	23	11.9	0456260	-692017	L	1	08750	L	236	SO	86072813	134900	000900		G C=225,B=90
OBIEF	SK028-67	23	12.3	0458420	-671512	L	3	28784	L	189	SO	86073013	134400	001100		G C=178,B=77
OBIEF	SK028-67	23	12.3	0458420	-671512	L	1	08775	L	190	SO	86073014	142300	000700		G C=210,B=112
IA028	HDE269006	23	11.17	0502501	-712421	H	1	08962	L	140	FO	86082516	162005	032000	464	V
IA028	HDE265006	23	11.07	0502501	-712421	L	3	29000	L	153	FO	86082521	214457	002000	500	V
OBIEF	SK050-70	24	11.2	0504130	-701601	L	3	28765	L	425	SO	86072817	170700	001800		G C=173,B=25
OBIEF	SK050-70	24	11.2	0504130	-701601	L	1	08753	L	422	SO	86072817	174100	000800		G C=221,B=37
OBIEF	SK070-70	23	11.3	0506450	-703356	L	3	28758	L	394	SO	86072715	150500	000830		G C=200,B=75
OBIEF	SK070-70	23	11.3	0506450	-703356	L	1	08740	L	409	SO	86072715	154000	000430		G C=228,B=80
OBIEF	SK014-71	32	10.6	0510140	-712648	L	3	28785	L	166	FO	86073016	163200	003000		G C=190,B=71
OBIEF	SK014-71	32	10.6	0510140	-712648	L	1	08777	L	165	FO	86073017	171300	000800		G C=190,B=40
OBIEF	SK082-69	25	10.9	0514390	-691739	L	3	28753	L	131	FO	86072614	142700	002500		G C=195,B=70
OBIEF	SK082-69	25	10.9	0514390	-691739	L	1	08738	L	131	FO	86072712	120400	001000		G C=245,B=55
OBIEF	SK082-69	25	10.9	0514390	-691739	L	1	08738	S	129	FO	86072712	122400	001600		G C=205,B=55
PHCAL	TFLOOD	99	0.0	0518186	-211718	L	1	08926	S			86081909	092600	000025		G E=10X,B=95
PHCAL	WAVCAL	98	0.0	0518186	-211718	L	1	08926	S			86081909	092800	000001		G E=10X,B=95
PHCAL	TFLOOD	99	0.0	0518186	-211718	H	1	08927	S			86081910	100100	000025		G E=60X,B=105
PHCAL	WAVCAL	98	0.0	0518186	-211718	H	1	08927	S			86081910	100300	000016		G E=60X,B=105
PHCAL	TFLOOD	99	0.0	0518186	-211718	H	1	08928				86081910	104600	000025		G B=103
PHCAL	TFLOOD	99	0.0	0518186	-211718	L	3	28937	S			86081910	105900	000005		G E=10X,B=99
PHCAL	WAVCAL	98	0.0	0518186	-211718	L	3	28937	S			86081911	110100	000002		G E=10X,B=99
PHCAL	TFLOOD	99	0.0	0518186	-211718	H	3	28938	S			86081911	112600	000005		G E=60X,B=122
PHCAL	WAVCAL	98	0.0	0518186	-211718	H	3	28938	S			86081911	112700	000200		G E=60X,B=122
PHCAL	TFLOOD	99	0.0	0518186	-211718	H	3	28939				86081911	115600	000005		G B=103
OBIEF	SK113-69	32	10.7	0521470	-692923	L	3	28752	L	154	FO	86072612	125200	002500		G C=108,B=35
OBIEF	SK113-69	32	10.7	0521470	-692923	L	1	08733	L	152	FO	86072613	132600	000800		G C=195,B=72
OBIEF	SK113-69	32	10.7	0521470	-692923	L	1	08733	S	153	FO	86072613	134000	001500		G C=178,B=72
GCIBA	NGC 1904	83	7.8	0522120	-243400	L	3	28936	L	155	FO	86081902	021900	038500		G C=178,B=85
OBIEF	SK092-68	23	11.7	0528330	-685409	L	3	28796	L	283	SO	86073112	125500	001400		G C=170,B=37
OBIEF	SK092-68	23	11.7	0528330	-685409	L	1	08785	L	287	SO	86073113	133000	000900		G C=132,B=75
IE095	NGC1994	83	10.37	0528360	-690900	H	3	28540	L	286	FO	86062421	213223	036800	403	V
OBIEF	SK130-67	25	11.4	0528550	-670208	L	3	28762	L	319	SO	86072811	115500	002700		G C=170,B=30
OBIEF	SK130-67	25	11.4	0528550	-670208	L	1	08749	L	340	SO	86072812	122900	001200		G C=215,B=52
OBIEF	SK106-66	23	11.7	0529000	-664107	L	3	28764	L	296	SO	86072814	143700	001000		G C=180,B=87
OBIEF	SK106-66	23	11.7	0529000	-664107	L	1	08751	L	306	SO	86072815	151300	000600		G C=202,B=105
OBIEF	SK106-66	23	11.7	0529000	-664107	L	3	28807	L	270	SO	86080112	121700	001200		G C=160,B=25
OBIEF	SK150-67	23	12.2	0530370	-670304	L	3	28786	L	164	SO	86073018	180500	002000		G C=185,B=18
OBIEF	SK150-67	23	12.2	0530370	-670304	L	1	08797	L	131	SO	86080111	112000	001200		G C=62,B=42
NRITS	HD 36822	20	4.41	0532045	+092727	H	1	08976	L	437	FU	86083113	134600	000030		G C=220,B=50
NRITS	HD 36822	20	4.41	0532045	+092727	H	3	29099	L	497	FU	86083113	135200	000045		G C=215,B=40
NRITS	HD 36822	20	4.41	0532045	+092727	H	3	29100	L	432	FU	86083114	143700	000045		G C=210,B=40
OBIEF	SK172-67	24	11.9	0532150	-673201	L	3	28783	L	237	SO	86073012	120700	002500		G C=200,B=52
OBIEF	SK172-67	24	11.9	0532150	-673201	L	1	08774	L	244	SO	86073012	123900	001300		G C=240,B=71

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmsstt	ECC	Comment
FGILW	HD 37350	53	4.5	0533112	-623119	L	1	08356	L	466	FU	86060812	124100	000025		G C=195,B=33
FGILW	BETA DOR	53	4.5	0533113	-623120	L	1	08319	L	723	FU	86060205	055200	000005		G C=120,B=30
FGILW	BETA DOR	53	4.5	0533113	-623120	L	3	28417	L	718	FU	86060206	060400	003000		G E=36,C=2.0X,B=20
FGILW	HD 37350	53	4.5	0533113	-623120	L	3	28452	L	457	FU	86060805	055500	040000		G E=164,C=5X,B=103
PHCAL	NULL	99		0533113	-623120	L	1	08355				86060809	093200	000000		G B=27
OBIEF	SK199-67	24	11.1	0534149	-672056	L	3	28798	L	109	FO	86073118	180400	002000		G C=195,B=19
OBIEF	SK199-67	24	11.1	0534149	-672055	L	1	08798	L	119	FO	86080113	132300	000800		G C=255,B=70
OBIEF	SK204-67	25	10.9	0534510	-672355	L	3	28760	L	118	FO	86072718	181600	002800		G C=160,B=20
OBIEF	SK204-67	25	10.9	0534510	-672355	L	1	08752	L	136	SO	86072816	162900	000700		G C=198,B=65
CCLJL	00009185	46	9.3	0535236	-625002	L	1	08411	M	575	FO	86061718	182400	002300		G E=80,C=69,B=44
OBIEF	SK169-66	13	11.6	0536480	-663951	L	3	28759	L	297	SO	86072716	163200	000800		G C=210,B=25
OBIEF	SK169-66	13	11.6	0536480	-663951	L	1	08741	L	329	SO	86072717	171100	000600		G C=2X,B=45
OBIEF	SK169-66	13	11.6	0536480	-663951	L	1	08741	S	286	SO	86072717	172400	001000		G C=185,B=45
OBIEF	SK228-67	23	11.5	0537460	-674549	L	3	28766	L	316	SO	86072818	182500	002000		G C=202,B=19
OBIEF	SK228-67	23	11.5	0537460	-674549	L	1	08776	L	341	SO	86073015	153600	000600		G C=230,B=105
OBIEF	SK228-67	23	11.5	0537460	-674549	L	1	08786	L	329	SO	86073114	144600	000600		G C=220,B=106
USSBS	HD 37795	22	2.6	0537502	-340600	H	1	08763	L	1949	FU	86072911	112300	000020		G C=230,B=43
NRITS	HD 37903	20	7.8	0539073	-021653	H	1	08973	L	19925	FO	86083107	073700	003000		G C=225,B=65
NRITS	HD 37903	20	7.8	0539073	-021653	H	3	29094	L	2437	FO	86083108	081400	005000		G C=220,B=70
XLHJL	CAL 83	59	16.8	0543489	-682334	L	3	28390	L		BO	86052807	075600	050000		G C=155,B=103
OBIEF	SK255-67	25	11.4	0544320	-671334	L	3	28795	L	88	FO	86073111	114100	002200		G C=180,B=30
OBIEF	SK255-67	25	11.4	0544320	-671334	L	1	08784	L	374	SO	86073112	121100	001100		G C=221,B=51
CCLJL	00009191	46	8.1	0545035	-701004	L	1	08410	M	1757	FO	86061717	170300	002800		G E=219,C=2X,B=59
IA072	HD39060	31	04.20	0546058	-510500	H	1	08919	L	602	FU	86081802	021512	000400	503	U
IM212	HD39060	31	04.19	0546059	-510501	H	1	08768	L	612	FU	86073000	003543	000400	502	U
ISHFB	HD 39060	31	0.0	0546059	-510501	H	1	08132	L	601	FU	86050122	223700	000325		G C=220,B=40
IM212	HD39060	31	04.15	0546059	-510501	H	1	08769	L	610	FU	86073001	013246	000400	501	U
IM212	HD39060	31	99.90	0546059	-510501	H	1	08770	L			86073002	024029	000400	501	U
IM212	HD39060	31	04.19	0546059	-510501	H	1	08790	L	607	FU	86073120	205925	000400	501	U
IM212	HD39060	31	04.21	0546059	-510501	H	1	08791	L	598	FU	86073121	212943	000400	501	U
IM212	HD39060	31	04.21	0546059	-510501	H	1	08792	L	601	FU	86073122	224103	000400	501	U
IM212	HD39060	31	04.20	0546059	-510501	H	1	08916	L	603	FU	86081718	180238	000400	503	U
IM212	HD39060	31	04.19	0546059	-510501	H	1	08917	L	612	FU	86081719	190458	000533	403	U TRAILED, R90,R=0.03
IM212	HD39060	31	04.19	0546059	-510501	H	3	28779	L	608	FU	86073000	004603	001000	500	U
IM212	HD39060	31	04.15	0546059	-510501	H	3	28780	L	631	FU	86073002	020510	001000	500	U
IM212	HD39060	31	04.22	0546059	-510501	H	3	28800	L	595	FU	86073121	210825	001000	500	U
IM212	HD39060	31	04.22	0546059	-510501	H	3	28801	L	591	FU	86073122	220735	001000	500	U
IM212	HD39060	31	04.19	0546059	-510501	H	3	28923	L	612	FU	86081718	181734	001000	501	U
IA072	HD39060	31	04.22	0546059	-510501	H	3	28926	L	591	FU	86081802	022355	001000	501	U
CMIFB	HD 39060	33	3.9	0546060	-510500	H	1	08324	L	584	FU	86060316	161000	000325		G C=233,B=45
CMIFB	HD 39060	33	3.9	0546060	-510500	H	1	08325	L	586	FU	86060316	165200	000650		G C=2.5X,B=64
CMIFB	HD 39060	33	3.9	0546060	-510500	H	1	08837	L	608	FU	86080512	122300	000325		G 205,B=50
RSISD	HD 39917	44	7.9	0551570	-433402	L	3	28793	L	2061	FO	86073107	074000	009000		G E=64,C=90,B=55
LSIAD	HD 39801	49	0.5	0552280	+072358	H	1	08929	L	13362	FU	86081913	133600	000215		G E=204,C=65,B=35
LSIAD	HD 39801	49	0.5	0552280	+072358	L	3	28940	L	13227	FU	86081913	134800	001000		G E=159,C=50,B=25

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
LSIAD	HD 39801	49	0.5	0552280	+072358	H	1	08930	S	13571	FU	86081914	143000	004500		G E=116,B=52
LSIAD	HD39801	49	0.5	0552280	+072358	L	3	28941	L	13361	FU	86081915	152300	004200		G E=3X,C=200,B=33
LSIAD	HD 39801	49	0.5	0552280	+072358	H	1	08931	S	13490	FU	86081916	161500	003500		G E=229,C=80,B=41
OBIEF	SK179-68	25	11.7	0554070	-682013	L	3	28757	L	252	SO	86072713	131100	002500		G C=180,B=68
OBIEF	SK179-68	25	11.7	0554070	-682013	L	1	08739	L	284	SO	86072713	135500	001000		G C=228,B=100
IC217	HD44594	44	07.03	0610470	-484249	H	1	08402	L	5570	FO	86061622	220957	021000	604	U
IM212	HD39060	31	04.20	0646059	-510501	H	1	08832	L	602	FU	86080419	190933	000400	502	U
IM212	HD39060	31	04.21	0646059	-510501	H	1	08833	L	597	FU	86080420	202324	000533	402	U TRAIL,R90,R=0.03,I=1
IM212	HD35060	31	04.20	0646059	-510501	H	3	28832	L	604	FU	86080419	194353	001000	500	U
GHIDY	HD 49798	16	8.30	0646347	-441533	H	1	08365	L	1652	FO	86061019	195700	001000		G C=200,B=40
PHCAL	HD 50241	31	3.3	0647406	-615314	L	3	28720	L	1009	FU	86072016	162000	000009		G C=157,B=19
IM212	HD50241	31	03.63	0647407	-615314	H	1	08789	L	1005	FU	86073119	193206	000230	501	U
ADIFW	HD 50241	31	3.3	0647407	-615314	L	3	28545	L	1025	FU	86062518	185800	001500		G C=100X,B=88
IM212	HD50241	31	03.61	0647407	-615314	H	1	08831	L	1021	FU	86080417	174454	000230	501	U
ADIFW	HD 50241	31	3.3	0647407	-615314	H	1	08487	L	1053	FU	86062519	193700	000200		G C=190,B=40
IM212	HD50241	31	03.64	0647407	-615314	H	3	28799	L	997	FU	86073119	193846	000600	400	U
IM212	HD50241	31	03.62	0647407	-615314	H	3	28831	L	1010	FU	86080418	180856	000600	401	U
SBITA	HD 50337	39	4.4	0648460	-533346	H	3	29093	L	337	FU	86083100	003200	018500		G C=1.2X,B=82
SBITA	HD 50337	39	4.4	0648460	-533346	H	1	08972	L	339	FU	86083101	013900	003500		G E=161,C=229,B=43
NCHWF	NGC 2346	70	0.0	0706496	-004329	L	3	28258	L		BO	86050316	161500	015000		G E=206,C=136,B=70
NCHWF	NGC 2346	70	11.3	0706496	-004329	L	3	28266	L	429	SO	86050715	153800	012000		G E=212,C=132,B=91
PHCAL	HD 55892	40	4.5	0711079	-464029	L	3	28631	L	334	FU	86070718	183400	000042		G C=182,B=22
ADIFW	HD 55892	40	4.5	0711080	-464030	L	3	28544	L	329	FU	86062516	165600	007000		G E=120,C=100X,B=94
ADIFW	HD 55892	40	4.5	0711080	-464030	H	1	08486	L	329	FU	86062518	181300	000600		G C=205,B=41
MGIEB	L2 PUP	51	3	0712006	-443325	L	1	08350	L	1206	FU	86060718	183100	001500		G E=178,C=115,B=42
MGIEB	L2 PUP	51	3.8	0712006	-443325	L	1	08540	L	635	FU	86070414	141400	000500		G E=157,C=59,B=42
SRHLW	L2 PUP	51	3.5	0712007	-443326	L	1	08152	L	843	FU	86050619	191900	001500		G E=98,C=115,B=58
MGIEB	L2 PUP	51	5.0	0712030	-443326	L	1	08868	L	370	FU	86081113	133400	000300		G E=62,B=38
MGIKC	HD 56855	47	2.7	0715226	-370024	H	1	08334	L	1791	FU	86060409	095500	012000		G C=10X,B=115
BEIGP	HD 58978	26	5.5	0724522	-225903	H	3	28457	L	15652	FO	86060820	204400	000240		G C=225,B=38
OBHSS	HE3-40	26	11.0	0730000	-412859	L	3	28312	L	189	SO	86051512	125900	006000		G C=68,B=35
OBHSS	HE3-40	26	11.0	0730000	-412859	L	3	28316	L	186	SO	86051522	222300	002500		G C=40,B=16
OBHSS	HE3-40	26	11.0	0730012	-412859	L	1	08204	L	186	SO	86051511	115100	006000		G E=245,C=155,B=48
PHCAL	HD60753	21	06.86	0732079	-502828	L	1	08756	L	6425	FO	86072822	220447	000026	503	U TRAILED: RATE=0.78,
PHCAL	HD60753	21	06.71	0732079	-502828	L	1	08757	L	7303	FO	86072823	231135	000012	703	U
PHCAL	HD60753	21	06.86	0732079	-502828	H	1	08758	L	6420	FO	86072823	235036	001200	503	U
PHCAL	HD60753	21	06.91	0732079	-502828	H	3	28768	L	6170	FO	86072821	212435	001500	501	U
PHCAL	HD60753	21	06.87	0732079	-502828	L	3	28769	L	6393	FO	86072823	231707	000010	400	U
PHCAL	HD60753	21	06.74	0732080	-502829	L	1	08464	L	7125	FO	86062303	030032	000006	503	U
PHCAL	HD 60753	21	6.70	0732080	-502828	L	3	28879	L	6177	FO	86080912	121100	000010		G C=178,B=18
PHCAL	HD60753	21	06.87	0732080	-502829	H	1	08465	L	6398	FO	86062303	035543	001000	503	U
PHCAL	HD 60753	21	6.70	0732080	-502828	L	1	08862	L	6200	FO	86080912	121600	000006		G C=180,B=30
PHCAL	HD60753	20	06.92	0732080	-502829	H	1	08545	L	6111	FO	86070420	203803	000400	402	U
PHCAL	HD60753	20	06.89	0732080	-502829	L	1	08546	L	6275	FO	86070421	211910	000006	503	U
PHCAL	HD60753	20	06.95	0732080	-502829	L	1	08547	L	5945	FO	86070421	214848	000015	703	U

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
PHCAL	HD60753	21	06.95	0732080	-502829	L	1	08754	L	5939	FO	86072820	201843	000006	502	V
PHCAL	HD60753	21	06.92	0732080	-502829	H	1	08755	L	6097	FO	86072820	205640	000900	503	V
PHCAL	HD 60753	21	06.86	0732080	-502829	H	1	08759	L	6468	FO	86072900	005847	000900	502	V
PHCAL	HD 60753	21	06.84	0732080	-502829	H	1	08760	L	6577	FO	86072901	015720	001300	603	V
PHCAL	HD60753	21	06.85	0732080	-502829	H	3	28532	L	6478	FO	86062303	031033	001300	501	V
PHCAL	HD60753	21	06.91	0732080	-502829	L	3	28533	L	6172	FO	86062304	042221	000010	500	V
PHCAL	HD60753	20	06.93	0732080	-502829	L	3	28605	L	6084	FO	86070419	194400	000010	501	V
PHCAL	HD60753	20	06.95	0732080	-502829	H	3	28606	L	5981	FO	86070420	204714	000500	301	V
PHCAL	HD60753	21	06.94	0732080	-502829	H	3	28767	L	6011	FO	86072820	202423	001300	501	V
PHCAL	HD 60753	21	06.86	0732080	-502829	L	3	28770	L	6468	FO	86072900	002400	000040	500	V TRAILED R=0.49 I=1
PHCAL	HD 60753	21	06.97	0732080	-502829	H	3	28771	L	5880	FO	86072902	021835	001300	501	V
PHCAL	HD60753	21	06.88	0732081	-502829	L	3	28531	L	6358	FO	86062302	023449	000010	501	V
PHCAL	HD 60753	21	6.7	0732081	-502829	L	3	28253	L	5991	FO	86050215	155900	000010		G C=166,B=17
PHCAL	HD 60753	21	6.7	0732081	-502829	L	1	08137	L	5954	FO	86050216	160900	000006		G C=187,B=36
PHCAL	HD 60753	21	6.7	0732081	-502829	L	1	08138	T	5805	FO	86050217	171000	000026		G C=190,B=35
PHCAL	HD 60753	21	6.7	0732081	-502829	L	3	28254	T	5889	FO	86050217	172100	000041		G C=195,B=18
PHCAL	SKY BKGD	21	6.7	0732081	-502829	H	3	28264	L	6309	FO	86050707	074900	015000		G C=110,B=55
PHCAL	HD 60753	21	6.7	0732081	-502829	L	3	28264	L	6309	FO	86050707	075000	000004		G C=110,B=55
PHCAL	HD 60753	21	6.7	0732081	-502829	L	2	17891	T	6267	FO	86050707	075900	000031		G C=200,B=25
PHCAL	HD 60753	21	6.7	0732081	-502829	L	2	17892	T	6413	FO	86050709	093700	000013		G C=112,B=25
PHCAL	HD 60753	21	6.7	0732081	-502829	L	2	17893	T	6124	FO	86050711	111200	000038		G C=250,B=25
PHCAL	HD 60753	21	6.7	0732081	-502829	L	2	17894	T	6123	FO	86050711	115900	000050		G C=1.2X,B=25
PHCAL	HD 60753	21	6.7	0732081	-502829	L	2	17895	T	6130	FO	86050712	124400	000031		G C=200,B=25
PHCAL	NULL	99	6.70	0732081	-502829	L	2	17896				86050713	132300	000000		G B=21
PHCAL	HD 60753	21	6.7	0732081	-502829	L	3	28265	L	6243	FO	86050714	140400	000012		G C=205,B=18
PHCAL	HD 60753	21	6.7	0732081	-502829	L	3	28348	T	6297	FO	86052109	092100	000041		G C=193,B=18
PHCAL	HD 60753	21	6.7	0732081	-502829	L	2	17919	L	6026	FO	86062317	173300	000010		G C=198,B=25
PHCAL	HD 60753	21	6.7	0732081	-502829	L	2	17919	S	5961	FO	86062317	173700	000029		G C=254,B=25
PHCAL	HD 60753	21	6.7	0732081	-502829	L	2	17920	T	6063	FO	86062318	180700	000043		G C=200,B=25
PHCAL	HD 60753	21	6.7	0732081	-502829	L	1	08505	L	5658	FO	86062918	181700	000006		G C=200,B=31
PHCAL	HD 60753	21	6.7	0732081	-502829	L	1	08506	T	5844	FO	86062918	185400	000026		G C=190,B=38
PHCAL	HD 60753	21	6.7	0732081	-502829	L	1	08507	L	6187	FO	86062919	193500	000006		G C=190,B=35
PHCAL	HD 60753	21	6.7	0732081	-502829	L	1	08508	T	6394	FO	86062920	201000	000026		G C=195,B=37
PHCAL	HD 60753	21	6.7	0732081	-502829	L	1	08509	L	6610	FO	86062920	204700	000006		G C=195,B=35
PHCAL	HD 60753	21	6.7	0732081	-502829	H	1	08527	L	6561	FO	86070214	142700	000900		G C=208,B=58
PHCAL	HD 60753	21	6.7	0732081	-502829	L	3	28630	L	5908	FO	86070717	173600	000010		G C=160,B=16
PHCAL	HD 60753	21	6.7	0732081	-502829	L	1	08561	L	5940	FO	86070717	174200	000006		G C=191,B=33
PHCAL	HD 60753	21	6.7	0732081	-502829	L	1	08799	L	6196	FO	86080114	144700	000006		G C=178,B=34
PHCAL	HD 60753	21	6.7	0732081	-502829	L	1	08800	T	6182	FO	86080115	152400	000026		G C=215,B=58
PHCAL	HD 60753	21	6.7	0732081	-502829	L	1	08801	L	6276	FO	86080116	160200	000006		G C=180,B=34
PHCAL	HD 60753	21	6.7	0732081	-502829	L	1	08802	T	6354	FO	86080116	164400	000026		G C=195,B=37
PHCAL	HD 60753	21	6.7	0732081	-502829	L	3	28693	L	6768	FO	86081313	132000	000041		G C=194,B=18
PHCAL	HD 60753	21	6.7	0732081	-502829	L	2	17937	L	6125	FO	86081416	160700	000010		G C=153,B=21
PHCAL	HD 60753	21	6.7	0732081	-502829	L	2	17937	S	6123	FO	86081416	161400	000029		G C=222,B=20
HM097	HD 61064	41	05.49	0734477	-035954	H	1	08134	L	18912	FO	86050202	025006	003400	602	V

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
NPIJK	M1-16	70	13	0734555	-093158	L	3	28267	L	58	SO	86050718	183100	002000		G B=55
CBINE HD	61715	53	5.6	0736540	-482909	L	1	08480	L	12280	FO	86062419	194000	000100		G C=215,B=32
LGHBP HD	61913	49	5.8	0739141	+141937	L	3	28259	L	16775	FO	86050319	192500	006000		G B=140
IDIJC HD	62542	21	8.0	0740581	-420636	L	1	08580	L	1642	FO	86071011	114900	000220		G C=4X,B=35
IDIJC HD	62542	21	8.0	0740581	-420636	L	1	08580	S	1673	FO	86071011	115800	000210		G C=1.5X,B=35
IDIJC HD	62542	21	8.0	0740581	-420636	L	3	28644	L	1681	FO	86071012	120500	000225		G C=140,B=17
LDHMG	YZ CMI	48	11.2	0742030	+034031	H	1	08281	L	148	FO	86052516	162700	012000		G E=150,B=71
LDHMG	YZ CMI	48	11.2	0742030	+034031	L	1	08284	L	144	FO	86052521	214200	002000		G E=155,B=38
CBINE HD	65592	53	7.4	0756009	-395915	L	1	08474	L	2334	FO	86062413	135100	002000		G C=245,B=38
PHCAL HD	66811	13	2.3	0801496	-395141	L	1	08172	T	3376	FU	86051017	170200	000001		G C=220,B=42
PHCAL	BD+75 325	16	09.73	0804430	+750648	L	1	08296	L	503	FO	86052706	063744	000024	502	V
PHCAL	BD+75 325	16	09.50	0804430	+750648	L	3	28383	L	619	FO	86052706	063411	000014	500	V
PHCAL BD	+75 0325	16	9.5	0804432	+750648	L	3	28255	S	503	FO	86050221	213400	000042		G C=250,B=18
PHCAL BD	+75 0325	16	9.5	0804432	+750648	L	3	28255	L	503	FO	86050221	213400	000014		G C=180,B=18
PHCAL BD	+75 0325	16	9.5	0804432	+750648	L	1	08140	L	504	FO	86050221	214300	000020		G C=198,B=35
PHCAL BD	+75 0325	16	9.5	0804432	+750648	L	1	08140	S	504	FO	86050221	215200	000100		G C=230,B=35
PHCAL BD	+75 0325	16	9.5	0804432	+750648	L	2	17887	L	513	FO	86050421	211000	000033		G C=174,B=23
PHCAL BD	+75 0325	16	9.5	0804432	+750648	L	2	17903	L	475	FO	86060118	180600	000024		G C=185,B=21
HI042	2 CHA	54	15.50	0808497	-762308	E	9	01810	2		BO	86050400	000001	004000		V FOR SWP28262
CVHRW	Z CHA	54	0.0	0808497	-762308	L	3	28262	L		BO	86050500	002000	078000		G C=230,B=130
CVHRW	Z CHA	54	15.5	0808497	-762308	L	2	17889	L		BO	86050514	140200	033000		G C=225,B=121
IBHAM	RX PUP	57	10.0	0812282	-413318	H	3	28270	L	160	FO	86050807	075000	042000		G E=5X,B=158
IBHAM	RX PUP	57	10.0	0812282	-413318	H	1	08159	L	152	FO	86050815	152600	001500		G B=61
IBHAM	RX PUP	57	10.0	0812282	-413318	L	3	28271	L	155	FO	86050816	160500	001200		G E=181,C=45,B=26
IBHAM	RX PUP	57	10.0	0812282	-413318	L	1	08160	L	150	FO	86050816	164700	001200		G E=1.2X,C=106,B=60
IBHAM	RX PUP	57	10.0	0812282	-413318	H	3	28272	L	148	FO	86050817	172000	003000		G E=118,B=80
IBHAM	RX PUP	57	10.0	0812282	-413318	L	1	08161	L	149	FO	86050818	180100	001500		G E=1.5X,C=138,B=82
IBHAM	RX PUP	57	10.0	0812282	-413318	H	3	28273	L	152	FO	86050818	183400	003000		G E=141,B=121
IBHAM	RX PUP	57	10.0	0812282	-413318	L	1	08162	L	154	FO	86050819	191500	001000		G E=1.2X,C=142,B=100
IBHAM	RX PUP	57	10.0	0812282	-413318	H	3	28274	L	156	FO	86050819	194700	003000		G E=217,B=184
IBHAM	RX PUP	57	10.0	0812282	-413318	L	1	08163	L	163	FO	86050820	202700	001000		G E=1.3X,C=154,B=122
IBHAM	RX PUP	57	10.0	0812282	-413318	H	3	28275	L	158	FO	86050820	205900	003000		G E=160,B=127
IBHAM	RX PUP	57	10.0	0812282	-413318	H	3	28276	L	152	FO	86050822	220300	004500		G E=110,B=42
IBHAM	RX PUP	57	10.0	0812282	-413318	H	3	28278	L	149	FO	86050908	081100	037001		G E=5X,B=142
IBHAM	RX PUP	57	10.0	0812282	-413318	L	1	08164	L	156	FO	86050914	142900	001000		G E=227,C=95,B=51
IBHAM	RX PUP	57	10.0	0812282	-413318	L	3	28279	L	154	FO	86050915	150500	002000		G E=1.3X,C=64,B=43
IBHAM	RX PUP	57	10.0	0812282	-413318	L	1	08165	L	156	FO	86050915	154300	001000		G E=1.1X,C=97,B=58
IBHAM	RX PUP	57	10.0	0812282	-413318	H	3	28280	L	156	FO	86050916	162000	003000		G E=114,B=85
IBHAM	RX PUP	57	10.0	0812282	-413318	L	1	08166	L	158	FO	86050917	170000	001000		G E=1.1X,C=110,B=70
IBHAM	RX PUP	57	10.0	0812282	-413318	H	3	28281	L	156	FO	86050917	173400	003000		G E=150,B=115
IBHAM	RX PUP	57	10.0	0812282	-413318	L	1	08167	L	158	FO	86050918	181200	001000		G E=1.2X,C=138,B=109
IBHAM	RX PUP	57	10.0	0812282	-413318	H	3	28282	L	160	FO	86050918	184700	003000		G E=212,B=187
IBHAM	RX PUP	57	10.0	0812282	-413318	L	1	08168	L	158	FO	86050919	192400	001000		G E=1.5X,C=170,B=137
IBHAM	RX PUP	57	10.0	0812282	-413318	H	3	28283	L	155	FO	86050919	195600	003000		G E=253,B=1.5X
IBHAM	RX PUP	57	10.0	0812282	-413318	L	1	08169	L	156	FO	86050920	203200	001000		G E=1.4X,C=161,B=137

