THE CELESCOPE CATALOG OF ULTRAVIOLET OBSERVATIONS

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ABSTRACT

The Smithsonian Astrophysical Observatory is using data obtained from approximately 7500 ultraviolet television pictures to compile The Celescope Catalog of Ultraviolet Observations described in this paper. This catalog lists the magnitude as observed in each of Celescope's four ultraviolet color bands, the standard deviations of the observed ultraviolet magnitudes, positions, identifications, and ground-based magnitudes, colors, and spectral types for approximately 5000 stars.

A Preliminary Catalog of Celescope Ultraviolet Observations, containing data on about 500 stars, was distributed at the time this paper was presented.

I. INTRODUCTION

The Smithsonian Astrophysical Observatory operated an ultraviolet television photometer, called the Celescope experiment, in the second Orbiting Astronomical Observatory (OAO-2) of the National Aeronautics and Space Administration. During the 16 months that we operated Celescope (December 1968 through April 1970), we took 8784 television pictures, observing about 1000 star fields once and about 700 more than once. We are now compiling the results from 7407 of these pictures into The Catalog of Celescope Ultraviolet Observations. Of the remaining 1377 pictures, 272 were not received, and 1105 were of quality too poor for processing.

Included in this paper is a Preliminary Catalog of Celescope Ultraviolet Observations in the format in which we intend to publish the final catalog. We consider observational

material presented in this sample listing to be final. Since we are still reviewing the identifications and ground-based data, there may be a few changes in these quantities; however, the ultraviolet magnitudes will not change. We are finding that about 5 to 10% of our identifications as given in this preliminary catalog are incorrect. The probability of misidentification in the final catalog will be considerably lower. Incorrect identifications are most probable for the faintest stars.

This Preliminary Catalog supercedes a similar one that was given limited distribution in May 1971 with preliminary ultraviolet magnitudes. Comments are invited on the format in which the catalog is presented. These comments will be useful to us in improving The Catalog of Celescope Ultraviolet Observations, which will be available on magnetic tape early in 1972, and in printed form later in 1972.

This Preliminary Catalog of Celescope Ultraviolet Observations contains the reduced ultraviolet magnitudes measured by Celescope, accompanied by identifications, positions and auxiliary astrophysical information where known.

The columns of the listing are described in the following section. Bibliographical information concerning the references cited in this Preliminary Catalog is included. Complete bibliographic information concerning all references used in compiling the Celescope Identification Catalog, from which the auxiliary information was derived, can be found in CDL-100, available upon request from Project Celescope, Smithsonian Astrophysical Observatory.

A description of the Celescope experiment is available as Smithsonian Astrophysical Observatory Special Report No. 282. A description of the data-analysis techniques will become available early in 1972 as Smithsonian Astrophysical Observatory Special Report No. 310.

The data contained in the Preliminary Catalog of Celescope Ultraviolet Observations, and the individual observed magnitudes on which these data were based, are also available on magnetic tape. The tentative format for the magnetic tape is given following the "Explanation of Columns."

II. EXPLANATION OF COLUMNS

Column	Contents
CEL	Preliminary Celescope Catalog ID number
HD	Henry Draper Catalogue number (reference 922).
DM	Durchmusterung number: B BD, Bonner Durchmusterung (reference 898)

Column	Contents
DM (cont.)	C CD or CoD, Cordoba Durchmusterung (reference 899). P CPD, Cape Photographic Durchmusterung (reference 900).
R.A.(1950)DEC.	Right ascension and declination (1950.0). If 897 is listed among the references (SAO Star Catalog), the position is taken from that reference. If the DM number is given but reference 897 is not listed, the position is taken from the DM and precessed to 1950.0. If the star has not been identified with a known object, the position given has been determined directly from the Celescope measurements and has an accuracy of about 1 arcmin.
OBJ	If the object is nonstellar, one or more of the following letters will indicate the nature of the object: B Barred spiral galaxy. C Globular cluster. D Diffuse emission nebula. E Elliptical galaxy. G Galactic cluster. I Irregular galaxy. N Reflection nebula. O Object surrounded by or associated with nebulosity. P Planetary nebula. Q Quasi-stellar galaxy. R Radio source. S Spiral galaxy. X Peculiar galaxy. * Identification given in NONSTAR column.
V	The photoelectric V magnitude of the UBV system when available. Otherwise, in order of preference, m_v, m_{pv}, m_{pg}. To distinguish among these possibilities, the magnitude given may be followed by MV(m_v), PV(m_{pv}), or PG(m_{pg}). In compiling these data, if different sources agreed to within $0^m.10$, the arithmetic mean is given. If there was greater disagreement, an astronomer resolved the disagreement. If he could not resolve it, an asterisk (*) appears in the magnitude column following the truncated mean of the source magnitudes. If the star has a

Column	Contents
V (cont.)	V magnitude listed in the Naval Observatory Catalogue (reference A19), only data combined from that catalog were used for deriving the magnitude given here. Magnitudes given to one decimal place required consistency within $\pm 0^{m}.5$ in the source material and imply that no source listed the magnitude to more than one decimal place. Magnitudes given to two decimal places required consistency within $\pm 0^{m}.05$ from those sources reporting the magnitude to two decimal places and disregarded magnitudes given to only one place. We consider only the photoelectric magnitudes to have reasonable accuracy; the photographic and photovisual magnitudes come mostly from source catalogs having very low photometric accuracy.
B-V	The photoelectric B-V color of the UBV system, otherwise the magnitude m_{pg} if available. If m_{pg} is given, the magnitude is followed by PG. The same conventions with regard to accuracy and the use of reference A19 apply as for the V column.
U-B	The photoelectric U-B color of the UBV system, when available. Otherwise, in order of preference, U-V or $(U-B)_C$. To distinguish between these possibilities, the magnitude given may be followed by U-V or UBC. The same conventions for accuracy and use of A19 apply as in the V column.
PHOT	When additional information is available in regard to the photometric characteristics of the object, one or more of the following entries will indicate these characteristics: A Member of an OB association. B Visual binary. H High-velocity star. M Multiple star. P Polarization data available. S Standard on MK or UBV system. U Observed in the ultraviolet below 3000 Å wavelength. X X-ray source. Z X-ray source also observed in the ultraviolet.

Column	Contents
PHOT (cont.)	* Merged image; see remarks.
	numbers Variable Stars:
	1 RW Aurigae variable.
	2 Eclipsing variable.
	3 Early-type irregular variable (type Ia of Kukarkin and Parenago).
	4 Variable star of unspecified type.
	5 Beta Canis Majoris variable.
	6 Alpha Canum Venaticorum variable.
	7 Delta Scuti variable.
	8 W Ursae Majoris variable.
	9 Peculiar variable.
	10 Classical Cepheid variable.
	11 Flare star.
	12 Irregular variable other than type IA of Kukarkin and Parenago.
	13 Semiregular variable.
	14 RR Lyrae variable.
	15 Mira Ceti and long-period variables.
	16 Nova-like variable.
	17 Nova.
	18 R Coronae Borealis variable.
	19 Supernova.
	20 T Tauri variable.
	21 U Geminorum variable.
	22 RV Tauri variable.
	23 W Virginis variable.
	24 Z Camelopardalis variable.
SPECT	Spectrum and luminosity. If different sources agreed to within ±2 subclasses, the arithmetic mean was taken. If they disagreed by more than 2 subclasses, arbitrary subclass designations were assigned according to the average of the given subclasses: E (early), if 0-3 in average subclass; M (middle), if 4-6; and L (late) if 7-9. Intermediate spectral subclasses and luminosities have been truncated; i.e., a star of spectral type B0.5 II-III is listed as B0 II.
PEC	When additional information is available in regard to the spectral characteristics of the object, one or more of the following entries will indicate these characteristics:
	A Peculiar A-type star.
	B Spectroscopic binary.

Column	Contents
PEC (cont.)	C Composite spectrum. D Interstellar D lines of sodium. E Any type of emission. G Magnetic field. H Interstellar H and K lines of Calcium II. M Metallic-line star. N Nebulous lines. P Peculiar spectrum. R Measured axial rotation. S Sharp lines. W Broad lines. Y Shell spectrum. 4 Interstellar 4430 Å absorption band.
U1	U1 magnitude. The weighted mean of the Celescope observational results in the U1 color band (2100-3200 Å). Celescope magnitudes are based on spectral irradiance in MKS units: $U_n = -2.5 \log I$, where I is spectral irradiance from the observed star at the effective wavelength of the color band, in units of watts per square meter per meter of wavelength. The U1 magnitude is derived from the formula $$U1 = \frac{\Sigma[U1_i/(1 + w_i)]}{\Sigma[1/(1 + w_i)]},$$ where $U1_i$ is the ith observation of the U1 magnitude and w_i is its weighting factor assigned as follows: w=3 if the object could not be separated from a neighboring object by our standard computer program and was separated manually. w=3 if the object was within 15 arcmin of the line, through the center of the field, separating the two different optical filters that were rigidly mounted in front of each television camera. w=6 if the object was both manually split and near the filter split line. w=∞ if the object was within 5 arcmin of the filter split line, if the object was in a part of the picture having a bright background, or if the object

Column	Contents
U1 (cont.)	touched the edge of the picture. Observations with w=∞ are not included in this Catalog. w=0 otherwise.
SD1	The standard deviation of U1, based on the formula $$SD1 = \left[\frac{\Sigma[(U1_i - U1)^2/(1 + w_i)]}{\Sigma[1/(1 + w_i)]}\right]^{1/2}$$ If U1 is based on a single observation, the weighting factor is given rather than the standard deviation. Weighting factor is indicated by the letter W preceding the number and by the use of a single-digit number rather than a number printed to two decimal places.
U2	U2 magnitude. The weighted mean of the Celescope observational results in the U2 color band (1550-3200 Å). Derivation as for U1.
SD2	Standard deviation of U2, or weighting factor for a single observation of U2, computed as for SD1.
U3	U3 magnitude. The weighted mean of the Celescope observational results in the U3 color band (1350-2150 Å). Derivation as for U1.
SD3	Standard deviation of U3, or weighting factor for a single observation of U3, computed as for SD1.
U4	U4 magnitude. The weighted mean of the Celescope observational results in the U4 color band (1050-2150 Å). Derivation as for U1. Very few U4 magnitudes are given because of interference from the bright Lyman-alpha background of the geocorona.
SD4	Standard deviation of U4, or weighting factor for a single observation of U4, computed as for SD1.
CEL	Preliminary Celescope Catalog ID number.

Column	Contents
NONSTAR	Nonstellar objects, in the rare cases where they have been identified with Celescope images, have their catalog number preceded by one of the following identifiers: N NGC, New General Catalogue. I IC, Index Catalogue. 3C Third Cambridge Catalogue of Radio Sources.
R.A.(2000)DEC.	Right ascension and declination (2000.0). See entry for R.A.(1950)DEC.
REMARKS	Most commonly used for naming additional stars in a merged image. Also used to give names of bright stars and variable stars.
REFERENCES	The identification numbers of the references used in compiling the auxiliary information. References cited in the Preliminary Catalog of Celescope Ultraviolet Observations are identified in the listing that follows the catalog. References not cited in this catalog are identified in CDL-100.

III. TENTATIVE FORMAT FOR MAGNETIC-TAPE VERSION OF CELESCOPE CATALOG

The magnetic-tape version of The Catalog of Celescope Ultraviolet Observations will contain the same information as is printed in the catalog itself, in a format convenient for machine computation. In addition, the magnetic-tape version will list the individual observations for each star, and a small amount of information useful for record keeping.

The following tentative tape format is given here only for the purpose of eliciting comments from potential users; the final format may be considerably different. Each observational record will contain the following items:

Item No.	Contents
1	Celescope catalog number
2	RA (1950), seconds of time
3	Dec (1950), tenths of minutes of arc
4	RA (2000), seconds of time
5	Dec (2000), tenths of minutes of arc

Item No.	Contents
6	Durchmusterung identifier. One integer is created from the DM zone and number: DM item = (sign of zone) × [(|zone|) × (100000) + number].
7	Durchmusterung code: BD, CD or CPD
8	Nonstar code: 1 for nonstellar objects
9	NGC-IC-3C Designation
10	HD number
11-31	Peculiarity codes (print columns OBJ, PHOT, PEC)
32	M1 × 100
33	M2 × 100
34	M3 × 100
35	Magnitude code defining the type of magnitudes listed in M1, M2 and M3
36	Spectral type and subtype
37	Luminosity
38-57	References
58-59	Name or comment
60	U_1 average
61	Weight of U_1
62	Rms of U_1
63	U_2 average
64	Weight of U_2
65	Rms of U_2
66	U_3 average
67	Weight of U_3
68	Rms of U_3
69	U_4 average
70	Weight of U_4
71	Rms of U_4
72	Number of U_1 magnitudes
73	U_1^i
74	Identifier of U_1^i (tape-frame-contact-Object Number)
75	Weight of U_1^i
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L	Number of U_2 magnitudes
L+1	U_2^ℓ
L+2	Identifier of U_2^ℓ
L+3	Weight of U_2^ℓ
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M	Number of U_3 magnitudes
M+1	U_3^m

Item No.	Contents
M+2	Identifier of U_3^m
M+3	Weight of U_3^m
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N	Number of U_4 magnitudes
N+1	U_4^m
N+2	Identifier of U_4^m
N+3	Weight of U_4^m
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PRELIMINARY CATALOG OF CELESCOPE ULTRAVIOLET OBSERVATIONS. JULY 1971.