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
IBHAM	RX PUP	57	10.0	0812282	-413318	L	3	28284	L	157	FO	86050921	210500	001200		G E=219,C=94,B=73
IBHAM	RX PUP	57	10.0	0812282	-413318	H	1	08170	L	154	FO	86050921	214600	006300		G E=208,B=125
CBINE HD	72275	53	7.4	0827425	-595718	L	1	08475	L	2303	FO	86062415	150500	001700		G C=199,B=39
PHCAL	TFLOOD	99	0.0	0828310	-273954	H	3	28331	S			86051720	200300	000005		G E=60X,B=122
PHCAL	WAVCAL	98	0.0	0828310	-273954	H	3	28331	S			86051720	200500	000200		G E=60X,B=122
PHCAL	TFLOOD	99	0.0	0828310	-273954	L	1	08214	S			86051720	203900	000025		G E=10X,B=100
PHCAL	WAVCAL	98	0.0	0828310	-273954	L	1	08214	S			86051720	204100	000001		G E=10X,B=100
PHCAL	TFLOOD	99	0.0	0828310	-273954	H	1	08215	S			86051721	211300	000025		G E=50X,B=105
PHCAL	WAVCAL	98	0.0	0828310	-273954	H	1	08215	S			86051721	211500	000016		G E=50X,B=105
OD88K	AS 201	70	12	0829368	-273520	L	3	28328	L	196	SO	86051715	155500	001000		G E=164,B=16
OD88K	AS 201	70	12	0829368	-273520	L	1	08213	L	197	SO	86051716	161500	002000		G C=50,B=35
OD88K	AS 201	70	12	0829368	-273520	L	3	28329	L	194	SO	86051716	164500	013000		G E=10X,B=60
AGHCW NGC	2639	88	12.6	0840029	+502313	L	3	28286	L	93	SO	86051013	133000	008000		G B=72
AGHCW NGC	2639	88	12.6	0840030	+502314	L	1	08219	L	75	SO	86051808	080100	040800		G C=145,B=105
STHRP	ETA HYA	21	4.3	0840367	+033446	H	1	08229	L	465	FU	86052015	155600	000042		G C=220,=44
USSBS HD	74956	30	1.96	0843194	-543130	H	3	28848	L	3373	FU	86080612	123400	000300		G C=5X,B=70
USSBS HD	74956	30	2.0	0843195	-543131	H	3	28775	L	3358	FU	86072912	121500	000044		G C=160,B=32
USSBS HD	74956	30	2.0	0843195	-543131	H	1	08764	L	3333	FU	86072912	122100	000030		G C=230,B=45
IA090	LDS235B	29	15.50	0845129	-184844	L	1	08294	L		BO	86052700	001133	021000	505	V
IA090	LDS235B	29	15.50	0845129	-184844	L	3	28389	L		BO	86052800	003616	034500	303	V
OD93K HD	77581	59	6.9	0900120	-402200	L	3	28650	T	4564	FO	86071112	120700	000820		G C=180,B=25
OD93K HD	77581	59	6.9	0900120	-402200	L	3	28651	T	4645	FO	86071113	130000	001230		G C=250,B=35
OD93K HD	77581	59	6.9	0900120	-402200	L	3	28652	T	4615	FO	86071114	141200	001300		G C=2X,B=70
OD93K HD	77581	59	6.9	0900120	-402200	L	3	28653	T	4556	FO	86071115	155200	001230		G C=2.5X,B=87
OD93K HD	77581	59	6.9	0900120	-402200	L	3	28654	T	4733	FO	86071117	170400	001320		G C=2X,B=60
MGIKC HD	78647	47	2.2	0906093	-431348	H	1	08331	L	2714	FU	86060405	054400	000730		G E=215,C=68,B=35
MGIKC HD	78647	47	2.2	0906093	-431348	H	1	08332	L	2708	FU	86060406	062800	010000		G E=8X,C=245,B=50
MGIKC	TFLOOD	99	2.2	0906093	-431348	H	1	08333	S			86060408	083600	000025		G E=60X,B=105
MGIKC	WAVCAL	98	2.2	0906093	-431348	H	1	08333	S			86060408	083800	000016		G E=60X,B=105
CBINE HD	78801	53	7.7	0906391	-511400	L	1	08476	L	2838	FO	86062416	160300	001600		G C=216,B=38
PHCAL HD	80007	32	1.7	0912396	-693040	L	1	08843	T	4319	FU	86080611	111400	000001		G C=150,B=38
PHCAL	A+81 266	16	12.1	0913428	+815611	L	1	08157	L	241	SO	86050721	215300	000248		G C=192,B=40
PHCAL	A+81 266	16	12.1	0913428	+815611	L	3	28269	L	245	SO	86050722	220300	000216		G C=204,B=18
CCIJL	0000W355	46	7.8	0930010	-105748	L	1	08408	M	2127	FO	86061714	144500	001300		G E=161,C=50,B=38
MGIEB	R CAR	51	4	0930592	-623401	L	1	08352	L	551	FU	86060720	204000	000700		G C=87,B=32
MGIEB	R CAR	51	4.5	0930592	-623401	L	1	08541	L	344	FU	86070415	150400	002000		G E=222,C=190,B=110
MGIEB	R CAR	51	5.0	0930592	-623401	L	1	08870	L	13536	FO	86081115	154800	001500		G E=1.2X,C=110,B=42
SDHFW PG	0934+186	28	13.3	0934290	+183841	L	1	08298	L	87	SO	86052821	214000	001800		G C=255,B=28
SDHFW PG	0934+186	28	13.3	0934290	+183841	L	3	28393	L	80	SO	86052822	220800	002000		G C=2X,B=18
FGILW	L CAR	53	5.1	0943523	-621636	L	3	28418	L	519	FU	86060207	073000	031500		G E=232C=132,B=85
FGILW	L CAR	53	5.1	0943523	-621635	L	1	08380	L	491	FU	86061305	054700	000100		G C=150,B=32
FGILW	L CAR	53	5.1	0943523	-621635	L	3	28480	L	498	10	86061305	055500	027000		G E=120,C=108,B=65
SRHLW	R LEO	51	6	0944521	+113941	L	1	08347	L	5211	FO	86060714	145300	000200		G E=145,C=62,B=33
SRHLW	R LEO	51	7.6	0944522	+113942	L	1	08151	L	3009	FO	86050618	180200	000100		G E=141,C=44,B=32
IM149	PG0946+301	85	00.00	0946463	+300921	L	1	08318	L		BO	86060122	225233	033209	245	V

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
IM149	PG0946+301	85	00.00	0946463	+300921	L	3	28421	L		BO	86060222	220500	040200	034	V
IM149	PG0946+301	85	16.00	0946463	+300921	L	3	28432	L		BO	86060421	214820	042000	333	V
HC010	HD85474	44	06.34	0949329	+082055	L	1	08227	S	969	FO	86051923	000817	002000	503	V $
HC010	HD85474	44	06.34	0949329	+082055	L	1	08227	L	969	FO	86051923	233817	002000	703	V $
HC010	HD85474	44	09.06	0949330	+082056	L	3	28345	L	922	FO	86052000	003810	036900	304	V
HSIRB	GD108	19	13.6	0958190	-071905	L	1	08369	L	55	SO	86061119	192800	007900		G C=3X,B=60
OBHSS	HE3-365	26	8.8	1002497	-582514	L	3	28309	L	891	FO	86051418	182500	003000		G C=180,B=84
OBHSS	HE3-365	26	8.8	1002497	-582513	L	1	08199	L	913	FO	86051419	190500	001000		G C=2.5X,B=75
HI042	OY CAR	54	15.00	1005166	-696924	L	2	17890	L		BO	86050700	005034	034500	336	V LWR 4.5 KV
HI042	OY CAR	54	15.50	1005166	-695924	E	9	01811	2		BO	86050600	000001	004000		V FOR SWP28263
CVHRW	OY CAR	54	16.	1005168	-695924	L	3	28263	L		BO	86050600	001700	087000		G E=240,C=243,B=141
STHRP	ALPH LEO	22	1.3	1005426	+121245	L	1	08230	T	5849	FU	86052017	170100	000001		G C=180,B=35
STHRP	ALPH LEO	22	1.3	1005426	+121245	L	1	08231	T	5918	FU	86052017	174900	000001		G C=200,B=35
STHRP	ALPH LEO	22	1.3	1005426	+121245	L	1	08232	T	5901	FU	86052018	183300	000001		G C=200,B=37
STHRP	ALPH LEO	22	1.3	1005426	+121245	H	1	08233	L	5950	FU	86052019	191500	000006		G C=210,B=43
STHRP	ALPH LEO	22	1.3	1005426	+121245	L	1	08234	T	6065	FU	86052019	195100	000001		G C=1.7X,B=40
STHRP	ALPH LEO	22	1.3	1005426	+121245	L	1	08235	T	6030	FU	86052020	205100	000001		G C=1.7X,B=38
STHRP	ALPH LEO	22	1.3	1005426	+121245	L	1	08236	T	6138	FU	86052021	213400	000001		G C=3X,B=40
STHRP	ALPH LEO	22	1.3	1005426	+121245	L	1	08237	L	6137	FU	86052022	220900	000001		G C=5X,B=37
STHRP	ALPH LEO	22	1.3	1005426	+121245	L	1	08238	L	6185	FU	86052022	224100	000001		G C=5X,B=37
IC093	HD88366	51	06.76	1007462	-611814	L	1	08330	L	7025	FO	86060404	043132	001700	332	V
MGIEB	S CAR	51	5.9	1007462	-611814	L	1	08542	L	11736	FO	86070416	160800	002000		G C=1.5X,B=171
IC093	S CAR	51	06.48	1007462	-611814	L	1	08482	L	8872	FO	86062404	042021	002700	403	V
MGIEB	S CAR	51	6.0	1007462	-611814	L	1	08871	L	8457	FO	86081116	164500	000500		G E=123,C=65,B=30
HA196	HD88366	51	06.02	1007462	-611814	L	1	08589	S	12956	FO	86071201	023402	001300	312	V $
HA196	HD88366	51	06.02	1007462	-611814	L	1	08589	L	12956	FO	86071201	014953	004000	612	V $
LDHMG	GL380	46	6.6	1008139	+494211	H	1	08279	L	6143	FO	86052511	111400	002500		G E=160,B=36
LDHMG	GL380	46	6.6	1008139	+494211	L	1	08283	L	6488	FO	86052520	203400	000230		G E=140,C=54,B=34
PHCAL HD	88824	31	5.3	1011266	-505904	L	3	28721	L	75	FO	86072017	170600	000125		G C=180,B=21
ADIFW HD	88824	31	5.3	1011267	-505904	L	3	28543	L	16383	FO	86062513	133400	014000		G C=100X,B=105
ADIFW HD	88824	31	5.3	1011267	-505904	H	1	08485	L	16774	FO	86062516	160000	001300		G C=200,B=41
OBHSS	HE3-395	26	9.1	1014297	-552051	L	1	08200	L	912	FO	86051420	202600	001000		G C=3.5X,B=71
OBHSS	HE3-395	26	9.1	1014297	-552051	L	3	28310	L	909	FO	86051420	204700	007000		G C=5X,B=92
OBHSS	HE3-395	26	9.1	1014297	-552051	L	1	08201	S	907	FO	86051422	220600	000400		G C=160,B=32
OBHSS	HE3-395	26	9.1	1014297	-552051	L	1	08201	L	915	FO	86051422	220600	000200		G C=186,B=35
OBHSS	HE3-395	26	9.1	1014300	-552100	L	3	28314	L	869	FO	86051518	180800	001000		G C=183,B=45
OBHSS	HE3-395	26	9.1	1014300	-552100	L	3	28314	S	880	FO	86051518	182500	001000		G C=45,B=45
OBHSS	HE3-395	26	9.1	1014300	-552100	L	1	08206	L	895	FO	86051518	184300	000300		G C=255,B=45
SHIPF	SKY BKGD	07		1015086	-074906	L	3	28410	L			86053118	184100	001500		G E=38,B=20
PHCAL	TFLOOD	99	0.0	1015086	-074906	L	1	08314	S			86053119	193100	000025		G E=10X,B=100
PHCAL	WAVCAL	98	0.0	1015086	-074906	L	1	08314	S			86053119	193200	000001		G E=10X,B=100
PHCAL	TFLOOD	99	0.0	1015086	-074906	H	1	08315	S			86053120	200100	000025		G E=60X,B=105
PHCAL	WAVCAL	98	0.0	1015086	-074906	H	1	08315	S			86053120	200300	000016		G E=60X,B=105
LDHMG	AD LEO	48	9.4	1016527	+200716	H	1	08278	L	665	FO	86052508	080100	009000		G E=184,C=82,B=51
LDHMG	AD LEO	48	9.4	1016527	+200716	L	1	08282	L	637	FO	86052519	193100	001500		G E=224,C=91,B=39

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
LDHMG	AD LEO	48	9.4	1016528	+200716	L	3	28375	L	654	FO	86052522	223000	001500		G B=15
OBHSS	HE3-407	26	9.2	1021060	-592200	L	1	08191	L	1518	FO	86051318	180500	001500		G C=2X,B=70
OBHSS	HE3-407	26	9.2	1021060	-592200	L	3	28300	L	1629	FO	86051318	183500	003500		G C=170,B=98
PHCAL HD	90132	31	5.3	1021177	+374520	L	3	28722	L	16613	FO	86072018	181100	000047		G C=138,B=20
SHIPF	P/HALLEY	06	8.5	1023531	-063725	L	1	08312	L	258	SO	86053112	122600	021000		G E=7X,C=175,B=105
SHIPF	P/HALLEY	06	8.5	1023531	-063725	D	9	01820	2			86053113	131300	002000		G NO COMMENTS
SHIPF	P/HALLEY	06	8.5	1023531	-063725	L	3	28409	L	247	SO	86053116	164700	001500		G E=106,B=19
SHIPF	P/HALLEY	06	8.5	1023531	-063725	L	1	08313	L	247	SO	86053117	175000	001500		G E=151,C=60,B=45
SHIWJ	HALLEY	06	10	1024128	-060445	L	1	08339	L	161	SO	86060505	055900	015500		G E=10X,C=97,B=65
SHIWJ	HALLEY	06	0.0	1024128	-060445	L	3	28433	L			86060506	062600	009000		G E=250,B=20
SHIWJ	HALLEY	06	0.0	1024131	-060435	D	9	01821	2			86060505	053700	002000		G NO COMMENTS
IS196	P/HALLEY	06	11.98	1024536	-054446	L	1	08358	L	271	SO	86060822	223513	003000	242	V ON NUCLEUS
IS196	P/HALLEY	06	12.03	1024536	-054446	L	1	08359	L	260	SO	86060823	235904	022000	374	V 4 CONSEC.EXP. ON NUC
IS196	P/HALLEY	06	11.98	1024536	-054446	L	3	28458	L	272	SO	86060823	231326	001500	030	V ON NUCLEUS
IS196	P/HALLEY	06	12.09	1024536	-054446	L	3	28459	L	245	SO	86060904	040508	003000	040	V
IS196	P/HALLEY	06	12.00	1024536	-054446	D	9	01822	2			86060822	221800	002000		V NUCLEUS AT R.P.
SHIPF	P/HALLEY	06	9.2	1025457	-052957	L	1	08374	L	147	SO	86061213	130300	015000		G E=4X,C=138,B=105
SHIPF	P/HALLEY	06	9.2	1025457	-052957	L	3	28478	L	141	SO	86061215	155800	003000		G E=127,B=25
SHIPF	P/HALLEY	06	9.2	1025457	-052957	D	9	01827	2			86061216	163500	002000		G NO COMMENTS
SCHPF	P/HALLEY	06	11.2	1026259	-085422	D	9	01817	2			86051916	162900	002000		G NO COMMENTS
SCHPF	P/HALLEY	06	11.2	1026259	-085422	L	1	08225	L	115	FO	86051916	165200	015000		G C=186,B=117
SCHPF	P/HALLEY	06	11.2	1026259	-085422	L	3	28343	L	112	FO	86051920	200700	001000		G E=118,B=17
SCHPF	P/HALLEY	06	11.2	1026259	-085421	L	1	08226	L	110	FO	86051921	210400	001000		G E=172,B=38
SCHPF	P/HALLEY	06	11.2	1026259	-085421	L	3	28344	L			86051922	220800	003500		G E=59,B=18
IS196	P/HALLEY	06	11.57	1028389	-100022	L	1	08208	L	98	FO	86051600	004235	009000	373	V ON NUCLEUS
IS196	P/HALLEY	06	11.56	1028389	-100022	H	1	08209	L	99	FO	86051603	030624	012000	033	V
IS196	P/HALLEY	06	11.56	1028389	-100022	L	1	08210	L	99	FO	86051605	055948	002000	032	V
IS196	P/HALLEY	06	11.55	1028389	-100022	L	3	28317	L	398	SO	86051600	002308	001000	030	V
IS196	P/HALLEY	06	11.56	1028389	-100022	L	3	28318	L	99	FO	86051601	011926	002500	030	V NUCLEUS IN LWLA
IS196	P/HALLEY	06	11.57	1028389	-100022	L	3	28319	L	98	FO	86051602	022920	020500	071	V
IS196	P/HALLEY	06	99.99	1028389	-100022	D	9	01815	2			86051600	000000	000000		V
ISHFB HD	91312	31	4.75	1030192	+404059	H	1	08131	L	287	FU	86050121	211800	001100		G B=40
ISHFB HD	91312	31	4.75	1030192	+404059	H	1	08139	L	286	FU	86050220	201700	001100		G C=1.2X,B=50
SHIPF	P/HALLEY	06	10	1030282	-050150	D	9	01832	2			86062505	055300	002000		G NO COMMENTS
SHIPF	P/HALLEY	06	10	1030282	-050150	L	1	08484	L	91	SO	86062510	104700	010800		G E=185,B=55
SHIPF	P/HALLEY	06	10	1030283	-050150	L	1	08483	L	85	SO	86062506	061800	004500		G E=112,C=54,B=41
SHIPF	P/HALLEY	06	10	1030283	-050150	L	3	28541	L	87	SO	86062507	071700	003000		G E=137,B=19
SCHPF	P/HALLEY	06	7.1	1031449	-111310	D	9	01814	2			86051216	160700	002000		G NO COMMENTS
SCHPF	P/HALLEY	06	7.1	1031449	-111310	L	1	08183	L	159	FO	86051216	161500	009000		G E=5X,C=185,B=135
SCHPF	P/HALLEY	06	7.1	1031449	-111310	L	1	08184	L	146	FO	86051218	183400	001000		G E=227,B=63
SCHPF	P/HALLEY	06	7.1	1031449	-111310	L	1	08185	L	148	FO	86051219	192500	001000		G E=176,B=80
SCHPF	P/HALLEY	06	7.1	1031449	-111310	L	1	08186	L	146	FO	86051220	201500	002000		G E=237,B=120
SCHPF	P/HALLEY	06	7.1	1031449	-111310	L	3	28296	L	147	FO	86051220	204500	001000		G E=136,B=30
SCHPF	P/HALLEY	06	7.1	1031449	-111310	L	1	08187	L	146	FO	86051221	211800	001000		G E=222,B=50
SCHPF	P/HALLEY	06	7.1	1031449	-111310	L	1	08188	L	140	FO	86051222	220300	003000		G E=205,B=40

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
IS196	SKY	06	99.99	1032540	-050641	L	3	28592	L			86070221	214845	001000	001	V
IS196	C/HALLEY	06	13.47	1034053	-045948	L	1	08528	L	72	SO	86070222	225059	003000	033	V ON NUCLEUS
IS196	C/HALLEY	06	13.47	1034053	-045948	L	1	08529	L	72	SO	86070223	235955	013500	343	V
IS196	C/HALLEY	06	13.45	1034053	-045948	L	3	28593	L	73	SO	86070223	232527	003000	031	V
IS196	C/HALLEY	06	13.47	1034053	-045948	L	3	28594	L	72	SO	86070300	003000	000000	041	V NUCLEUS IN LWLA
IS196	C/HALLEY	00	99.99	1034053	-045948	E	9	01837	2			86070222	222500	004000		V
HM097	HD92245	30	06.33	1036219	-121059	H	1	08133	L	10084	FO	86050200	000056	002100	603	V
HM097	HD92245	30	06.26	1036219	-121059	H	3	28250	L	10701	FO	86050200	002944	010000	701	V
STHRP	FEIGE 34	16	11.	1036399	+432151	L	1	08429	L	118	FO	86061920	204700	000430		G C=5X,B=36
STHRP	FEIGE 34	16	11.1	1036400	+432152	L	1	08385	T	115	FO	86061317	174100	000522		G C=190,B=50
STHRP	FEIGE 34	16	11.1	1036400	+432152	L	1	08386	L	116	FO	86061318	183200	000330		G C=2X,B=40
STHRP	FEIGE 34	16	11.1	1036400	+432152	L	1	08387	L	123	FO	86061319	190700	000330		G C=2X,B=35
STHRP	FEIGE 34	16	11.1	1036400	+432152	L	1	08388	T			86061319	195100	001300		G C=2X,B=50
SHIPF	P/HALLEY	06	13.4	1036479	-050248	D	9	01841	2			86070804	040100	002000		G NO COMMENTS
SHIPF	P/HALLEY	06	13.4	1036479	-050248	L	1	08564	L	68	SO	86070804	041800	018000		G E=197,C=93,B=70
RCIJD HD	93194	21	4.80	1042181	-634153	L	3	29089	L	289	FU	86083013	133800	000002		G C=160,B=20
RCIJD HD	93194	21	4.80	1042181	-634153	L	1	08970	L	287	FU	86083013	134200	000001		G C=175,B=35
HA196	HD93308	61	05.97	1043070	-592500	H	1	08288	L	13478	FO	86052605	052233	001200	563	V
HA196	HD93308	61	05.93	1043070	-592500	H	1	08586	L	13854	FO	86071122	224740	001200	571	V
HA196	HD93308	61	05.93	1043070	-592500	H	1	08587	L	13861	FO	86071123	235528	002500	782	V
HA196	HD93308	61	05.95	1043070	-592500	H	3	28379	L	13629	FO	86052605	053835	003000	361	V
HA196	HD93308	61	05.95	1043070	-592500	H	3	28657	L	13665	FO	86071123	231450	003000	360	V
HA196	HD93308	61	05.95	1043070	-592500	H	3	28658	L	13690	FO	86071200	003025	006000	571	V
PHCAL	HD93521	12	07.10	1045336	+375005	L	1	08295	L	5231	FO	86052605	051336	000003		V
PHCAL HD	93521	12	7.0	1045336	+375004	L	2	17904	L	5094	FO	86060118	185800	000003		G C=158,B=22
PHCAL	HD93521	12	07.15	1045336	+375005	L	3	28382	L	5010	FO	86052605	051739	000003		V
SDHFW PG	1047+003	28	13.5	1047291	+001522	L	3	28350	L	60	SO	86052116	160200	001500		G C=210,B=19
SDHFW PG	1047+003	28	13.5	1047291	+001522	L	1	08242	L	61	SO	86052116	163400	002000		G C=230,B=40
EGIMM PG	1048-090	85	16.0	1048594	-090213	L	1	08345	L		BO	86060706	061400	016500		G C=102,B=60
IA072	HD94305	10	11.71	1049101	-620108	L	3	28875	L	346	SO	86080820	203007	004500	451	V
IA072	HD94305	10	11.73	1049101	-620108	L	3	28924	L	339	SO	86081720	202532	004500	451	V
PHCAL	BD+33 2642	20	11.09	1050010	+330528	L	2	17912	L	150	FO	86062223	230130	000408	502	V LWR 4.5 KV
PHCAL	BD+33 2642	20	11.11	1050010	+330528	L	3	28529	L	147	FO	86062222	225130	000400	501	V
IA092	AG CAR	23	08.24	1054106	-601111	L	1	08468	S	1905	FO	86062321	214130	000500	772	V $
IA092	AG CAR	23	08.24	1054106	-601111	L	1	08468	L	1905	FO	86062321	213109	000040	552	V $
IA092	AG CAR	23	08.29	1054106	-601111	H	1	08469	L	1831	FO	86062401	010115	006000	502	V
IA092	AG CAR	23	08.20	1054106	-601111	H	3	28536	L	1981	FO	86062321	215455	018000	552	V
IA092	AG CAR	23	08.31	1054106	-601111	L	3	28537	L	1800	FO	86062402	020821	000300	551	V
IA092	AG CAR-B	73	08.31	1054122	-601100	L	1	08470	L		BO	86062402	024435	012000	302	V
IA092	AG CAR-B	73	14.00	1054122	-601100	L	3	28585	L		BO	86063023	232052	028600	332	V
PMIGB	SZ 06	58	11.2	1057508	-764533	L	1	08936	L	363	SO	86082008	084500	009000		G E=155,C=90,B=55
IC166	HD95650	48	09.78	1059570	+221412	L	1	08430	L	484	FO	86062000	002541	003000	243	V
IC166	HD95650	48	09.86	1059570	+221412	L	3	28511	L	449	FO	86061921	215002	015000	112	V
IGIJN HD	96308	23	8.6	1103061	-605421	H	1	08875	L	938	FO	86081214	141700	003300		G C=159,B=57
PMIGB	SZ 19	58	10.6	1105575	-772150	L	1	08937	L	167	FO	86082010	105700	006000		G E=120,C=103,B=48