CEL	HD	DM	R.A. (1950) DEC.	OBJ	V	B-V	U-B	PHOT	SPECT	PEC.	U1	SD1	U2	SD2	U3
A 1P	67269	C-45 3741	8 3 35 -45 15.8		8.2 MV	8.2 PG		*	A				12.66	W0	
A 2P	67385	C-44 4032	8 4 7 -45 1.6		6.94MV				B5				9.36	.20	
A 3P	67460	C-45 3765	8 4 31 -45 15.0		8.70MV				A0				13.60	W0	
A 4P	67609	C-44 4054	8 5 4 -44 54.2		9.8 MV	9.1 PG			A0				13.21	W0	
A 5P	67760	C-44 4068	8 5 57 -45 .1		8.5 MV	7.4 PG			A0		12.66	.18	11.02	W0	
A 6P	67865	C-45 3799	8 6 26 -45 23.7		9.6 MV	9.0 PG			A0				13.24	W0	
A 7P	67890	C-44 4078	8 6 29 -44 54.7		8.9 MV	7.7 PG			B9		12.31	W0	10.89	W0	
A 8P		C-43 3977	8 6 34 -44 5.9		9.2 MV						14.27	W3	14.05	W3	
A 9P	67951	C-45 3807	8 6 48 -45 38.9		9.6 MV	8.4 PG			B8		12.77	W0	11.78	W0	
A10P	68007	C-45 3809	8 6 58 -46 6.8		9.1 MV	8.5 PG			B9		12.78	W0			
A11P	67982	C-44 4089	8 6 59 -45 .4		9.9 MV								12.73	W0	
A12P		C-44 4095	8 7 3 -44 34.4		8.1 MV								13.94	W0	
A13P	68006	C-44 4093	8 7 6 -44 17.2		9.2 MV	8.0 PG			B8		13.56	.09	13.43	W0	
A14P	68034	C-45 3811	8 7 7 -45 15.0		8.5 MV	9.5 PG			A0		12.92	W0	12.26	W0	
A15P	68217	C-43 3998	8 7 57 -43 58.5		5.20	-.20			B3		8.89	.19	7.88	.47	
A16P	68322	C-43 4002	8 8 22 -44 11.8		8.9 MV	7.5 PG			B8		12.05	.15	10.25	W0	10.68
A17P	68369	C-44 4116	8 8 33 -44 45.2			8.10PG							13.78	W0	
A18P	68417	C-44 4118	8 8 44 -44 27.6		10.5 MV	9.0 PG			B8		12.86	.00	12.13	.02	
A19P	68476	C-45 3849	8 8 57 -45 51.3		9.6 MV	8.1 PG			B9		12.32	W0	11.84	W0	
A20P	68539	C-43 4015	8 9 21 -44 10.1		9.6 MV	9.1 PG			A2				13.53	.15	
A21P	68554	C-45 3857	8 9 23 -45 42.1		9.0 MV	8.1 PG			B9		11.84	W0	11.40	W0	
A22P	68697	C-45 3872	8 9 58 -46 5.0		8.30MV				A0		10.68	W3	11.61	W3	
A23P	68695	C-43 4022	8 10 1 -43 55.3		10.2 MV	9.6 PG			A0				13.81	W0	
A24P	68718	C-43 4023	8 10 8 -44 5.2		9.1 MV	8.2 PG			A0		12.90	.28	11.69	.19	
A25P	68737	C-44 4148	8 10 12 -44 45.5		10.0 MV	9.2 PG			B9		12.57	.17	12.18	.14	
A26P	68717	C-43 4025	8 10 14 -43 36.6		9.6 MV	9.6 PG			B9				13.83	W0	
A27P	68786	C-45 3880	8 10 29 -45 14.1		10.2 MV				A0		14.12	W0	13.91	.03	
A28P	68825	C-45 3883	8 10 35 -45 42.1		9.4 MV	8.1 PG			B8		10.84	W3	11.39	W3	
A29P	68805	C-43 4034	8 10 38 -43 49.7		9.8 MV	9.1 PG			B8		12.91	W0	11.89	W0	
A30P	68893	C-45 3890	8 10 53 -45 17.5		10.5 MV	9.3 PG			B9		13.25	W0	13.56	W0	
A31P	68895	C-45 3892	8 10 56 -46 6.8		6.02	-.13		B	B3				8.69	W0	7.96
A32P	68921	C-45 3891	8 11 1 -45 25.5		9.8 MV	8.7 PG			A0		12.93	.15	13.76	.16	
A33P	68965	C-45 3894	8 11 8 -45 27.7		9.8 MV	8.7 PG			A0		12.97	W3			
A34P	68920	C-44 4163	8 11 8 -44 32.7		10.2 MV	8.7 PG			B9				13.56	.07	
A35P	68945	C-43 4044	8 11 9 -43 36.3		10.0 MV	9.4 PG			A2				13.88	W0	
A36P	69128	C-45 3902	8 12 0 -45 18.6		9.1 MV	9.2 PG			B8		12.09	.16	13.15	.13	
A37P	69109	C-46 3926	8 12 5 -46 28.7		10.2 MV	9.6 PG			A0		11.45	W3			10.21
A38P	69168	C-46 3931	8 12 11 -46 25.6		6.50MV				B3		10.33	W3	8.60	W0	7.88
A39P	69167	C-43 4061	8 12 16 -43 45.4		10.2 MV	9.3 PG			A0				12.81	W0	
A40P	69237	C-43 4069	8 12 21 -43 18.7		9.8 MV	9.8 PG			A0				13.28	W3	
A41P	69213	C-44 4192	8 12 26 -44 25.2		6.6 MV	6.4 PG		7	F0		11.57	.11	11.52	.03	
A42P	69302	C-45 3914	8 12 47 -45 40.9		5.80	-0.13		B	B3		9.06	.29	7.97	.03	7.36
A43P	69301	C-44 4202	8 12 49 -45 8.5		9.0 MV	9.0 PG			F5		13.95	W3			
A44P	69324	C-44 4203	8 12 54 -45 3.6		8.2 MV	7.9 PG			B8		10.69	.12	11.85	W3	11.10
A45P	69358	C-45 3917	8 13 4 -45 53.7		10.2 MV	9.2 PG			B3				12.24	W0	12.72
A46P	69344	C-43 4081	8 13 5 -43 47.0		10.5 MV	9.6 PG			A0				13.65	W0	
A47P	69356	C-43 4084	8 13 13 -43 20.6		9.6 MV	9.3 PG			B9				12.81	W3	
A48P	69404	C-46 3951	8 13 16 -46 19.9		6.43	-.15			B3V	EN	9.79	W0	8.37	.11	7.71
A49P	69360	C-43 4088	8 13 20 -44 1.7		9.9 MV								13.82	.12	
A50P	69448	C-43 4092	8 13 35 -43 21.9		9.0 MV	8.5 PG			A5				13.47	W3	
A51P	69513	C-44 4225	8 13 53 -45 4.0		9.4 MV	9.0 PG		*	A0		13.75	W3			12.89
A52P	69512	C-44 4222	8 13 54 -44 33.9		9.7 MV						12.83	W3			
A53P	69567	C-43 4104	8 14 3 -44 10.1		9.1 MV	8.5 PG			B8		12.36	W0	12.14	.05	11.68
A54P	69650	C-45 3942	8 14 17 -46 9.5		6.76MV				A2		12.27	.07	11.05	W0	13.12
A55P	69677	C-45 3943	8 14 18 -46 1.3		11.5 MV	10.1 PG			A0				13.56	W0	
A56P	69648	C-43 4113	8 14 23 -44 10.1		8.2 MV	7.8 PG			B2		11.75	.41	11.76	.15	11.12
A57P	69710	C-43 4120	8 14 39 -44 11.3		8.3 MV	9.4 PG			A0		12.06	W6	13.02	.07	
A58P	69822	C-45 3957	8 15 14 -45 51.4		10.0 MV	8.8 PG			B9		13.23	W0	12.73	.01	
A59P	69780	C-43 4125	8 15 14 -43 16.6		9.2 MV	8.8 PG			A3				13.94	W0	
A60P	69883	C-44 4254	8 15 32 -44 30.7		9.0 MV	8.2 PG			A0		12.78	W3	12.27	W3	11.73
A61P	69933	C-45 3962	8 15 33 -46 8.3		10.2 MV	9.4 PG			A0		13.07	W0	12.55	W0	
A62P	69931	C-44 4255	8 15 36 -45 .6		9.0 MV								14.76	W0	
A63P	69882	C-42 4090	8 15 36 -42 22.0		7.15	.3*	-.51		B2III		10.88	W0			
A64P	69952	C-46 4007	8 15 42 -46 44.2		7.8 MV	7.6 PG			A0		10.99	W0	10.58	.23	11.54
A65P	69953	C-46 4008	8 15 45 -46 51.4		10.0 MV	9.2 PG			B9		13.82	W0			
A66P	69930	C-43 4136	8 15 49 -43 27.7		9.1 MV	8.4 PG			B3		12.23	W0	12.05	W6	11.23
A67P	69932	C-45 3963	8 15 51 -45 30.7		9.7 MV				B9				13.12	.03	
A68P	69972	C-46 4010	8 15 52 -46 23.9		10.0 MV	9.3 PG			B9		13.72	W0	12.98	W0	
A69P	69951	C-41 3957	8 15 55 -41 33.1		10.2 MV			2	A0		12.90	W0	13.11	W0	
A70P	69989	C-43 4145	8 16 10 -43 23.3		9.8 MV	9.2 PG			B8				12.98	W6	
A71P	70024	C-41 3965	8 16 19 -41 57.1		8.9 MV	8.8 PG			B8		12.96	W0	12.59	W0	
A72P	70084	C-46 4025	8 16 27 -46 56.1		7.3 MV	7.1 PG			B5		10.64	.69	9.32	.08	9.18
A73P	70064	C-45 3972	8 16 36 -45 29.2		10.2 MV	9.6 PG		*	A0		13.34	.10	12.39	.04	13.28
A74P	70123	C-45 3981	8 16 38 -45 39.0		10.5 MV	9.9 PG			A0				13.64	.21	
A75P	70124	C-45 3982	8 16 40 -45 54.2		10.2 MV	9.3 PG			A2				13.87	W0	

PRELIMINARY CATALOG OF CELESCOPE ULTRAVIOLET OBSERVATIONS. JULY 1971.

SD3	U4	SD4	CEL	NONSTAR	R.A. (2000)	DEC.	-----REMARKS-----	----------REFERENCES----
			A 1P		8 5 10	-45 24.4	W/-45 3742	897 922
			A 2P		8 5 43	-45 10.2		897
			A 3P		8 6 6	-45 23.6		897
			A 4P		8 6 40	-45 2.9		922
			A 5P		8 7 33	-45 8.8		897
			A 6P		8 8 1	-45 32.5		922
			A 7P		8 8 5	-45 3.5		897
			A 8P		8 8 12	-44 14.7		899
			A 9P		8 8 23	-45 47.7		897
			A10P		8 8 32	-46 15.6		897
			A11P		8 8 35	-45 9.2		899
			A12P		8 8 40	-44 43.2		899
			A13P		8 8 44	-44 26.0		897
			A14P		8 8 43	-45 23.8		897
			A15P		8 9 36	-44 7.3		158 419 897 901 884
W0			A16P		8 10 0	-44 20.7		897
			A17P		8 10 10	-44 54.1		899
			A18P		8 10 22	-44 36.5		922
			A19P		8 10 32	-46 .2		897
			A20P		8 10 59	-44 19.0		922
			A21P		8 10 58	-45 51.0		897
	9.89	W0	A22P		8 11 33	-46 14.0		897
			A23P		8 11 40	-44 4.3		922
			A24P		8 11 47	-44 14.2		922
			A25P		8 11 49	-44 54.5		897
			A26P		8 11 54	-43 45.6		922
			A27P		8 12 5	-45 23.1		899
			A28P		8 12 11	-45 51.1		897
			A29P		8 12 17	-43 58.7		897
			A30P		8 12 29	-45 26.5		922
W0	8.61	W3	A31P		8 12 31	-46 15.8		897 901 884 419 841
			A32P		8 12 37	-45 34.5		922
			A33P		8 12 44	-45 36.7		922
			A34P		8 12 46	-44 41.7		899
			A35P		8 12 49	-43 45.3		897
			A36P		8 13 37	-45 27.7		897
W3			A37P		8 13 39	-46 37.8		922
.14			A38P		8 13 45	-46 34.7		897
			A39P		8 13 56	-43 54.5		922
			A40P		8 14 1	-43 27.8		897
			A41P		8 14 4	-44 34.3	AI VEL	207 969 897 922
.02			A42P		8 14 23	-45 50.0		897 901 419 884 A19
			A43P		8 14 26	-45 17.6		922
W3			A44P		8 14 31	-45 12.7		897
W0			A45P		8 14 40	-46 2.9		897
			A46P		8 14 45	-43 56.2		922
			A47P		8 14 53	-43 29.8		897
.30			A48P		8 14 51	-46 29.1		342 897 158 419
			A49P		8 14 59	-44 10.9		899
			A50P		8 15 15	-43 31.1		897
W3			A51P		8 15 30	-45 13.2	MERGED WITH 4228	922
			A52P		8 15 32	-44 43.1		899
W0			A53P		8 15 42	-44 19.3		897
W0			A54P		8 15 52	-46 18.7		897
			A55P		8 15 53	-46 10.5		897
W0			A56P		8 16 2	-44 19.3		897
			A57P		8 16 18	-44 20.6		897
			A58P		8 16 50	-46 .7		897
			A59P		8 16 55	-43 25.9		922
.29			A60P		8 17 11	-44 40.0		897
			A61P		8 17 8	-46 17.6		897
			A62P		8 17 14	-45 9.9		899
			A63P		8 17 19	-42 31.3		897 158 793
.03			A64P		8 17 16	-46 53.5		897
			A65P		8 17 19	-47 .7		897
.00			A66P		8 17 30	-43 37.0		897
			A67P		8 17 28	-45 40.0		899
			A68P		8 17 27	-46 33.2		897
			A69P		8 17 39	-41 42.4	AU PUP	969
			A70P		8 17 51	-43 32.6		897
			A71P		8 18 2	-42 6.5		897
			A72P		8 18 1	-47 5.5		897
.16			A73P		8 18 13	-45 38.6	W/-45 3978	897
.01			A74P		8 18 15	-45 48.4		899 922
			A75P		8 18 16	-46 3.6		897