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
IGIJN	HD 96899	23	8.9	1106265	-604236	H	1	08874	L	659	FO	86081212	125200	004500		G C=150,B=58
IGIJN	HD 96946	13	8.5	1106450	-602917	H	3	28516	L	1156	FO	86062015	152500	010000		G C=185,B=60
IGIJN	HD 96946	12	8.5	1106450	-602917	H	1	08873	L	1239	FO	86081210	105700	007500		G C=210,B=58
IGIJN	HD 306097	13	8.9	1107000	-602200	H	3	28517	L	437	FO	86062019	191200	008700		G C=92,B=38
CBINE	HD 97082	53	6.8	1107320	-583400	L	1	08428	L	5300	FO	86061919	193000	000436		G C=182,B=37
IGIJN	HD 97166	13	7.9	1107580	-595839	H	1	08877	L	1997	FO	86081216	164000	001100		G C=132,B=40
IGIJN	HD 97319	13	8.6	1108585	-605045	H	1	08433	L	1075	FO	86062014	141200	005500		G C=180,B=55
IGIJN	HD 97381	23	8.6	1109239	-600618	H	1	08876	L	1386	FO	86081215	153500	003000		G C=168,B=48
IGIJN	HD 97484	12	8.4	1109560	-604923	H	1	08434	L	1172	FO	86062017	172600	008500		G C=240,B=78
IBHMP	TT HYA	66	9.0	1110460	-261200	L	3	28364	L	985	FO	86052316	160100	002500		G E=254,C=222,B=30
IBHMP	TT HYA	66	9.0	1110460	-261200	L	1	08263	L	738	FO	86052316	163800	001000		G E=3X,C=233,B=38
IBHMP	TT HYA	66	9.0	1110460	-261200	L	3	28365	L	649	FO	86052317	170800	003500		G E=232,C=107,B=27
IBHMP	TT HYA	66	9.0	1110460	-261200	L	1	08264	L	656	FO	86052317	175200	001500		G E=4X,C=1.2X,B=38
IBHMP	TT HYA	66	9.0	1110460	-261200	L	3	28366	L	631	FO	86052318	182300	003800		G E=234,C=92,B=26
IBHMP	TT HYA	66	9.0	1110460	-261200	L	1	08265	L	631	FO	86052319	190800	001200		G E=3X,C=232,B=40
IBHMP	TT HYA	66	9.0	1110460	-261200	L	3	28367	L	629	FO	86052319	194300	004000		G E=229,C=104,B=24
IBHMP	TT HYA	66	9.0	1110460	-261200	L	1	08266	L	629	FO	86052320	203100	002000		G E=6X,C=1.5X,B=39
IBHMP	TT HYA	66	9.0	1110460	-261200	L	3	28368	L	641	FO	86052321	210300	003800		G E=218,C=98,B=22
IBHMP	TT HYA	66	9.0	1110460	-261200	L	1	08267	L	686	FO	86052321	215200	001200		G E=3X,C=220,B=37
IBHMP	TT HYA	66	9.0	1110460	-261200	L	3	28369	L	651	FO	86052322	222200	002500		G E=166,C=80,B=20
CSIJL	HD 98712	48	8.7	1118569	-201041	L	1	08431	L	1141	FO	86062004	044000	003000		G E=202,C=80,B=38
IC166	HD98712	48	08.83	1118570	-201042	L	3	28512	L	1123	FO	86062001	015711	015000	111	V
RMIJL	SKY BACK	07		1127259	+301434	L	3	28562	L			86062813	135200	001000		G E=37,B=25
RMIJL	AW UMA	40	6.9	1127259	+301434	L	3	28563	L	4012	FO	86062814	143400	002000		G E=55,C=2X,B=30
NPIJK	PB 8	70	13	1130566	-564934	L	3	28434	L	125	SO	86060514	140100	004000		G E=99,C=82,B=35
CEITS	HD 101007	39	0.0	1134368	-605334	L	3	29067	L	4591	FO	86082906	063700	002000		G C=250,B=20
SBITA	HD 101379	39	5.2	1137097	-650713	H	1	08971	L	19042	FO	86083023	235600	001100		G E=185,C=132,B=41
CCIJL	00000435	46	7.8	1138346	-440746	L	1	08409	M	2275	FO	86061715	155600	001400		G E=108,C=100,B=40
IC217	HD101563	44	06.76	1138390	-285519	H	1	08403	L	7021	FO	86061702	025103	011600	603	V
CEITS	HD 101712	39	7.9	1139268	-630812	L	3	28964	L	2914	FO	86082300	005200	001800		G C=205,B=18
CEITS	HD 101712	39	7.9	1139269	-630813	L	1	08957	L	2859	FO	86082223	231900	001300		G C=1.5X,B=20
CEITS	HD 101712	39	7.9	1139269	-630813	L	3	28963	L	2930	FO	86082223	234700	002500		G C=1.2X,B=18
CEITS	HD 101712	39	7.9	1139269	-630813	L	1	08958	L	2806	FO	86082300	002200	000800		G C=220,B=38
XLHJL	PG 1144+005	17	15.0	1144013	+002908	L	3	28385	L		BO	86052716	161300	009000		G C=255,B=35
XLHJL	PG 1144+005	17	15.0	1144013	+002908	L	3	28386	L		BO	86052718	181700	003500		G C=140,B=25
AGHCW	NGC 3998	88	11.5	1155214	+554357	L	1	08174	L	214	SO	86051108	081200	033000		G E=200,C=190,B=128
AGHCW	NGC 3998	88	11.5	1155214	+554357	L	3	28327	L	205	SO	86051708	083200	033700		G E=114,C=115,B=82
CCIJL	00000453	46	7.0	1155240	-272534	L	1	08404	M	4630	FO	86061705	053800	003000		G E=1X,C=185,B=39
SHIPF	SKY BKG	07		1158175	-192249	L	3	28542	L			86062508	084000	003000		G E=79,C=45,B=20
XQHMS	QSO 1202+281	85	0.0	1202089	+281053	L	3	28346	L		BO	86052007	075300	029000		G E=187,C=95,B=60
XQIMS	QSO 1202+281	85	16.2	1202089	+281053	L	3	28604	L		BO	86070404	040800	034000		G E=222,C=125,B=82
CSITS	HD 105563	39	7.2	1206447	-633232	L	3	28979	L	3871	FO	86082323	231500	000230		G C=1.2X,B=18
CSITS	HD 105563	39	7.2	1206447	-633232	L	3	28979	S	3863	FO	86082323	232900	000230		G C=140,B=18
CSITS	HD 105563	39	7.2	1206447	-633232	H	3	28980	L	3890	FO	86082400	000800	012000		G E=1.5X,C=210,B=60
CSITS	HD 105563	39	7.2	1206447	-633232	H	1	08960	L	3825	FO	86082402	021600	008500		G E=2X,C=220,B=60

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	ND	Obs.date	Exptim	mmmmsstt	ECC	Comment
HQ070	NGC 4151	84	12.54	1208004	+394102	L	1	08193	L	164	SO	86051400	002148	002500	343	U
HQ070	NGC 4151	84	12.55	1208004	+394102	L	1	08194	L	163	SO	86051402	022700	003500	352	U
HQ070	NGC4151	84	12.67	1208004	+394102	L	1	08217	L	147	SO	86051803	035021	002500	343	U
HQ070	NGC4151	84	12.64	1208004	+394102	L	1	08218	L	150	SO	86051806	060434	004300	353	U
HQ070	NGC4151	84	12.53	1208004	+394102	L	1	08246	L	166	SO	86052200	001048	003500	353	U
HQ070	NGC4151	84	12.53	1208004	+394102	L	1	08247	L	166	SO	86052201	014140	003500	353	U
HQ070	NGC4151	84	12.54	1208004	+394102	L	1	08285	L	164	SO	86052600	005037	003500	353	U
HQ070	NGC4151	84	12.54	1208004	+394102	L	1	08286	L	165	SO	86052602	022006	003500	353	U
HQ070	NGC 4151	84	12.55	1208004	+394102	L	1	08303	L	163	SO	86053000	004933	003500	353	U
HQ070	NGC 4151	84	12.62	1208004	+394102	L	1	08304	L	153	SO	86053003	031214	003500	353	U
HQ070	NGC 4151	84	12.57	1208004	+394102	L	1	08305	L	160	SO	86053005	052010	003500	353	U
HQ070	NGC4151	84	12.60	1208004	+394102	L	1	08308	L	156	SO	86053101	012110	003500	353	U
HQ070	NGC4151	84	12.62	1208004	+394102	L	1	08309	L	153	SO	86053102	025207	003500	353	U
HQ070	NGC4151	84	12.63	1208004	+394102	L	1	08310	L	152	SO	86053104	042319	003500	353	U
IQ128	NGC4151	84	12.66	1208004	+394102	L	1	08327	L	148	SO	86060321	214425	003500	353	U
IQ128	NGC4151	84	12.61	1208004	+394102	L	1	08328	L	155	SO	86060400	002801	003500	353	U
IQ218	NGC4151	84	12.60	1208004	+394102	L	1	08354	L	156	SO	86060803	031553	003500	353	U
IQ128	NGC4151	84	12.60	1208004	+394102	L	1	08370	L	156	SO	86061122	224435	003500	350	U
IQ128	NGC4151	84	12.56	1208004	+394102	L	1	08371	L	161	SO	86061200	003322	003000	350	U
IQ128	NGC4151	84	12.54	1208004	+394102	L	1	08398	L	164	SO	86061522	224314	003500	353	U
IQ128	NGC4151	84	12.54	1208004	+394102	L	1	08399	L	164	SO	86061600	003019	003000	353	U
HQ070	NGC 4151	84	12.52	1208004	+394102	L	3	28303	S	167	SO	86051400	014541	003500	031	U $
HQ070	NGC 4151	84	12.52	1208004	+394102	L	3	28303	L	167	SO	86051400	005038	004000	351	U $
HQ070	NGC4151	84	12.58	1208004	+394102	L	3	28337	S	159	SO	86051804	052304	003500	132	U $
HQ070	NGC4151	84	12.58	1208004	+394102	L	3	28337	L	159	SO	86051804	042823	004500	252	U $
HQ070	NGC4151	84	12.57	1208004	+394102	L	3	28353	L	160	SO	86052200	005222	004500	351	U
HQ070	NGC4151	84	12.48	1208004	+394102	L	3	28354	L	173	SO	86052202	022028	004000	351	U
HQ070	NGC4151	84	12.56	1208004	+394102	L	3	28376	L	161	SO	86052600	000045	004500	351	U
HQ070	NGC4151	84	12.57	1208004	+394102	L	3	28377	L	160	SO	86052601	013021	004500	351	U
HQ070	NGC 4151	84	12.61	1208004	+394102	L	3	28396	L	155	SO	86052923	235828	004500	351	U
HQ070	NGC4151	84	12.57	1208004	+394102	L	3	28397	S	160	SO	86053001	022142	004500	231	U $
HQ070	NGC4151	84	12.57	1208004	+394102	L	3	28397	L	160	SO	86053001	012919	004500	351	U $
HQ070	NGC 4151	84	12.56	1208004	+394102	L	3	28398	L	161	SO	86052903	035405	008000	361	U Lya,CIV SAT.;NV=76
HQ070	NGC4151	84	12.59	1208004	+394102	L	3	28399	L	158	SO	86053006	060758	004000	351	U
HQ070	NGC4151	84	12.68	1208004	+394102	L	3	28404	L	145	SO	86053023	235512	008000	361	U
HQ070	NGC4151	84	12.63	1208004	+394102	L	3	28405	L	152	SO	86053102	020153	004500	351	U
HQ070	NGC4151	84	12.67	1208004	+394102	L	3	28406	L	146	SO	86053103	033225	004500	351	U
HQ070	NGC4151	84	12.64	1208004	+394102	L	3	28407	L	151	SO	86053105	050358	006300	351	U
IQ128	NGC4151	84	12.64	1208004	+394102	L	3	28425	S	151	SO	86060322	231923	006500	352	U $
IQ128	NGC4151	84	12.64	1208004	+394102	L	3	28425	L	151	SO	86060322	222320	004500	352	U $
II003	NGC4151	84	12.58	1208004	+394102	L	3	28450	L	159	SO	86060802	022540	004500	351	U
IQ218	NGC 4151	84	12.65	1208004	+394102	L	3	28451	L	149	SO	86060803	035542	005200	361	U
IQ128	NGC4151	84	12.61	1208004	+394102	L	3	28472	L	155	SO	86061121	215300	004500	251	U
IQ128	NGC4151	84	12.61	1208004	+394102	L	3	28473	L	155	SO	86061123	232532	006000	361	U
IQ128	NGC4151	84	12.47	1208004	+394102	L	3	28496	L	175	SO	86061521	215245	004500	351	U

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
IQ128	NGC4151	84	12.52	1208004	+394102	L	3	28497	L	167	SO	86061523	232329	006000	361	V
OBHSS	HE3-759	26	9.8	1208393	-621305	L	1	08192	L	323	SO	86051319	194700	003000		G C=210,B=160
OBHSS	HE3-759	26	9.8	1208480	-621300	L	3	28301	L	326	SO	86051320	202400	004500		G C=136,B=105
RRHRB	HD 106516	42	6.1	1212360	-100114	L	1	08253	L	8714	FO	86052219	190500	000030		G C=227,B=35
RRHRB	HD 106516	42	6.1	1212360	-100114	L	3	28356	L	8717	FO	86052219	191500	000700		G C=141,B=23
RRHRB	HD 106516	42	6.1	1212360	-100114	H	1	08254	L	8962	FO	86052219	195100	004500		G C=1.2X,B=65
RRHRB	HD 106516	42	6.1	1212360	-100114	L	3	28357	L	9196	FO	86052220	204600	001000		G C=170,B=22
RRHRB	HD 106516	42	6.1	1212360	-100114	H	1	08255	L	9037	FO	86052221	212100	007000		G C=1.5X,B=60
RRHRB	HD 106516	42	6.1	1212360	-100114	L	3	28358	L	8962	FO	86052222	223600	001000		G C=175,B=19
EGITT	MK49	82	14.80	1216372	+040803	L	3	28648	L		BO	86071020	203123	037600	213	V
CBINE	HD 107447	53	6.6	1218365	-620015	L	1	08478	L	6059	FO	86062418	180000	000430		G C=1.5X,B=35
CBINE	HD 107805	53	6.8	1220522	-612108	L	1	08477	L	3855	FO	86062417	171000	001030		G C=1.5X,B=38
CBINE	HD 107805	53	6.8	1220522	-612108	L	1	08481	L	3849	FO	86062420	202000	000700		G C=200,B=35
GHIBS	HZ 25	20	10.4	1222539	+361545	H	3	28659	L	232	FO	86071203	035400	021000		G C=198,B=73
IQ019	3C273	85	13.16	1226332	+021943	L	1	08195	L	95	SO	86051404	042908	003000	403	V
IQ019	3C273	85	13.20	1226332	+021943	L	1	08196	L	91	SO	86051406	061006	003700	503	V
HQ070	3C273	85	13.17	1226332	+021943	L	3	28304	L	94	SO	86051403	035306	003000	351	V
IQ019	3C273	85	13.10	1226332	+021943	L	3	28305	L	100	SO	86051405	050440	006000	461	V
OD90K	HD 108903	49	1.6	1228226	-564959	H	1	08472	L	5307	FU	86062409	093000	010000		G E=5X,C=182,B=50
OD90K	TFLOOD	99	1.6	1228226	-564959	H	1	08473	S			86062412	120200	000025		G E=60X,B=102
OD90K	108903	49	1.6	1228226	-564959	H	1	08473	S			86062412	120400	000016		G
OD90K	HD 108903	49	1.6	1228226	-564959	L	3	28539	L	5383	FU	86062412	121300	004500		G E=255,C=70,B=30
CPIJH	HD 108945	36	5.5	1228306	+245035	H	3	28595	L	15846	FO	86070313	131300	002500		G C=192,B=50
CPIJH	HD 108945	36	5.5	1228306	+245035	H	1	08532	L	15811	FO	86070313	134500	002500		G C=1.3X,B=80
CPIJH	HD 108945	36	5.5	1228306	+245035	H	3	28596	L	15730	FO	86070314	141800	002500		G C=201,B=60
CPIJH	HD 108945	36	5.5	1228306	+245035	H	1	08533	L	15649	FO	86070314	145400	002500		G C=2X,B=120
CPIJH	HD 108945	36	5.5	1228306	+245035	H	3	28597	L	15516	FO	86070315	152800	003000		G C=1.3X,B=125
CPIJH	HD 108945	36	5.5	1228306	+245035	L	1	08534	L	15561	FO	86070316	160500	000010		G C=195,B=36
CPIJH	HD 108945	36	5.5	1228306	+245035	H	3	28598	L	15769	FO	86070316	163600	003000		G C=2X,B=152
CPIJH	HD 108945	36	5.5	1228306	+245035	H	1	08535	L	11597	FO	86070317	171400	002500		G C=3X,B=156
CPIJH	HD 108945	36	5.5	1228306	+245035	H	3	28599	L	15528	FO	86070317	174800	006000		G C=3X,B=120
CPIJH	HD 108945	36	5.5	1228308	+245036	H	3	28620	L	15413	FO	86070613	131400	004500		G C=2X,B=87
CPIJH	HD 108945	36	5.5	1228308	+245036	H	1	08555	L	15363	FO	86070614	140700	002500		G C=2X,B=105
CPIJH	HD 108945	36	5.5	1228308	+245036	H	3	28621	L	15290	FO	86070614	144100	004500		G C=5X,B=168
CPIJH	HD 108945	36	5.5	1228308	+245036	H	1	08556	L	15134	FO	86070615	153400	002500		G C=5X,B=200
CPIJH	HD 108945	36	5.5	1228308	+245036	H	3	28622	L	15194	FO	86070616	160700	003000		G C=5X,B=200
CPIJH	HD 108945	36	5.5	1228308	+245036	L	1	08557	L	15743	FO	86070617	171000	000010		G C=196,B=33
CPIJH	HD 108945	36	5.5	1228308	+245036	H	3	28623	L	15722	FO	86070617	171700	004500		G C=5X,B=158
CPIJH	HD 108945	36	5.5	1228308	+245036	H	3	28624	L			86070618	182500	002300		G C=182,B=44
CPIJH	HD 108945	36	5.5	1228308	+245036	H	3	28637	L	15942	FO	86070913	133600	004000		G C=255,B=65
CPIJH	HD 108945	36	5.5	1228308	+245036	H	1	08576	L	16477	FO	86070914	142500	002000		G C=1.2X,B=80
CPIJH	HD 108945	36	5.5	1228308	+245036	H	3	28638	L	15174	FO	86070914	145600	003000		G C=240,B=85
CPIJH	HD 108945	36	5.5	1228308	+245036	H	1	08577	L	14863	FO	86070915	153400	001700		G C=1.2X,B=105
CPIJH	HD 108945	36	5.5	1228308	+245036	H	3	28639	L	14915	FO	86070916	160600	002000		G C=210,B=80
CPIJH	HD 108945	36	5.5	1228308	+245036	L	1	08578	L	15139	FO	86070916	164200	000010		G C=210,B=35

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
CPIJH	HD 108945	36	5.5	1228308	+245036	L	3	28640	L	15422	FO	86070917	171200	000100		G C=2X,B=20
CPIJH	HD 108945	36	5.5	1228308	+245036	H	3	28641	L	15797	FO	86070917	174200	003000		G C=210,B=55
CPIJH	HD 108945	36	5.5	1228308	+245036	H	1	08579	L	15925	FO	86070918	181900	001500		G C=230,B=50
CPIJH	HD 108945	36	5.5	1228308	+245036	H	1	08591	L	15442	FO	86071213	130600	001700		G C=250,B=50
CPIJH	HD 108945	36	5.5	1228308	+245036	H	3	28662	L	15227	FO	86071213	133000	003000		G C=220,B=50
CPIJH	HD 108945	36	5.5	1228308	+245036	H	1	08592	L	14951	FO	86071214	140800	001500		G C=250,B=59
CPIJH	HD 108945	36	5.5	1228308	+245036	H	3	28663	L	14606	FO	86071214	143800	003000		G C=235,B=70
CPIJH	HD 108945	36	5.5	1228308	+245036	H	1	08593	L	14714	FO	86071215	151400	001500		G C=255,B=80
CPIJH	HD 108945	36	5.5	1228308	+245036	H	3	28664	L	14903	FO	86071215	154400	002000		G C=198,B=80
CPIJH	HD 108945	36	5.5	1228308	+245036	L	1	08594	L	15140	FO	86071216	161600	000010		G C=215,B=38
CPIJH	HD 108945	36	5.5	1228308	+245036	L	3	28665	L	15499	FO	86071216	164500	000100		G C=2X,B=20
CPIJH	HD 108945	36	5.5	1228308	+245036	H	3	28666	L	15761	FO	86071217	171600	002500		G C=190,B=50
CPIJH	HD 108945	36	5.5	1228308	+245036	H	3	28667	L	16468	FO	86071218	183400	001800		G C=142,B=30
CBINE	HD 108968	53	5.5	1228510	-590854	L	1	08479	L	13184	FO	86062418	185000	000048		G C=200,B=33
SDHFW	PG 1230+053	28	13.3	1230397	+051407	L	1	08243	L	71	SO	86052117	174600	002100		G C=228,B=42
IA080	HD109387	26	03.86	1231216	+700349	H	1	08372	L	815	FU	86061204	043628	000115	701	V
IA080	HD109387	26	04.06	1231216	+700349	H	3	28336	L	682	FU	86051703	030301	000125	502	V
IA080	HD 109387	26	03.95	1231216	+700349	H	3	28554	L	758	FU	86062703	034921	000125	500	V
IA080	HD109387	26	04.05	1231216	+700349	H	3	28601	L	689	FU	86070321	213106	000125	501	V
GE010	NGC4621	81	12.29	1239309	+115514	L	1	08129	L	206	SO	86050100	005456	035300	305	V
IA072	HDE311884	11	11.12	1240529	-624851	L	1	08918	L	146	FO	86081800	001343	003500	553	V
IA072	HDE311884	11	11.18	1240529	-624851	L	3	28874	L	138	FO	86080818	180030	009000	341	V
IA072	HDE311884	11	11.15	1240529	-624851	L	3	28925	L	142	FO	86081722	220534	012200	451	V
EGITT	V2033	82	14.70	1243327	+084457	L	3	28642	L		BO	86070919	195738	041000	204	V
EGHDW	NGC 4736	80	11	1248327	+412348	L	1	08289	L	212	FO	86052607	075500	015000		G C=103,B=59
EGHDW	NGC 4736	80	11	1248327	+412348	L	3	28380	L			86052610	103000	025400		G C=86,B=60
CVIGS	EX HYA	54	10.9	1249426	-285839	L	1	08761	L	138	FO	86072904	042000	000600		G E=1.5X,C=180,B=35
CVIGS	EX HYA	54	10.9	1249426	-285839	L	3	28772	L	130	FO	86072904	044900	000900		G E=3X,C=210,B=25
CVIGS	EX HYA	54	10.9	1249426	-285839	L	3	28773	L	170	FO	86072905	054000	000300		G E=1.2X,C=70,B=25
CVIGS	EX HYA	54	13.0	1249426	-285839	L	3	28857	L	85	SO	86080709	095500	000900		G E=63,C=50,B=30
CVIGS	EX HYA	54	13.0	1249426	-285839	L	1	08851	L	77	SO	86080710	102800	002000		G E=216,C=130,B=60
CVIGS	EX HYA	54	13.0	1249426	-285839	L	3	28858	L	87	SO	86080710	105500	004000		G E=222,C=150,B=65
CBINE	HD 112044	53	6.6	1251236	-580934	L	1	08427	L	5481	FO	86061918	183700	000348		G C=171,B=36
ADIFW	HD 112429	31	5.2	1253295	+654234	L	3	28558	L	17475	FO	86062713	134500	011800		G E=200,C=100X,B=87
ADIFW	HD 112429	31	5.2	1253295	+654234	H	1	08492	L	16625	FO	86062715	155000	001800		G C=1.2X,B=50
QSIEJ	QSO 1302-102	85		1302557	-101718	D	9	01844	2			86072518	180300	016000		G NO COMMENTS
QSIEJ	QSO 1302-102	85	14.9	1302557	-101718	L	1	08732	L		BO	86072608	080400	014100		G C=160,B=70
IQ140	PKS1302102	85	15.20	1302558	-101718	L	1	08734	L		BO	86072618	183256	025000	505	V
QSIEJ	QSO 1302-102	85	14.9	1302558	-101717	L	3	28750	L		BO	86072523	231100	025000		G E=138,C=130,B=65
IQ140	PKS1302102	85	15.20	1302558	-101718	L	3	28749	L		BO	86072518	182249	025000	342	V
QSIEJ	QSO 1302-102	85	14.9	1302558	-101717	L	3	28751	L		BO	86072603	034900	025000		G E=145,C=145,B=65
IQ140	PKS1302102	85	15.20	1302558	-101718	E	9	01845	2		BO	86072523	231400	016000		V FOR SWP 28750
QSIEJ	QSO 1302-102	85	14.9	1302558	-101717	D	9	01846	2			86072618	181200	016000		G NO COMMENTS
IQ140	PKS1302102	85	15.20	1302558	-101718	E	9	01847	2		BO	86072623	231700	016000		V FOR LWP 8735
QSIEJ	QSO 1302-102	85	14.9	1302558	-101717	L	1	08735	L		BO	86072623	231500	022500		G C=205,B=73

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
CCIJL	000W9427	46	9.3	1305146	+344005	L	1	08412	L	541	FO	86061719	195700	002500		G E=96,C=63,B=39
CCIJL	000W9427	46	9.3	1305146	+344005	L	3	28506	L	542	FO	86061720	202800	002000		G B=19
IA051	M53L	83	14.00	1310179	+182751	L	1	08623	L		BO	86071420	204627	009000	001	V
IA051	M53L	83	14.00	1310179	+182751	L	1	08624	L		BO	86071500	000856	015800	304	V
IA051	M53L	83	14.00	1310179	+182751	L	3	28675	L		BO	86071422	222714	009500	101	V
GCIBA	NGC 5024	83	7.6	1310300	+182600	L	3	28649	L	240	SO	86071104	040300	037000		G C=120,B=85
LGIHJ	HD 114961	49	8.0	1311297	-023233	L	1	08730	L	13433	FO	86072511	114900	009000		G E=2X,C=85,B=53
WDIJH	HZ 43	37	12.8	1314006	+292149	L	3	28391	L	141	SO	86052819	190600	000520		G C=205,B=18
WDIJH	HZ 43	37	12.8	1314006	+292149	L	3	28391	S	119	SO	86052819	192700	001030		G C=135,B=18
WDIJH	HZ 43	37	12.8	1314006	+292149	L	3	28392	L	117	SO	86052820	201900	000520		G C=206,B=17
WDIJH	HZ 43	37	12.8	1314006	+292149	L	3	28392	S	121	SO	86052820	203400	001200		G C=215,B=17
LDIDB	HD 115617	44	4.7	1315471	-180201	L	1	08809	T	25315	FO	86080210	100100	000120		G C=212,B=39
IM007	PB166	20	12.54	1321547	+493809	H	1	08595	L	165	SO	86071219	193923	042800	306	V RP:2,-212
SNIRK	SN 1986G	56	12	1322404	-424618	D	9	01812	2			86050615	153900	002000		G NO COMMENTS
SNIRK	SN 1986G	56	12	1322404	-424618	L	1	08150	L	229	SO	86050616	161200	003000		G C=55,B=41
SNIRK	SN 1986G	56	11.7	1322404	-424618	L	1	08182	L	306	SO	86051208	085500	035000		G C=180,B=145
SNIRK	SUPRNOVA	06	12.1	1322404	-424615	L	1	08224	L	201	SO	86051900	002700	087000		G C=240,B=173
SNIRK	SN 1986G	56	12.8	1322404	-424618	L	1	08299	L	125	SO	86052900	000400	086000		G C=212,B=168
HETOO	SN (N5128)	56	12.06	1322405	-424616	L	1	08158	L	253	SO	86050800	004435	033300	334	V 120" E,60"S OF NUCLE
IETOO	SN(N5128)	56	12.01	1322405	-424616	L	1	08202	L	264	SO	86051500	000049	039700	305	V 120"E,60"S OF NUCLEU
HETOO	SN(N5128)	56	99.99	1322405	-424616	E	9	01813	2			86050800	002000	004000		V
IETOO	SN(N5128)	56	12.32	1322405	-424615	E	9	01816	2	201	SO	86051900	001500	004000		V
IETOO	SN CRAGG 1	56	99.99	1322405	-424618	E	9	01819	2			86052823	234100	004000		V FOR LWP 8299
GCIRB	NGC 5139	83	0.0	1323440	-471330	D	9	01838	2			86070304	045900	016000		G NO COMMENTS
GCIRB	NGC 5139	83	0.0	1323457	-471302	D	9	01835	2			86070104	045900	016000		G NO COMMENTS
GCIRB	NGC 5139	83	0.0	1323457	-471302	L	1	08518	L		BO	86070105	050700	003000		G C=75,B=38
GCIRB	NGC 5139	83	0.0	1323457	-471302	L	3	28586	L		BO	86070105	054300	009000		G C=55,B=30
GCIRB	NGC 5139	83	0.0	1323457	-471302	L	1	08519	L		BO	86070107	072200	010000		G C=110,B=50
GCIRB	NGC 5139	83	0.0	1323457	-471302	D	9	01836	2			86070109	093500	016000		G NO COMMENTS
GCIRB	NGC 5139	83	6	1323457	-471102	L	1	08520	L		BO	86070109	094000	015000		G E=178,C=174,B=125
GCIRB	NGC 5139	83	0.0	1323457	-471502	L	1	08530	L		BO	86070305	050300	015000		G C=130,B=58
GCIRB	NGC 5139	83		1323577	-471302	D	9	01839	2			86070308	081100	016000		G NO COMMENTS
GCIRB	NGC 5139	83	6.0	1323577	-471302	L	1	08531	L		BO	86070308	081500	014000		G C=140,B=90
MGIEB	R HYA	51	5.0	1326585	-230124	L	1	08348	L	21360	FO	86060716	162400	000500		G E=60,B=33
MGIEB	R HYA	51	4.7	1326585	-230124	L	1	08544	L	26038	FO	86070418	183100	001500		G E=94,C=62,B=47
MGIEB	R HYA	51	5.0	1326585	-230124	L	1	08866	L	342	FU	86081110	104800	003000		G E=84,C=62,B=42
QSHEJ	WOLF 485	29	12.2	1327372	-081853	L	3	28464	L	145	SO	86060918	184300	001000		G C=86,B=20
QSHEJ	WOLF 485	29	12.2	1327372	-081853	L	1	08362	L	144	SO	86060919	190300	001000		G C=162,B=42
QSHEJ	WOLF 485	29	12.2	1327372	-081853	L	3	28465	L	154	SO	86060919	193400	001000		G C=87,B=18
QSIEJ	WOLF 485	29	12.2	1327399	-081823	L	3	28747	L	133	SO	86072516	162500	001000		G C=92,B=18
QSIEJ	WOLF 485	29	12.2	1327399	-081823	L	3	28748	L	145	SO	86072517	171300	001000		G C=85,B=16
QSIEJ	WOLF 485	29	12.2	1327399	-081823	L	3	28756	L	131	SO	86072617	173900	001000		G C=90,B=16
QSIEJ	WOLF 485	29	12.2	1327400	-081824	L	3	28754	L	158	SO	86072616	160800	001000		G C=77,B=25
QSIEJ	WOLF 485	29	12.2	1330338	-081113	L	3	28755	L	142	SO	86072616	165000	001000		G C=92,B=20
LDHMG	EQ VIR	46	9.3	1332063	-080509	H	1	08269	L	491	FO	86052407	075700	018007		G E=166,B=61