CEL	HD	DM	R.A. (1950) DEC.	OBJ	V	B-V	U-B	PHOT	SPECT	PEC.	U1	SD1	U2	SD2	U3
A76P	70141	C-45 3983	8 16 55 -45 51.0		10.2 MV	9.6 PG			A0				13.68	WO	
A77P	70173	C-44 4278	8 16 59 -44 29.5		10.5 MV	9.6 PG			A0				14.39	WO	
A78P		C-40 4089	8 17 2 -40 53.4		8.7 MV	9.1 PG			A2				13.70	WO	
A79P	70198	C-44 4281	8 17 5 -44 25.2		10.5 MV	9.6 PG			A0				13.76	.27	
A80P	70172	C-41 3978	8 17 10 -41 43.1		10.3 MV	9.2 PG			A0				13.13	WO	
B 1P	70219	C-45 3991	8 17 14 -45 44.6		9.2 MV	9.2 PG			B8		13.15	.10	13.09	.15	
B 2P	70218	C-44 4282	8 17 15 -44 52.7		8.02MV				A0		12.27	.04	11.41	.16	12.23
B 3P	70217	C-41 3981	8 17 17 -41 49.4		9.5 MV	8.5 PG			B9		12.35	WO	12.09	WO	
B 4P	70250	C-43 4166	8 17 33 -43 49.1		9.0 MV	8.8 PG			A0						13.80
B 5P	70307	C-41 3990	8 17 45 -41 51.0		8.9 MV	8.4 PG			B9		12.05	WO	11.80	WO	
B 6P	70308	C-42 3989	8 17 46 -42 13.7		9.3 MV	8.6 PG			A0		13.22	WO	13.05	WO	
B 7P	70368	C-46 4045	8 18 1 -46 16.9		8.53	.41			F2				14.15	WO	
B 8P	70366	C-41 3995	8 18 13 -41 38.4		9.7 MV	9.4 PG			A0				13.67	WO	
B 9P	70449	C-45 4014	8 18 31 -46 6.8		9.8 MV	9.0 PG			A0				13.12	WO	
B10P	70448	C-43 4187	8 18 37 -43 43.4			8.0 PG		2	B9						13.99
B11P	70507	C-46 4064	8 18 48 -46 50.0		8.3 MV	7.8 PG			B9		10.95	W3	11.10	.30	11.42
B12P	70506	C-43 4192	8 18 54 -44 5.7		7.08MV				A0		10.28	.18	10.09	.18	9.33
B13P	70505	C-41 4014	8 18 54 -41 16.1		9.5 MV	9.7 PG			B9				13.39	WO	
B14P	70531	C-40 4120	8 19 4 -40 54.7		7.5 MV	7.7 PG			A3		13.13	WO	12.75	WO	
B15P		C-46 4047	8 19 14 -46 17.2		10.0 MV								13.53	WO	
B16P	70615	C-45 4033	8 19 26 -45 52.3		9.8 MV	9.0 PG			A0		12.68	.04	12.65	.28	
B17P		C-42 4150	8 19 26 -42 15.1		9.4 MV	9.5 PG			B9		13.68	W3			
B18P	70643	C-46 4076	8 19 30 -46 50.4		9.0 MV	8.1 PG			B9		10.90	W3	12.11	W3	11.50
B19P	70682	C-44 4325	8 19 46 -44 49.8		7.89MV			*	A0		11.32	.07	9.83	.09	10.23
B20P	70683	C-44 4326	8 19 47 -44 59.8		10.2 MV	9.6 PG			A0		13.26	.06	13.15	.11	
B21P	70700	C-44 4328	8 19 55 -44 22.7		10.0 MV	9.0 PG			A0		12.83	.08	12.41	.09	12.78
B22P	70699	C-40 4140	8 19 55 -41 2.1		8.6 MV	8.3 PG			A0		12.67	WO	11.98	WO	
B23P	70715	C-42 4157	8 19 58 -42 40.5		8.03MV				B9		12.78	W3	11.70	W3	11.87
B24P	70716	C-43 4207	8 20 0 -44 4.0		9.2 MV	8.7 PG			A0		13.29	W3	13.02	.07	
B25P	70744	C-40 4147	8 20 14 -40 24.1		8.9 MV	8.9 PG			A0				13.00	WO	12.18
B26P	70764	C-40 4151	8 20 22 -40 50.0		7.1 MV	7.5 PG			F5		12.65	WO	13.11	WO	
B27P	70850	C-45 4054	8 20 44 -45 38.3		8.8 MV	8.5 PG			B9		11.80	.05	11.17	.11	11.23
B28P	70872	C-43 4223	8 20 55 -44 1.5		8.4 MV	7.5 PG			A0		12.49	.16	11.36	.05	11.87
B29P	70873	C-44 4345	8 20 56 -44 34.5		9.6 MV	9.1 PG			F0				13.75	.57	
B30P	70892	C-44 4346	8 20 58 -44 42.2		7.3 MV	7.8 PG			F0		12.65	.32	12.31	.06	
B31P	70912	C-40 4173	8 21 9 -40 37.2		10.1 MV	9.4 PG			A0				12.57	WO	
B32P	70948	C-42 4178	8 21 14 -43 4.0		7.12MV				B8		11.09	WO	10.39	WO	9.00
B33P	70947	C-39 4274	8 21 21 -40 13.2		7.4 MV	7.3 PG			B8		10.85	WO	10.47	WO	9.37
B34P	70976	C-42 4184	8 21 29 -42 49.5		8.6 MV	8.5 PG			A0				12.31	WO	
B35P		C-45 4072	8 21 32 -45 25.3		9.7 MV	9.8 PG					13.31	W3	13.65	WO	
B36P		C-44 4357	8 21 40 -44 48.2		7.78MV				B5		11.13	.35	10.12	.15	9.97
B37P	71017	C-40 4185	8 21 40 -41 13.2		9.9 MV	9.4 PG			A0				14.20	WO	
B38P	71019	C-42 4187	8 21 42 -42 38.7		8.26MV				B8		11.73	WO	10.72	.00	10.83
B39P	71042	C-45 4074	8 21 45 -45 35.5		10.0 MV	9.0 PG			A0		12.69	W3	12.95	.01	
B40P	71060	C-45 4075	8 21 50 -45 27.0		7.44MV				A0		11.98	.04	12.31	.14	
B41P	71041	C-43 4234	8 21 50 -44 4.9		9.4 MV	8.8 PG			A0		13.19	W3	13.00	.04	
B42P	71059	C-43 4235	8 21 56 -43 34.4		10.0 MV	9.3 PG			B8				13.72	WO	
B43P	71123	C-42 4198	8 22 10 -42 23.5		8.4 MV	7.9 PG			B9		13.50	WO	12.41	.60	12.65
B44P	71162	C-44 4372	8 22 23 -44 20.6		10.2 MV	9.3 PG			A5				14.15	WO	
B45P	71161	C-43 4244	8 22 30 -43 33.1		10.2 MV	9.6 PG			A0				13.94	WO	
B46P	71237	C-46 4128	8 22 41 -46 49.4		10.0 MV	9.4 PG			B9				12.73	WO	13.28
B47P	71218	C-44 4381	8 22 43 -44 15.2		9.8 MV	9.3 PG			B9		11.15	W3	13.15	.09	
B48P	71216	C-40 4212	8 22 48 -40 35.0		7.1 MV	7.2 PG			B3		10.33	WO	9.44	.03	8.95
B49P	71303	C-43 4258	8 23 7 -43 51.9		9.6 MV	9.1 PG			A2				14.23	WO	
B50P	71286	C-41 4098	8 23 8 -41 52.5		8.9 MV	8.6 PG			A3				13.81	W3	
B51P	71316	C-47 3919	8 23 12 -47 17.5		9.2 MV	9.0 PG			F0				14.13	W3	
B52P	71302	C-42 4219	8 23 13 -42 36.4		5.98	-.18		B	B3V	N	9.71	.12	8.63	.02	8.02
B53P	71304	C-43 4259	8 23 15 -44 8.2		8.4 MV	8.2 PG			B0		12.46	W3	12.94	.01	
B54P	71336	C-42 4221	8 23 24 -43 12.1		8.0 MV	7.3 PG			B3		10.76	.18	10.68	WO	
B55P		C-44 4392	8 23 38 -44 59.9		9.0 MV	7.3 PG					11.94	.16	13.14	.18	
B56P	71384	C-42 4226	8 23 40 -42 30.0		9.8 MV	9.1 PG			A2				13.13	.16	
B57P	71383	C-40 4230	8 23 45 -40 48.3		8.4 MV	8.5 PG			A0		11.99	W3	12.61	W3	
B58P	71444	C-46 4152	8 23 54 -46 28.2		9.0 MV	8.2 PG			A0		12.55	.10	11.11	.11	11.47
B59P	71441	C-41 4118	8 24 1 -41 46.6		10.3 MV	9.4 PG			A				13.69	WO	
B60P	71459	C-41 4119	8 24 7 -41 59.3		5.46	-.16		U	B3V		9.20	.05	8.14	.23	7.54
B61P	71421	C-40 4235	8 24 7 -40 24.1		10.6 MV	9.4 PG			A2				13.42	W6	
B62P	71440	C-40 4236	8 24 8 -40 27.1		10.3 MV	10.3 PG			A0				13.47	W6	
B63P	71470	C-43 4276	8 24 17 -43 51.5		8.9 MV	7.8 PG			B8		11.97	.09	10.98	.01	
B64P	71490	C-42 4240	8 24 20 -43 8.3		10.9 MV	9.7 PG			B9				12.92	W3	
B65P	71508	C-42 4241	8 24 25 -42 41.9		10.0 MV	9.8 PG			B8		13.26	WO	12.89	.10	
B66P	71527	C-40 4245	8 24 30 -41 4.5		9.2 MV	8.6 PG			A0		13.68	W6			
B67P	71528	C-41 4127	8 24 31 -41 58.4		7.9 MV	7.6 PG			B3		11.65	.10	10.03	.00	
B68P	71545	C-42 4244	8 24 37 -42 27.7		10.5 MV	9.7 PG			A0				13.97	.12	
B69P	71544	C-40 4248	8 24 38 -41 1.3		8.02MV				B9		11.69	W6			11.98
B70P	71653	C-46 4171	8 24 51 -46 44.1		10.5 MV	9.6 PG			A0				13.35	WO	

			A76P		8 18 31 -46 .4		897	
			A77P		8 18 38 -44 38.9		922	
			A78P		8 18 47 -41 2.8		897	
			A79P		8 18 44 -44 34.6		899 922	
			A80P		8 18 54 -41 52.5		922	
SD3	U4	SD4	CEL	NONSTAR	R.A. (2000) DEC.	-----REMARKS-----	----------REFERENCES---	
			B 1P		8 18 51 -45 54.0		897	
.12			B 2P		8 18 53 -45 2.1		897	
			B 3P		8 19 1 -41 58.8		897	
W3			B 4P		8 19 13 -43 58.5		897	
			B 5P		8 19 29 -42 .4		897	
			B 6P		8 19 29 -42 23.1		922	
			B 7P		8 19 37 -46 26.4		897 A19	
			B 8P		8 19 57 -41 47.9		899 922	
			B 9P		8 20 7 -46 16.3		897	
WO			B10P		8 20 18 -43 52.9	AY VEL	969	
			B11P		8 20 23 -46 59.5		897	
WO			B12P		8 20 34 -44 15.2		897	
.15			B13P		8 20 39 -41 25.6		897	
			B14P		8 20 50 -41 4.2		897	
			B15P		8 20 50 -46 26.7		899	
			B16P		8 21 3 -46 1.8		897	
			B17P		8 21 9 -42 24.6		897	
.17			B18P		8 21 5 -46 59.9		897	
.04			B19P		8 21 25 -44 59.4	WITH C-44 4330	897	
			B20P		8 21 25 -45 9.4		897 922	
WO			B21P		8 21 35 -44 32.3		897 922	
			B22P		8 21 41 -41 11.7		897	
W3			B23P		8 21 41 -42 50.1		897	
			B24P		8 21 40 -44 13.6		922	
WO			B25P		8 22 1 -40 33.7		897	
			B26P		8 22 8 -40 59.6		922	
.02			B27P		8 22 21 -45 47.9		897	
WO			B28P		8 22 35 -44 11.1		897	
			B29P		8 22 35 -44 44.1		897 922	
			B30P		8 22 37 -44 51.8		922	
			B31P		8 22 55 -40 46.9		922	
WO			B32P		8 22 56 -43 13.7		897	
WO			B33P		8 23 8 -40 22.9		897	
			B34P		8 23 12 -42 59.2		897	
			B35P		8 23 10 -45 35.0		897	
.39			B36P		8 23 19 -44 57.9		897	
			B37P		8 23 25 -41 22.9		899 922	
WO			B38P		8 23 25 -42 48.4		897	
			B39P		8 23 23 -45 45.2		897	
			B40P		8 23 28 -45 36.7		897	
			B41P		8 23 30 -44 14.6		922	
			B42P		8 23 37 -43 44.1		897 922	
WO			B43P		8 23 54 -42 33.2		897	
			B44P		8 24 3 -44 30.3		922	
			B45P		8 24 12 -43 42.8		922	
WO			B46P		8 24 16 -46 59.1		897	
			B47P		8 24 23 -44 24.9		897 922	
WO			B48P		8 24 35 -40 44.7		897	
			B49P		8 24 48 -44 1.7		922	
			B50P		8 24 53 -42 2.3		897	
			B51P		8 24 46 -47 27.3		897	
WO			B52P		8 24 56 -42 46.2		158 419 897 884 901	
			B53P		8 24 56 -44 18.0		922	
			B54P		8 25 6 -43 21.9		897 922	
			B55P		8 25 17 -45 9.7		897	
			B56P		8 25 24 -42 39.8		897	
			B57P		8 25 31 -40 58.1		897	
.02	13.09	WO	B58P		8 25 30 -46 38.0		897	
			B59P		8 25 46 -41 56.4		897	
WO			B60P		8 25 52 -42 9.1		419 841 488 897 901 884 A19	
			B61P		8 25 54 -40 33.9		899 922	
			B62P		8 25 55 -40 36.9		899 922	
			B63P		8 25 58 -44 1.3		897 922	
			B64P		8 26 3 -43 18.1		922	
			B65P		8 26 8 -42 51.7		897	
			B66P		8 26 16 -41 14.3		922	
			B67P		8 26 16 -42 8.2		897	
			B68P		8 26 21 -42 37.6		922	
W6			B69P		8 26 24 -41 11.2		897	
			B70P		8 26 27 -46 54.0		897	