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
LDHMG	EQ VIR	46	9.3	1332063	-080509	L	1	08270	L	510	FO	86052411	115600	001800		G E=140,C=57,B=35
IM139	M 83	80	99.99	1334099	-293637	E	9	01826	2			86061101	011500	004000		V TARGET IN SWLA (SWP
GHIDY	M 83	80	8.1	1334099	-293637	D	9	01823	2			86060920	204200	016000		G NO COMMENTS
GHIDY	M83	80	8.1	1334099	-293637	H	3	28468	L		BO	86061021	211200	088500		G B=160
GHIDY	M 83	80	8.1	1334100	-293638	H	3	28466	L	125	FO	86060922	220500	083500		G C=1.2X,B=160
GHIDY	SKY M 83	80	8.1	1334100	-293638	H	1	08363	L			86060923	230700	079000		G B=145
GHIDY	M83 SKY	80	8.1	1334100	-293638	L	1	08366	L			86061021	211500	087500		G C=255,B=180
IM139	M83	80	11.29	1334110	-293639	E	9	01824	2	125	FO	86060922	225600	016000		V FIELD FOR SWP 28466+
GHIDY	M 83	80	8.1	1334100	-293700	D	9	01825	2			86061021	210000	016000		G NO COMMENTS
CBINE HD	118769	53	7.8	1337011	-572138	L	1	08426	L	2102	FO	86061917	174700	000636		G C=105,B=38
PHCAL	ETA UMA	21	02.03	1345340	+493344	L	1	08256	L	4164	FU	86052300	003510	000025	301	V TARGET POSITION X=-9
PHCAL	ETA UMA	21	02.04	1345340	+493344	L	1	08257	L	4137	FU	86052301	013554	001500	301	V TARGET POSITION X=-5
PHCAL	ETA UMA	21	01.98	1345340	+493344	L	1	08258	L	4367	FU	86052302	024217	010000	300	V TARGET POSITION X=18
PHCAL	ETA UMA	21	01.91	1345340	+493344	L	1	08259	L	4630	FU	86052305	050050	000200	301	V TARGET POSITION X=-8
PHCAL	ETA UMA	21	02.07	1345340	+493344	L	1	08260	L	4011	FU	86052306	060334	003000	302	V TARGET POSITION X=-3
PHCAL	ETA UMA	21	02.02	1345340	+493344	H	1	08438	L	4202	FU	86062103	034104	000005	503	V
PHCAL	ETA UMA	21	02.05	1345340	+493344	H	2	17911	L	4096	FU	86062221	215323	000008	502	V LWR 4.5 KV
PHCAL	ETA UMA	21	02.03	1345340	+493344	L	3	28359	L	4164	FU	86052300	002921	000025	300	V TARGET POSITION X=10
PHCAL	ETA UMA	21	01.93	1345340	+493344	L	3	28360	L	4552	FU	86052301	010432	001500	300	V TARGET POSITION X=14
PHCAL	ETA UMA	21	01.98	1345340	+493344	L	3	28361	L	4367	FU	86052302	020241	008000	301	V TARGET POSITION X=18
PHCAL	ETA UMA	21	01.91	1345340	+493344	L	3	28362	L	4630	FU	86052304	045418	000200	300	V TARGET POSITION X=11
PHCAL	ETA UMA	21	01.95	1345340	+493344	L	3	28363	L	4486	FU	86052305	052809	003000	300	V TARGET POSITION X=16
PHCAL	ETA UMA	21	02.00	1345340	+493344	H	3	28521	L	4279	FU	86062102	025453	000006	401	V
PHCAL	ETA UMA	21	02.03	1345340	+493344	H	3	28522	L	4170	FU	86062104	041217	000006	501	V
SHIPF	P/HALLEY	06	9.2	1345342	+493343	L	1	08375	L	141	SO	86061216	164500	002000		G E=123,B=55
PHCAL HD	120315	21	1.8	1345343	+493344	H	2	17885	L	1830	FU	86050419	192300	000006		G C=170,B=32
PHCAL HD	120315	21	1.8	1345343	+493344	H	2	17886	L	4012	FU	86050420	202800	000006		G C=180,B=30
PHCAL HD	120315	21	1.8	1345343	+493344	H	1	08156	L	4121	FU	86050719	194600	000005		G C=210,B=45
PHCAL HD	120315	21	1.8	1345343	+493344	H	3	28268	L	4126	FU	86050719	195400	000006		G C=171,B=34
PHCAL HD	120315	21	1.8	1345343	+493344	H	2	17902	L	4007	FU	86060117	171400	000006		G C=205,B=29
PHCAL HD	120315	21	1.8	1345343	+493344	L	1	08376	T	4079	FU	86061218	181100	000001		G C=195,B=40
PHCAL HD	120315	21	1.8	1345343	+493344	L	1	08377	L	4036	FU	86061219	190200	000001		G C=195,B=35
PHCAL HD	120315	21	1.8	1345343	+493344	L	1	08378	L	4117	FU	86061220	200400	000001		G C=190,B=36
STHRP	ETA UMA	21	1.9	1345343	+493344	L	1	08455	L	4097	FU	86062215	153100	000001		G C=5X,B=36
STHRP	ETA UMA	21	1.9	1345343	+493344	L	1	08456	L	4131	FU	86062216	160700	000001		G C=5X,B=38
STHRP	ETA UMA	21	1.9	1345343	+493344	L	1	08457	T	4132	FU	86062216	164100	000002		G C=5X,B=43
STHRP	ETA UMA	21	1.9	1345343	+493344	L	1	08458	L	4123	FU	86062217	171900	000001		G C=5X,B=36
STHRP	ETA UMA	21	1.9	1345343	+493344	L	1	08459	T	4106	FU	86062218	181400	000001		G C=2X,B=37
STHRP	ETA UMA	21	1.9	1345343	+493344	L	1	08460	T	4175	FU	86062218	185800	000001		G C=2X,B=37
STHRP	ETA UMA	21	1.9	1345343	+493344	L	1	08461	T	4185	FU	86062219	194900	000001		G C=2X,B=38
PHCAL HD	120315	21	1.8	1345343	+493344	H	2	17921	L	4250	FU	86062319	190600	000008		G C=205,B=30
PHCAL HD	120315	21	1.8	1345343	+493344	L	1	08513	T	4192	FU	86063013	135900	000001		G C=175,B=39
PHCAL HD	120315	21	1.8	1345343	+493344	L	1	08514	T	4188	FU	86063014	144900	000001		G C=173,B=40
PHCAL HD	120315	21	1.8	1345343	+493344	L	1	08515	T	4113	FU	86063015	154800	000001		G C=185,B=45
PHCAL HD	120315	21	1.8	1345343	+493344	H	1	08516	L	4107	FU	86063017	170500	000005		G C=200,B=43

PRC	Object	CL	MAG	R.A.	DEC	D C	Image #	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
PHCAL	HD 120315	21	1.8	1345343	+493344	L 1	08567	T	4204	FU	86070813	133700	000001		G C=190,B=38
PHCAL	HD 120315	21	1.8	1345343	+493344	L 1	08568	T	4092	FU	86070814	143000	000001		G C=198,B=40
PHCAL	HD 120315	21	1.8	1345343	+493344	L 1	08569	T	4054	FU	86070815	151800	000001		G C=205,B=50
PHCAL	HD 120315	21	1.8	1345343	+493344	L 1	08570	T	4041	FU	86070816	160400	000001		G C=210,B=51
PHCAL	HD 120315	21	1.8	1345343	+493344	L 1	08571	T	4069	FU	86070816	165000	000001		G C=200,B=50
PHCAL	HD 120315	21	1.8	1345343	+493344	L 1	08572	T	4685	FU	86070817	173800	000001		G C=180,B=40
PHCAL	HD 120315	21	1.8	1345343	+493344	L 1	08573	T	4173	FU	86070818	182900	000001		G C=178,B=33
PHCAL	HD 120315	21	1.8	1345343	+493344	H 3	28829	L	4081	FU	86080414	145700	000006		G C=175,B=33
PHCAL	HD 120315	21	1.8	1345343	+493344	H 1	08829	L	4091	FU	86080415	150300	000005		G C=205,B=45
XGIFB	A1795	90	0.0	1346343	+265004	L 3	28735	L		BO	86072204	040700	035000		G C=100,B=80
XGIFB	A1795	90	0.0	1346343	+265004	L 3	28746	L		BO	86072504	044000	032000		G B=72
NPIJK	NGC 5307	70	12	1347515	-505725	L 3	28436	L	190	SO	86060517	175600	003000		G E=118,C=107,B=77
NPIJK	HE2 99	70	13.2	1348462	-660835	L 3	28463	L	87	SO	86060916	164200	004000		G E=211,C=115,B=47
NPIJK	HE2 99	70	0.0	1348463	-660836	L 3	28420	L	86	SO	86060218	182200	001500		G E=106,C=78,B=40
NPIJK	HE2 99	70	0.0	1348463	-660836	L 1	08321	L	93	SO	86060218	184400	001500		G E=179,C=143,B=80
HSIJD	LSE0044	16	12.4	1349330	-475450	H 3	29086	L	146	SO	86082923	231400	027500		G C=200,B=90
IQ144	PG1351+64	85	14.61	1351460	+640028	L 1	08344	L	26	SO	86060702	025732	011000	402	V
IQ144	PG1351+64	85	14.61	1351461	+640029	L 3	28446	L	26	SO	86060621	215315	030000	362	V
USSBS	HD 121263	20	2.5	1352245	-470236	H 1	08852	L	2471	FU	86080712	124100	000007		G C=240,B=40
QSIMM	PG 1352+011	85	16.0	1352258	+010650	L 1	08860	L		BO	86080902	020500	018000		G E=100,C=110,B=62
QSIMM	PG 1352+011	85	16.0	1352258	+010650	L 3	28877	L			86080905	051100	020000		G B=45
GHIBS	HD 121800	20	9.11	1353544	+662139	H 3	28660	L	733	FO	86071208	080800	006500		G C=165,B=45
GHIBS	HD 121800	20	9.11	1353544	+662139	H 3	28661	L	744	FO	86071209	094700	006000		G C=160,B=45
RCIJD	LSS 3184	07	12.6	1357479	-655535	L 1	08966	L	117	SO	86083007	072900	005000		G C=2X,B=75
RCIJD	LSS 3184	07	12.6	1357479	-655535	L 3	29087	L	118	SO	86083008	082600	006000		G C=220,B=70
RCIJD	LSS 3184	07	12.6	1357479	-655535	L 1	08967	L	119	SO	86083009	093300	001700		G C=190,B=55
SRHLW	R CEN	51	6.0	1412569	-594055	L 1	08154	L	11659	FO	86050622	222300	002500		G E=49,C=49,B=35
MGIEB	R CEN	51	6.0	1412569	-594055	L 1	08349	L	15500	FO	86060717	171600	003000		G E=76,C=75,B=52
MGIEB	R CEN	51	5.7	1412569	-594055	L 1	08543	L	13874	FO	86070417	171900	003000		G B=176
MGIEB	R CEN	51	6.0	1412569	-594055	L 1	08867	L	8201	FO	86081112	121500	003000		G E=144,B=70
IQ138	NGC5548	84	13.81	1415435	+252201	L 1	08648	L	53	SO	86071721	211331	006500	451	V
IQ138	NGC5548	84	13.79	1415435	+252201	L 1	08649	L	54	SO	86071801	011549	009100	573	V
IQ138	NGC5548	84	99.99	1415435	+252201	L 3	28699	L	53	SO	86071719	193158	009000	353	V
IQ138	NGC5548	84	13.77	1415435	+252201	L 3	28700	L	55	SO	86071722	222409	016500	472	V
CCIJL	00006546	46	8.5	1419462	+295130	L 1	08417	M	1211	FO	86061817	173200	003500		G E=198,C=96,B=53
LGIHJ	HD 126327	49	6	1421567	+255549	L 1	08668	L	11873	FO	86072107	075800	015500		G E=150,C=85,B=62
MLIFB	HD 128220B	16	8.5	1432559	+192518	H 3	28423	L	1104	FO	86060318	180600	003000		G C=213,B=93
MLIFB	HD 128220B	16	8.5	1432560	+192519	H 3	28439	L	1249	FO	86060606	060400	003800		G C=180,B=41
MLIFB	HD 128220B	16	8.5	1432560	+192519	H 3	28440	L	1245	FO	86060607	071400	003800		G C=183,B=42
MLIFB	HD 128220B	16	8.5	1432560	+192519	H 3	28441	L	1285	FO	86060608	082300	003800		G C=180,B=41
MLIFB	HD 128220B	16	8.5	1432560	+192519	H 3	28442	L	1297	FO	86060609	093100	003800		G C=180,B=42
MLIFB	HD 128220B	16	8.5	1432560	+192519	H 3	28443	L	1261	FO	86060610	103900	003800		G C=190,B=42
MLIFB	HD 128220B	16	8.5	1432560	+192519	H 3	28444	L	1262	FO	86060611	114600	003800		G C=185,B=43
MLIFB	HD 128220B	16	8.5	1432560	+192519	H 1	08341	L	1262	FO	86060612	123200	002000		G C=140,B=45
MRITA	HD 128621	46	1.3	1435524	-603733	L 3	28488	L		BO	86061418	181900	000601		G E=250,C=65,B=40

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
MRITA	HD 128621	46	1.3	1435524	-603733	L	3	28489	L		BO	86061418	185800	004000		G E=7X,C=2X,B=45
MRITA	HD 128620	44	0.06	1435528	-603719	L	3	28484	L		BO	86061414	143700	000301		G B=20
MRITA	HD 128620	44	0.1	1435538	-603714	L	3	28486	L		BO	86061416	162800	000301		G E=137,C=1.2X,B=28
MRITA	HD 128620	44	0.1	1435538	-603714	L	3	28487	L		BO	86061417	170600	002000		G E=5X,C=10X,B=60
MRITA	HD 128620	44	0.1	1436112	-603749	L	3	28485	L		BO	86061415	153800	000301		G E=86,C=210,B=35
USSBS	HD 129989	47	2.7	1442480	+271703	H	1	08854	L	2277	FU	86080716	163300	001900		G C=5X,B=82
USSBS	HD 129989	47	2.7	1442480	+271703	H	1	08855	L	2182	FU	86080717	174900	000105		G C=108,B=35
USSBS	HD 130841	30	2.8	1448061	-155009	H	3	28859	L	1617	FU	86080713	134800	000242		G C=190,B=42
USSBS	HD 130841	30	2.8	1448061	-155009	H	1	08853	L	1640	FU	86080713	135500	000124		G C=237,B=55
USSBS	HD 130841	30	2.8	1448061	-155009	H	3	28860	L	1663	FU	86080714	142700	000114		G B=25
USSBS	HD 130841	30	2.8	1448061	-155009	H	3	28861	L	1634	FU	86080715	153400	000900		G C=5X,B=85
PHCAL	SERENDIPIT	07	99.99	1449048	+191827	L	2	17908				86062122	224552	000500	002	V LWR 5 KV
PHCAL	SERENDIPIT	07	99.99	1449048	+191827	L	2	17909				86062123	231344	002500	002	V LWR 5 KV
PHCAL	SERENDIPIT	07	99.99	1449048	+191827	L	2	17910				86062200	001539	003000	002	V LWR 5 KV
IC166	HD131156	44	99.99	1449048	+191827	E	9	01831	2			86061821	215100	016000		V FOR SWP 28508
CSIJL	HD 131156	44	4.7	144905	+191827	H	1	08471	L	26084	FO	86062405	054300	001400		G E=223,C=192,B=36
CSIJL	HD 131156	44	4.7	1449050	+191827	H	3	28508	L	25362	FO	86061822	220200	073500		G E=2X,C=230,B=144
CSIJL	HD 131156	44	4.7	1449050	+191827	H	1	08420	L	26948	FO	86061910	102600	005500		G E=5X,C=2X,B=60
CSIJL	TFLOOD	99	4.7	1449050	+191827	H	3	28509	S			86061910	105500	000005		G E=60X,CB=125
CSIJL	WAVCAL	98	4.7	1449050	+191827	H	3	28509	S			86061910	105700	000200		G E=60X,B=125
CSIJL	HD 131156	44	4.7	1449050	+191827	L	3	28510	L	28002	FO	86061911	114200	005000		G E=114,C=120,B=35
CSIJL	TFLOOD	99	4.7	1449050	+191827	H	1	08421	S			86061912	121600	000025		G E=60X,B=112
CSIJL	WAVCAL	98	4.7	1449050	+191827	H	1	08421	S			86061912	121800	000016		G E=60X,B=112
CSIJL	HD 131156	44	4.7	1449050	+191827	L	3	28513	L	26042	FO	86062006	061000	009000		G E=197,C=168,B=32
CSIJL	HD 131156	44	4.7	1449050	+191827	H	1	08432	L	26112	FO	86062007	074600	000800		G E=163,C=124,B=30
CSIJL	HD 131156	44	4.7	1449050	+191827	H	1	08439	L	26473	FO	86062105	053000	001000		G E=166,C=142,B=34
CSIJL	HD 131156	44	4.7	1449050	+191827	L	3	28523	L	26291	FO	86062105	055500	012000		G E=252,C=221,B=32
CSIJL	TFLOOD	99		1449050	+191827	H	1	08440	S			86062106	063600	000025		G E=60X,B=104
CSIJL	WAVECAL	98		1449050	+191827	H	1	08440	S			86062106	063800	000016		G E=60X,B=104
CSIJL	HD 131156	44	4.7	1449050	+191827	H	3	28525	L	340	FU	86062122	220100	050000		G E=255,C=170,B=103
CSIJL	HD 131156	44	4.7	1449050	+191827	H	1	08450	L	25638	FO	86062206	064000	001400		G E=237,C=186,B=36
CSIJL	TFLOOD	99		1449050	+191827	H	3	28526	S			86062207	073400	000005		G E=60X,B=122
CSIJL	WAVECAL	98		1449050	+191827	H	3	28526	S			86062207	073600	000200		G E=60X,B=122
CSIJL	HD 131156	44	4.7	1449050	+191827	L	3	28527	L	27191	FO	86062208	081600	010000		G E=222,C=208,B=31
CSIJL	TFLOOD	99		1449050	+191827	H	1	08451	S			86062208	085500	000025		G E=60X,B=104
CSIJL	WAVECAL	98		1449050	+191827	H	1	08451	S			86062208	085700	000016		G E=60X,B=104
CSIJL	HD 131156	44	4.7	1449050	+191827	H	1	08467	L	26368	FO	86062309	091300	001400		G E=226,C=190,B=36
CSIJL	HD 131156	44	4.7	1449050	+191827	L	3	28535	L	26178	FO	86062309	093300	018500		G E=1.2X,C=1.5X,B=60
CSIJL	HD 131156	44	4.7	1449050	+191827	L	3	28538	L	26015	FO	86062406	060400	016000		G E=2X,C=2X,B=40
CSIJL	HD 131117	44	6.3	1449329	-302220	H	1	08452	L	7732	FO	86062211	110400	002500		G E=73,C=122,B=38
CSIJL	HD 131117	44	6.3	1449329	-302220	L	3	28528	L	7665	FO	86062211	114600	006000		G C=83,B=28
CSIJL	HD 131511	46	6.0	1451070	+192112	L	3	28514	L	9656	FO	86062008	083200	011000		G E=79,C=70,B=40
XCILC	A 1991	88	0.0	1452133	+185046	L	3	28701	L		BO	86071803	034400	041000		G B=70
ADIFW	HD 132052	40	4.5	1454341	-040838	L	3	28549	L	335	FU	86062617	171200	007000		G E=114,C=90X,B=87
IC159	HD 133640	44	05.05	1502080	+475053	L	1	08495	L	24693	FO	86062821	210415	001000	881	V SATURATED ~20X

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
RMIJL	HD 133640	44	6.1	1502080	+475053	L	3	28564	L	22551	FO	86062816	162300	001000		G E=124,C=75,B=40
IC159	HD 133640	44	05.15	1502080	+475053	H	1	08496	L	23409	FO	86062821	215804	002000	501	U
RMIJL	HD 133640	44	6.1	1502080	+475053	L	3	28565	L	23891	FO	86062817	171200	001500		G E=187,C=115,B=53
IC159	HD 133640	44	05.09	1502080	+475053	L	3	28570	L	24159	FO	86062821	212446	001500	340	U Ly Alf/C IV=53DN,CII
RMIJL	HD 133640	44	6.1	1502080	+475053	L	3	28566	L	24512	FO	86062817	175900	001500		G E=170,C=92,B=39
IC159	HD 133640	44	05.23	1502080	+475053	L	3	28571	L	22279	FO	86062822	223447	001500	330	U Ly Alf/CIV=41DN,CII=
RMIJL	HD 133640	44	6.1	1502080	+475053	L	3	28567	L	23172	FO	86062818	184500	001500		G E=123,C=80,B=26
IC159	HD133640	44	05.18	1502080	+475053	H	3	28625	L	23049	FO	86070619	195148	040900	434	U
RMIJL	HD 133640	44	6.1	1502080	+475053	L	3	28568	L	22234	FO	86062819	193400	001500		G E=134,C=84,B=25
RMIJL	HD 133640	44	6.1	1502080	+475053	L	3	28569	L	24061	FO	86062820	202200	001500		G E=167,C=83,B=25
CBINE	HD 135592	53	6.7	1515159	-661853	L	1	08425	L	5376	FO	86061916	165800	000348		G C=205,B=36
IDIJC	HD 137569	24	7.9	1524008	+145204	L	1	08582	L	1799	FO	86071016	163200	000110		G C=4X,B=39
IDIJC	HD 137569	24	7.9	1524008	+145204	L	1	08582	S	1799	FO	86071016	163700	000110		G C=205,B=39
IDIJC	HD 137569	24	7.9	1524008	+145204	L	3	28646	L	1827	FO	86071017	171200	000116		G C=169,B=20
IDIJC	HD 137569	24	7.9	1524008	+145204	L	1	08599	L	2047	FO	86071318	184100	000200		G C=3X,B=35
IDIJC	HD 137569	24	7.9	1524008	+145204	L	1	08599	S	1958	FO	86071318	184800	000125		G C=220,B=35
OD95K	HD 137949	27	6.7	1526439	-171610	H	1	08856	L	5427	FO	86080718	185000	006000		G C=230,B=54
OD95K	HD 137949	27	6.7	1526439	-171610	L	3	28862	L	5309	FO	86080719	195700	001300		G E=51,C=3X,B=16
IBIFW	BD -08 3999	47	9.3	1529409	-082202	L	3	28561	L	565	FO	86062722	220400	086500		G E=210,C=3X,B=170
IC049	UZ LIB	46	09.41	1529411	-082157	E	9	01833	2	670	FO	86062522	221600	004000		U FIELD FOR SWP 28547
IBIFW	BD -08 3999	39	9.3	1529411	-082203	L	3	28547	L	576	FO	86062523	230000	085500		G E=185,C=225,B=142
IC049	UZ LIB	46	09.60	1529411	-082157	E	9	01834	2	565	FO	86062721	215200	004000		U FIELD FOR SWP 28561
IA080	HD138749	26	04.20	1530547	+313135	H	1	08400	L	603	FU	86061604	043119	000110	503	U
IA080	HD138749	26	04.28	1530547	+313136	H	3	28333	L	562	FU	86051723	234125	000145	502	U
IA080	HD138749	26	04.26	1530547	+313136	H	3	28476	L	573	FU	86061204	040011	000145	501	U
IA080	HD138749	26	04.20	1530547	+313135	H	3	28500	L	603	FU	86061604	042641	000145	501	U
IA080	HD138749	26	04.32	1530547	+313136	H	3	28552	L	542	FU	86062701	015708	000145	500	U
IA080	HD138749	26	04.37	1530547	+313136	H	3	28600	L	520	FU	86070319	195129	000145	501	U
IA080	HD138749	26	04.38	1530547	+313136	H	3	28723	L	516	FU	86072019	193500	000145	501	U
IA080	HD138749	26	09.56	1530547	+313136	H	3	28840	L	587	FU	86080517	174320	000145	500	U
HC010	1532+0918	47	12.02	1532549	+091910	L	1	08239	S	261	SO	86052102	021001	003000	22	U $
HC010	1532+0918	47	12.02	1532549	+091910	L	1	08239	L	261	SO	86052102	012041	003000	333	U $
HC010	153+0918	47	12.03	1532549	+091910	L	1	08240	L	260	SO	86052104	041936	014800	353	U
HC010	1532+0918	47	12.03	1532549	+091910	L	3	28347	L	259	SO	86052100	000843	013800	112	U
PMIGB	SZ 65	58	12.2	1536163	-343634	L	1	08935	L	160	SO	86082007	070300	004500		G E=65,B=40
PMIGB	SZ 65	58	12.2	1536163	-343634	L	1	08963	L	172	SO	86082523	232700	025500		G E=190,C=105,B=80
IA045	HE 2-133	70	10.84	1538009	-562711	L	1	08940	S	188	FO	86082016	173137	001500	401	U $
IA045	HE 2-133	70	10.84	1538009	-562711	L	1	08940	L	188	FO	86082016	163855	004500	801	U $
IA045	HE 2-133	70	10.88	1538009	-562711	L	3	28944	L	181	FO	86082016	160227	003000	400	U
WDIJH	TON 245	37	13.8	1538170	+265812	L	3	28889	L	53	SO	86081014	141600	001300		G C=145,B=75
WDIJH	TON 245	37	13.8	1538170	+265812	L	3	28889	S	52	SO	86081014	143600	002500		G C=120,B=75
SDHFW	PG 1538+401	28	13.3	1538478	+400438	L	1	08245	L	69	SO	86052122	220700	001700		G C=228,B=36
SDHFW	PG 1538+401	28	13.3	1538478	+400438	L	3	28352	L	70	SO	86052122	223200	001300		G C=245,B=19
PMIGB	SZ 68	58	10.5	1542014	-340808	L	1	08934	L	206	FO	86082005	054700	002500		G E=137,C=63,B=35
PMIGB	SZ 77	58	12.5	1548324	-354747	L	1	08933	L	115	FO	86082001	010800	018000		G E=176,C=99,B=65

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
PHCAL	BD+332642	20	11.14	1550010	+330528	L	1	08437	L	144	FO	86062101	015455	000310	503	V
PHCAL	BD+332642	20	11.11	1550010	+330528	L	3	28520	L	148	FO	86062101	012015	000400	400	V
PHCAL	BD +33 2642	20	10.8	1550019	+330528	L	2	17888	L	139	FO	86050422	221300	000420		G C=185,B=22
PHCAL	BD +33 2642	20	10.8	1550019	+330528	L	1	08216	L	156	FO	86051722	223100	000310		G C=210,B=34
PHCAL	BD +33 2642	20	10.8	1550019	+330528	L	3	28332	L	159	FO	86051723	233900	000400		G C=170,B=17
PHCAL	BD +33 2642	20	10.8	1550019	+330528	L	2	17905	L	145	FO	86060119	195400	000105		G C=88,B=25
PHCAL	BD +33 2642	20	10.8	1550019	+330528	L	2	17906	L	145	FO	86060120	202900	000310		G C=170,B=25
PHCAL	BD +33 2642	20	10.8	1550019	+330528	L	2	17922	L	148	FO	86062319	195600	000420		G C=188,B=21
PHCAL	BD +33 2642	20	10.8	1550019	+330528	L	1	08560	L	145	FO	86070715	155600	000310		G C=240,B=53
PHCAL	BD +33 2642	20	10.9	1550019	+330528	L	3	28629	L	146	FO	86070716	160600	000400		G C=180,B=26
PHCAL	BD +33 2642	20	10.8	1550019	+330528	L	1	08878	L	152	FO	86081314	145900	000310		G C=189,B=35
PHCAL	BD +33 2642	20	10.8	1550019	+330528	L	3	28894	L	152	FO	86081315	150700	000400		G C=170,B=15
PHCAL	BD +33 2642	20	10.8	1550019	+330528	L	2	17936	L	147	FO	86081414	145900	000420		G C=164,B=22
IC038	HD142560	58	11.46	1553240	-374058	L	1	08489	L	108	FO	86062622	221437	001200	361	V
IC038	HD 142560	58	11.44	1553240	-374058	L	3	28551	L	439	SO	86062622	223243	015000	352	V
IC038	RU LUPI	58	10.59	1553240	-374058	L	3	28582	L	234	FO	86063002	022706	014000	561	V
BEIGP	HD 142983	26	4.8	1555231	-140812	H	3	28613	L	24557	FO	86070512	123800	000319		G C=215,B=38
NPIJK	HE2 142	70	13.4	1555593	-554703	L	3	28435	L	60	SO	86060515	154700	006000		G B=57
CCIJL	000W9533	46	8.0	1556299	+275253	L	1	08418	M	1799	FO	86061819	190100	002500		G E=209,C=1.5X,B=41
CBINE	HD 142941	53	6.4	1556402	-633810	L	1	08424	L	5069	FO	86061915	155900	000400		G C=165,B=36
II094	T CRB	57	10.5	1557244	+260338	H	3	28490	L	361	FO	86061423	233400	062000		G E=240,C=215,B=138
II094	T CR B	57	10.17	1557245	+260339	L	1	08391	L	342	FO	86061422	224047	001000	331	V
IC100	T CRB	57	10.25	1557245	+260338	L	1	08658	L	318	FO	86071920	201822	002000	571	V
IC100	T CRB	57	10.17	1557245	+260338	L	3	28715	L	342	FO	86071920	205620	003500	111	V TRACK LOST
IC100	T CRB	57	10.22	1557245	+260339	L	3	28716	L	326	FO	86071922	221008	006000	461	V
II094	T CR B	57	99.99	1557245	+260339	E	9	01829	2			86061422	220000	004000		V FOR SWP28490
CBINE	HD 143999	53	8.0	1602500	-624645	L	1	08423	L	2144	FO	86061915	150900	000324		G C=156,B=35
OBHSS	HE3-1138	26	9.6	1603060	-525500	L	3	28313	L	278	FO	86051515	153600	010000		G B=75
OBHSS	HE3-1138	26	9.6	1603107	-525540	L	1	08205	L	287	FO	86051514	145600	003000		G C=80,B=53
SPIJW	SATURN	03	0.7	1603269	-185323	L	3	28872	L			86080814	143100	003000		G E=127,C=2X,B=98
SPIJW	SATURN	03	+0.4	1603269	-185323	L	3	28873	L			86080815	153300	006500		G C=5X,B=65
SPIJW	SATURN	03	+0.4	1603274	-185341	L	3	28880	L			86080913	135600	003000		G E=130,C=2X,B=110
SPIJW	SATURN	03	+0.4	1603275	-185341	L	3	28881	L			86080915	151000	007500		G E=176,C=5X,B=90
IS205	SATURN	03	00.40	1604170	-185145	L	3	28736	L		BO	86072220	202034	005000	701	V TRACKING ON TITAN
IS205	SATURN	03	00.40	1604170	-185145	E	9	01843	2		BO	86072220	201000	016000		V
PMIGB	SZ 98	58	12.4	1605010	-385651	L	1	08938	L	163	SO	86082012	124600	002500		G E=115,B=47
PMIGB	SZ 98	58	12.4	1605010	-385651	L	1	08939	L	160	SO	86082014	140800	004000		G E=162,B=51
IA071	HR6000	27	07.00	1605128	-385743	H	1	08846	L	5732	FO	86080618	183907	002500	773	V
IA071	HR5999	33	07.53	1605128	-385823	L	3	28853	L	3598	FO	86080618	180216	003000	770	V
SDHFW	PG 1605+072	28	12.9	1605370	+071239	L	3	28351	L	98	SO	86052119	194200	001030		G C=223,B=19
SDHFW	PG 1605+072	28	12.9	1605370	+071239	L	1	08244	L	97	SO	86052120	200300	001500		G C=253,B=40
LDIDB	HD 145675	46	6.7	1608468	+435703	L	1	08448	M	6022	FO	86062120	200400	001930		G C=1.5X,B=40
LDIDB	HD 145675	46	6.7	1608468	+435703	L	1	08448	S	5518	FO	86062120	203900	000600		G C=195,B=38
LGHJL	HD 145544	45	3.8	1610521	-633337	H	1	08291	L	554	FU	86052619	195200	001800		G E=178,C=162,B=43
LDHMG	GL616.2	48	10.0	1615593	+552329	H	1	08262	L	348	FO	86052308	082700	036200		G E=2X,B=107

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
LDHMG	GL616.2	48	10.0	1615594	+552329	L	1	08261	L	351	FO	86052307	073300	001500		G E=131,C=63,B=40
IA051	M4-V4	45	10.20	1620181	-262900	L	1	08600	L	333	FO	86071320	205108	006000	211	V
IA051	M4-V4	45	10.22	1620181	-262900	L	3	28673	L	325	FO	86071319	194446	006000	110	V
CMIFB	HD 148283	33	5.5	1623371	+373025	H	1	08326	L	13650	FO	86060319	192700	001800		G C=227,B=78
CMIFB	HD 148283	33	5.5	1623371	+373025	H	1	08836	L	14922	FO	86080509	092200	001800		G C=198,B=55
PMHSS	ROX 20	58	14.5	1624130	-244500	L	1	08773	L		BO	86073008	080900	013500		G B=138
IC171	HD147675	47	04.29	1625427	-784721	H	1	08744	L	556	FU	86072723	232429	002000	553	V
IM085	HD 148740	24	07.49	1629491	-655435	H	1	08317	L	3699	FO	86060100	001954	001000	403	V
IM085	HD 148740	24	07.58	1629491	-655435	H	3	28412	L	3427	FO	86053123	234032	002000	400	V
ISHFB	HD 149630	21	4.20	1632292	+423220	H	1	08130	L	452	FU	86050119	194200	000240		G C=210,B=43
CMIFB	HD 149630	22	4.2	1632292	+423220	H	3	28424	L	448	FU	86060320	204100	000430		G C=165,B=33
CMIFB	HD 149630	22	4.2	1632293	+423221	H	3	28836	L	449	FU	86080511	110800	000500		G C=185,B=35
PHCAL	HD 149438	20	2.8	1632459	-280651	H	3	28628	L	1852	FU	86070714	141100	000006		G C=204,B=35
PHCAL	HD 149438	20	2.8	1632459	-280651	H	1	08559	L	1851	FU	86070714	141700	000006		G C=218,B=43
PHCAL	HD 149438	20	2.8	1632459	-280651	H	1	08565	S	1855	FU	86070809	093000	000011		G C=219,B=42
PHCAL	HD 149438	20	2.8	1632459	-280651	H	3	28634	S	1871	FU	86070809	093600	000009		G C=179,B=33
PHCAL	TFLOOD	99		1632459	-280651	L	3	28820	S			86080314	141800	000005		G E=20X,B=100
PHCAL	WAVECAL	98		1632459	-280651	L	3	28820	S			86080314	142000	000002		G E=20X,B=100
PHCAL	TFLOOD	99		1632459	-280651	L	1	08820	S			86080314	142200	000025		G E=20X,B=100
PHCAL	WAVECAL	98		1632459	-280651	L	1	08820	S			86080314	142400	000001		G E=20X,B=100
PHCAL	TFLOOD	99		1632459	-280651	H	3	28821	S			86080315	151800	000005		G E=60X,B=125
PHCAL	WAVECAL	98		1632459	-280651	H	3	28821	S			86080315	151900	000200		G E=60X,B=125
PHCAL	TFLOOD	99		1632459	-280651	H	1	08821	S			86080315	152300	000025		G E=60,B=105
PHCAL	WAVECAL	98		1632459	-280651	H	1	08821	S			86080315	152500	000016		G E=60X,B=105
PHCAL	HD 149438	20	2.8	1632459	-280651	H	3	28822	L	1877	FU	86080316	160100	000006		G C=180,B=31
PHCAL	HD 149438	20	2.8	1632459	-280651	H	2	17931	L	2156	FU	86081410	103600	000008		G C=163,B=32
LDIJL	CM DRA	48	12.9	1633224	+571549	L	3	28619	L	118	SO	86070520	200300	079000		G E=174,B=120
LDIJL	CM DRA	48	12.9	1633224	+571549	L	1	08554	L	114	FO	86070609	092300	009000		G E=155,C=108,B=80
IC158	CM DRA	48	12.91	1633225	+571550	E	9	01840	2	118	SO	86070519	195000	004000		V FOR SWP28619
GHIBS	PHL382	20	11.3	1633296	-470147	H	3	28668	L	353	SO	86071304	041000	040000		G C=210,B=100
IDIJC	HD 149452	12	9.0	1633297	-470147	L	3	28669	L	662	FO	86071311	114600	000730		G C=115,B=18
IDIJC	HD 149452	12	9.0	1633297	-470147	L	1	08596	L	667	FO	86071312	123900	002800		G C=4X,B=50
IDIJC	HD 149452	12	9.0	1633297	-470147	L	1	08596	S	657	FO	86071313	131900	000700		G C=190,B=50
IDIJC	HD 149452	12	9.0	1633297	-470147	L	3	28670	L	683	FO	86071313	133200	001030		G C=150,B=19
IM085	CDD-673184	24	10.98	1635397	-674604	H	3	28413	L	166	FO	86060101	010930	021800	402	V
IM085	HD 149770	21	08.13	1636103	-622726	H	1	08316	L	2105	FO	86053122	223447	002000	402	V
IM085	HD 149770	21	08.19	1636103	-622726	H	3	28411	L	1999	FO	86053121	214719	004000	400	V
XBIJL	HD 150708	47	8.2	1638220	+604750	L	1	08405	L	1149	FO	86061707	072100	001500		G C=1.3X,B=35
XBIJL	HD 150708	47	8.2	1638220	+604750	L	3	28504	L	1151	FO	86061707	074400	023000		G E=83,C=100,B=58
XBIJL	HD 150708	47	8.2	1638220	+604750	L	1	08406	L	1153	FO	86061708	084100	001000		G C=220,B=35
GCHRB	NGC 6205	83		163954	+363316	L	1	08211	L	186	FO	86051610	103000	026000		G C=1.2X,B=95
HSIJD	LSE 256	16	12.0	1640279	-631350	L	1	08969	L	222	SO	86083012	122100	000600		G C=240,B=165
HSIJD	LSE 256	16	12.0	1640279	-631350	L	3	29090	L	204	SO	86083014	143400	001400		G C=255,B=55
EGIJH	NGC 6212	84	15.2	1641419	+395356	L	3	28692	L		BO	86071703	035200	041500		G C=118,B=80
MRITA	HD 150798	47	1.9	1643209	-685619	H	1	08390	L	3367	FU	86061420	201200	000600		G C=80,B=35

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
LGHJL	HD 150798	47	1.9	1643210	-685619	L	3	28381	L	3319	FU	86052620	203600	003000		G E=234,C=100,B=30
LGHJL	HD 150798	47	1.9	1643210	-685619	H	1	08292	L	3339	FU	86052621	211600	002500		G E=3X,C=180,B=42
GCIBA	NGC 6218	83	6.6	1644360	-015200	S	9	01848	2			86080302	024500	002000		G NO COMMENTS
GCIBA	NGC 6218	83	6.6	1644360	-015200	L	3	28817	L		BO	86080302	025100	036000		G E=96,C=102,B=75
GCIBA	NGC 6218	83	6.6	1644373	-015215	S	9	01849	2			86080502	022900	002000		G NO COMMENTS
GCIBA	NGC 6218	83	6.6	1644373	-015215	L	3	28835	L		BO	86080502	023700	037000		G C=134,B=103
CPIJH	HD 152107	36	4.81	1647461	+460409	H	1	08575	L	257	FU	86070912	124000	001500		G C=200,B=50
CPIJH	HD 152107	36	4.80	1647461	+460409	H	1	08590	L	248	FU	86071211	113500	001500		G C=1.5X,B=50
OD69K	HE2 182	70	12.5	1649492	-640934	L	3	28249	L	221	SO	86050118	183500	001500		G E=94,C=85,B=20
EGHSS	NGC 6240	84	13.3	1650276	+022906	L	1	08189	L	22	SO	86051308	081900	015000		G B=59
EGHSS	NGC 6240	84	13.3	1650276	+022906	L	3	28298	L	22	SO	86051310	105700	023000		G B=70
ADIFW	HD 152598	40	5.3	1651042	+314659	L	3	28559	L	15791	FO	86062716	165200	013500		G E=205,C=100X,B=85
IA071	AK SCO	41	09.51	1651230	-364824	H	1	08847	L	615	FO	86080620	200558	028100	334	V
LDIDB	HD 152792	44	6.8	1651574	+425436	L	1	08447	T	4497	FO	86062118	185400	000655		G C=220,B=40
IA051	M10 I-32	25	13.50	1654314	-035957	L	1	08601	L		BO	86071400	003504	013200	312	V
IA051	M10 I-32	25	13.50	1654314	-035957	L	3	28674	L		BO	86071322	224344	010000	311	V
OBHSS	HE3-1300	26	11.1	1655338	-423737	L	1	08203	L	128	FO	86051508	080500	003500		G C=93,B=40
OBHSS	HE3-1300	26	11.1	1655338	-423737	L	3	28311	L	129	FO	86051508	085200	012000		G C=60,B=29
OD91K	HD 153919	66	6.7	1700326	-374628	H	1	08667	L	6478	FO	86072106	062900	001400		G C=226,B=47
OD91K	HD 153919	66	6.7	1700327	-374629	H	3	28730	L	6455	FO	86072103	034400	002500		G C=298,B=41
OD91K	HD 153919	66	6.7	1700327	-374629	H	1	08665	L	6439	FO	86072104	041700	001400		G C=230,B=45
OD91K	HD 153919	66	6.7	1700327	-374629	H	3	28731	L	6380	FO	86072104	044800	002500		G C=199,B=40
OD91K	HD 153919	66	6.7	1700327	-374629	H	1	08666	L	6415	FO	86072105	052300	001400		G C=226,B=45
OD91K	HD 153919	66	6.7	1700327	-374629	H	3	28732	L	6483	FO	86072105	055500	002500		G C=200,B=40
OBHSS	HE3-1330	26	9.0	1703180	-423200	L	1	08190	L	655	FO	86051315	155600	003000		G C=2X,B=68
OBHSS	HE3-1330	26	9.0	1703180	-423200	L	3	28299	L	655	FO	86051316	163300	004000		G C=150,B=45
OBHSS	HE3-1330	26	9.0	1703204	-423236	L	1	08198	L	641	FO	86051417	172000	001000		G C=1.2X,B=50
QSHEJ	QSO 1704+608	85	15.3	1704033	+604831	L	1	08711	L		BO	86072404	040400	028000		G C=166,B=86
QSHEJ	QSO 1704+608	85	15.3	1704033	+604831	L	1	08712	L			86072409	091200	006500		G C=81,B=46
QSIEJ	QSO 1704+608	85	15.3	1704034	+604829	L	1	08736	L		BO	86072704	041100	020000		G E=158,B=138,B=70
QSIEJ	QSO 1704+608	85	15.3	1704035	+604831	L	1	08737	L		BO	86072707	075900	014000		G C=190,B=150
SPIJN	URANUS	03	6	1707218	-225918	L	1	08899	M	13616	FO	86081608	085000	005000		G C=20X,B=83
SPIJN	URANUS	03	6	1707219	-225918	L	1	08898	M	13928	FO	86081607	070800	005000		G C=30X,B=80
SPIJN	URANUS	03	6	1707220	-225920	L	1	08897	M	13929	FO	86081605	055100	002500		G C=16X,B=55
SPIJN	URANUS	03	6	1707223	-225921	L	1	08896	M	13859	FO	86081604	045300	001000		G C=7X,B=40
SPIJN	URANUS	03	6	1707224	-225922	L	1	08895	M	13821	FO	86081603	035400	000500		G C=3X,B=36
SPIJN	URANUS	03	6	1707227	-225923	L	1	08892	M	13407	FO	86081601	013200	000030		G C=100,B=33
SPIJN	URANUS	03	6	1707227	-225923	L	1	08893	M	13600	FO	86081602	021800	000137		G C=1.3X,B=34
SPIJN	URANUS	03	6	1707227	-225923	L	1	08894	M	13747	FO	86081603	030500	000230		G C=225,B=34
IS205	URANUS	03	06.01	1709211	-230146	L	3	28738	L	13037	FO	86072301	014816	006000	300	V
IS205	URANUS	03	06.01	1709220	-230147	L	3	28737	S	13070	FO	86072222	222854	015000	302	V 3EXPO:22:28:54/30M//
OBHSS	HE3-1359	26	9.6	1711420	-401600	L	1	08207	L	387	FO	86051519	195900	004000		G C=192,B=145
OBHSS	HE3-1359	26	9.6	171146	-401643	L	3	28315	L	395	FO	86051520	204900	002000		G B=30
NPIWF	75+35 1	70	14	1712305	+491919	L	3	28437	L	50	SO	86060520	200000	004600		G C=3X,B=27
NPIWF	75+35 1	70	-13.6	1712305	+491919	L	3	28462	L	60	SO	86060914	145600	001300		G E=232,C=193,B=19

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
NPIWF	75 +35 1 70		13.6	1712305	+491919	L	1	08361	L	231	SO	86060915	151700	001300		G C=160,B=40
GCHRB	NGC 6341	83	7.0	1715349	+431120	L	1	08249	L		BO	86052207	075400	018000		G C=3X,B=65
GCHRB	NGC 6341	83	7.0	1715349	+431120	L	1	08250	L		BO	86052211	112400	010000		G C=240,B=56
EGIJH	ARP 102B	84	14.7	1717562	+490148	L	1	08633	L		BO	86071608	084700	012000		G C=80,B=56
EGIJH	ARP 102B	84	14.7	1717563	+490149	L	3	28684	L		BO	86071604	041300	026500		G E=81,C=85,B=62
PLHNE	HD 156979	53	6.6	1719050	-453401	L	3	28291	L	5773	FO	86051122	221000	003900		G C=80,B=20
XBIJL	HD 157482	44	5.6	1720049	+400120	L	3	28505	L	12767	FO	86061712	125500	003800		G C=5X,B=23
XBIJL	HD 157482	44	5.6	1720050	+400121	L	1	08407	L	12773	FO	86061712	122400	001000		G C=10X,B=42
QSHCW	4C 34.47	85	15.5	1721319	+342041	L	1	08149	M		BO	86050411	114200	018800		G C=175,B=105
QSHCW	4C 34.47	85	15.5	1721320	+342041	L	3	28257	M		BO	86050307	075000	041000		G E=1.5X,C=151,B=93
QSHCW	4C 34.47	85	15.5	1721320	+342041	L	3	28261	L		BO	86050407	073900	022500		G E=188,C=95,B=60
QSHCW	4C 34.47	85	15.5	1721320	+342042	L	1	08171	L		BO	86051007	074900	027000		G E=125,C=198,B=90
SUHHM	URANUS	03	5.5	1722247	-231442	L	3	28246	L	12579	FO	86050107	075900	012000		G E=140,C=150,B=38
SUHHM	URANUS	03	5.5	1722247	-231442	L	3	28247	L	12672	FO	86050111	112200	015000		G E=175,C=190,B=50
WDIPS	V442 OPH	63	13.0	1729220	-161315	L	3	28959	L	57	SO	86082211	115300	003000		G C=178,B=139
WDIPS	V442 OPH	63	14.0	1729220	-161315	L	1	08955	L	74	SO	86082212	124500	002000		G C=2X,B=210
WDIPS	V442 OPH	63	14.0	1729220	-161315	L	3	28960	L	81	SO	86082213	131900	002000		G C=205,B=167
WDIPS	V442 OPH	63	14.0	1729220	-161315	L	1	08956	L	86	SO	86082213	135600	001000		G C=174,B=132
WDIPS	V442 OPH	63	14.0	1729220	-161315	L	3	28961	L	65	SO	86082214	142800	002000		G C=114,B=85
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08669	L	3504	FO	86072111	115100	000130		G C=221,B=34
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08670	L	3340	FO	86072112	122600	000130		G C=219,B=35
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08671	L	3019	FO	86072113	130500	000142		G C=213,B=36
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08672	L	2557	FO	86072113	133900	000202		G C=217,B=35
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08673	L	2271	FO	86072114	141600	000220		G C=226,B=35
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08674	L	2317	FO	86072114	145100	000210		G C=239,B=35
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08675	L	2747	FO	86072115	153200	000150		G C=255,B=34
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08676	L	3074	FO	86072116	161400	000140		G C=1.2X,B=35
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08677	L	3190	FO	86072116	164900	000130		G C=1.2X,B=35
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08678	L	3341	FO	86072117	172300	000115		G C=241,B=34
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08679	L	3472	FO	86072118	180200	000110		G C=240,B=34
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08683	L	2516	FO	86072212	120600	000140		G C=220,B=37
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08684	L	2204	FO	86072212	124300	000155		G C=225,B=34
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08685	L	2201	FO	86072213	131700	000155		G C=240,B=35
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08686	L	2660	FO	86072214	141800	000130		G C=225,B=38
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08687	L	2921	FO	86072214	145100	000120		G C=230,B=35
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08688	L	3041	FO	86072215	152400	000120		G C=255,B=38
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08689	L	3161	FO	86072215	155800	000110		G C=240,B=37
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08690	L	3367	FO	86072217	170500	000100		G C=220,B=35
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08691	L	3273	FO	86072217	173900	000110		G C=240,B=35
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08692	L	3039	FO	86072218	183700	000115		G C=238,B=35
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08695	L	2325	FO	86072312	120100	000140		G C=186,B=35
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08696	L	2733	FO	86072312	123600	000125		G C=109,B=34
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08697	L	3105	FO	86072313	131100	000120		G C=205,B=35
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08698	L	3376	FO	86072313	134400	000115		G C=209,B=34
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08699	L	3535	FO	86072314	141900	000110		G C=217,B=35

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08700	L	3642	FO	86072314	145200	000110		G C=222,B=35
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08701	L	3638	FO	86072315	152600	000110		G C=219,B=35
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08702	L	3519	FO	86072315	155900	000110		G C=215,B=35
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08703	L	3330	FO	86072316	163300	000115		G C=221,B=35
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08704	L	3109	FO	86072317	170700	000120		G C=214,C=35
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08705	L	2727	FO	86072317	175500	000130		G C=216,B=34
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08706	L	2350	FO	86072318	183400	000150		G C=225,B=34
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08713	L	2772	FO	86072411	114300	000125		G C=209,B=35
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08714	L	3067	FO	86072412	121800	000120		G C=225,B=35
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08715	L	3214	FO	86072412	125200	000115		G C=217,B=35
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08716	L	3380	FO	86072413	132800	000110		G C=221,B=34
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08717	L	3406	FO	86072414	140200	000110		G C=222,B=34
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08718	L	3392	FO	86072414	143600	000110		G C=239,B=35
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08719	L	3225	FO	86072415	151000	000110		G C225,B=35
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08720	L	3002	FO	86072415	154500	000120		G C=240,B=34
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08721	L	2788	FO	86072416	161800	000125		G C=220,B=34
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08722	L	2469	FO	86072416	165100	000140		G C=247,B=35
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08723	L	2071	FO	86072417	172700	000150		G C=227,B=35
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08724	L	2045	FO	86072418	180800	000150		G C=233,B=35
CBIJE	HD 159441	31	7.4	1733507	-564729	L	1	08725	L	2398	FO	86072418	184200	000135		G C=226,B=35
OBHSS	HE3-1482	26	9.0	1745000	-280000	L	3	28302	L	959	FO	86051322	222200	003000		G B=19
OBHSS	HE3-1482	26	9.02	1745047	-275951	L	3	28308	L	985	FO	86051413	135800	014000		G C=115,B=87
IE095	HD162214	57	10.84	1747314	-064147	L	3	28733	L	187	FO	86072120	201211	018000	331	U
IC100	HD162214	57	11.12	1747315	-064148	L	1	08659	L	146	FO	86072000	000200	016500	772	U
IE095	HD162214	57	10.86	1747315	-064148	L	1	08680	L	184	FO	86072123	231653	006000	402	U
II059	RS OPH	55	11.27	1747315	-064142	L	1	08825	L	128	FO	86080323	234521	006200	412	U
II059	RS OPH	55	11.14	1747315	-064142	L	3	28825	L	143	FO	86080321	214303	011600	331	U
IA080	HD162732	26	06.95	1748447	+482425	H	3	28334	L	5973	FO	86051800	004314	002000	502	U
ACIRP	V453 SCO	66	6.4	1752597	-322806	L	3	28930	L	5058	FO	86081812	123200	000220		G C=178,B=15
ACIRP	V453 SCO	66	6.4	1752597	-322806	L	1	08921	L	5265	FO	86081812	123900	000030		G C=252,B=36
ACIRP	V453 SCO	66	6.4	1752597	-322806	L	1	08921	S	5115	FO	86081812	124500	000300		G C=1.2X,B=36
ACIRP	V453 SCO	66	6.4	1752598	-322807	L	3	28911	L	6912	FO	86081516	163200	000130		G E=102,C=152,B=19
ACIRP	V453 SCO	66	6.4	1752598	-322807	L	1	08889	L	7060	FO	86081516	163700	000030		G C=1.5X,B=36
IA069	HD163296	33	07.11	1753206	-215657	H	1	08780	L	5164	FO	86073022	224012	003200	441	U
AEITS	HD 163296	30	6.8	1753206	-215656	L	3	28792	M	4889	FO	86073106	060100	001030		G E=87,C=4X,B=35
IA069	HD163296	33	07.25	1753206	-215657	H	1	08793	L	4594	FO	86080100	000914	004000	552	U
AEITS	HD 163296	30	6.80	1753206	-215656	H	1	08795	L	5165	FO	86080107	073900	004000		G E=208,C=205,B=60
IA069	HD163296	33	09.42	1753206	-215656	H	1	08794	L	668	FO	86080101	013500	004000		U
AEITS	HD 163296	30	6.80	1753206	-215656	L	3	28805	L	5089	FO	86080108	082600	000800		G E=133,C=3X,B=30
IA069	HD163296	33	07.22	1753206	-215657	H	1	08803	L	4720	FO	86080121	212342	004000	553	U
AEITS	HD 163296	30	6.80	1753206	-215656	H	1	08796	L	5061	FO	86080109	090200	004000		G C=212,B=63
IA069	HD163296	33	07.14	1753206	-215657	H	1	08804	L	5036	FO	86080122	224422	004000	552	U
AEITS	HD 163296	30	6.80	1753206	-215656	L	3	28806	L	5062	FO	86080109	094900	001600		G C=8X,B=20
IA069	HD163296	33	07.11	1753206	-215657	H	1	08805	L	5206	FO	86080200	001358	003300	453	U
IA069	HD183296	33	07.14	1753206	-215657	L	3	28802	L	5059	FO	86080100	005611	001800	760	U

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
IA069	HD163296	33	07.16	1753206	-215657	L	3	28810	L	4961	FO	86080122	221133	001800	770	U
IA069	HD163296	33	07.17	1753206	-215657	L	3	28811	L	4933	FO	86080123	234103	000500	770	U
IA069	HD163296	33	07.18	1753206	-215657	L	3	28816	L	4861	FO	86080220	203136	000200	550	U
IA069	HD163296	33	99.90	1753207	-215657	H	1	08766	L			86072920	202624	003000	451	U
AEITS	HD 163296	30	6.8	1753207	-215657	H	1	08771	L	4838	FO	86073003	035800	004000		G E=223,C=190,B=45
IA069	HD163296	33	07.16	1753207	-215657	H	1	08767	L	4948	FO	86072921	214219	004000	552	U
AEITS	HD 163296	30	6.8	1753207	-215657	L	3	28781	L	4638	FO	86073004	044500	001800		G C=7.5X,B=20
IA069	HD163296	33	07.23	1753207	-215657	H	1	08778	L	4687	FO	86073019	195056	004000	552	U
AEITS	HD 163296	30	6.8	1753207	-215657	H	1	08772	L	4599	FO	86073005	053900	004000		G E=219,C=190,B=45
IA069	HD163296	33	07.16	1753207	-215657	H	1	08779	L	4972	FO	86073021	211826	004000	551	U
AEITS	HD 163296	30	6.8	1753207	-215657	L	3	28782	L	4495	FO	86073006	063200	000800		G E=186,C=4X,B=40
IA069	HD163296	33	07.20	1753207	-215657	H	1	08813	L	4800	FO	86080218	182418	004000	552	U
AEITS	HD 163296	30	6.8	1753207	-215657	H	1	08782	L	4878	FO	86073103	034700	004000		G E=205,C=190,B=50
IA069	HD163296	33	07.23	1753207	-215657	H	1	08814	L	4658	FO	86080219	194559	004000	552	U
AEITS	HD 163296	30	6.8	1753207	-215657	L	3	28791	L	4933	FO	86073104	043500	001800		G C=8X,B=35
IA069	HD163296	33	07.24	1753207	-215657	H	1	08822	L	4639	FO	86080317	174228	004000	452	U
AEITS	HD 163296	30	6.8	1753207	-215657	H	1	08783	L	4927	FO	86073105	050900	004000		G E=220,C=190,B=50
IA069	HD163296	33	07.20	1753207	-215657	H	1	08823	L	4795	FO	86080319	190152	004000	452	U
AEITS	HD 163296	30	6.8	1753207	-215657	H	1	08806	L	5359	FO	86080205	054600	003500		G E=178,C=166,B=49
IA069	HD163296	33	07.21	1753207	-215657	H	1	08824	L	4746	FO	86080320	203147	003300	452	U
AEITS	HD 163296	30	6.8	1753207	-215657	L	3	28813	L	5282	FO	86080206	062900	000800		G C=3X,B=18
IA069	HD163296	33	07.21	1753207	-215657	H	1	08834	L	4737	FO	86080421	215146	004000	551	U
AEITS	HD 163296	30	6.8	1753207	-215657	H	1	08807	L	5200	FO	86080207	070300	003500		G E=190,C=175,B=52
IA069	HD163296	33	07.24	1753207	-215657	H	1	08835	L	4624	FO	86080423	231117	004000	551	U
AEITS	HD 163296	30	6.8	1753207	-215657	L	3	28814	L	5221	FO	86080207	074500	001600		G C=8X,B=17
IA069	HD163296	33	07.19	1753207	-215657	H	1	08842	L	4828	FO	86080521	213407	004000	551	U
AEITS	HD 163296	30	6.8	1753207	-215657	H	1	08808	L	5101	FO	86080208	081800	003500		G E=190,C=170,B=54
IA069	HD163296	33	07.16	1753207	-215657	L	3	28776	L	4983	FO	86072919	195558	002000	760	U
AEITS	HD 163296	30	6.8	1753207	-215657	H	1	08817	L	5266	FO	86080309	092800	004000		G E=211,C=166,B=43
IA069	HD163296	33	07.17	1753207	-215657	L	3	28777	L	4904	FO	86072921	210823	001800	750	U
AEITS	HD 163296	30	6.8	1753207	-215657	L	3	28818	L	5132	FO	86080310	101600	000800		G C=5X,B=15
IA069	HD163296	33	07.14	1753207	-215657	L	3	28778	L	5074	FO	86072922	223034	001800	750	U
AEITS	HD 163296	30	6.8	1753207	-215657	H	1	08818	L	5062	FO	86080310	105100	004000		G E=217,B=170,B=46
IA069	HD163296	33	07.18	1753207	-215657	L	3	28787	L	4882	FO	86073020	203913	001800	750	U NOT CENTERED; START
AEITS	HD 163296	30	6.8	1753207	-215657	L	3	28819	L	4971	FO	86080311	113800	001600		G C=8X,B=18
IA069	HD163296	33	07.16	1753207	-215657	L	3	28788	L	4958	FO	86073022	220515	001800	750	U
AEITS	HD 163296	30	6.8	1753207	-215657	H	1	08819	L	4886	FO	86080312	122100	003500		G E=213,C=170,B=62
IA069	HD163296	33	07.21	1753207	-215657	L	3	28815	L	4739	FO	86080219	191034	001800	770	U
AEITS	HD 163296	30	6.8	1753207	-215657	H	1	08827	L	4516	FO	86080410	101000	004000		G E=232,C=187,B=55
IA069	HD163296	33	07.31	1753207	-215657	L	3	28823	L	4333	FO	86080318	182941	001800	771	U
AEITS	HD 163296	30	6.8	1753207	-215657	L	3	28827	L	4451	FO	86080410	105700	000800		G C=5X,B=17
IA069	HD163296	33	07.20	1753207	-215657	L	3	28824	L	4797	FO	86080319	194638	000230	550	U
AEITS	HD 163296	30	6.8	1753207	-215657	H	1	08828	L	4468	FO	86080411	113100	004000		G E=255,C=191,B=63
IA069	HD163296	33	07.20	1753207	-215657	L	3	28833	L	4797	FO	86080422	223902	001800	771	U
AEITS	HD 163296	30	6.8	1753207	-215657	L	3	28828	L	4472	FO	86080412	122500	001600		G C=8X,B=21