B71P	71609	C-42	4251	8	24	55	-43	14.6	7.7	MV	8.1	PG			B2	11.36	.20	11.64	.37	
B72P	71607	C-42	4250	8	24	56	-42	21.5	7.21	MV					A2	12.94	.16	11.84	.01	
B73P	71627	C-42	4253	8	24	57	-42	42.4	9.8	MV	9.3	PG			B8	12.69	W0	12.51	.09	12.77
B74P	71628	C-44	4413	8	25	1	-44	41.1	9.4	MV	8.4	PG			A0			11.69	W3	
B75P	71651	C-45	4137	8	25	2	-45	25.1	9.6	MV	9.1	PG			A0			13.52	W3	
B76P	71652	C-45	4140	8	25	6	-45	36.1	9.6	MV	9.1	PG			A0			12.98	.06	13.50
B77P	71694	C-47	3955	8	25	10	-47	16.4	9.6	MV	8.7	PG			B9	12.84	W0	12.32	W0	11.93
B78P	71693	C-43	4296	8	25	16	-43	41.8	9.6	MV	9.0	PG			B8			12.12	W0	
B79P	71743	C-46	4178	8	25	28	-46	20.6	10.0	MV	9.3	PG			B9			12.88	.16	
B80P	71719	C-44	4421	8	25	29	-44	25.1	10.5	MV	9.6	PG			A0	12.50	W6			

CEL	HD		DM	R.A. (1950)			DEC.	OBJ	V		B-V		U-B	PHOT	SPECT	PEC.	U1	SD1	U2	SD2	U3
C 1P	71742	C-41	4145	8	25	33	-41	33.6	8.3	MV	8.9	PG			A3				13.68	.03	
C 2P	71773	C-44	4425	8	25	40	-44	56.4	9.1	MV	8.6	PG			A0		14.55	W3	13.09	.31	
C 3P	71788	C-47	3963	8	25	41	-47	38.2	8.5	MV	8.2	PG			B9		11.92	W3			11.93
C 4P	71786	C-41	4149	8	25	46	-41	58.2	10.3	MV	9.4	PG			B9				12.79	.11	13.57
C 5P	71823	C-47	3967	8	25	53	-47	33.8	8.9	MV	8.4	PG			B5		11.60	W3			11.30
C 6P		C-42	4273	8	26	6	-42	48.4	10.3	MV	9.9	PG			A0				14.15	W0	
C 7P	71874	C-47	3973	8	26	12	-47	30.5	8.5	MV	8.2	PG			B9		11.55	W3			11.09
C 8P	71857	C-40	4277	8	26	14	-41	4.7	7.77	MV					A0		12.30	W0	11.31	W0	12.14
C 9P	71858	C-41	4162	8	26	15	-41	30.4	9.0	MV	10.2	PG			A0				13.51	.27	
C10P	71896	C-41	4166	8	26	26	-41	40.1	8.9	MV	9.0	PG			B9		13.23	.01	12.35	.13	12.84
C11P	71917	C-46	4198	8	26	27	-46	38.9	10.0	MV	9.3	PG			A2				13.95	W0	
C12P	71984	C-46	4205	8	26	48	-46	47.3	8.4	MV	7.9	PG			B9		11.99	.37	10.68	.14	11.17
C13P	71967	C-40	4285	8	26	50	-41	.4	7.70	MV					A0		12.68	W0	11.28	W0	12.01
C14P		C-45	4146	8	26	52	-45	58.0	10.	MV									14.07	W0	13.84
C15P	71998	C-41	4175	8	27	1	-41	22.0	8.6	MV	8.3	PG			B9				12.36	.10	12.85
C16P	72014	C-42	4290	8	27	7	-42	25.2	6.21		-.05		+1.14		B3V	EN	9.33	.27	9.64	1.30	7.57
C17P	72034	C-45	4167	8	27	9	-45	34.1	9.8	MV	9.2	PG			B9		13.12	W0	12.77	.00	
C18P	72067	C-43	4337	8	27	26	-43	59.6	5.94	MV	5.7	PG		U	B3V	E	10.22	.62	7.88	.12	
C19P	72089	C-45	4173	8	27	27	-45	23.4	7.7	MV	7.5	PG			B9		11.38	.10	10.52	.03	10.68
C20P	72108	C-47	4004	8	27	31	-47	45.4	5.32		-.15			B	B5	N			7.36	W0	11.11
C21P	72065	C-40	4297	8	27	31	-40	58.3	9.9	MV	9.1	PG			A0		13.42	W0	11.33	W0	12.14
C22P	72088	C-44	4459	8	27	32	-44	43.0	10.5	MV	8.9	PG			B9		12.97	.01	11.87	.22	11.70
C23P	72107	C-43	4338	8	27	34	-43	18.2	10.0	MV	9.4	PG			B8		13.78	W3	14.54	W3	
C24P	72128	C-45	4176	8	27	39	-45	17.8	9.20	MV	9.0	PG			A0		13.17	.15	12.24	.30	12.68
C25P	72140	C-46	4221	8	27	44	-46	43.3	10.2	MV	9.0	PG			B9		13.25	.15	12.70	W0	
C26P	72162	C-45	4177	8	27	46	-45	21.8	9.84	MV	9.6	PG			A0				13.43	W3	
C27P	72127	C-44	4462	8	27	46	-44	33.4	5.22					U8	B3V		8.35	.00	7.60	.18	5.36
C28P	72180	C-47	4012	8	27	50	-47	38.1	9.8	MV	9.0	PG			A0		13.05	W0	13.46	W0	
C29P	72139	C-41	4189	8	27	50	-41	21.4	8.00	MV					B9		13.02	.13	11.67	.15	12.34
C30P	72161	C-42	4305	8	27	53	-43	9.9	8.2	MV	7.9	PG			B9		11.11	W3	11.69	.19	
C31P	72179	C-43	4343	8	27	55	-43	55.9	8.6	MV	7.7	PG			B8		11.54	W3	10.66	.03	
C32P	72159	C-41	4193	8	27	58	-41	37.3	9.0	MV	9.1	PG			B9				12.54	.15	
C33P	72177	C-41	4194	8	28	5	-41	45.1	9.2	MV	9.9	PG		*	B9		12.07	.10	11.69	.16	11.13
C34P	72232	C-45	4183	8	28	8	-46	9.8	6.11						B8		9.68	.08	8.59	.18	7.77
C35P	72253	C-47	4023	8	28	9	-47	51.5	7.79	MV					B9				11.44	W3	
C36P	72230	C-44	4469	8	28	10	-44	34.5	9.0	MV	8.5	PG			A0		13.20	W0			
C37P	72250	C-41	4201	8	28	19	-41	28.2	9.9	MV	9.9	PG			B8				12.65	.22	12.68
C38P	72270	C-42	4315	8	28	23	-42	51.1	10.5	MV	9.4	PG			A2				13.88	W3	
C39P	72271	C-43	4350	8	28	25	-44	7.5	9.6	MV	9.1	PG			B8		12.84	W0	12.09	W0	
C40P	72319	C-42	4323	8	28	40	-42	28.6	9.1	MV	8.5	PG			A0		12.62	W0	12.19	W0	
C41P	72351	C-46	4244	8	28	48	-46	50.6	10.5	MV	9.3	PG			A0		14.21	W0			
C42P		C-45	4194	8	28	48	-46	8.6	9.7	MV	10.1	PG					12.82	W0	13.31	W0	
C43P	72350	C-44	4477	8	28	58	-44	34.1	6.49					B	B5IV		10.72	.20	9.69	.10	8.98
C44P	72387	C-45	4195	8	29	5	-45	42.3	10.2	MV	9.4	PG			A0				13.32	.01	
C45P	72402	C-44	4485	8	29	14	-44	26.7	9.6	MV	8.3	PG			A0		13.49	.17	12.80	.06	12.80
C46P	72401	C-41	4214	8	29	14	-42	1.4	9.3	MV	9.7	PG			B8				12.61	W0	
C47P	72439	C-41	4219	8	29	25	-41	53.8	9.3	MV	9.2	PG			A0				13.44	W0	
C48P	72453	C-44	4489	8	29	31	-44	19.7	9.8	MV	9.0	PG			B9		13.14	.07	12.24	.02	12.26
C49P	72485	C-47	4048	8	29	35	-47	41.8	6.4*		-.16				B4				8.67	W0	
C50P	72483	C-45	4207	8	29	43	-45	20.8	9.4	MV	9.1	PG		*	A0		12.75	.54	12.39	.04	12.19
C51P	72516	C-47	4050	8	29	50	-47	15.0	9.4	MV	8.4	PG			F5		13.47	W3			
C52P	72499	C-43	4368	8	29	51	-43	34.1	10.2	MV	9.4	PG			A0				14.37	W0	
C53P	72537	C-45	4215	8	29	57	-45	36.9	8.14	MV					B8		10.72	.05	9.60	.01	9.25
C54P	72515	C-43	4371	8	29	57	-44	14.8	8.8	MV	8.4	PG			B8		12.79	.22	12.50	.02	12.41
C55P	72535	C-41	4225	8	30	1	-41	51.8	7.7	MV	8.1	PG			B5		11.29	W0	10.88	W0	10.39
C56P	72555	C-46	4267	8	30	3	-47	4.2	6.81	MV					B3		8.08	W3	10.59	.63	8.25
C57P	72554	C-45	4219	8	30	6	-45	57.4	8.5	MV	8.1	PG			B0III		11.83	.19	12.28	.09	12.66
C58P	72576	C-43	4374	8	30	8	-43	39.1	8.4	MV	8.5	PG			B9		12.80	1.00	13.24	.38	13.58
C59P	72611	C-41	4232	8	30	30	-41	39.7	7.1	MV	7.4	PG			A0		11.17	W0	10.37	W0	10.99
C60P	72648	C-43	4382	8	30	36	-43	45.6	7.9	MV	7.5	PG			B3		12.22	.06	11.24	.35	10.83
C61P	72676	C-45	4227	8	30	41	-45	51.6	8.6	MV	8.4	PG			F5		14.05	W0	14.23	W0	
C62P	72675	C-45	4228	8	30	44	-45	36.9	8.6	MV	8.5	PG			A3		12.66	.05	12.94	.06	
C63P	72733	C-43	4390	8	30	59	-43	52.4	9.0	MV	8.2	PG			B9		12.82	W0	11.87	W0	12.25
C64P	72735	C-47	4065	8	31	0	-47	32.4	10.5	MV	9.1	PG			A0				14.76	W3	
C65P	72732	C-42	4365	8	31	0	-43	3.8	8.6	MV	8.3	PG			A0				12.67	W0	

			B71P	8 26 37	-43 24.5		897 922	
			B72P	8 26 40	-42 31.4		897	
W0			B73P	8 26 40	-42 52.3		897	
			B74P	8 26 41	-44 51.0		897 922	
			B75P	8 26 41	-45 35.0		897 922	
W0			B76P	8 26 44	-45 46.0		897	
W0			B77P	8 26 45	-47 26.3		897	
			B78P	8 26 58	-43 51.7		897 922	
			B79P	8 27 5	-46 30.5		897	
			B80P	8 27 9	-44 35.0		922	