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
IA069	HD163296	33	07.10	1753207	-215657	H	3	28834	L	5210	FO	86080423	235748	005000	331	U
AEITS	HD 163296	30	6.8	1753207	-215657	L	1	08838	L	4879	FO	86080514	141200	000100		G C=1.3X,B=40
IA069	HD163296	33	07.24	1753207	-215657	H	3	28844	L	4695	FO	86080522	222040	014700	662	U
AEITS	HD 163296	30	6.8	1753207	-215657	L	3	28837	L	4743	FO	86080514	141800	000800		G C=5X,B=50
AEITS	HD 163296	30	6.8	1753207	-215657	L	3	28838	L	4630	FO	86080515	150100	001600		G C=8X,B=70
AEITS	HD 163296	30	6.8	1753207	-215657	L	3	28839	L	4711	FO	86080516	160300	000230		G C=201,B=18
AEITS	HD 163296	30	6.8	1753207	-215657	H	1	08839	L	4625	FO	86080516	161300	003500		G E=255,C=226,B=95
AEITS	HD 163296	30	6.8	1753207	-215657	L	1	08844	L	4883	FO	86080613	133700	000050		G E=1.2X,C=240,B=40
AEITS	HD 163296	30	6.8	1753207	-215657	L	3	28849	L	4852	FO	86080613	134700	000800		G C=3X,B=65
AEITS	HD 163296	30	6.8	1753207	-215657	L	3	28850	L	4706	FO	86080614	143200	001600		G C=6X,B=105
AEITS	HD 163296	30	6.8	1753207	-215657	L	3	28851	L	4583	FO	86080615	153000	000230		G C=202,B=35
AEITS	HD 163296	30	6.8	1753207	-215657	L	3	28852	L	4781	FO	86080616	160100	000230		G C=202,B=30
AEITS	HD 163296	30	6.8	1753207	-215657	H	1	08845	L	4376	FO	86080616	161200	003500		G E=255,C=220,B=90
AEITS	HD 163296	30	6.8	1753207	-215657	H	1	08848	L	4692	FO	86080705	053600	004000		G E=225,C=194,B=48
AEITS	HD 163296	30	6.8	1753207	-215657	L	3	28855	L	4669	FO	86080706	062300	000800		G C=3X,B=18
AEITS	HD 163296	30	6.8	1753207	-215657	H	1	08849	L	4630	FO	86080706	065600	004000		G E=228,C=197,B=60
AEITS	HD 163296	30	6.8	1753207	-215657	L	3	28856	L	4846	FO	86080707	074300	001600		G C=6X,B=18
AEITS	HD 163296	30	6.8	1753207	-215657	H	1	08850	L	4880	FO	86080708	081600	003800		G E=228,C=200,B=70
AEITS	HD 163296	30	6.8	1753207	-215657	H	1	08857	L	4852	FO	86080806	061000	004000		G E=224,C=190,B=48
AEITS	HD 163296	30	6.8	1753207	-215657	L	3	28866	L	4853	FO	86080806	065600	000800		G C=3X,B=16
AEITS	HD 163296	30	6.8	1753207	-215657	H	1	08858	L	4759	FO	86080807	073000	004000		G E=227,C=183,B=48
AEITS	HD 163296	30	6.8	1753207	-215657	L	3	28867	L	4801	FO	86080808	081800	001600		G C=6X,B=35
LGHBP	HD 61913	49	6.2	1755223	+452122	L	1	08145	L	16736	FO	86050320	203500	003000		G E=2X,C=245,B=137
LGHBP	HD 61913	49	6.2	1755223	+452122	L	3	28260	L	16606	FO	86050321	211600	009000		G B=75
MLHCW	HD 164284	26	4.8	1757479	+042129	H	3	28288	L	339	FU	86051114	144400	000210		G C=255,B=43
BEIGP	HD 164284	26	4.8	1757480	+042130	H	3	28456	L	26534	FO	86060819	190500	000210		G C=207,B=40
BEIGP	HD 164284	26	4.8	1757480	+042130	H	3	28612	L	327	FU	86070511	113700	000210		G C=225,B=40
BEIGP	HD 164284	26	4.8	1757480	+042130	H	3	28868	L	312	FU	86080809	092900	000210		G C=220,B=40
IDIJC	HD 164073	24	8.0	1758105	-484837	L	1	08583	L	1722	FO	86071018	180800	000056		G C=3X,B=31
IDIJC	HD 164073	24	8.0	1758105	-484837	L	1	08583	S	1722	FO	86071018	181700	000106		G C=220,B=31
IDIJC	HD 164073	24	8.0	1758105	-484837	L	3	28647	L	1663	FO	86071018	182300	000048		G C=190,B=18
MLIDM	HD 164402	23	5.77	1758524	-224650	H	3	29022	L	12576	FO	86082701	011100	000500		G C=215,B=40
MLIDM	HD 164402	23	5.77	1758524	-224650	H	3	29073	L	12281	FO	86082911	114600	000415		G C=245,B=88
IA188	HD164402	23	06.06	1758525	-224651	H	3	29014	L	12503	FO	86082618	182106	000500	501	U
MLIDM	HD 164402	23	5.7	1758525	-224651	H	3	28966	L	12683	FO	86082302	024200	000430		G C=200,B=35
IA188	HD164402	23	05.93	1758525	-224651	H	3	29038	L	13886	FO	86082716	163650	000500	501	U
MLIDM	HD 164402	23	5.7	1758525	-224651	H	3	28971	L	12386	FO	86082309	090300	000500		G C=220,B=39
IA188	HD164402	23	06.08	1758525	-224651	H	3	29042	L	12366	FO	86082720	200943	000500	501	U
MLIDM	HD 164402	23	5.7	1758525	-224651	H	3	28978	L	12160	FO	86082314	141600	000400		G C=220,B=71
IA188	HD164402	23	06.05	1758525	-224651	H	3	29058	L	12632	FO	86082816	165033	000500	501	U
MLIDM	HD 164402	23	5.7	1758525	-224651	H	3	28984	L	12656	FO	86082410	104900	000500		G C=230,B=60
IA188	HD164402	23	06.03	1758525	-224651	H	3	29062	L	12808	FO	86082820	204130	000500	501	U
MLIDM	HD 164402	23	5.7	1758525	-224651	H	3	28993	L	12539	FO	86082510	104000	000500		G C=230,B=61
IA188	HD164402	23	05.91	1758525	-224651	H	3	29077	L	14091	FO	86082914	145711	000530	501	U
MLIDM	HD 164402	23	5.7	1758525	-224651	H	3	29002	L	12606	FO	86082607	075000	000500		G C=226,B=40

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
IA188	HD164402	23	06.04	1758525	-224651	H	3	29081	L	12716	FO	86082918	182418	000530	501	V
MLIDM	HD 164402	23	5.77	1758525	-224651	H	3	29006	L	12918	FO	86082611	110900	000500		G C=235,B=68
IA188	HD164402	23	06.01	1758525	-224651	H	3	29085	L	13030	FO	86082922	224423	000530	501	V
MLIDM	HD 164402	23	5.77	1758525	-224651	H	3	29010	L	12238	FO	86082614	143300	000400		G C=220,B=65 -
IA188	HD164402	23	99.99	1758525	-224651	E	9	01858	2			86082622	220759	016000		V FOR SWP29018
MLIDM	HD 164402	23	5.7	1758525	-224651	H	3	29018	L	12684	FO	86082621	215900	000500		G C=225,B=40
MLIDM	HD 164402	23	5.7	1758525	-224651	H	3	29026	L	12878	FO	86082707	070000	000500		G C=226,B=42
MLIDM	HD 164402	23	5.7	1758525	-224651	H	3	29030	L	13062	FO	86082710	101900	000500		G C=230,B=54
MLIDM	HD 164402	23	5.7	1758525	-224651	H	3	29034	L	12609	FO	86082713	131900	000320		G C=1.3X,B=146
MLIDM	HD 164402	23	5.7	1758525	-224651	H	3	29050	L	12995	FO	86082809	090600	000500		G C=224,B=40
MLIDM	HD 164402	23	5.7	1758525	-224651	H	3	29054	L	12577	FO	86082812	121100	000345		G C=1.3X,B=130
MLIDM	HD 164402	23	5.7	1758525	-224651	H	3	29068	L	12261	FO	86082907	074200	000500		G C=217,B=39
MLIDM	HD 164402	23	5.7	1758525	-224651	H	3	29069	L	12434	FO	86082908	082500	001000		G C=2X,B=58
IC171	HD165341	46	04.47	1802555	+023034	H	1	08707	L	476	FU	86072320	200021	005000	771	V
IC171	HD165341	46	04.42	1802555	+023034	H	1	08743	L	497	FU	86072722	221039	003000	663	V
IC171	HD165341	46	04.42	1802555	+023034	H	1	08746	L	495	FU	86072802	021632	001800	563	V
CVIPS	V426 OPH	63	13.0	1805248	+055120	L	1	08941	M	140	SO	86082023	231000	001500		G E=144,C=125,B=36
CVIPS	V426 OPH	63	13.0	1805248	+055120	L	3	28946	L	110	SO	86082023	235900	003000		G E=97,C=75,B=25
CVIPS	V426 OPH	63	13.0	1805248	+055120	L	1	08942	M	125	SO	86082100	004700	003000		G E=129,C=116,B=35
CVIPS	V426 OPH	63	13.0	1805248	+055120	L	3	28947	L	115	SO	86082101	013600	003000		G E=85,C=61,B=28
CVIPS	V426 OPH	63	13.0	1805248	+055120	L	1	08943	M	126	SO	86082102	021600	003000		G E=136,C=118,B=35
CVIPS	V426 OPH	63	13.0	1805248	+055120	L	3	28948	L	126	SO	86082103	030200	003000		G E=99,C=73,B=25
CVIPS	V426 OPH	63	13.0	1805248	+055120	L	1	08944	L	127	SO	86082103	034700	001500		G E=142,C=119,B=30
CVIPS	V426 OPH	63	13.0	1805248	+055120	L	3	28949	L	102	SO	86082106	061800	003000		G E=93,C=75,B=22
CVIPS	V426 OPH	63	13.0	1805248	+055120	L	1	08945	L	101	SO	86082106	065900	001500		G E=131,C=110,B=35
CVIPS	V426 OPH	63	13.0	1805248	+055120	L	1	08951	L	104	SO	86082203	035100	002000		G E=164,C=122,B=38
CVIPS	V426 OPH	63	13.0	1805248	+055120	L	3	28956	M	127	SO	86082206	061900	004000		G E=70,C=67,B=35
CVIPS	V426 OPH	63	13.0	1805248	+055120	L	1	08952	M	108	SO	86082207	072100	003000		G E=125,C=112,B=42
CVIPS	V426 OPH	63	13.0	1805248	+055120	L	3	28957	M	112	SO	86082208	081400	004000		G E=80,C=67,B=31
CVIPS	V426 OPH	63	13.0	1805248	+055120	L	1	08953	M	116	SO	86082209	092000	003000		G E=149,C=128,B=59
CVIPS	V426 OPH	63	13.0	1805248	+055120	L	3	28958	L	108	SO	86082210	100800	003000		G E=107,C=99,B=50
CVIPS	V426 OPH	63	13.0	1805248	+055120	L	1	08954	L	111	SO	86082210	104700	002000		G E=196,C=150,B=72
HC248	HDE 319139	46	10.70	1810539	-324826	L	1	08924	L	213	FO	86081820	203037	004000	332	V DOUBLE RP: -2,-212;
HC248	HDE 319139	46	10.80	1810539	-324826	L	1	08925	L	195	FO	86081821	215547	002300	332	V
HC248	HDE 319139	46	10.84	1810539	-324826	L	1	08932	L	188	FO	86081918	185118	002300	331	V
HC248	HDE 319139	46	10.66	1810539	-324826	L	3	28933	L	220	FO	86081818	181540	012000	161	V DOUBLE: RP: -2,-212;
HC248	HDE 319139	46	10.71	1810539	-324826	L	3	28934	L	211	FO	86081821	212109	003000	150	V
HC248	HDE 319139	46	10.76	1810539	-324826	L	3	28935	L	202	FO	86081822	222514	014200	271	V
HC248	HDE319139	46	10.81	1810539	-324826	L	3	28942	L	193	FO	86081918	181457	003000	150	V
HC248	HDE 319139	46	10.83	1810539	-324826	L	3	28943	L	189	FO	86081919	192409	028000	272	V DOUBLE RP: 2,-212; -
HC248	HDE319139	46	99.99	1810540	-324827	D	9	01855	2			86081921	212800	016000		V FOR 'ASTROMETRY'
SUIJC	SKY BKG	07		1811499	-221945	L	3	28928	L			86081807	074900	006000		G E=86,B=25
SUIJC	NEPTUNE	03	8	1811505	-221945	L	3	28927	L	1600	FO	86081804	040900	015000		G E=142,C=80,B=36
SPIJN	NEPTUNE	03	8	1811509	-221931	L	1	08911	M	2070	FO	86081709	095900	006000		G C=6X,B=60
SPIJN	NEPTUNE	03	8	1811509	-221931	L	1	08912	M	1700	FO	86081712	122800	000300		G C=96,B=36

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
SPIJN	NEPTUNE	03	8	1811509	-221931	L	1	08913	M	1936	FO	86081713	132400	000600		G C=148,B=38
SPIJN	NEPTUNE	03	8	1811509	-221931	L	1	08914	M	1896	FO	86081714	141900	001500		G C=2X,B=45
SPIJN	NEPTUNE	03	8	1811509	-221931	L	1	08915	M	1905	FO	86081715	153100	001500		G C=1.5X,B=38
SPIJN	NEPTUNE	03	8	1811511	-221932	L	1	08910	M	2022	FO	86081708	080500	006000		G C=6X,B=55
SPIJN	NEPTUNE	03	8	1811515	-221932	L	1	08909	M	2028	FO	86081706	061100	006000		G C=6X,B=51
SPIJN	NEPTUNE	03	8	1811518	-221933	L	1	08908	M	2048	FO	86081704	041900	006000		G C=6X,B=50
SPIJN	NEPTUNE	03	8	1811524	-221933	L	1	08906	M	1968	FO	86081701	015000	001500		G C=1.3X,B=37
SPIJN	NEPTUNE	03	8	1811524	-221933	L	1	08907	M	2010	FO	86081702	025600	003000		G C=3X,B=40
SPIJN	NEPTUNE	03	8	1811541	-221930	L	1	08904	M	1949	FO	86081616	161500	001000		G C=1.2X,B=38
SPIJN	NEPTUNE	03	8	1811544	-221929	L	1	08903	M	1913	FO	86081614	145600	001500		G C=1.2X,B=43
SPIJN	NEPTUNE	03	8	1811547	-221928	L	1	08900	M	1804	FO	86081611	111200	000130		G C=63,B=35
SPIJN	NEPTUNE	03	8	1811547	-221928	L	1	08901	M	1979	FO	86081612	124500	000300		G C=104,B=35
SPIJN	NEPTUNE	03	8	1811547	-221928	L	1	08902	M	1918	FO	86081613	134400	000730		G C=183,B=40
IS115	NEPTUNE	03	08.38	1812058	-221933	E	9	01854	2	1678	FO	86081319	194000	016000		V FOR SWP28895
SNIJC	NEPTUNE	03	7.7	1812058	-221932	L	3	28895	L	1678	FO	86081317	170600	090000		G C=1.2X,B=142
SNIJC	NEPTUNE	03	7.7	1812058	-221932	D	9	01853				86081317	174000	016000		G NO COMMENTS
PHCAL	NULL	99		1812058	-221932	H	2	17930				86081409	093000	000000		G B=38
SNIJC	NEPTUNE	03	7.7	1812083	-221926	L	3	28892	L	1620	FO	86081218	183800	099000		G C=1.2X,B=145
IS115	NEPTUNE	03	08.42	1812084	-221927	E	9	01852	2	1620	FO	86081300	002400	004000		V FOR SWP 28892
DCHNE	HD 167660	53	7.5	1814029	-190540	L	1	08176	L	2646	FO	86051119	195400	000800		G C=168,B=85
HSIJD	LSE 242	16	12.3	1814156	-631902	L	1	08968	L	132	SO	86083010	105000	001000		G C=170,B=75
HSIJD	LSE 242	16	12.3	1814156	-631902	L	3	29088	L	133	SO	86083011	111800	001000		G E=131,C=130,B=90
MLIDM	HD 167756	23	6.3	1815055	-421831	H	3	29001	L	8101	FO	86082607	070900	000600		G C=227,B=42
IA188	HD167756	23	06.52	1815056	-421832	H	3	29017	L	8634	FO	86082621	210258	000600	501	V
MLIDM	HD 164402	23	5.7	1815056	-421832	H	3	28965	L	8183	FO	86082301	015400	000600		G C=220,B=39
IA188	HD167756	23	06.55	1815056	-421832	H	3	29041	L	8417	FO	86082719	191602	000600	501	V
MLIDM	HD 167756	23	6.3	1815056	-421832	H	3	28972	L	8052	FO	86082309	094400	000600		G C=225,B=40
IA188	HD167756	23	06.57	1815056	-421832	H	3	29057	L	8255	FO	86082815	153148	000600	501	V
MLIDM	HD 167756	23	6.3	1815056	-421832	H	3	28985	L	8118	FO	86082411	114600	000600		G C=1.5X,B=115
MLIDM	HD 167756	23	6.3	1815056	-421832	H	3	28994	L	8287	FO	86082511	111800	000500		G C=250,B=87
MLIDM	HD 167756	23	6.30	1815056	-421832	H	3	29009	L	7921	FO	86082613	135000	000330		G C=250,B=126
MLIDM	HD 167756	23	6.3	1815056	-421832	H	3	29025	L	8211	FO	86082703	033500	000600		G C=220,B=40
MLIDM	HD 167756	23	6.3	1815056	-421832	H	3	29033	L	8305	FO	86082712	124100	000315		G C=1.3X,B=150
MLIDM	HD 167756	23	6.3	1815056	-421832	H	3	29049	L	8583	FO	86082808	082400	000600		G C=229,B=40
IA186	NULL	00	99.99	1815175	-121546	L	1	08173				86051001	013538	001500	003	V SERENDIPITY
IA186	HD167971	15	07.89	1815175	-121546	H	3	28287	L	2597	FO	86051000	000737	040000	433	V
IA186	HD167971	15	07.73	1815176	-121546	H	3	28297	L	3011	FO	86051300	000936	039800	444	V
IA113	HD 168075	15	09.12	1815459	-134852	H	3	28285	L	868	FO	86050900	001145	039500	434	V
IA113	HD 168076	15	08.56	1815463	-134918	H	3	28277	L	1435	FO	86050823	235720	041000	774	V
OD85K	HD 170680	36	5.1	1828305	-182620	H	3	28340	L	16838	FO	86051819	191600	002800		G C=160,B=42
OD85K	HD 170680	36	5.1	1828305	-182620	H	3	28341	L	18742	FO	86051820	204000	002200		G C=1.2X,B=50
OD85K	HD 170680	36	5.1	1828305	-182620	H	1	08223	L	20195	FO	86051821	211000	001400		G C=2X,B=50
IQ138	3C382	86	14.00	1833120	+323918	L	3	28691	L		BO	86071620	201345	039400	354	V
STHRP	ALPH LYR	30	0.0	1835146	+384410	L	1	08462	L	15992	FU	86062220	204400	000001		G C=7X,B=37
PHCAL	HD 172167	30	0.0	1835147	+384409	L	1	08765	L	16104	FU	86072918	184800	000001		G C=5X,B=36

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
II013	CH CYG	57	07.01	1923142	+500831	H	1	08631	L	5659	FO	86071520	200534	014700	573	V
II013	CH CYG	57	06.99	1923142	+500831	L	3	28682	S	5766	FO	86071522	230023	000800	341	V $
II013	CH CYG	57	06.99	1923142	+500831	L	3	28682	L	5766	FO	86071522	224150	001200	771	V $
CVISS	NOVAVUL1	55	14	1924034	+271554	L	3	28460	L		BO	86060906	061900	024000		G B=40
CVISS	NOVAVUL1	55	14	1924034	+271554	L	1	08360	L		BO	86060910	102700	004732		G B=44
CVISS	NOVAVUL1	55	13.8	1924034	+271554	L	3	28461	L	31	SO	86060911	114200	007000		G E=32,B=27
OD85K HD	183324	36	5.8	1926293	+015049	H	1	08220	L	11140	FO	86051815	155400	001500		G C=225,B=45
OD85K HD	183324	36	5.8	1926293	+015049	H	3	28338	L	11858	FO	86051816	161700	003500		G C=215,B=42
OD85K HD	183324	36	5.8	1926293	+015049	H	3	28342	L	11792	FO	86051821	215500	005400		G C=1.5X,B=50
PLHNE HD	183344	53	6.5	1926399	-070852	L	3	28394	L	4957	FO	86052916	160300	011000		G C=155,B=45
PLHNE HD	183344	53	6.5	1926400	-070853	L	1	08300	L	4907	FO	86052915	154900	000700		G C=145,B=35
HM097	HD185037	25	06.31	1934003	+364956	H	1	08136	L	10281	FO	86050206	061548	001130	503	V
II068	HM SGE	57	11.44	1939414	+163733	L	1	08879	L	110	FO	86081419	191317	001000	251	V
II068	HM SGE	57	11.40	1939414	+163733	L	1	08880	L	114	FO	86081421	213004	009000	482	V
II068	HM SGE	57	11.41	1939414	+163733	L	3	28896	L	453	SO	86081418	185447	001100	250	V
II068	HM SGE	57	11.43	1939414	+163733	L	3	28897	L	111	FO	86081419	194243	010000	381	V
II068	HM SGE	57	11.42	1939414	+163733	H	3	28898	L	112	FO	86081423	230835	010000	152	V
HC229	16CYGB	44	06.63	1940314	+502356	L	1	08146	S	7879	FO	86050323	240341	001500	$87	V $870
HC229	16CYGB	44	06.63	1940314	+502356	L	1	08146	L	7879	FO	86050323	235514	000230	770	V $870
HC229	16CYGB	44	06.55	1940314	+502356	L	1	08147	L	8375	FO	86050400	004935	000100	551	V
HC229	16CYGB	44	06.56	1940314	+502356	H	1	08148	L	8355	FO	86050401	012241	032500	764	V
HC229	16CYGB	44	06.63	1940315	+502357	L	1	08141	L	7831	FO	86050223	235237	000300	771	V
HC229	16CYGB	44	06.61	1940315	+502357	H	1	08142	L	8009	FO	86050300	003727	005000	431	V
HC229	16CYGB	44	06.61	1940315	+502357	H	1	08143	L	7970	FO	86050302	020946	015000	731	V
HC229	16CYGB	44	06.61	1940315	+502357	H	1	08144	L	7961	FO	86050305	054025	006700	531	V
HC229	16CYGB	44	06.63	1940315	+502357	L	3	28256	L	7844	FO	86050300	000313	009500	300	V
CCINE HD	186688	53	6.9	1942485	+290834	L	1	08512	L	3399	FO	86063006	060100	000212		G C=200,B=35
CCINE HD	186688	53	6.9	1942485	+290834	H	3	28583	L	3346	FO	86063006	061600	037000		G C=250,B=142
CCINE HD	186688	53	6.9	1942485	+290834	H	3	28590	L	5509	FO	86070203	035200	042000		G C=237,B=110
ADIFW HD	187642	31	0.8	1948206	+084406	L	3	28546	T	8749	FU	86062521	210400	000300		G C=100X,B=115
CMIFB HD	187642	33	0.8	1948210	+084406	H	1	08323	L	9618	FU	86060314	145500	000025		G C=1.5X,B=48
LDIDB HD	187923	44	6.1	1949430	+113013	L	1	08810	T	9002	FO	86080211	114200	000420		G C=225,B=51
CEITS HD	188037	39	0.0	1950206	+221926	L	1	08978	L	5170	FO	86083123	230500	000330		G C=190,B=35
CEITS HD	188037	39	0.0	1950206	+221926	L	3	29103	L	5175	FO	86083123	234100	000630		G C=93,B=17
NPIWF	V1016CYG	70	11	1955199	+394123	L	3	28616	L	647	FO	86070516	160500	000300		G E=1.1X,C=42,B=22
NPIWF	V1016CYG	70	11	1955199	+394123	L	1	08552	L	415	FO	86070516	161900	000300		G E=1.2X,C=96,B=58
NPIWF	V1016CYG	70	11	1955199	+394123	H	3	28617	L	159	FO	86070516	165500	002000		G E=1.3X,C=150,B=104
NPIWF	V1016CYG	70	11	1955199	+394123	H	1	08553	L	150	FO	86070517	173200	002000		G E=1.3X,B=114
NPIWF	V1016CYG	70	11	1955199	+394123	H	3	28618	L	149	FO	86070518	180800	004000		G E=2X,B=70
PHCAL	RR TEL	57	10.86	2000200	-555204	H	1	08178	L	185	FO	86051123	234723	004000	271	V
PHCAL	RR TEL	57	10.84	2000200	-555204	L	1	08179	L	187	FO	86051201	015511	000300	370	V
PHCAL	RR TEL	57	10.81	2000200	-555204	H	1	08180	L	192	FO	86051202	023202	002500	261	V
PHCAL	RR TEL	57	10.97	2000200	-555204	L	1	08726	L	167	FO	86072419	195723	000200	360	V
PHCAL	RR TEL	57	10.96	2000200	-555204	L	1	08727	L	169	FO	86072421	211453	000400	470	V
PHCAL	RR TEL	57	10.90	2000200	-555204	H	1	08728	L	178	FO	86072423	232356	002000	261	V

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
ACIRP	V356 SGR	66	7.74	1844544	-201949	L	3	28899	L	2582	FO	86081501	014900	000130		G E=76,C=54,B=25
ACIRP	V356 SGR	66	7.74	1844544	-201949	L	1	08881	L	2563	FO	86081501	015600	000100		G C=120,B=32
ACIRP	V356 SGR	66	7.74	1844544	-201949	L	3	28900	L	2503	FO	86081502	025600	000500		G E=136,C=133,B=25
ACIRP	V356 SGR	66	7.74	1844544	-201949	L	1	08882	L	2534	FO	86081503	030900	000300		G C=235,B=35
ACIRP	V356 SGR	66	7.74	1844544	-201949	L	3	28901	L	2452	FO	86081504	041300	000700		G E=195,B=137,B=25
ACIRP	V356 SGR	66	7.74	1844544	-201949	L	3	28902	L	2565	FO	86081504	045000	000700		G E=172,C=132,B=25
ACIRP	V356 SGR	66	7.74	1844544	-201949	L	1	08883	L	2502	FO	86081505	050700	000300		G C=222,B=32
ACIRP	V356 SGR	66	7.74	1844544	-201949	L	3	28903	L	2587	FO	86081506	061500	000700		G E=163,C=132,B=25
ACIRP	V356 SGR	66	7.74	1844544	-201949	L	3	28904	L	2528	FO	86081506	065200	000830		G E=206,C=148,B=26
ACIRP	V356 SGR	66	7.74	1844544	-201949	L	1	08884	L	2477	FO	86081507	070800	000300		G C=220,B=37
ACIRP	V356 SGR	66	7.74	1844544	-201949	L	3	28905	L	2670	FO	86081508	082600	000830		G E=198,C=176,B=20
ACIRP	V356 SGR	66	7.74	1844544	-201949	L	1	08885	L	2424	FO	86081508	084300	000300		G C=226,B=35
ACIRP	V356 SGR	66	7.74	1844544	-201949	L	3	28906	L	2397	FO	86081509	094700	000830		G E=205,C=178,B=20
ACIRP	V356 SGR	66	7.74	1844544	-201949	L	3	28907	L	2389	FO	86081510	103000	000830		G E=206,C=185,B=21
ACIRP	V356 SGR	66	7.74	1844544	-201949	L	1	08886	L	2392	FO	86081510	104300	000300		G C=242,B=38
ACIRP	V356 SGR	66	6.9	1844544	-201949	L	3	28908	L	2563	FO	86081512	122500	000600		G E=151,C=140,B=21
ACIRP	V356 SGR	66	8.0	1844544	-201949	L	1	08887	L	2545	FO	86081513	130900	000220		G C=227,B=37
ACIRP	V356 SGR	66	8.0	1844544	-201949	L	3	28909	L	2588	FO	86081514	141400	000700		G C=1.5X,B=20
ACIRP	V356 SGR	66	8.0	1844544	-201949	L	3	28910	L	2719	FO	86081514	145700	000130		G C=130,B=17
ACIRP	V356 SGR	66	8.0	1844544	-201949	L	3	28910	S	2842	FO	86081515	151200	000200		G C=102,B=18
ACIRP	V356 SGR	66	6.9	1844544	-201949	L	1	08888	L	3010	FO	86081515	154600	000050		G C=221,B=34
ACIRP	V356 SGR	66	6.9	1844544	-201949	L	1	08888	S	3048	FO	86081515	155100	000130		G C=187,B=30
ACIRP	V356 SGR	66	6.9	1844544	-201949	L	3	28929	L	4505	FO	86081809	095600	000040		G C=200,B=16
ACIRP	V356 SGR	66	6.9	1844544	-201949	L	1	08920	L	4456	FO	86081810	100400	000025		G C=253,B=37
ACIRP	V356 SGR	66	6.9	1844544	-201949	L	1	08920	S	4508	FO	86081810	101600	000230		G C=3X,B=37
II137	HD174237	26	06.11	1845360	+525556	H	3	28912	L	12074	FO	86081517	174155	000800	600	V
II137	HD174237	26	06.14	1845360	+525556	H	3	28913	L	11754	FO	86081518	182136	001500	701	V
II137	HD174237	26	06.10	1845360	+525556	H	3	28914	L	12109	FO	86081519	190950	000740	500	V
II137	HD174237	26	06.00	1845360	+525556	H	3	28915	L	13095	FO	86081519	194527	001500	701	V
II137	HD174237	26	06.13	1845360	+525556	H	3	28916	L	11819	FO	86081520	202749	000700	500	V
II137	HD174237	26	06.13	1845360	+525556	H	3	28917	L	11824	FO	86081521	210539	000700	500	V
IQ138	3C390.3	86	15.68	1845378	+794305	L	3	29091	L	10	SO	86083016	161248	034000	344	V
RSISD	HD 174429	44	7.9	1849137	-501429	L	3	28803	L	1065	FO	86080103	031100	012000		G E=109,C=75,B=50
CCIJL	W736	46	8.0	1853120	+041202	L	1	08419	M	1740	FO	86061820	201800	002300		G E=130,C=231,B=38
DCHNE	HD 178359	53	6.53	1905409	+011306	L	1	08177	L	5733	FO	86051121	210900	000300		G C=123,B=43
IA045	PK SO+3.1	70	11.50	1909167	+164629	L	3	28945	L	415	SO	86082018	183536	021200	331	V
ADIFW	HD 180777	31	5.1	1911011	+762842	L	3	28550	L	19199	FO	86062619	191600	009000		G E=208,C=85X,B=78
IA094	BF CYG	57	09.90	1921552	+293434	L	1	08664	L	435	FO	86072101	013359	003500	001	V WRONG STAR
IA094	BF CYG	57	11.36	1921552	+293434	L	3	28728	L	118	FO	86072100	004536	004000	001	V WRONG STAR
IA094	BF CYG	57	11.51	1921552	+293434	L	3	28729	L	103	FO	86072102	021812	002900	201	V
IE095	BF CYG	57	11.44	1921556	+293434	L	1	08681	L	110	FO	86072202	022824	002000	461	V
II097	BF CYG	57	11.49	1921556	+293434	L	1	08781	L	420	SO	86073100	005625	002500	562	V
IE095	BF CIG	57	11.44	1921556	+293434	L	3	28734	L	110	FO	86072201	015202	003000	371	V
II097	BF CYG	57	11.49	1921556	+293434	L	3	28789	L	105	FO	86073100	002308	001000	350	V
II097	BF CYG	57	11.49	1921556	+293434	H	3	28790	L	420	SO	86073101	013615	007100	251	V

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
PHCAL	RR TEL	57	10.88	2000200	-555204	H	1	08729	L	181	FO	86072500	003402	004000	361	U
PHCAL	RR TEL	57	10.94	2000200	-555204	H	1	08815	S	171	FO	86080222	220000	010500	163	U
PHCAL	RR TEL	57	10.87	2000200	-555204	L	3	28292	L	182	FO	86051200	003310	000300	370	U
PHCAL	RR TEL	57	10.83	2000200	-555204	H	3	28293	L	189	FO	86051201	011934	003000	270	U
PHCAL	RR TEL	57	11.04	2000200	-555204	H	3	28740	L	157	FO	86072419	192933	002000	260	U
PHCAL	RR TEL	57	10.99	2000200	-555204	H	3	28741	L	164	FO	86072420	202825	004000	270	U
PHCAL	RR TEL	57	10.93	2000200	-555204	L	3	28742	L	173	FO	86072421	214609	009000	470	U
PHCAL	RR TEL	57	10.91	2000200	-555204	L	3	28743	L	177	FO	86072423	235610	000200	360	U
PHCAL	RR TEL	57	10.86	2000200	-555204	L	3	28744	L	185	FO	86072501	012441	000400	370	U
PHCAL	RR TEL	57	10.99	2000200	-555204	H	3	28745	L	206	FO	86072502	020724	004000	270	U
PHCAL	RR TEL	57	10.98	2000200	-555204	H	3	28808	S	166	FO	86080118	183126	008500	171	U
IQ148	PKS2005-48	87	14.38	2005465	-485843	L	1	08212	L	32	SO	86051623	234604	010500	404	U
IQ148	PKS2005-48	87	14.41	2005465	-485843	L	1	08340	L	31	SO	86060522	220310	010000	303	U
IQ148	PKS2005-48	87	99.99	2005465	-485843	L	3	28326	L	33	SO	86051702	021401	027200	402	U
IQ148	PKS2005-48	87	14.41	2005465	-485843	L	3	28438	L	31	SO	86060523	234940	000298	303	U
IQ148	PKS2005-48	87	14.52	2005466	-485843	L	3	28863	L	28	SO	86080721	215939	016700	302	U
IDIJC	HD 191396	23	8.1	2006298	+375902	L	1	08598	L	1513	FO	86071317	171600	000136		G C=3X,B=35
IDIJC	HD 191396	23	8.1	2006298	+375902	L	1	08598	S	1516	FO	86071317	172200	000136		G C=160,B=35
IDIJC	HD 191396	23	8.1	2006298	+375902	L	3	28672	L	1521	FO	86071317	172800	000100		G C=100,B=16
HM097	HD192044	25	06.12	2009548	+261942	H	1	08135	L	11973	FO	86050204	045041	000900	603	U
HM097	HD192044	25	06.09	2009548	+261942	H	3	28251	L	12236	FO	86050205	051331	002400	701	U
IC163	HD191849	48	08.27	2010194	-451847	L	1	08977	L	1863	FO	86083120	205632	002300	351	U
IC163	HD191849	48	08.28	2010194	-451847	L	3	29101	L	1843	FO	86083116	164442	024500	112	U
IC163	HD191849	48	08.24	2010194	-451847	L	3	29102	L	1911	FO	86083121	213007	003700	110	U
ACIIA	HD 192713	39	5.2	2013204	+232116	H	3	28289	L	18071	FO	86051115	153200	008500		G C=222,B=117
ACIIA	HD 192713	39	5.2	2013204	+232116	H	1	08175	L	16751	FO	86051117	170500	005000		G E=2.5X,C=1.5X,B=147
ACIIA	HD 192713	39	5.2	2013204	+232116	H	3	28290	L	16575	FO	86051118	180200	004700		G E=152,C=225,B=146
ACIIA	HD 192713	39	8.4	2013204	+232116	H	3	28428	L	18035	FO	86060415	150500	010000		G E=142,C=190,B=75
ACIIA	HD 192713	39	8.4	2013204	+232116	H	1	08342	L	18770	FO	86060613	134400	005000		G E=214,C=175,B=60
ACIIA	HD 192713	39	8.4	2013204	+232116	H	3	28445	L	18611	FO	86060614	144100	012500		G E=155,C=215,B=88
ACIIA	HD 192713	39	8.4	2013205	+232117	H	3	28387	L	17180	FO	86052720	200900	010500		G C=173,B=55
ACIIA	HD 192713	39	8.4	2013205	+232117	H	1	08297	L	17538	FO	86052721	215800	005000		G E=231,C=190,B=48
ACIIA	HD 192713	39	8.4	2013205	+232117	H	3	28395	L	17365	FO	86052919	195200	012000		G C=193,B=63
ACIIA	HD 192713	39	8.4	2013205	+232117	H	1	08302	L	17218	FO	86052921	215800	005000		G E=234,C=187,B=48
ACIIA	HD 192713	39	8.4	2013205	+232117	H	1	08311	L	17203	FO	86053107	072200	005500		G C=210,B=50
ACIIA	HD 192713	39	8.4	2013205	+232117	H	3	28408	L	17821	FO	86053108	082300	013500		G C=190,B=60
ACIIA	HD 192713	39	8.4	2013205	+232117	H	3	28419	L	17507	FO	86060213	135500	011000		G C=205,B=86
ACIIA	HD 192713	39	8.4	2013205	+232117	H	1	08320	L	16789	FO	86060215	155600	005000		G E=1.5X,C=230,B=105
ACIIA	HD 192713	39	8.4	2013205	+232117	H	1	08336	L	17866	FO	86060414	140700	005000		G E=250,C=195,B=59
ACIIA	HD 192713	39	8.4	2013205	+232117	H	1	08357	L	17610	FO	86060813	135600	005000		G E=251,C=192,B=65
ACIIA	HD 192713	39	8.4	2013205	+232117	H	3	28453	L	17374	FO	86060814	145200	011000		G E=190,C=205,B=83
ACIIA	HD 192713	39	8.4	2013205	+232117	H	1	08364	L	18632	FO	86061014	140500	005000		G C=180,B=50
ACIIA	HD 192713	39	8.4	2013205	+232117	H	3	28467	L	18786	FO	86061015	150300	011200		G C=200,B=70
ACIIA	HD 192713	39	5.2	2013205	+232117	H	1	08373	L	17155	FO	86061205	053900	005000		G E=239,C=180,B=53
ACIIA	HD 192713	39	5.2	2013205	+232117	H	3	28477	L	17620	FO	86061206	063600	013500		G C=196,B=60

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
WDIPS	V794 AQL	55	18.0	2014565	-034910	L	3	28501	L		BO	86061606	061700	039000		G C=130,B=90
IA099	HD193237	23	05.14	2015565	+375236	H	1	08287	L	23544	FO	86052604	041458	000500	563	U
IA099	HD193237	23	05.14	2015565	+375236	H	1	08517	L	23519	FO	86063021	213424	000500	561	U
IA099	HD193237	23	05.02	2015565	+375236	H	1	08663	L	25168	FO	86072023	234344	000500	561	U
PHCAL	HD193237	23	05.20	2015565	+375236	H	1	08890	L	22704	FO	86081522	221329	000400	502	U
PHCAL	HD193237	23	05.15	2015565	+375236	L	1	08891	L	23450	FO	86081523	233111	000002	401	U
IA099	HD193237	23	05.19	2015565	+375236	H	3	28378	L	22873	FO	86052603	033833	003000	561	U
IA099	HD193237	23	05.11	2015565	+375236	H	3	28584	L	23973	FO	86063021	214552	003000	561	U
IA099	HD193237	23	05.02	2015565	+375236	H	3	28727	L	25168	FO	86072023	230712	003000	661	U
PHCAL	HD193237	23	05.17	2015565	+375236	H	3	28918	L	23109	FO	86081522	223536	002500	601	U
PHCAL	HD193237	23	05.17	2015565	+375236	L	3	28919	L	23170	FO	86081523	233413	000017	400	U
HI069	N VUL84 H2	55	11.52	2024404	+274047	L	1	08524	L	409	SO	86070120	202347	002000	471	U
HI069	N VUL84 H2	55	11.49	2024404	+274047	L	1	08525	S	421	SO	86070121	213832	002000	361	U $
HI069	N VUL84 H2	55	11.49	2024404	+274047	L	1	08525	L	421	SO	86070121	213128	000100	231	U $
HI069	N VUL84 H2	55	11.47	2024404	+274047	H	1	08526	L	426	SO	86070123	230742	007000	232	U
HI069	N VUL84 H2	55	11.56	2024404	+274047	L	3	28587	L	99	FO	86070120	204950	002600	351	U
HI069	N VUL84 H2	55	11.48	2024404	+274047	L	3	28588	L	106	FO	86070122	221050	005000	360	U
HI069	N VUL84 H2	55	11.52	2024404	+274047	L	3	28589	L	408	SO	86070200	002602	014100	371	U
CVHSS	NOVAVUL2	55	0.0	2024407	+274041	D	9	01809	2			86050207	074100	002000		G NO COMMENTS
CVHSS	NOVAVUL2	55	0.0	2024407	+274041	H	3	28252	L	126	FO	86050207	075100	042000		G E=150,C=175,B=91
WDIJH	GD 391	37	13.4	2028050	+390324	L	3	28888	L	62	SO	86081011	114600	001600		G C=210,B=55
WDIJH	GD 391	37	13.4	2028050	+390324	L	3	28888	S	62	SO	86081012	120900	003700		G C=240,B=55
IC159	HD 197433	44	07.70	2038030	+752458	L	1	08497	L	3094	FO	86062900	002926	000500	551	U
IC159	HD197533	44	07.90	2038030	+752458	L	1	08498	L	2574	FO	86062902	023851	000400	441	U
IC159	HD 197433	44	07.81	2038030	+752458	L	1	08499	L	2795	FO	86062904	041240	000400	451	U
IC159	HD 197433	44	07.80	2038030	+752458	L	3	28572	L	2823	FO	86062900	000127	002000	230	U
IC159	SKY	07	99.99	2038030	+752458	L	3	28573	L			86062901	011402	002000	130	U HD 197433 LOCATED AT
IC159	HD 197433	44	07.87	2038030	+752458	L	3	28574	L	2657	FO	86062902	020824	004000	230	U 2*20MIN :RP(-37,-208
IC159	HD197433	44	07.78	2038030	+752458	L	3	28575	L	2869	FO	86062903	034947	004000	230	U 2*20MIN:RP(-37,-208)
LDIDB	HD 197076	44	6.45	2038293	+194508	L	1	08811	M	7597	FO	86080213	131800	000315		G C=250,B=50
LDHMG	AT MIC	48	10.9	2038447	-323647	H	1	08271	L	307	FO	86052413	135000	011000		G E=213,B=57
LDHMG	AT MIC	48	10.9	2038447	-323647	L	1	08272	L	308	FO	86052416	161800	001700		G E=4X,C=2X,B=38
LDHMG	AT MIC	48	10.9	2038447	-323647	L	1	08275	L	322	FO	86052422	222600	000500		G E=110,B=36
PHCAL	HD 197157	31	4.51	2040226	-520604	L	3	28591	L	328	FU	86070218	181000	000034		G C=176,B=22
ADIFW	HD 197157	31	4.5	2040227	-520605	H	1	08488	L	325	FU	86062614	142900	000900		G C=240,B=44
ADIFW	HD 197157	31	4.5	2040227	-520605	L	3	28548	L	319	FU	86062615	150700	005700		G C=100X,B=82
LDHMG	AU MIC	48	8.6	2042047	-313118	H	1	08273	L	991	FO	86052417	171800	015000		G E=1.5X,B=102
LDHMG	AU MIC	48	8.6	2042047	-313118	L	1	08274	L	1012	FO	86052421	213300	000720		G E=135,B=38
LDHMG	AU MIC	48	8.6	2042047	-313118	L	3	28374	L	963	FO	86052512	125300	003000		G E=50,C=32,B=20
LDHMG	AU MIC	48	8.6	2042047	-313118	H	1	08280	L	956	FO	86052513	133900	007500		G E=214,B=50
XBIJL	HD 196818	47	8.4	2042123	-801903	L	3	28534	L	1391	FO	86062305	052400	015000		G E=80,C=67,B=37
XBIJL	HD 196818	47	8.4	2042124	-801905	L	1	08466	L	1389	FO	86062305	055900	000800		G E=246,C=99,B=32
II014	HBV 475	57	13.22	2049026	+352337	L	1	08268	L	90	SO	86052401	012708	006000	352	U
II014	HBV 475	57	13.12	2049026	+352337	L	1	08276	L	98	SO	86052423	234022	006600	343	U
II014	HBV 475	57	13.18	2049026	+352337	H	1	08277	L	93	SO	86052502	021250	021000	035	U

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
II014	HBV475	57	13.42	2049026	+352337	L	1	08905	L	75	SO	86081619	190812	006500	352	V
II014	HBV 475	57	13.22	2049026	+352337	L	3	28370	L	90	SO	86052400	001852	006000	251	V
II014	HBV 475	57	13.23	2049026	+352337	H	3	28371	L	89	SO	86052402	023215	025400	132	V
II014	HBV 475	57	13.12	2049026	+352337	L	3	28372	L	98	SO	86052500	005555	007000	341	V
II014	HBV 475	57	13.16	2049026	+352337	L	3	28373	L	95	SO	86052505	054816	006000	341	V
II014	HBV475	57	13.35	2049026	+352337	L	3	28921	L	80	SO	86081617	175209	007000	240	V
II014	HBV475	57	13.42	2049026	+352337	L	3	28922	L	75	SO	86081620	201925	026800	372	V
CBINE	HD 198726	53	5.6	2049208	+280344	L	1	08422	L	9869	FO	86061914	140100	000055		G C=150,B=33
IDIJC	HD 199021	20	8.4	2051042	+422505	L	1	08581	L	1116	FO	86071014	142500	002500		G 5X,B=81
IDIJC	HD 199021	20	8.4	2051042	+422505	L	1	08581	S	1171	FO	86071015	150200	000500		G C=220,B=81
IDIJC	HD 199021	20	8.4	2051042	+422505	L	3	28645	L	1119	FO	86071015	151400	001100		G C=160,B=39
IA080	HD200120	26	05.03	2058074	+471930	H	3	28335	L	25002	FO	86051802	020607	000130	502	V
BEIGP	HD 200120	26	4.5	2058074	+471930	H	3	28455	L	308	FU	86060818	181700	000120		G C=223,B=37
IA080	HD200120	26	04.82	2058074	+471930	H	3	28475	L	347	FU	86061202	025429	000130	501	V
BEIGP	HD 200120	26	4.5	2058074	+471930	H	3	28614	L	26763	FO	86070513	134900	000120		G C=200,B=38
IA080	HD200120	26	04.80	2058074	+471930	H	3	28499	L	355	FU	86061602	025714	000130	501	V
BEIGP	HD 200120	26	4.5	2058074	+471930	H	3	28870	L	348	FU	86080811	110500	000130		G C=215,B=39
IA080	HD200120	26	04.43	2058074	+471930	H	3	28553	L	492	FU	86062702	025504	000130	500	V
IA080	HD200120	26	04.76	2058074	+471930	H	3	28725	L	28725	FO	86072021	211638	000130	501	V
IA080	HD200120	26	04.62	2058074	+471930	H	3	28843	L	416	FU	86080520	204332	000130	500	V
CBINE	HD 201078	53	5.8	2104242	+305900	L	1	08453	L	12252	FO	86062213	135400	000056		G C=213,B=31
PHCAL	TFLOOD	99	5.9	2106320	+775527	H	3	28493	S			86061515	150800	000005		G E=50X,B=120
PHCAL	WAVECAL	22	5.9	2106320	+775527	H	3	28493	S			86061515	150900	000200		G E=50X,B=120
SRHLW	T CEP	51	5	2108528	+681711	L	1	08346	L	19004	FO	86060713	133300	002000		G E=226,C=48,B=35
MGIEB	T CEP	51	5.8	2108529	+681712	L	1	08538	L	12536	FO	86070411	113600	001000		G E=255,C=70,B=42
MGIEB	T CEP	51	7.0	2108529	+681712	L	1	08865	L	5914	FO	86081109	094100	001000		G E=1.2X,B=35
EGIMM	PG 2112+059	85	15.5	2112235	+055511	L	3	28447	L		BO	86060710	101200	016000		G E=101,C=68,B=50
MLIPC	HD 203064	14	5.00	2116350	+434404	H	3	29003	L	20816	FO	86082608	085500	000220		G C=227,B=40
IA188	HD203064	14	05.33	2116351	+434405	H	3	29011	L	20996	FO	86082615	154315	000220	501	V
MLIPC	HD 203064	14	5.0	2116351	+434405	H	3	28969	L	21846	FO	86082307	071100	000200		G C=200,B=38
IA188	HD203064	14	05.33	2116351	+434405	H	3	29015	L	20985	FO	86082619	191327	000220	501	V
MLIPC	HD 203064	14	5.0	2116351	+434405	H	3	28973	L	20877	FO	86082310	103400	000215		G C=215,B=40
IA188	HD203064	14	05.12	2116351	+434405	H	3	29039	L	23787	FO	86082717	172750	000220	501	V
MLIPC	HD 203064	14	5.0	2116351	+434405	H	3	28976	L	20227	FO	86082312	124400	000200		G C=220,B=60
IA188	HD203064	14	05.26	2116351	+434405	H	3	29043	L	21970	FO	86082921	210004	000220	501	V
MLIPC	HD 203064	14	5.0	2116351	+434405	H	3	28983	L	21014	FO	86082409	095900	000215		G C=220,B=40
IA188	HD203064	14	05.25	2116351	+434405	H	3	29059	L	22017	FO	86082817	175037	000220	501	V
MLIPC	HD 203064	14	5.0	2116351	+434405	H	3	28986	L	20446	FO	86082412	124200	000155		G C=220,B=72
IA188	HD203064	14	05.28	2116351	+434405	H	3	29063	L	21616	FO	86082821	213154	000220	501	V
MLIPC	HD 203064	14	5.0	2116351	+434405	H	3	28992	L	21233	FO	86082509	095500	000220		G C=225,B=42
IA188	HD203064	14	05.11	2116351	+434405	H	3	29064	L	23953	FO	86082822	220003	000220	501	V
MLIPC	HD 203064	14	5.0	2116351	+434405	H	3	28995	L	20596	FO	86082512	121200	000220		G C=1.5X,B=95
IA188	HD203064	14	05.25	2116351	+434405	H	3	29078	L	22031	FO	86082915	154431	000250	501	V
MLIPC	HD 203064	14	5.0	2116351	+434405	H	3	28997	L	20207	FO	86082513	133000	000145		G C=253,B=102
IA188	HD203064	14	05.32	2116351	+434405	H	3	29080	L	21156	FO	86082917	173826	000250	501	V

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
MLIPC	HD 203064	14	5.00	2116351	+434405	H	3	29007	L	21001	FO	86082612	121600	000220		G C=255,B=87
IA188	HD203064	14	05.30	2116351	+434405	H	3	29082	L	21450	FO	86082919	190933	000250	501	V
MLIPC	HD 203064	14	5.0	2116351	+434405	H	3	29019	L	20975	FO	86082623	230400	000220		G C=220,B=4[illegible]
IA188	HD203064	14	05.31	2116351	+434405	H	3	29084	L	21270	FO	86082920	205845	000250	501	V
MLIPC	HD 203064	14	5.0	2116351	+434405	H	3	29023	L	21470	FO	86082701	015900	000220		G C=220,B=40
MLIPC	HD 203064	14	5.00	2116351	+434405	H	3	29027	L	21779	FO	86082708	080800	000220		G C=226,B=40
MLIPC	HD 203064	14	5.0	2116351	+434405	H	3	29031	L	21273	FO	86082711	110700	000220		G C=238,B=58
MLIPC	HD 203064	14	5.0	2116351	+434405	H	3	29035	L	21214	FO	86082714	141000	000210		G C=242,B=80
MLIPC	HD 203064	14	5.0	2116351	+434405	H	3	29047	L	21997	FO	86082806	064100	000220		G C=223,B=40
MLIPC	HD 203064	14	5.0	2116351	+434405	H	3	29051	L	22006	FO	86082810	100200	000220		G C=220,B=40
MLIPC	HD 203064	14	5.0	2116351	+434405	H	3	29055	L	21540	FO	86082812	125900	000215		G C=255,B=98
MLIPC	HD 203064	14	5.0	2116351	+434405	H	3	29070	L	21400	FO	86082909	093100	000220		G C=223,B=40
MLIPC	HD 203064	14	5.0	2116351	+434405	H	3	29072	L	21131	FO	86082910	105700	000220		G C=237,B=43
MLIPC	HD 203064	14	5.0	2116351	+434405	H	3	29074	L	20625	FO	86082912	123800	000220		G C=255,B=75
MLIPC	HD 203064	14	5.0	2116351	+434405	H	3	29076	L	21259	FO	86082914	141200	000230		G C=242,B=55
CMIFB	HD 203280	31	2.44	2117229	+622223	H	1	08682	L	2076	FU	86072210	105000	000130		G C=235,B=42
ADIFW	HD 203280	31	2.4	2117232	+622224	H	1	08493	L	15501	FO	86062719	191400	001800		G C=243,B=44
ADIFW	HD 203280	31	2.4	2117232	+622224	H	1	08494	L	2094	FU	86062720	202600	000200		G C=1.5X,B=43
ADIFW	HD 203280	31	2.4	2117232	+622224	L	3	28560	L	2062	FU	86062720	203500	000730		G C=100X,B=73
MLICW	HD 203467	26	5.4	2118200	+643933	H	3	28615	L	21941	FO	86070514	144400	000600		G C=220,B=50
MLICW	HD 203467	26	5.40	2118200	+643933	H	3	28869	L	20915	FO	86080810	102200	000600		G C=200,B=35
MLICW	HD 203467	26	5.4	2118201	+643934	H	3	28454	L	20622	FO	86060817	172300	000600		G C=215,B=42
LGHJL	HD 204867	45	2.9	2128556	-054731	H	1	08293	L	1357	FU	86052622	223900	001000		G E=153,C=1.5X,B=38
OD69K	NGC 7094	70	13.6	2134279	+123347	L	3	28248	L	61	SO	86050116	164200	002400		G C=255,B=20
MGIKC	HD 206936	49	4.1	2141585	+583301	H	1	08306	L	871	FU	86053007	074000	039000		G C=160,B=105
MGIKC	TFLOOD	99	4.1	2141585	+583301	H	1	08307	S			86053014	144100	000025		G E=60X,B=105
MGIKC	WAVCAL	98	4.1	2141585	+583301	H	1	08307	S			86053014	144200	000016		G E=60X,B=105
DCHNE	HD 207489	41	7.2	2146139	+384322	L	1	08301	L	3264	FO	86052918	184500	000300		G C=110,B=35
PHCAL	BD+284211	16	10.66	2148560	+283735	H	1	08435	L	221	FO	86062022	221242	006500	503	V
PHCAL	BD+284211	16	10.71	2148560	+283735	L	1	08436	L	210	FO	86062100	001930	000050	503	V
PHCAL	BD+28 4211	16	10.65	2148560	+283735	L	1	08548	L	222	FO	86070500	000231	000050	303	V TRAILED R=0.40 I=1
PHCAL	BD+28 4211	16	10.66	2148560	+283735	L	1	08549	L	220	FO	86070501	012319	000140	402	V TRAILED R=0.20,I=1
PHCAL	BD+28 4211	16	10.67	2148560	+283735	L	1	08550	L	219	FO	86070502	022352	000140	603	V
PHCAL	BD+28 4211	16	10.50	2148560	+283735	L	2	17913	L	254	FO	86062300	002457	000122	502	V LWR 4.5 KV
PHCAL	BD+284211	16	10.75	2148560	+283735	L	3	28518	L	203	FO	86062022	220407	000026	500	V
PHCAL	BD+284211	16	10.68	2148560	+283735	H	3	28519	L	217	FO	86062023	232555	004500	501	V
PHCAL	BD+28 4211	16	10.50	2148560	+283835	L	3	28530	S	254	FO	86062300	003249	000118	601	V $
PHCAL	BD+28 4211	16	10.50	2148560	+283835	L	3	28530	L	254	FO	86062300	002907	000026	501	V $
PHCAL	BD+28 4211	16	10.68	2148560	+283735	H	3	28607	L	216	FO	86070423	230946	004500	501	V
PHCAL	BD+28 4211	16	10.68	2148560	+283735	L	3	28608	L	217	FO	86070501	010312	000117	501	V TRAILED R=0.26,I=1
PHCAL	BD+28 4211	16	10.67	2148560	+283735	L	3	28609	L	219	FO	86070502	022048	000026	500	V
PHCAL	BD+28 4211	16	10.63	2148560	+283734	L	3	28920	L	226	FO	86081600	002639	000117	500	V TRAIL R=0.26 I=1
PHCAL	NULL	99		2148573	+283733	L	2	17880				86050415	153900	000000		G B=18
PHCAL	TFLOOD	99	0.0	2148573	+283733	L	2	17882	S			86050416	164400	000010		G E=10X,B=83
PHCAL	WAVCAL	98	0.0	2148573	+283733	L	2	17882	S			86050416	164600	000001		G E=10X,B=83

PRG	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
PHCAL	TFLOOD	99	0.0	2148573	+283733	H	2	17883	S			86050417	171000	000010		G E=60X,B=138
PHCAL	WAVCAL	98	0.0	2148573	+283733	H	2	17883	S			86050417	171200	000022		G E=60X,B=138
PHCAL	TFLOOD	99		2148573	+283733	H	2	17884	L			86050417	174400	000010		G B=130
PHCAL BD	28 +4211	16	10.5	2148573	+283733	L	1	08861	L	208	FO	86080910	101500	000050		G C=195,B=30
PHCAL BD	28 +4211	16	10.5	2148573	+283733	L	3	28878	L		FO	86080910	101900	000026		G C=190,B=15
PHCAL BD	+28 4211	16	10.5	2148574	+283734	L	2	17881	L	204	FO	86050416	161500	000122		G C=185,B=23
STHRP BD	+28 4211	16	10.5	2148574	+283734	H	1	08228	L	200	FO	86052013	135200	006500		G C=200,B=54
PHCAL BD	+28 4211	16	10.5	2148574	+283734	L	1	08241	L	224	FO	86052112	121100	000050		G C=178,B=33
PHCAL BD	+28 4211	16	10.5	2148574	+283734	L	3	28349	L	225	FO	86052112	121700	000026		G C=180,B=15
STHRP BD	+28 4211	16	10.5	2148574	+283734	L	1	08381	L	218	FO	86061313	132700	000200		G C=2X,B=35
STHRP BD	+28 4211	16	10.5	2148574	+283734	L	1	08382	L	217	FO	86061314	140400	000200		G C=2X,B=34
STHRP BD	+28 4211	16	10.5	2148574	+283734	L	1	08383	T	217	FO	86061314	144200	001500		G C=4X,B=60
STHRP BD	+28 4211	16	10.5	2148574	+283734	L	1	08384	L	218	FO	86061315	155700	000403		G C=4X,B=40
PHCAL BD	+28 4211	16	10.5	2148574	+283734	H	1	08392	L	211	FO	86061510	104900	006500		G C=190,B=55
PHCAL	TFLOOD	99	10.5	2148574	+283734	L	1	08393	S			86061512	122000	000025		G E=10X,B=105
PHCAL	WAVECAL	16	10.5	2148574	+283734	L	1	08393	S			86061513	132200	000001		G E=10X,B=105
PHCAL	TFLOOD	99	10.5	2148574	+283734	H	1	08394	S			86061513	135100	000025		G E=50X,B=105
PHCAL	WAVECAL	16	10.5	2148574	+283734	H	1	08394	S			86061513	135200	000016		G E=50X,B=105
PHCAL	TFLOOD	99	10.5	2148574	+283734	L	3	28492	S			86061514	144100	000005		G E=10X,B=100
PHCAL	WAVECAL	16	10.5	2148574	+283734	L	3	28492	S			86061514	144200	000002		G E=10X,B=100
STHRP BD	+28 4211	16	10.5	2148574	+283734	L	1	08454	L	215	FO	86062214	144300	000500		G C=5X,B=38
PHCAL BD	+28 4211	16	10.5	2148574	+283734	L	2	17916	L	212	FO	86062315	150400	000122		G C=190,B=25
PHCAL BD	+28 4211	16	10.5	2148574	+283734	L	2	17916	S	211	FO	86062315	151000	000407		G C=250,B=25
PHCAL BD	+28 4211	16	10.5	2148574	+283734	L	2	17917	T	208	FO	86062315	154400	000448		G C=185,B=25
PHCAL BD	+28 4211	16	10.5	2148574	+283734	L	1	08566	L	215	FO	86070811	114700	000050		G C=200,B=35
PHCAL BD	+28 4211	16	10.5	2148574	+283734	L	3	28635	L	217	FO	86070811	115300	000026		G C=195,B=25
PHCAL BD	+28 4211	16	10.5	2148574	+283734	L	2	17932	L	233	FO	86081411	115500	000122		G C=146,B=21
HSIRB	G93-48	17	12.7	2149530	+020924	L	3	28469	L	105	SO	86061114	140900	001340		G C=130,B=16
HSIRB	G93-48	17	12.7	2149530	+020924	L	1	08367	L	104	SO	86061114	144400	001550		G C=160,B=41
HSIRB	G93-48	17	12.7	2149530	+020924	L	3	28470	L	105	SO	86061115	151600	003500		G C=255,B=30
HSIRB	G93-48	17	12.7	2149530	+020924	L	1	08368	L	108	SO	86061115	155900	006000		G C=2X,B=85
HSIRB	G93-48	17	12.7	2149530	+020924	L	3	28471	M	122	SO	86061117	170700	004800		G C=235,B=59
LDIDB HD	207978	41	5.5	2150158	+283331	L	1	08446	T	13403	FO	86062117	174500	000112		G C=222,B=36
IBIAL SAO	51509	66	8.9	2157003	+474437	L	1	08625	L	925	FO	86071511	114300	001200		G C=10X,B=42
IBIAL SAO	51509	66	8.9	2157003	+474437	L	1	08626	L	878	FO	86071513	130200	000130		G C=1.2X,B=33
IBIAL SAO	51509	66	8.9	2157003	+474437	L	3	28677	L	881	FO	86071513	131000	000230		G C=198,B=16
IBIAL SAO	51509	66	8.9	2157003	+474437	L	1	08627	L	929	FO	86071514	141200	000115		G C=242,B=34
IBIAL SAO	51509	66	8.9	2157003	+474437	L	3	28678	L	861	FO	86071514	141800	000245		G C=220,B=18
IBIAL SAO	51509	66	8.9	2157003	+474437	L	1	08628	L	815	FO	86071515	151700	000107		G C=240,B=34
IBIAL SAO	51509	66	8.9	2157003	+474437	L	3	28679	L	817	FO	86071515	152200	000245		G C=228,B=18
IBIAL SAO	51509	66	8.9	2157003	+474437	L	1	08629	L	782	FO	86071516	163100	000058		G C=224,B=36
IBIAL SAO	51509	66	8.9	2157003	+474437	L	3	28680	L	778	FO	86071516	163600	000230		G C=220,B=18
IBIAL SAO	51509	66	8.9	2157003	+474437	L	1	08630	L	750	FO	86071517	173900	000058		G C=220,B=35
IBIAL SAO	51509	66	8.9	2157003	+474437	L	3	28681	L	759	FO	86071517	174400	000230		G C=220,B=18
IBIAL SAO	51509	66	8.9	2157003	+474437	L	1	08634	L	863	FO	86071611	113600	000058		G C=185,B=35