SD3	U4	SD4	CEL	NOVSTAR	R.A. (2000)	DEC.	-----REMARKS-----	----------REFERENCES----------
			C 1P		8 27 19	-41 43.5		897
			C 2P		8 27 20	-45 6.3		897
.20			C 3P		8 27 15	-47 48.1		897
W0			C 4P		8 27 31	-42 8.1		922
W0			C 5P		8 27 27	-47 43.7		897
			C 6P		8 27 49	-42 58.3		922
W0			C 7P		8 27 47	-47 40.4		897
.18			C 8P		8 28 0	-41 14.6		897
			C 9P		8 28 1	-41 40.3		897
.31			C10P		8 28 11	-41 50.1		897
			C11P		8 28 3	-46 48.9		897
.19			C12P		8 28 24	-46 57.3		897
.37			C13P		8 28 37	-41 10.4		897
W0			C14P		8 28 30	-46 8.0		900
.30			C15P		8 28 47	-41 32.0		897
.02			C16P		8 28 51	-42 35.2		158 897 A19
			C17P		8 28 48	-45 44.1		897
			C18P		8 29 8	-44 9.6		488 752 897 901 884 419 922
.07			C19P		8 29 6	-45 33.4		897
W3			C20P		8 29 5	-47 55.4		897 901 884 158 419
.35			C21P		8 29 18	-41 8.3		897 922
.16	9.40	W6	C22P		8 29 12	-44 53.0		897 922
			C23P		8 29 17	-43 28.2		922
.00			C24P		8 29 18	-45 27.8		897
			C25P		8 29 20	-46 53.3		897
			C26P		8 29 25	-45 31.8		922
1.05			C27P		8 29 27	-44 43.4		901 884 419 897 488
			C28P		8 29 25	-47 48.1		897
.28			C29P		8 29 36	-41 31.4		897
			C30P		8 29 36	-43 19.9		897
			C31P		8 29 37	-44 5.9		897
			C32P		8 29 44	-41 47.3		897
.37			C33P		8 29 51	-41 55.2	INCL 72178	897
.02			C34P		8 29 46	-46 19.9		897 884 901
			C35P		8 29 43	-48 1.6		897
			C36P		8 29 51	-44 44.6		897
.40			C37P		8 30 5	-41 38.3		897
			C38P		8 30 7	-43 1.2		922
			C39P		8 30 7	-44 17.6		897
			C40P		8 30 24	-42 38.7		922
			C41P		8 30 24	-47 .7		922
			C42P		8 30 26	-46 18.7		897
.13	8.19	W0	C43P		8 30 39	-44 44.2		901 419 884 897
			C44P		8 30 44	-45 52.4		899 922
W3			C45P		8 30 55	-44 36.8		922
			C46P		8 30 59	-42 11.5		922
			C47P		8 31 11	-42 3.9		922
W3			C48P		8 31 12	-44 29.8		897
			C49P		8 31 10	-47 51.9		897 419 842 884 901
.07			C50P		8 31 22	-45 30.9	WITH -45 4213	897 922
			C51P		8 31 26	-47 25.2		897 922
			C52P		8 31 34	-43 44.3		922
.13			C53P		8 31 36	-45 47.1		897
W3			C54P		8 31 39	-44 25.0		897 922
W0			C55P		8 31 47	-42 2.0		897
.21			C56P		8 31 39	-47 14.4		897
W0			C57P		8 31 44	-46 7.6		12 897
W3	13.06	W0	C58P		8 31 51	-43 49.3		897 922
W0			C59P		8 32 16	-41 49.9		897
.10			C60P		8 32 19	-43 55.8		897 922
			C61P		8 32 20	-46 1.8		897 922
			C62P		8 32 23	-45 47.1		897
.05			C63P		8 32 41	-44 2.6		897 922
			C64P		8 32 35	-47 42.6		897
			C65P		8 32 44	-43 14.0		897

C66P	72731	C-41	4240	8	31	1	-41	42.5	8.9	MV	9.4	PG			B9			12.48	W0	
C67P	72751	C-45	4232	8	31	9	-45	28.0	9.1	MV	9.0	PG			A0	12.10	W0	12.07	.24	12.43
C68P	72772	C-43	4393	8	31	12	-43	14.2	8.3	MV	8.5	PG			F5			14.49	W0	
C69P	72773	C-44	4512	8	31	13	-45	10.4	9.2	MV	8.7	PG			A0	12.73	W0	12.72	.02	
C70P	72789	C-43	4396	8	31	15	-44	3.9	9.8	MV	9.3	PG			A0			13.52	W0	...
C71P	72800	C-47	4072	8	31	18	-47	26.0	6.61		.14				BLI	11.42	W3	11.11	W3	12.02
C72P	72798	C-45	4236	8	31	22	-45	34.9	6.45		-.14				B5III	10.20	.21	9.07	.03	8.34
C73P	72817	C-46	4296	8	31	28	-46	17.0	10.0	MV	9.0	PG			A0	12.65	.16	13.34	.02	
C74P		C-44	4518	8	31	28	-45	.8	9.52		.28				B3	13.03	W0	13.37	.06	
C75P		C-44	4520	8	31	30	-45	0.0	9.52		.28				B3			13.66	.06	
C76P	72836	C-42	4375	8	31	38	-42	54.4	9.4	MV	9.0	PG			B8			13.29	W0	
C77P	72874	C-42	4378	8	31	49	-42	36.2	9.8	MV	9.1	PG			A0			13.92	W3	
C78P	72875	C-42	4379	8	31	51	-42	50.4	9.8	MV	8.8	PG			A0			12.78	W0	13.56
C79P	72898	C-42	4380	8	31	53	-42	27.7	9.0	MV	8.2	PG			B9	13.07	W3	12.24	W3	12.53
C80P	72939	C-47	4087	8	31	57	-47	43.3	9.6	MV	8.9	PG			B5			11.79	W0	13.20

CEL	HD		DM	R.A. (1950)			DEC.	OBJ	V		B-V		U-B	PHOT	SPECT	PEC.	U1	SD1	U2	SD2	U3
D 1P	72918	C-43	4410	8	31	58	-43	16.6	9.6	MV	9.0	PG			B9				12.04	W0	13.15
D 2P	72919	C-44	4529	8	32	1	-44	46.4	8.2	MV	7.5	PG		*	B9		11.98	.17	11.45	1.31	11.31
D 3P	72959	C-44	4535	8	32	10	-45	13.6	10.2	MV	9.3	PG			A0		13.16	W0	13.30	.05	
D 4P	72997	C-44	4539	8	32	26	-44	22.3	7.6	MV	7.0	PG			B5		10.56	.20	9.52	.05	
D 5P	73010	C-45	4255	8	32	31	-45	27.8	7.50	MV					B8		11.02	.30	9.87	.03	9.93
D 6P	73009	C-44	4540	8	32	31	-44	37.8	9.8	MV	9.1	PG			B9		12.51	W0	11.93	.19	
D 7P	73042	C-43	4417	8	32	37	-43	50.4	8.8	MV	9.0	PG			B9				12.50	0.00	
D 8P	73061	C-46	4320	8	32	46	-46	51.0	9.8	MV	9.3	PG			A2				14.10	W3	
D 9P		C-43	4418	8	32	46	-44	.9	9.6	MV	9.2	PG			A				13.18	W0	
D10P	73059	C-44	4544	8	32	48	-44	20.0	9.6	MV	8.8	PG			B9		12.64	W3			
D11P	73055	C-40	4408	8	32	52	-41	3.7	8.6	MV	7.9	PG			B8						11.00
D12P	73076	C-44	4547	8	32	53	-44	15.9	8.7	MV	8.6	PG			B9		12.27	W0	11.81	1.16	
D13P	73090	C-44	4548	8	32	58	-44	21.3	8.2	MV	7.6	PG			B9		11.23	.41	10.48	1.06	
D14P	73125	C-45	4271	8	33	14	-45	18.2	10.0	MV	9.3	PG			A0		13.00	W0	12.81	.08	
D15P	73153	C-44	4555	8	33	26	-45	3.3	9.1	MV	8.4	PG			A0		12.57	W0	12.49	.03	
D16P		C-45	4267	8	33	27	-45	35.6	9.6	MV	9.4	PG			A		13.12	W3			
D17P	73186	C-43	4437	8	33	34	-44	7.4	9.8	MV	8.9	PG			B9		12.51	W0	11.98	.20	
D18P	73219	C-47	4114	8	33	39	-47	47.2	10.9	MV	9.6	PG			A2				12.97	W0	
D19P	73218	C-42	4418	8	33	43	-42	23.3	7.6	MV	7.7	PG			F5				13.53	W0	
D20P	73304	C-46	4344	8	34	13	-46	57.1	10.0	MV	8.7	PG			A3				14.66	.12	
D21P	73305	C-47	4119	8	34	15	-47	40.3	9.4	MV	8.5	PG			A0				11.34	W3	13.29
D22P	73303	C-43	4458	8	34	19	-44	13.3	9.1	MV	8.7	PG			B9		12.34	W0	11.71	.24	
D23P		C-46	4349	8	34	23	-46	19.6	7.46	MV					B5		10.56	.09	9.56	.03	8.82
D24P	73368	C-46	4354	8	34	28	-46	57.1	11.5	MV	9.6	PG			A3				14.41	.19	
D25P	73384	C-44	4584	8	34	40	-45	15.0	9.24	MV	8.5	PG			A0		12.98	W3			
D26P	73404	C-46	4360	8	34	42	-47	7.0	9.40		.07				A0				12.73	.07	
D27P	73421	C-47	4132	8	34	48	-47	25.0	9.19		.30				A2				14.19	W0	
D28P	73420	C-43	4467	8	34	54	-43	54.3	9.6	MV	8.3	PG			B3		12.20	W0	11.72	.04	
D29P	73461	C-47	4135	8	35	4	-47	19.5	7.36		.32				A5				12.36	W0	
D30P	73478	C-47	4136	8	35	7	-47	49.4	7.40	MV					B8		11.14	W0	10.01	W0	9.46
D31P	73477	C-45	4303	8	35	11	-46	8.9	8.2	MV	8.5	PG			G0				14.45	W3	
D32P		C-45	4304	8	35	15	-45	20.8	9.10		.19				B2III	4			12.17	.21	12.16
D33P	73589	C-46	4375	8	35	37	-47	1.4	8.84		.04				B8		12.33	.36	12.54	.28	11.79
D34P		C-45	4313	8	35	38	-45	56.7	10.53		.11				B3III	4			13.09	.27	
D35P	73568	C-44	4602	8	35	38	-45	1.9	8.33		.31				B1III				11.81	W0	
D36P	73567	C-41	4322	8	35	41	-42	10.8	8.6	MV	8.7	PG			B8		13.16	W0	11.82	W0	12.48
D37P	73634	C-42	4451	8	35	53	-42	48.8	4.13		.10		.12		A8I		10.79	W0	10.03	.04	12.15
D38P	73658	C-45	4322	8	36	0	-46	6.4	7.08	MV					B5		10.29	.05	9.82	.08	9.39
D39P	73738	C-44	4627	8	36	28	-45	9.7	8.5	MV	7.8	PG			B9		11.56	.28	10.88	.13	12.02
D40P	73774	C-43	4500	8	36	37	-44	7.3	9.6	MV	9.3	PG			B9				12.81	.35	
D41P	73813	C-46	4395	8	36	46	-46	36.0	7.58		-.02			*	B9		10.77	.02	9.68	.00	9.75
D42P		C-45	4398	8	36	50	-46	59.6	9.0	MV	9.5	PG					12.84	W0	12.92	W0	
D43P		C-45	4338	8	36	54	-45	45.1	8.2	MV	7.6	PG			B8		11.33	.04	10.87	.02	10.97
D44P	73811	C-42	4469	8	36	54	-42	16.2	8.4	MV	7.9	PG			B9		12.37	W0	11.57	W0	13.07
D45P	73830	C-45	4339	8	36	57	-45	37.3	8.2	MV	7.8	PG			A2				13.51	.27	
D46P	73847	C-46	4400	8	36	59	-46	36.3	8.20		-.04				B9						11.16
D47P	73903	C-45	4348	8	37	19	-46	3.0	8.96		.23			*	B4V		11.42	.24	10.74	.05	11.27
D48P				8	37	38	-46	15.4											14.56	W0	
D49P		C-46	4409	8	37	39	-46	20.2	9.8	MV	9.4	PG					12.79	.01	13.29	0.00	
D50P		C-45	4374	8	37	50	-46	7.0									12.99	.08	13.06	.01	
D51P	73986	C-42	4487	8	37	50	-42	18.5	8.34	MV					B9				11.45	W0	
D52P	74042	C-44	4659	8	38	6	-44	35.3	9.6	MV	8.4	PG		*	A0				12.31	.03	13.32
D53P	74069	C-44	4661	8	38	12	-44	57.5	9.8	MV	9.3	PG			A				13.22	W3	
D54P	74107	C-47	4194	8	38	29	-47	34.2	10.2	MV	9.4	PG			A0		13.43	W0			
D55P	74106	C-45	4380	8	38	29	-45	26.3	8.8	MV	8.3	PG			B9		13.01	.39	12.08	.16	12.63
D56P	74129	C-45	4389	8	38	40	-45	56.7	9.2	MV	9.0	PG			A		12.13	.04	12.23	.04	12.24
D57P		C-46	4432	8	38	57	-47	3.4	9.5	MV	10.1	PG		*			13.26	W0			
D58P	74180	C-46	4438	8	38	58	-46	28.2	3.90		.7*		.22	B	F2I		11.18	.13	12.01	.00	
D59P	74194	C-44	4683	8	39	5	-44	52.8	7.54		.23				BE		11.19	.18	10.90	.12	11.58
D60P	74209	C-44	4684	8	39	8	-44	34.2	9.6	MV	.90	PG			A0		13.70	W0	13.47	.02	

			C66P	8	32	47	-41	52.7		897
.16			C67P	8	32	49	-45	38.2		922 897
			C68P	8	32	56	-43	24.4		922
			C69P	8	32	53	-45	20.6		897 922
			C70P	8	32	57	-44	14.1		897 922
W3			C71P	8	32	54	-47	36.2		158 897
.56	9.64	W3	C72P	8	33	1	-45	45.1		897 158 419 A19
			C73P	8	33	6	-46	27.2		897
			C74P	8	33	8	-45	11.0		899 A19
			C75P	8	33	10	-45	10.3		158
			C76P	8	33	22	-43	4.7		897
			C77P	8	33	34	-42	46.5		922
W0			C78P	8	33	35	-43	.7		922
.16			C79P	8	33	38	-42	38.0		897
W0			C80P	8	33	32	-47	53.6		897

SD3	U4	SD4	CEL	NONSTAR	R.A. (2000)			DEC.	-----REMARKS-----	----------REFERENCES--
W0			D 1P		8	33	42	-43 26.9		897
W3			D 2P		8	33	42	-44 56.7	MERGED CPD 2744	897
			D 3P		8	33	50	-45 23.9		897
	9.18	.16	D 4P		8	34	8	-44 32.6		897
.20			D 5P		8	34	11	-45 38.1		897
			D 6P		8	34	12	-44 48.1		897
			D 7P		8	34	20	-44 .7		897
			D 8P		8	34	23	-47 1.3		897
			D 9P		8	34	28	-44 11.2		897
	12.14	W3	D10P		8	34	30	-44 30.3		897
W0			D11P		8	34	39	-41 14.0		897
			D12P		8	34	35	-44 26.2		897
	10.64	.36	D13P		8	34	40	-44 31.6		897
			D14P		8	34	54	-45 28.6		897
			D15P		8	35	7	-45 13.7		922 897
			D16P		8	35	7	-45 46.0		897
			D17P		8	35	16	-44 17.8		897
			D18P		8	35	14	-47 57.6		922
			D19P		8	35	28	-42 33.7		922
			D20P		8	35	50	-47 7.5		897 922
W0			D21P		8	35	51	-47 50.7		897 922
			D22P		8	36	1	-44 23.7		897
.07			D23P		8	36	1	-46 30.0		897
			D24P		8	36	5	-47 7.5		922
			D25P		8	36	21	-45 25.4		897
			D26P		8	36	19	-47 17.4		158
			D27P		8	36	24	-47 35.4		158
			D28P		8	36	37	-44 4.7		897
			D29P		8	36	41	-47 30.0		897 158
W0			D30P		8	36	43	-47 59.9		897
			D31P		8	36	50	-46 19.4		897 922
.26			D32P		8	36	55	-45 31.3		16 474 897 158
.28			D33P		8	37	14	-47 11.9		158 897
			D34P		8	37	17	-46 7.2		900 16 474 158
			D35P		8	37	19	-45 12.4		16 897 158 A19
W0			D36P		8	37	27	-42 21.3		897
W0			D37P		8	37	38	-42 59.3		901 884 899 8 508 781 897 921 158 A19
.01	10.26	.35	D38P		8	37	39	-46 16.9		897
.13	13.27	W3	D39P		8	38	9	-45 20.2		897
			D40P		8	38	20	-44 17.8		897
.09	11.14	W0	D41P		8	38	24	-46 46.5	WITH 4400	897 158
			D42P		8	38	28	-47 10.2		897
.12	12.29	W0	D43P		8	38	34	-45 55.7		897
W0			D44P		8	38	40	-42 26.8		897
			D45P		8	38	37	-45 47.9		897
W3			D46P		8	38	37	-46 46.9		897 158
.10	12.07	W0	D47P		8	38	59	-46 13.6	W/-45 4351.4352	158 16 897
			D48P		8	39	17	-46 26.0		
			D49P		8	39	18	-46 30.8		897
			D50P		8	39	30	-46 17.6		899
			D51P		8	39	36	-42 29.1		897
W3			D52P		8	39	48	-44 45.9	W/-44 4662	897 922
			D53P		8	39	54	-45 8.1		922
			D54P		8	40	6	-47 44.8		897
.33			D55P		8	40	10	-45 36.9		897
.24			D56P		8	40	20	-46 7.4		899 922 897
			D57P		8	40	35	-47 14.1	DOUBLE STAR	897
			D58P		8	40	37	-46 38.9		921 783 793 899 620 897 884 901
.09	11.54	W3	D59P		8	40	47	-45 3.5		897 158
			D60P		8	40	51	-44 44.9		897

D61P		C-45	4394	8	39	10	-45	54.9	10.16	.21			B2V	EN	13.08	W0	13.06	.05		
D62P		C-45	4393	8	39	10	-45	19.6	9.3 MV	9.1 PG		*			12.18	.11	11.92	.10	12.18	
D63P		C-44	4691	8	39	31	-45	5.9	8.48	.40			B2I		12.74	W0	13.11	.21		
D64P	74272	C-46	4448	8	39	35	-47	8.3	4.76	.12	.12		A3II		10.63	W0	10.88	.51		
D65P		C-45	4401	8	39	35	-45	34.5	9.1 MV	8.7 PG			A		12.26	.40	12.04	.16	12.54	
D66P	74290	C-47	4217	8	39	38	-47	23.7	8.30MV				B8		11.93	W0	13.04	W0	12.09	
D67P	74319	C-44	4698	8	39	52	-44	48.7	6.63MV				B9		9.95	.08	9.32	.06	8.72	
D68P		C-45	4415	8	40	7	-45	22.3	9.0 MV	9.5 PG					14.52	W0	14.30	W0		
D69P	74371	C-44	4704	8	40	15	-45	13.8	5.24	.22	-.44	S	B5I		9.99	.00	9.71	.02	9.85	
D70P	74402	C-47	4239	8	40	18	-47	41.6	11.5 MV	9.0 PG			B9		12.88	W6				
D71P	74401	C-47	4241	8	40	22	-47	29.1	9.1 MV	9.1 PG			B8		11.34	W3	13.29	W3	11.85	
D72P	74386	C-47	4235	8	40	25	-47	36.0	9.4 MV	8.7 PG			F0		13.16	W3				
D73P		C-45	4425	8	40	38	-45	32.8	9.7 MV	9.2 PG			B		12.69	.04	12.78	.08	12.47	
D74P	74454	C-46	4474	8	40	42	-46	23.9	8.02MV				B9		11.61	.14	11.21	.05	12.01	
D75P	74496	C-47	4258	8	40	50	-47	20.4	7.4 MV	6.7 PG			A2		11.23	W3	12.71	W3		
D76P	74528	C-45	4435	8	41	2	-45	22.5	8.44	.16		*	B5V	N	12.16	.26	11.77	.19	11.75	
D77P	74558	C-46	4483	8	41	9	-46	37.7	6.94	.25			A5III		11.63	.14	12.18	.09		
D78P	74557	C-43	4571	8	41	13	-43	47.0	9.0 MV	8.5 PG			A3				13.58	W0		
D79P	74602	C-46	4486	8	41	25	-46	50.1	9.6 MV	8.6 PG			B9		12.94	.39	13.71	.69	11.70	
D80P	74620	C-47	4276	8	41	29	-47	30.4	9.4 MV	8.3 PG			B9						10.91	

CEL	HD	DM	R.A. (1950)			DEC.	OBJ	V	B-V	U-B	PHOT	SPECT	PEC.	U1	SD1	U2	SD2	U3
E 1P		C-46	4490	8	41	37	-46	16.0	10.01	.05			B2V		12.74	W0	12.96	.06	
E 2P	74650	C-47	4282	8	41	39	-47	37.5	7.49MV				B9						11.06
E 3P	74649	C-45	4449	8	41	44	-46	8.2	9.1 MV	8.7 PG			A0		12.18	.10	11.92	.17	12.01	
E 4P	74677	C-45	4455	8	41	55	-45	55.2	8.62	.22			B3III		12.02	.10	11.90	.21		
E 5P	74695	C-46	4496	8	41	57	-46	45.0	10.9 MV	9.3 PG			B9		11.96	.20	12.67	.28		
E 6P		C-45	4457	8	42	0	-45	21.8	9.0 MV	9.0 PG			B		12.25	.15	12.33	.14	11.83	
E 7P	74711	C-46	4504	8	42	8	-46	37.0	7.10	.08			B3		10.65	.24	10.49	.01	10.39	
E 8P		C-45	4463	8	42	17	-45	43.6	9.5 MV						11.44	W0	12.03	.13		
E 9P	74773	C-46	4512	8	42	30	-46	56.0	7.8 MV	6.9 PG			B5		10.38	W0	11.13	1.28	9.36	
E10P	74693	C-43	4581	8	42	53	-43	20.5	9.6 MV	9.0 PG			A2				13.90	W0		
E11P		C-45	4482	8	43	4	-45	48.0	10.0 MV				W8N	E	13.40	W0	13.73	W3		
E12P	74868	C-44	4771	8	43	6	-44	22.0	6.57	.57			G3IV		12.91	.10	13.58	.26		
E13P	74869	C-47	4312	8	43	16	-47	46.4	11.5 MV	9.6 PG			B9				13.09	.16		
E14P		P-45	2968	8	43	16	-46	.9							12.23	W3	13.18	W3		
E15P		C-44	4775	8	43	20	-44	23.9	9.9 MV	9.5 PG							14.09	.26		
E16P	74921	C-46	4531	8	43	22	-47	9.8	10.9 MV	9.6 PG			A				13.90	W3		
E17P		C-45	4494	8	43	23	-45	58.1	10.0 MV				B	E	11.75	W3	12.63	W3		
E18P	74937	C-46	4534	8	43	27	-47	1.1	8.5 MV	9.0 PG			A3				13.98	W3		
E19P	74920	C-45	4496	8	43	29	-45	51.3	7.53	.03			B3		10.41	.05	10.03	.21	9.15	
E20P	74936	C-45	4498	8	43	32	-45	43.4	8.26			*	B8		13.33	W0	13.32	.52		
E21P	74936	C-45	4501	8	43	38	-45	46.6	8.26	.22			B8		11.82	.21	12.31	.03		
E22P	74952	C-45	4502	8	43	39	-45	43.9	7.90	.21		*	A3		11.58	.03	11.55	.01	12.49	
E23P	74968	C-46	4537	8	43	43	-46	30.2	9.8 MV	8.5 PG			B9				12.66	W0		
E24P		C-45	4509	8	43	58	-45	34.8	9.9 MV						12.37	.05	13.08	.05		
E25P	75028	C-47	4329	8	44	2	-47	44.8	8.5 MV	7.9 PG			A0		13.22	W0	11.79	.17	12.10	
E26P	75009	C-43	4611	8	44	3	-44	3.9	7.0 MV	6.6 PG			B9		10.98	.12	10.57	.26	9.57	
E27P	75061	C-43	4617	8	44	10	-43	15.9	9.8 MV	9.0 PG			A0				14.01	W0		
E28P	75064	C-47	4332	8	44	16	-47	23.6	9.6 MV	8.6 PG			B9				12.64	.09		
E29P	75062	C-43	4615	8	44	18	-43	34.1	8.0 MV	7.4 PG			B9		11.94	.03	11.04	W0	11.42	
E30P	75063	C-45	4517	8	44	20	-45	51.5	3.90	.00	-.02		A0III		9.53	.36	9.11	.35	8.75	
E31P	75103	C-46	4557	8	44	30	-47	12.7	8.4 MV	7.8 PG			F2				13.62	W0		
E32P		C-46	4560	8	44	37	-46	23.0	9.7 MV	9.5 PG							12.53	W3	13.23	
E33P	75129	C-47	4337	8	44	40	-47	22.0	6.78MV				B8		12.20	.25	11.14	.02	12.04	
E34P		C-44	4805	8	44	42	-44	43.1	9.5 MV	9.5 PG							13.67	.06		
E35P	75149	C-45	4526	8	44	48	-45	43.7	5.47	.23			B3I		10.45	W0	10.04	.13	9.90	
E36P	75128	C-46	4564	8	44	49	-46	28.5	9.6 MV	9.0 PG			A0				12.32	W3		
E37P	75148	C-43	4624	8	44	53	-43	47.1	9.0 MV	7.9 PG			A2		13.04	W0	12.93	.12		
E38P	75212	C-48	4097	8	45	6	-48	34.9	8.5 MV	8.1 PG			A0		12.16	W0	11.20	W0		
E39P		C-45	4534	8	45	9	-46	16.0	9.5 MV	9.4 PG					13.64	.15	12.50	.29	12.19	
E40P	75243	C-47	4348	8	45	13	-47	37.3	9.6 MV	8.7 PG			A0		12.54	W0	11.36	W3		
E41P	75211	C-43	4635	8	45	16	-43	53.4	7.50	.41	-.65		B5		11.74	.24	11.52	.07	11.54	
E42P	75241	C-44	4818	8	45	22	-44	53.4	6.59	-.12			B5III		9.61	.31	9.81	.04	8.56	
E43P		C-47	4341	8	45	24	-48	16.5	9.1 MV								13.19	W0		
E44P		C-47	4339	8	45	37	-47	51.9	8.6 MV								13.80	W0		
E45P	75276	C-45	4541	8	45	37	-45	58.2	5.75	.5*	.3*	S	F2I				13.19	W3		
E46P	75293	C-47	4358	8	45	39	-47	40.0	9.4 MV	9.1 PG			B9		13.34	W0	12.04	.57	11.91	
E47P	75275	C-43	4643	8	45	39	-43	52.9	9.1 MV	8.6 PG			B3		11.70	.13	11.02	.04	11.15	
E48P	75309	C-45	4547	8	45	47	-46	16.0	7.84	.02			B2		10.74	.30	10.33	.24	10.25	
E49P	75310	C-46	4587	8	45	49	-46	29.3	10.2 MV	8.7 PG			A0				12.34	.22	13.10	
E50P	75349	C-46	4590	8	45	57	-47	1.3	9.2 MV	8.9 PG			B9		13.06	W0	12.15	.39	12.03	
E51P	75348	C-43	4649	8	46	3	-44	2.9	8.7 MV	9.0 PG			A3				14.24	.12		
E52P		C-47	4364	8	46	17	-47	30.6	9.6 MV	9.5 PG							12.90	.17		
E53P	75398	C-43	4658	8	46	24	-43	45.0	9.4 MV	8.4 PG			A0		12.34	W0	12.35	.15		
E54P	75465	C-46	4605	8	46	40	-46	43.5	9.00	.22			B3V	EN			12.87	.24	13.12	
E55P		C-45	4571	8	46	49	-45	47.5	9.5 MV								13.46	W0		