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	3	28685	L	864	FO	86071611	114100	000230	G C=190,B=17
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	1	08635	L	811	FO	86071613	131500	000115	G C=210,B=35
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	3	28686	L	796	FO	86071613	132200	000300	G C=205,B=18
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	1	08636	L	670	FO	86071614	142400	000120	G C=205,B=34
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	3	28687	L	658	FO	86071614	143000	000300	G C=193,B=18
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	1	08637	L	512	FO	86071615	152700	000128	G C=192,B=36
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	3	28688	L	506	FO	86071615	153300	000320	G C=159,B=18
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	1	08638	L	390	FO	86071616	163300	000140	G C=161,B=37
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	3	28689	L	381	FO	86071616	164300	000600	G C=183,B=18
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	1	08639	L	429	FO	86071617	174100	000200	G C=204,B=35
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	3	28690	L	447	FO	86071617	174900	000600	G C=220,B=17
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	1	08640	L	564	FO	86071618	183500	000135	G C=205,B=34
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	1	08641	L	725	FO	86071711	113100	000120	G C=217,B=35
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	3	28693	L	740	FO	86071711	113800	000300	G C=208,B=17
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	1	08642	L	692	FO	86071713	130800	000120	G C=201,B=34
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	3	28694	L	699	FO	86071713	131400	000300	G C=205,B=17
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	1	08643	L	727	FO	86071714	141500	000120	G C=215,B=34
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	3	28695	L	734	FO	86071714	142000	000300	G C=215,B=17
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	1	08644	L	775	FO	86071715	151800	000120	G C=238,B=38
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	3	28696	L	780	FO	86071715	152500	000300	G C=223,B=18
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	1	08645	L	789	FO	86071716	162800	000110	G C=237,B=35
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	3	28697	L	794	FO	86071716	163500	000240	G C=220,B=17
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	1	08646	L	808	FO	86071717	173400	000058	G C=213,B=35
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	3	28698	L	817	FO	86071717	173900	000230	G C=217,B=17
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	1	08647	L	833	FO	86071718	182400	000058	G C=214,B=34
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	1	08650	L	687	FO	86071811	115100	000120	G C=216,B=35
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	3	28702	L	698	FO	86071811	115900	000300	G C=203,B=17
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	1	08651	L	819	FO	86071813	132800	000118	G C=240,B=34
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	3	28703	L	817	FO	86071813	133300	000230	G C=202,B=17
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	1	08652	L	811	FO	86071814	143000	000105	G C=223,B=35
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	3	28704	L	819	FO	86071814	143500	000230	G C=205,B=18
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	1	08653	L	835	FO	86071815	153200	000058	G C=206,B=34
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	3	28705	L	837	FO	86071815	153700	000230	G C=210,B=18
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	1	08654	L	842	FO	86071816	163500	000058	G C=217,B=35
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	3	28706	L	841	FO	86071816	164200	000230	G C=210,B=17
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	1	08655	L	846	FO	86071817	173800	000058	G C=212,B=34
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	3	28707	L	856	FO	86071817	174300	000215	G C=208,B=17
IBIAL	SAO	51509	66	8.9	2157003	+474437	L	1	08656	L	842	FO	86071818	182800	000058	G C=223,B=34
PHCAL	TFLOOD	99			2159285	+433854	H	2	17901				86060116	161300	000007	G B=133
RSIDH	HD	209318	66	8.8	2159286	+433855	L	3	28414	L	821	FO	86060106	060200	041000	G E=139,C=125,B=100
PHCAL	SAF READ	99			2159286	+433855	H	2	17897				86060113	132900	000000	G B=16
PHCAL	TFLOOD	99			2159286	+433855	L	3	28415	S			86060113	135700	000005	G E=10X,B=105
PHCAL	WAVECAL	98			2159286	+433855	L	3	28415	S			86060113	135900	000002	G E=10X,B=105
PHCAL	TFLOOD	99			2159286	+433855	H	3	28416	S			86060114	142400	000005	G E=60,B=127
PHCAL	WAVECAL	98			2159286	+433855	H	3	28416	S			86060114	142600	000200	G E=60X,B=127

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
PHCAL	TFLOOD	99		2159286	+433855	L	2	17898	S			86060114	144000	000007		G E=10X,B=85
PHCAL	WAVECAL	98		2159286	+433855	L	2	17898	S			86060114	144200	000001		G E=10X,B=85
PHCAL	TFLOOD	99		2159286	+433855	H	2	17899	S			86060115	150900	000010		G E=60X,B=179
PHCAL	WAVECAL	98		2159286	+433855	H	2	17899	S			86060115	151100	000022		G E=60X,B=179
PHCAL	TFLOOD	99		2159286	+433855	H	2	17900	S			86060115	154200	000007		G E=60X,B=125
PHCAL	WAVECAL	98		2159286	+433855	H	2	17900	S			86060115	154400	000016		G E=60X,B=125
RSIDH HD	209318	66	8.8	2159286	+433855	L	3	28422	L	830	FO	86060305	054600	042000		G E=170,C=139,B=102
MLIPC HD	209975	13	5.11	2203362	+620209	H	3	29004	L	19659	FO	86082609	093500	000500		G C=230,B=43
IA188	HD209975	14	05.41	2203363	+623210	H	3	29012	L	19967	FO	86082616	163915	000500	501	V
MLIPC HD	209975	13	5.1	2203363	+620210	H	3	28967	L	20304	FO	86082303	034200	000500		G C=220,B=40
IA188	HD209975	14	05.40	2203363	+620210	H	3	29016	L	20134	FO	86082620	200522	000500	501	V
MLIPC HD	209975	13	5.1	2203363	+620210	H	3	28970	L	20009	FO	86082308	080300	000500		G C=230,B=40
IA188	HD209975	14	05.44	2203363	+620210	H	3	29040	L	19602	FO	86082718	181813	000500	501	V
MLIPC HD	209975	13	5.1	2203363	+620210	H	3	28975	L	18795	FO	86082312	120000	000430		G C=240,B=65
IA188	HD209975	14	05.40	2203363	+620210	H	3	29044	L	20151	FO	86082721	215229	000500	501	V
MLIPC HD	209975	13	5.1	2203363	+620210	H	3	28981	L	19624	FO	86082408	082000	000500		G C=235,B=41
IA188	HD209975	14	05.38	2203363	+620210	H	3	29060	L	20343	FO	86082818	184446	000500	501	V
MLIPC HD	209975	13	5.1	2203363	+620210	H	3	28988	L	18982	FO	86082414	140400	000330		G C=245,B=115
IA188	HD209975	14	05.46	2203363	+620210	H	3	29079	L	19363	FO	86082916	163853	000530	501	V
MLIPC HD	209975	13	5.1	2203363	+620210	H	3	28989	L	18534	FO	86082414	143800	000400		G C=240,B=81
IA188	HD209975	14	05.43	2203363	+620210	H	3	29083	L	19688	FO	86082919	195705	000530	501	V
MLIPC HD	209975	13	5.1	2203363	+620210	H	3	28990	L	19749	FO	86082508	083700	000500		G C=230,B=41
MLIPC HD	209975	13	5.1	2203363	+620210	H	3	28996	L	19479	FO	86082512	125400	000345		G C=2X,B=185
MLIPC HD	209975	13	5.1	2203363	+620210	H	3	28998	L	18660	FO	86082514	140500	000315		G C=1.5X,B=140
MLIPC HD	209975	13	5.1	2203363	+620210	H	3	28999	L	18646	FO	86082514	143800	000335		G C=225,B=80
MLIPC HD	209975	13	5.11	2203363	+620210	H	3	29008	L	19342	FO	86082612	125600	000315		G C=1.3X,B=143
MLIPC HD	209975	13	5.1	2203363	+620210	H	3	29020	L	19512	FO	86082623	234500	000500		G C=230,B=40
MLIPC HD	209975	13	5.1	2203363	+620210	H	3	29024	L	19520	FO	86082702	023900	000500		G C=230,B=40
MLIPC HD	209975	13	5.11	2203363	+620210	H	3	29028	L	20361	FO	86082708	084400	000500		G C=242,B=45
MLIPC HD	209975	13	5.1	2203363	+620210	H	3	29032	L	19847	FO	86082711	114800	000415		G C=1.2X,B=100
MLIPC HD	209975	13	5.1	2203363	+620210	H	3	29036	L	20114	FO	86082714	144900	000415		G C=241,B=70
MLIPC HD	209975	13	5.1	2203363	+620210	H	3	29048	L	20412	FO	86082807	072200	000500		G C=235,B=41
MLIPC HD	209975	13	5.1	2203363	+620210	H	3	29052	L	20319	FO	86082810	103900	000500		G C=235,B=53
MLIPC HD	209975	13	5.1	2203363	+620210	H	3	29056	L	19930	FO	86082813	134000	000345		G C=213,B=71
MLIPC HD	209975	13	5.1	2203363	+620210	H	3	29071	L	20072	FO	86082910	100800	000500		G C=237,B=42
MLIPC HD	209975	13	5.1	2203363	+620210	H	3	29075	L	19611	FO	86082913	132100	000345		G C=255,B=103
OD85K HD	210418	36	3.5	2207406	+055704	H	1	08221	L	811	FU	86051817	173100	000230		G C=250,B=40
OD85K HD	210418	36	3.5	2207406	+055704	H	3	28339	L	793	FU	86051817	174000	000500		G C=210,B=35
CMIFB HD	210418	33	3.5	2207410	+055706	H	1	08322	L	791	FU	86060313	135800	000240		G C=254,B=44
IA072	CX CEP	11	12.41	2207487	+572945	L	3	28876	L	185	SO	86080823	232715	008200	331	V
IA072	CX CEP	11	12.45	2207487	+572945	L	3	28883	L	179	SO	86080922	222831	014000	332	V
IA188	HD210839	14	05.41	2209486	+591003	H	3	29013	L	19910	FO	86082617	172749	000930	501	V
MLIPC HD	210839	15	5.0	2209486	+591003	H	3	28968	L	20476	FO	86082306	061700	000820		G C=210,B=40
IA188	HD210839	14	05.41	2209486	+591003	H	3	29061	L	19979	FO	86082819	193829	000930	501	V
MLIPC HD	210839	15	5.0	2209486	+591003	H	3	28974	L	19425	FO	86082311	111600	000900		G C=235,B=61

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
MLIPC	HD 210839	15	5.0	2209486	+591003	H	3	28977	L	18585	FO	86082313	132000	000600		G C=245,B=130
MLIPC	HD 210839	15	5.0	2209486	+591003	H	3	28982	L	19330	FO	86082409	090900	000930		G C=230,B=50
MLIPC	HD 210839	15	5.0	2209486	+591003	H	3	28987	L	19272	FO	86082413	132300	000600		G C=1.5X,B=190
MLIPC	HD 210839	15	5.0	2209486	+591003	H	3	28991	L	19309	FO	86082509	091400	000900		G C=225,B=50
MLIPC	HD 210839	15	5.04	2209486	+591003	H	3	29005	L	19681	FO	86082610	101400	000930		G C=235,B=48
MLIPC	HD 210839	15	5.0	2209486	+591003	H	3	29021	L	20102	FO	86082700	002400	000630		G C=185,B=35
MLIPC	HD 210839	15	5.04	2209486	+591003	H	3	29029	L	20422	FO	86082709	092300	000930		G C=242,B=53
MLIPC	HD 210839	15	5.0	2209486	+591003	H	3	29037	L	19512	FO	86082715	153300	000845		G C=230,B=54
MLIPC	HD 210839	15	5.0	2209486	+591003	H	3	29045	L	19999	FO	86082722	224200	000930		G C=235,B=40
MLIPC	HD 210839	15	5.0	2209486	+591003	H	3	29053	L	20305	FO	86082811	111900	000745		G C=255,B=110
II003	RU PEG	54	12.83	2211354	+122716	L	1	08510	L	127	SO	86062922	221043	003000	991	V BL. OFFS.
II003	RU PEG	54	12.60	2211354	+122716	L	1	08863	L		BO	86080918	181707	003000	352	V 138 CTS (S/O) AT R.
II003	RU PEG	54	99.99	2211354	+122716	L	3	28448	L		BO	86060722	224326	003000	331	V
II003	RU PEG	54	12.70	2211355	+122717	L	1	08181	L		BO	86051204	043816	003000	341	V
II003	RU PEG	54	12.74	2211355	+122716	L	1	08248	L	138	SO	86052204	040111	003000	332	V
II003	RU PEG	54	13.17	2211355	+122716	L	1	08353	L	94	SO	86060722	220213	003000	343	V
II003	RU PEG	54	11.26	2211355	+122716	L	1	08511	L	129	FO	86062923	235132	001739	891	V
II003	RU PEG	54	12.61	2211355	+122716	L	1	08537	L	155	SO	86070402	021834	003000	453	V
II003	RU PEG	54	99.99	2211355	+122716	L	1	08632	L	135	SO	86071600	001852	003000	331	V
II003	RU PEG	54	12.70	2211355	+122717	L	3	28294	L		BO	86051203	035256	004000	330	V
II003	RU PEG	54	12.70	2211355	+122717	L	3	28295	L		BO	86051205	051950	008800	330	V
II003	RU PEG	54	12.74	2211355	+122716	L	3	28355	L	138	SO	86052204	043959	012700	331	V
II003	RU PEG	54	99.99	2211355	+122716	L	3	28449	L		BO	86060800	001159	008000	331	V
II003	RU PEG	54	13.00	2211355	+122716	L	3	28580	L		BO	86062923	235045	003500	880	V BL. OFFS.
II003	RU PEG	54	11.26	2211355	+122717	L	3	28581	L	129	FO	86063000	003047	001400	660	V
II003	RU PEG	54	12.61	2211355	+122716	L	3	28603	L	155	SO	86070323	235209	014000	701	V
II003	RU PEG	54	14.00	2211355	+122716	L	3	28683	L		BO	86071601	010425	010300	342	V
II003	RU PEG	54	12.60	2211355	+122716	L	3	28882	L		BO	86080918	185726	011000	351	V
KGHJL	HD 211388	47	4.1	2213473	+372959	H	1	08290	L	456	FU	86052617	175000	006000		G E=166,C=112,B=58
CCIJL	0000W862	46	7.7	2226255	-301518	L	1	08415	M	2569	FO	86061814	144200	002400		G E=119,C=140,B=41
FGILW	DELT CEP	53	4.5	2227185	+580932	L	3	28481	L	540	FU	86061311	113300	007500		G C=250,B=30
FGILW	DELT CEP	53	4.5	2227185	+580932	L	1	08490	L	500	FU	86062705	053900	000011		G C=140,B=35
FGILW	DELT CEP	53	4.5	2227185	+580932	L	3	28556	L	505	FU	86062705	054800	030000		G C=5X,B=95
PHCAL	TFLLOD	99	0.0	2228000	-105600	L	2	17914	S			86062313	134500	000010		G E=7X,B=92
PHCAL	WAVCAL	98	0.0	2228000	-105600	L	2	17914	S			86062313	134700	000001		G E=7X,B=92
PHCAL	TFLLOD	99	0.0	2228000	-105600	H	2	17915	S			86062314	141200	000010		G E=50X,B=90X
PHCAL	WAVCAL	98	0.0	2228000	-105600	H	2	17915	S			86062314	141300	000022		G E=50X,B=90X
PHCAL	31516	41	5.30	2231576	-205753	L	1	08762	L			86072907	070400	006000		G B=55
PHCAL	31516	41	5.30	2231576	-205753	L	3	28774	L			86072907	070600	010000		G B=45
CSIJL	EV LAC	48	10.2	2244399	+440435	L	3	28515	L	307	FO	86062011	111600	009000		G E=63,B=35
RSHLR	HD 216489	47	5.6	2250344	+163431	L	3	28400	L	11591	FO	86053015	153000	012000		G E=242,C=79,B=40
RSHLR	HD 216489	47	5.6	2250344	+163431	L	3	28403	L	11424	FO	86053021	214400	006500		G E=172,C=61,B=21
IC171	HD217014	44	05.81	2255002	+203000	H	1	08708	L	15149	FO	86072321	215411	007500	632	V
RSISD	HD 217344	44	8.4	2257420	-340046	L	3	28812	L	1137	FO	86080201	015900	015400		G E=79,C=82,B=60
IA080	HD217675	26	03.81	2259369	+420325	H	1	08841	L	855	FU	86080519	195622	000100	501	V

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
IA080	HD217675	26	03.68	2259369	+420325	H	3	28474	L	961	FU	86061201	015517	000110	501	V
IA080	HD217675	26	03.76	2259369	+420325	H	3	28498	L	892	FU	86061602	020204	000110	501	V
IA080	HD217675	26	03.85	2259369	+420325	H	3	28726	L	825	FU	86072022	221141	000110	501	V
IA080	HD217675	26	03.69	2259369	+420325	H	3	28842	L	952	FU	86080519	192528	000110	501	V
IDIJC	HD 217919	20	8.3	2301013	+632543	L	1	08597	L	1386	FO	86071314	145500	002700		G C=4.5X,B=80
IDIJC	HD 217919	20	8.3	2301013	+632543	L	1	08597	S	1405	FO	86071315	152800	000600		G C=205,B=80
IDIJC	HD 217919	20	8.3	2301013	+632543	L	3	28671	L	1366	FO	86071315	154000	001500		G C=187,B=30
LDIDB	HD 217877	41	6.68	2301209	-050354	L	1	08812	M	5734	FO	86080214	145900	000315		G C=240,B=59
SJHHM	JUPITER	03	-1.9	2315421	-055256	L	3	28320	L			86051616	162000	001500		G E=144,C=10X,B=45
SJHHM	SKYBKGRD	07	-1.9	2315421	-055256	L	3	28321	L			86051617	172100	001500		G E=38,B=18
SJHHM	JUPITER	03	-1.9	2315421	-055256	L	3	28322	L			86051618	181900	001500		G E=166,C=10X,B=50
SJHHM	SKYBKGRD	07	-1.9	2315421	-055256	L	3	28323	L			86051619	192100	001500		G E=73,B=30
SJHHM	JUPITER	03	-1.9	2315421	-055256	L	3	28324	L			86051620	202000	001500		G E=189,C=10X,B=50
SJHHM	SKYBKGRD	07	-1.9	2315421	-055256	L	3	28325	L			86051621	211400	001500		G E=226,B=19
HE027	NGC7603	84	14.27	2316229	-000148	L	1	08379	L	35	SO	86061222	222510	016000	353	V
HE027	NGC7603	84	14.34	2316229	-000148	L	3	28479	L	33	SO	86061301	011527	021200	332	V
OD85K	HD 220278	36	5.2	2320020	-151851	H	1	08222	L	16454	FO	86051818	185500	001400		G C=240,B=50
CVIPS	IP PEG	54	14.8	2320384	+180832	L	3	28950	L		BO	86082108	083500	012000		G E=51,C=65,B=43
CVIPS	IP PEG	54	14.8	2320384	+180832	L	1	08946	L			86082110	104100	006000		G E=105,C=95,B=50
CVIPS	IP PEG	54	14.8	2320384	+180832	L	3	28951	L			86082111	114800	004000		G B=37
CVIPS	IP PEG	54	14.8	2320384	+180832	L	1	08947	L			86082112	123600	012000		G E=232,B=160
CVIPS	IP PEG	54	14.8	2320384	+180832	L	3	28954	L			86082123	235800	009500		G E=44,C=53,B=35
CVIPS	IP PEG	54	14.8	2320384	+180832	L	1	08950	L			86082201	014000	002500		G E=66,C=50,B=37
CVIPS	IP PEG	54	14.8	2320385	+180832	L	1	08949	L		BO	86082123	230800	004000		G E=62,C=60,B=40
CVIPS	IP PEG	54	14.8	2320385	+180832	L	3	28955	L			86082202	021100	005000		G C=48,B=30
SPIJW	JUPITER	03	-2.8	2330385	-044159	L	3	28847	L		BO	86080606	063500	010000		G C=5X,B=85
SPIJW	JUPITER	03	-2.8	2330391	-044221	L	3	28846	L		BO	86080604	043700	007500		G C=20X,B=40
SPIJW	JUPITER	03	-2.6	2330397	-044243	L	3	28845	L		BO	86080602	021800	010000		G E=1.2X,C=10X,B=34
II134	Z AND	57	10.42	2331149	+483230	L	1	08584	L	272	FO	86071119	195057	000700	351	V
II134	Z AND	57	10.44	2331149	+483230	L	3	28655	L	268	FO	86071120	200402	003000	380	V
HI185	HD221650	57	10.19	2331150	+483231	L	1	08329	L	334	FO	86060402	021758	001000	563	V
II134	Z AND	57	10.48	2331150	+483231	L	1	08585	L	259	FO	86071120	203746	002500	781	V
HI185	HD221650	57	10.17	2331150	+483231	L	3	28426	L	341	FO	86060402	020135	001000	360	V
HI185	HD221650	57	10.18	2331150	+483231	L	3	28427	L	338	FO	86060402	024726	004000	571	V
II134	Z AND	57	10.48	2331150	+483231	L	3	28656	L	258	FO	86071121	210626	000800	320	V
II134	Z AND	57	10.17	2331150	+483231	E	9	01828	2	342	FO	86061322	220000	004000		V FOR SWP28482
II134	Z AND	57	10.0	2331152	+483231	H	3	28482	L	342	FO	86061321	215800	060000		G E=6X,C=180,B=114
II134	Z AND	57	10.0	2331152	+483231	H	1	08389	L	335	FO	86061408	081500	018000		G E=2X,C=125,B=65
II134	Z AND	57	10.0	2331152	+483231	H	3	28483	L	337	FO	86061411	112600	008500		G E=1.5X,B=41
ZAIMP	Z AND	57	10.2	2331152	+483231	L	1	08502	L	287	FO	86062913	135100	001700		G E=3X,C=3X,B=42
ZAIMP	Z AND	57	10.2	2331152	+483231	L	3	28577	L	290	FO	86062914	141500	001500		G E=2X,C=86,B=31
ZAIMP	Z AND	57	10.2	2331152	+483231	L	3	28577	S		FO	86062914	144000	001500		G E=1.2X,C=58,B=31
PHCAL	TFLOOD	99		2331152	+483231	L	3	28578	S			86062915	153100	000005		G E=10X,B=102
PHCAL	WAVCAL	98		2331152	+483231	L	3	28578	S			86062915	153300	000002		G E=10X,B=102
PHCAL	TFLOOD	99		2331152	+483231	H	3	28579	S			86062916	160400	000005		G E=60X,B=129

PRO	Object	CL	MAG	R.A.	DEC	D	C	Image	A	FES	MD	Obs.date	Exptim	mmmmsstt	ECC	Comment
PHCAL	WAVCAL	98		2331152	+483231	H	3	28579	S			86062916	160600	000200		G E=60X,B=129
PHCAL	TFLOOD	99		2331152	+483231	L	1	08503	S			86062916	162400	000025		G E=10X,B=100
PHCAL	WAVCAL	98		2331152	+483231	L	1	08503	S			86062916	162600	000001		G E=10X,B=100
PHCAL	TFLOOD	99		2331152	+483231	H	1	08504	S			86062916	165400	000025		G E=60X,B=110
PHCAL	WAVCAL	98		2331152	+483231	H	1	08504	S			86062916	165600	000016		G E=60X,B=110
SIIHM	IO	04	5.0	2333451	-041653	L	3	28708	L			86071821	214900	081000		G E=201,C=186,B=144
SIIHM	IO SKY	07		2333451	-041653	L	1	08657	L			86071821	215600	078000		G C=10X,B=165
SJIHM	JUPITER	03	-2.7	2333451	-041653	L	3	28709	L			86071912	120400	001500		G E=84,C=10X,B=21
SJIHM	JUPITER	03	-2.7	2333451	-041653	L	3	28710	L			86071913	130300	001500		G E=70,C=10X,B=21
SJIHM	JUPITER	03	-2.7	2333451	-041653	L	3	28711	L			86071914	140200	001500		G E=74,C=10X,B=22
SJIHM	JUPITER	03	-2.7	2333451	-041653	L	3	28712	L			86071914	145500	001500		G E=50,C=10X,B=22
SJIHM	JUPITER	03	-2.7	2333451	-041653	L	3	28713	L			86071915	154500	001500		G E=60,C=10X,B=23
SJIHM	JUPITER	03	-2.7	2333451	-041653	L	3	28714	L			86071916	164200	001500		G E=46,C=10X,B=22
II198 IO		04	99.99	2333456	-041648	E	9	01842	2			86071822	220100	004000		U
RSHLR HD	222107	45	3.8	2335060	+461114	L	3	28402	L	629	FU	86053020	200400	004000		G E=232,C=72,B=20
NJIMK	R AQR	57	6.7	2341143	-153343	L	1	08551	L	6091	FO	86070508	084800	003000		G E=2X,C=125,B=42
NJIMK	R AQR	57	6.5	2341143	-153343	L	3	28611	L	6029	FO	86070509	093400	004500		G E=2X,C=60,B=26
NJIMK	RAQR JET	57	8.0	2341146	-153334	L	3	28610	L		BO	86070503	034300	030000		G E=2X,C=117,B=72
RRHRB HD	224930	42	5.8	2359293	+265041	H	1	08521	L	12060	FO	86070113	133600	002000		G C=159,B=54
RRHRB HD	224930	42	5.8	2359293	+265041	L	1	08522	L	12233	FO	86070114	143300	000045		G C=230,B=35
RRHRB HD	224930	42	5.8	2359293	+265041	H	1	08523	L	12158	FO	86070115	151600	004000		G C=2X,B=168
LDIDB HD	224930	44	5.7	2359332	+264903	L	1	08445	T	11529	FO	86062116	163600	000210		G C=195,B=35

Errors in Foregoing VILSPA Log

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

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

UK Resident Astronomer
Villafranca Satellite Tracking Station
Apartado 54065
Madrid, Spain

TAPE ARCHIVE RETRIEVAL

DATA TAPE:

TAPE DENSITY ◯ 1600 bpi (default) ◯ 800 bpi

REQUESTED DATA ◯ Raw Data Only

◯ Complete: Raw image + Extracted Spectra

◯ Extracted Spectra Only

CAM #	IMAGE #	CAM #	IMAGE #	CAM #	IMAGE #	CAM #	IMAGE #

CAMERA NUMBERS: 1 = LWP / 2 = LWR / 3 = SWP / 4 = SWR

REASON DATA IS ACCESSIBLE:

◯ Normal Release (6 month rule)

◯ Special Release ◯ data from my programme .....

◯ maintenance data

◯ others (give details) .....

.....

REQUESTED BY: ..... DATE OF REQUEST: .....

MAILING ADDRESS: .....

.....

.....

DATA BANK R.A.

.....

Dr. A. Cassatella,
Data Bank Resident Astronomer,
Villafranca Satellite Tracking Station
Apartado 54065
Madrid,
SPAIN

QUESTIONNAIRE FOR NEWSLETTER CIRCULATION

☐ Please note my change of address as below. (I attach the current mailing label for cancellation.)

☐ Having become acquainted with the ESA IUE Newsletter through a colleague/library, I would like to be placed on the regular mailing list. My name and address, including the post code, are given below.

☐ Please delete my name and address (printed below) from the Newsletter distribution list.

NAME:

ADDRESS:

Now tear off this last page and return it to ESA, Paris, in the convenient posting format provided. Simply fold and staple leaving the mailing address (verso) visible.

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