SD3	U4	SD4	CEL	NONSTAR	R.A. (2000) DEC.	-----REMARKS-----	----------REFERENCES----
			D61P		8 40 50 -46 5.6		341 900 899 308 A 7 158
.38	12.45	W0	D62P		8 40 51 -45 30.3	W/-45 4392	897
			D63P		8 41 13 -45 16.6		16 897 A 7 158
			D64P		8 41 13 -47 19.0		158 897 781 901 884 921
.23	12.67	W0	D65P		8 41 16 -45 45.2		897
W0			D66P		8 41 15 -47 34.4		897
.00	8.96	W3	D67P		8 41 34 -44 59.4		897
			D68P		8 41 48 -45 33.0		897
.15	9.90	W0	D69P		8 41 57 -45 24.5		884 901 897 620 158 419 793 7
			D70P		8 41 55 -47 52.3		897
W0			D71P		8 41 59 -47 39.9		897
			D72P		8 42 2 -47 46.8		922
W3			D73P		8 42 19 -45 43.6		897
.35			D74P		8 42 22 -46 34.7		897
			D75P		8 42 28 -47 31.2		897
.24			D76P		8 42 44 -45 33.3	W/-45 4441	16 897 158
			D77P		8 42 48 -46 48.5		897 505 158
			D78P		8 42 57 -43 57.8		897
W6			D79P		8 43 4 -47 .9		897
W0			D80P		8 43 7 -47 41.2		897
			E 1P		8 43 17 -46 26.8		158 900 16
.09			E 2P		8 43 16 -47 48.3		897
.18			E 3P		8 43 24 -46 19.0		897 922
			E 4P		8 43 36 -46 6.0		158 16 897
			E 5P		8 43 36 -46 55.8		897
W0	12.44	W0	E 6P		8 43 42 -45 32.6		897
.04			E 7P		8 43 47 -46 47.8		158 897
			E 8P		8 43 58 -45 54.5		897 899
.06			E 9P		8 44 9 -47 6.9		897
			E10P		8 44 38 -43 31.4		922
			E11P		8 44 45 -45 58.9		899 308 6
			E12P		8 44 50 -44 32.9		158 487 A19
			E13P		8 44 53 -47 57.3		899 922
			E14P		8 44 57 -46 11.8		897
			E15P		8 45 4 -44 34.8		897
			E16P		8 45 1 -47 20.7		897
			E17P		8 45 4 -46 9.0		899 308
			E18P		8 45 6 -47 12.0		897
.18			E19P		8 45 10 -46 2.2		158 897
			E20P		8 45 13 -45 54.3	INCLUDES 74952	897
			E21P		8 45 19 -45 57.5		158 897
.46			E22P		8 45 20 -45 54.8	INCL 4498,4501	897 158
			E23P		8 45 23 -46 41.1		897
			E24P		8 45 40 -45 45.8		897
W3			E25P		8 45 40 -47 55.8		897
.00			E26P		8 45 47 -44 14.9		897
			E27P		8 45 56 -43 26.9		922
			E28P		8 45 54 -47 34.6		897
.24			E29P		8 46 3 -43 45.1		897
.28			E30P		8 46 1 -46 2.5		921 158 783 781 897 901 884
			E31P		8 46 9 -47 23.7		897
W3			E32P		8 46 17 -46 34.0		897
W0			E33P		8 46 19 -47 33.0		897
			E34P		8 46 25 -44 54.1		897
.13			E35P		8 46 30 -45 54.7		620 897 901 884 158
			E36P		8 46 29 -46 39.5		922
			E37P		8 46 38 -43 58.1		897
			E38P		8 46 42 -48 45.9		897
W6			E39P		8 46 50 -46 27.0		897
			E40P		8 46 51 -47 48.3		922
.19			E41P		8 47 1 -44 4.4		158 897 A19
.05			E42P		8 47 5 -45 4.4		158 897
			E43P		8 47 1 -48 27.5		899
			E44P		8 47 15 -48 2.9		899
			E45P		8 47 18 -46 9.2		7 158 793 835 884 901 620 897
.16			E46P		8 47 17 -47 51.0		897
.31			E47P		8 47 24 -44 3.9		897
.05			E48P		8 47 28 -46 27.0		897 158
.13			E49P		8 47 29 -46 40.4		897
.49			E50P		8 47 36 -47 12.4		897
			E51P		8 47 48 -44 14.0		897
			E52P		8 47 56 -47 41.7		897
			E53P		8 48 9 -43 56.1		922
.03			E54P		8 48 20 -46 54.6		16 897 158 A19
			E55P		8 48 31 -45 58.6		899

E56P	75478	C-47	4377	8	46	50	-47	21.1	8.9 MV	8.1 PG			F0				13.68	.07		
E57P	75534	C-47	4381	8	47	6	-47	34.6	8.0 MV	8.1 PG			B5	12.16	W0		11.73	W0	12.24	
E58P		C-46	4615	8	47	10	-47	6.2	9.4 MV	9.1 PG				13.22	W0		12.38	W3		
E59P	75549	C-43	4668	8	47	17	-43	34.5	7.32	-.13			B3V	10.31	.10		9.63	.09	9.04	
E60P	75587	C-45	4581	8	47	24	-45	27.0	8.8 MV	8.7 PG			F0				13.17	.13		
E61P	75610	C-47	4388	8	47	29	-47	29.3	10.0 MV	9.3 PG			A0				13.49	W0		
E62P		C-45	4583	8	47	32	-45	57.4	9.2 MV								13.68	W0		
E63P	75608	C-42	4676	8	47	34	-43	11.0	7.55MV				B8	11.02	W0		10.25	.14	9.44	
E64P	75631	C-42	4677	8	47	38	-42	49.1	9.2 MV	8.2 PG			A2	12.46	W0		11.43	W0	11.42	
E65P	75658	C-47	4393	8	47	45	-47	18.1	8.10	.21			B3	11.92	W0		10.97	.03	11.15	
E66P		C-45	4592	8	47	50	-46	12.5	9.8 MV					13.31	W0		13.15	W0		
E67P	75657	C-42	4684	8	47	52	-42	38.2	7.59MV				B8	10.32	W0		9.34	.19	8.93	
E68P	75710	C-44	4861	8	48	4	-45	7.3	5.02			*	A2	10.60	.05		9.97	.04	9.97	
E69P	75744	C-47	4411	8	48	16	-47	26.6	10.2 MV	9.1 PG			B8	12.88	W0		11.96	W3		
E70P	75726	C-43	4680	8	48	18	-43	20.7	10.2 MV	9.6 PG			A0				13.27	W0		
E71P		C-45	4606	8	48	30	-45	20.1	8.92	.38		:	B0V	13.30	W0		13.54	.11	13.61	
E72P	75760	C-44	4873	8	48	33	-45	12.4	9.19MV	9.4 PG			A2				14.45	W3		
E73P	75823	C-48	4146	8	48	40	-48	30.3	8.9 MV	9.0 PG			F8				13.94	W0		
E74P	75820	C-45	4613	8	48	44	-46	3.6	9.8 MV	8.7 PG			A0	12.96	.16		11.86	.11	12.33	
E75P	75822	C-47	4421	8	48	46	-47	36.3	9.6 MV	8.6 PG			B8	11.83	W0		11.23	W0	11.53	
E76P	75821	C-46	4661	8	48	52	-46	20.5	5.09	-.22			O9II	8.51	.00		6.58	W3	6.95	
E77P		C-45	4615	8	48	53	-45	21.9	9.1	.40			B2V	EN			13.72	W0	13.36	
E78P	75819	C-42	4708	8	48	57	-43	0.0	10.2 MV	9.1 PG			A2				13.32	W0		
E79P	75851	C-42	4711	8	49	3	-42	51.4	10.2 MV	9.5 PG			A0				14.62	W3		
E80P	75873	C-45	4625	8	49	6	-46	7.3	9.1 MV	9.1 PG			A2	13.57	W0		13.62	W3		

CEL	HD		DM	R.A. (1950)			DEC.	OBJ	V	B-V	U-B	PHOT	SPECT	PEC.	U1	SD1	U2	SD2	U3
F 1P	75860	C-43	4691	8	49	6	-43	33.8	7.6	.73		SP	B1I		12.26	W3	13.85	W3	
F 2P	75872	C-43	4693	8	49	13	-44	13.9	9.8 MV	9.4 PG			B9				12.93	.13	13.05
F 3P	75887	C-47	4432	8	49	21	-47	40.9	9.8 MV	9.0 PG			A0				12.86	W0	
F 4P	75927	C-43	4700	8	49	29	-44	13.3	9.6 MV	8.9 PG			B9		13.80	W3	12.89	.13	13.67
F 5P		C-45	4635	8	49	33	-45	29.3	8.97	.40			B0III		13.63	.16	13.64	.29	13.82
F 6P	75955	C-45	4641	8	49	42	-45	26.1	7.8 MV	7.9 PG			A0		12.60	.09	11.82	.33	12.30
F 7P	75968	C-46	4683	8	49	51	-46	25.3	8.4 MV	7.9 PG			B8		12.11	.27	11.06	.10	10.91
F 8P	75991	C-47	4441	8	49	53	-47	23.0	10.0 MV	8.7 PG		*	B3		11.81	W0	11.38	W0	11.42
F 9P	75966	C-43	4707	8	49	53	-43	51.5	9.2 MV	8.4 PG			A0		14.49	W3	13.17	.03	
F10P	76005	C-48	4169	8	49	58	-48	33.9	9.08	.21			B8		12.20	W6	13.18	W3	
F11P	76004	C-43	4711	8	50	4	-43	57.7	6.68MV				B3		9.13	.13	9.23	.03	7.93
F12P		C-47	4429	8	50	5	-47	42.2	8.4 MV								14.29	W0	
F13P	76031	C-43	4716	8	50	18	-43	49.2	9.1 MV	9.4 PG			B3		14.60	W0			13.85
F14P	76060	C-45	4653	8	50	20	-46	6.0	8.2 MV	7.6 PG			B8		11.68	.19	10.42	.18	10.67
F15P	76074	C-43	4718	8	50	34	-43	58.4	9.4 MV	8.7 PG			A0		14.23	W0	12.86	.19	
F16P		C-48	4183	8	50	50	-49	3.0	9.5 MV								12.40	W3	12.60
F17P	76137	C-46	4703	8	50	56	-46	49.3	10.2 MV	9.3 PG			A0		13.46	W0	13.38	W0	
F18P		C-47	4459	8	50	59	-47	23.0	9.66	.22			B5V				13.28	W0	
F19P	76161	C-47	4460	8	51	0	-48	10.2	6.0*	-.16			B6V	N			8.80	W3	7.99
F20P	76183	C-43	4727	8	51	6	-44	5.8	8.41MV				A0		13.53	W3	13.24	.19	
F21P	76186	C-46	4707	8	51	7	-47	12.2	6.79MV				B9		11.01	.04	10.51	.05	
F22P		C-46	4755	8	51	14	-47	2.1	9.2 MV								13.93	W0	
F23P	76184	C-44	4920	8	51	17	-45	12.8	9.34MV	9.4 PG			A0		13.46	.01	12.94	.08	13.32
F24P	76211	C-44	4923	8	51	19	-45	11.0	9.0 MV	8.5 PG			A0		13.59	W0	13.50	.11	
F25P		C-46	4716	8	51	22	-47	2.9	9.2 MV								13.86	W0	
F26P	76256	C-43	4732	8	51	35	-43	33.8	9.4 MV	8.2 PG			B9		12.41	.08	11.90	.05	12.73
F27P	76268	C-43	4735	8	51	36	-44	8.6	7.53MV				A0		12.86	.11	12.04	.08	13.49
F28P		C-43	4739	8	51	47	-44	11.3	9.0 MV	8.8 PG							13.54	W3	
F29P	76307	C-47	4472	8	51	48	-47	19.7	9.8 MV	8.8 PG			B9		11.27	.05	12.27	.33	
F30P	76306	C-44	4931	8	51	48	-45	6.2	9.6 MV	9.0 PG			B9		12.63	.11	12.04	.05	12.65
F31P	76282	C-43	4740	8	51	49	-43	20.5	8.2 MV	7.5 PG			A0		12.44	.12	11.77	.02	12.70
F32P	76325	C-48	4208	8	51	56	-48	52.8	8.9 MV	8.9 PG			A2		13.75	W0	11.76	W3	12.41
F33P		C-45	4679	8	52	0	-46	18.5	10.5 MV	8.9 PG			A2				14.02	W0	
F34P	76342	C-48	4213	8	52	1	-48	34.5	9.4 MV	9.3 PG			A0				12.89	W3	13.63
F35P		C-49	3929	8	52	7	-49	26.4	8.5 MV								13.58	W0	
F36P	76360	C-47	4480	8	52	10	-47	19.8	5.32	.27	1.58	B	A4	AM	10.49	.23	11.23	.15	
F37P	76358	C-44	4933	8	52	10	-45	11.2	7.74MV	8.4 PG			K0				14.35	.22	
F38P	76341	C-42	4762	8	52	11	-42	17.7	7.21MV				B2		11.20	W0	10.62	.06	
F39P	76359	C-46	4732	8	52	16	-46	59.6	9.2 MV	8.5 PG			A0		12.22	.07	12.58	.14	
F40P	76425	C-48	4222	8	52	31	-48	56.2	9.0 MV	8.7 PG			A0				12.13	W3	
F41P		C-45	4685	8	52	32	-45	58.8	9.5 MV						12.80	W0	13.62	W0	
F42P	76424	C-46	4735	8	52	34	-46	18.2	9.8 MV	9.6 PG			A0		12.70	.33	12.66	.16	
F43P		C-48	4221	8	52	35	-48	42.5	9.3 MV								13.87	W3	
F44P		C-48	4225	8	52	40	-48	40.5	9.8 MV								12.84	W3	
F45P	76439	C-44	4939	8	52	40	-45	15.8	8.1 MV	7.7 PG			B9		11.50	.09	10.70	.33	11.09
F46P		C-43	4757	8	52	51	-44	14.3	9.5 MV	9.4 PG							13.56	.10	
F47P	76516	C-43	4762	8	53	15	-43	38.4	8.3 MV	8.0 PG			A0		13.07	.13	12.16	.05	13.42
F48P	76536	C-47	4504	8	53	18	-47	24.0	9.0 MV	8.8 PG			W C		13.74	W6	12.03	W6	
F49P	76534	C-42	4780	8	53	21	-43	16.5	7.9 MV	7.5 PG			B3		11.93	.34	11.27	.06	12.32
F50P	76556	C-47	4505	8	53	26	-47	24.9	8.20	.41			B3		12.91	W6			12.32

SD3	U4	SD4	CEL	NONSTAR	R.A. (2000) DEC.	-----REMARKS-----	------------REFERENCES--
			E56P		8 48 29 -47 32.2		897
W0			E57P		8 48 45 -47 45.7		897
			E58P		8 48 50 -47 17.3		897
.13			E59P		8 49 3 -43 45.6		158 419 897 A19
			E60P		8 49 7 -45 38.1		922
			E61P		8 49 8 -47 40.4		897
			E62P		8 49 14 -46 8.5		899
.18			E63P		8 49 21 -43 22.1		897
W3			E64P		8 49 25 -43 .3		897 922
.12			E65P		8 49 24 -47 29.3		158 897
			E66P		8 49 31 -46 23.7		899
.10			E67P		8 49 39 -42 49.4		897
.05			E68P		8 49 47 -45 18.5	WITH C-44 4873	884 901 781 897
			E69P		8 49 55 -47 37.8		922
			E70P		8 50 4 -43 31.9		922
.09			E71P		8 50 13 -45 31.3	WITH C-45 4615	16 897 158 A 7
			E72P		8 50 16 -45 23.6		922
			E73P		8 50 17 -48 41.5		922
.11			E74P		8 50 26 -46 14.8		897
W0			E75P		8 50 25 -47 47.5		897
.09			E76P		8 50 33 -46 31.7		419 783 901 884 897 488 12 921 158
W0			E77P		8 50 36 -45 33.1		900 16 A 7 158 419
			E78P		8 50 44 -43 11.2		922
			E79P		8 50 50 -43 2.6		922
			E80P		8 50 48 -46 18.5		922
			F 1P		8 50 52 -43 45.0		899 340 897 7 158 419 12 2 A19
.08			F 2P		8 50 58 -44 25.1		897
			F 3P		8 51 0 -47 52.1		922
.02			F 4P		8 51 14 -44 24.6		897
W0			F 5P		8 51 16 -45 40.6		A 7 158 16 897
.13			F 6P		8 51 25 -45 37.4		897
.11			F 7P		8 51 32 -46 36.6		897
W0			F 8P		8 51 33 -47 34.3	WITH -47 4447	897
			F 9P		8 51 39 -44 2.8		922
			F10P		8 51 35 -48 45.2		897 158
.09			F11P		8 51 50 -44 9.0		897
			F12P		8 51 44 -47 53.5		899
.15			F13P		8 52 4 -44 .5		897
.15			F14P		8 52 2 -46 17.3		897 308
			F15P		8 52 20 -44 9.7		922
W3			F16P		8 52 27 -49 14.3		899
			F17P		8 52 37 -47 .6		922
			F18P		8 52 39 -47 34.3		900 16 158
W0			F19P		8 52 38 -48 21.5		419 842 897 884 901
			F20P		8 52 52 -44 17.1		897
			F21P		8 52 47 -47 23.5		897
			F22P		8 52 55 -47 13.4		899
W0			F23P		8 53 1 -45 24.1		899
			F24P		8 53 3 -45 22.3		922
			F25P		8 53 3 -47 14.3		899
W0			F26P		8 53 22 -43 45.2		897
.16			F27P		8 53 22 -44 20.0		897
			F28P		8 53 33 -44 22.7		897
			F29P		8 53 28 -47 31.1		897
.05			F30P		8 53 32 -45 17.6		897
W0			F31P		8 53 36 -43 31.9		897
.14			F32P		8 53 33 -49 4.2		897
			F33P		8 53 42 -46 29.9		897
W3			F34P		8 53 39 -48 45.9		922
			F35P		8 53 43 -49 37.8		899
			F36P		8 53 50 -47 31.2		901 884 781 897 158 753
			F37P		8 53 54 -45 22.6		922
			F38P		8 54 0 -42 29.1		897
			F39P		8 53 57 -47 11.0		922
			F40P		8 54 8 -49 7.6		897
			F41P		8 54 15 -46 10.2		899
			F42P		8 54 16 -46 29.6		922
			F43P		8 54 13 -48 53.9		899
.41			F44P		8 54 18 -48 51.9		899
			F45P		8 54 24 -45 27.2		897
W0			F46P		8 54 37 -44 25.7		897
			F47P		8 55 2 -43 49.9		897
W3			F48P		8 54 58 -47 35.5		899 922
W6			F49P		8 55 8 -43 28.0		897
			F50P		8 55 6 -47 36.4		897 158

F51P	76567	C-45	4694	8	53	26	-46	10.1	7.8 MV	7.5 PG			A0		11.60	.23	11.84	.15		
F52P	76566	C-44	4951	8	53	34	-44	51.0	6.25	-.17		B	B3V		9.61	.02	8.91	.80	7.89	
F53P	76565	C-43	4764	8	53	36	-43	36.5	8.5 MV	7.8 PG			A0		13.24	.04	12.22	.11		
F54P	76588	C-45	4698	8	53	40	-45	29.2	9.1 MV	8.7 PG			A0				14.06	.01		
F55P	76589	C-46	4758	8	53	41	-46	41.9	8.2 MV	8.2 PG			B9		11.17	W6	12.16	W3		
F56P		C-43	4770	8	54	4	-44	13.3	9.0 MV								13.76	W0		
F57P	76649	C-45	4707	8	54	7	-46	9.0	8.0 MV	8.1 PG			B8		12.07	.14	13.14	.09		
F58P	76693	C-46	4769	8	54	18	-47	17.3	10.0 MV	9.6 PG			A0				13.24	W3	14.29	
F59P	76745	C-48	4249	8	54	29	-48	56.6	9.1 MV	8.4 PG			A0				11.96	W0		
F60P	76725	C-44	4963	8	54	30	-45	12.3	8.8 MV	8.6 PG			B9		11.91	W0	11.73	.03		
F61P	76744	C-45	4710	8	54	35	-46	8.4	8.5 MV	8.2 PG			A0		12.47	.10	13.51	.10		
F62P	76777	C-47	4531	8	54	47	-47	44.4	9.1 MV	9.0 PG			A0				13.05	W0		
F63P	76776	C-43	4782	8	54	49	-43	43.7	9.2 MV	8.8 PG			A5				13.78	W0		
F64P	76764	C-42	4802	8	54	50	-43	.5	9.6 MV	9.4 PG			B8		12.60	W0	12.47	W0		
F65P	76775	C-41	4656	8	54	57	-42	4.0	9.0 MV	8.9 PG			A2				13.54	W0		
F66P	76803	C-47	4532	8	55	1	-47	40.1	8.9 MV	8.4 PG			A0				13.41	W0		
F67P	76802	C-41	4657	8	55	7	-41	57.7	8.3 MV	8.6 PG			F0				13.68	W0		
F68P	76852	C-48	4265	8	55	14	-48	52.4	10.5 MV	9.6 PG			B				12.79	W3		
F69P	76838	C-42	4808	8	55	19	-43	3.8	7.31	+0.00		*	B3V		10.26	W0	9.57	.01		
F70P	76874	C-48	4267	8	55	21	-48	55.7	10.5 MV	9.6 PG			A5				13.36	W3		
F71P	76915	C-47	4543	8	55	40	-48	.7	8.9 MV	8.8 PG			A0				12.62	W0	13.52	
F72P	76898	C-43	4794	8	55	41	-44	4.3	7.39	-.15			B4V	N	10.78	.17	9.48	.23	9.52	
F73P	76940	C-43	4797	8	55	55	-43	21.1	9.1 MV	8.6 PG			A0		12.70	W3	13.42	W3		
F74P	76954	C-42	4822	8	56	3	-42	19.8	8.2 MV	7.7 PG			B9		11.15	W0	10.53	W0		
F75P	76967	C-42	4824	8	56	5	-42	57.6	9.6 MV	9.2 PG			B8		12.06	W0	11.86	W0		
F76P		C-47	4551	8	56	12	-47	33.0	9.0 MV				O7				14.37	W0		
F77P	76998	C-44	4991	8	56	14	-44	40.5	9.8 MV	9.0 PG			A0		12.50	W0	12.59	.08		
F78P		C-43	4813	8	56	40	-43	34.2	9.2 MV								13.79	W0		
F79P	77115	C-46	4808	8	56	58	-46	33.9	9.6 MV	9.0 PG			A0				12.41	.23		
F80P	77114	C-43	4819	8	57	9	-43	25.7	9.2 MV	8.7 PG			A0				12.96	W0		

CEL	HD	DM	R.A. (1950)	DEC.	OBJ	V	B-V	U-B	PHOT	SPECT	PEC.	U1	SD1	U2	SD2	U3
G 1P	77140	C-46	4810	8 57 11	-47	2.5	5.17	.26	.17	B	FOIII	A	11.47	W0	10.39	.28	13.39
G 2P	77112	C-42	4846	8 57 16	-43	13.7	9.2 MV	9.1 PG			A0				12.70	W0	
G 3P	77166	C-42	4853	8 57 32	-42	24.4	9.8 MV	8.9 PG			B9				12.62	W3	12.23
G 4P	77167	C-42	4855	8 57 33	-43	9.6	10.0 MV	9.0 PG		*	B9				13.01	W0	12.12
G 5P		C-46	4822	8 57 43	-46	50.4	9.1 MV								12.80	W0	
G 6P		C-43	4816	8 57 44	-44	.1	9.3 MV								15.01	W0	
G 7P		C-44	5012	8 57 57	-44	50.7	9.7 MV	9.7 PG					14.16	W3			
G 8P		C-47	4571	8 58	4	-47	57.4	7.7 MV							13.82	W0	
G 9P	77320	C-42	4875	8 58 33	-42	58.6	6.08	-.18			B2V	CEN	9.37	W3	8.61	W3	8.08
G10P	77400	C-46	4826	8 58 35	-47	2.3	9.2 MV	8.7 PG			A0				12.69	W0	
G11P	77343	C-43	4839	8 58 38	-43	43.2	9.0 MV	8.7 PG			A2				14.17	.02	
G12P	77384	C-46	4823	8 58 39	-46	31.1	8.9 MV	8.5 PG			A5				12.39	.03	13.70
G13P		C-45	4773	8 58 44	-45	31.9	9.4 MV								14.32	W0	
G14P	77383	C-42	4881	8 58 51	-43	8.7	10.2 MV	9.4 PG			A0				13.28	W3	
G15P	77420	C-43	4848	8 58 58	-43	39.6	9.0 MV	8.3 PG			A3				14.23	.04	
G16P	77433	C-45	4772	8 59 1	-45	41.9	8.3 MV	8.6 PG			A3				12.74	.30	
G17P	77453	C-45	4774	8 59 9	-45	26.1	8.3 MV	8.2 PG			A3				13.10	.13	
G18P	77511	C-46	4836	8 59 22	-47	2.6	7.7 MV	7.5 PG			F0				12.48	W0	
G19P	77651	C-45	4788	9 0 23	-46	15.6	9.1 MV	9.0 PG			A0				13.24	.21	
G20P	77650	C-42	4905	9 0 32	-42	18.3	10.0 MV	9.4 PG			A				13.19	W3	13.70
G21P	77669	C-43	4873	9 0 38	-43	46.3	8.5 MV	7.7 PG			B9		12.74	.07	11.36	W0	12.15
G22P	77684	C-42	4906	9 0 45	-42	30.5	7.23MV				A0		11.96	W0	11.28	W0	11.71
G23P		C-45	4797	9 0 52	-45	27.8	9.3 MV								14.64	W0	
G24P	77741	C-45	4798	9 0 58	-45	58.5	9.5 MV				A0				13.34	.34	
G25P	77740	C-44	5064	9 0 59	-44	26.7	8.5 MV	8.3 PG			A0		13.57	.17	12.21	W0	
G26P	77739	C-43	4877	9 1 1	-44	2.8	8.4 MV	7.7 PG			A0		12.15	.17	11.15	W3	11.49
G27P	77769	C-46	4861	9 1 5	-46	45.9	9.6 MV	9.1 PG			B8				13.01	W0	
G28P	77754	C-42	4913	9 1 7	-42	41.1	9.6 MV	8.3 PG			A0		13.65	W0	12.62	W0	13.60
G29P		C-45	4794	9 1 8	-46	11.9	9.4 MV								14.22	W0	
G30P	77812	C-44	5072	9 1 18	-45	11.1	9.39MV	8.7 PG			A0				13.20	W0	
G31P	77850	C-44	5073	9 1 31	-44	42.3	10.5 MV	9.4 PG			A2				14.96	W0	
G32P	77849	C-43	4885	9 1 34	-43	51.0	9.4 MV	8.8 PG			A0				12.80	.03	
G33P	78080	C-42	4941	9 2 55	-43	4.0	9.0 MV	9.4 PG			A0				13.26	W0	
G34P	78116	C-45	4840	9 3 18	-45	40.5	8.2 MV	8.0 PG			A0				12.29	W3	
G35P	78265	C-44	5115	9 3 52	-44	57.6	8.5 MV	8.1 PG			A0				13.25	W0	
G36P	78616	C-44	5150	9 5 54	-44	25.8	6.78	-.02	-.75UBC		B2		10.84	W0			

		F51P	8	55	9	-46	21.6	897
.02		F52P	8	55	19	-45	2.5	158 897 419 901 884
		F53P	8	55	23	-43	48.0	897
		F54P	8	55	24	-45	40.7	899 922
		F55P	8	55	23	-46	53.4	897
		F56P	8	55	50	-44	24.8	899
		F57P	8	55	50	-46	20.5	897
W3		F58P	8	55	59	-47	28.8	922
		F59P	8	56	7	-49	8.1	922
		F60P	8	56	14	-45	23.8	897
		F61P	8	56	18	-46	19.9	897
		F62P	8	56	27	-47	55.9	897 922
		F63P	8	56	36	-43	55.2	899 922
		F64P	8	56	38	-43	12.0	897
		F65P	8	56	47	-42	15.5	897
		F66P	8	56	41	-47	51.6	897
		F67P	8	56	57	-42	9.3	922
		F68P	8	56	52	-49	4.0	922
		F69P	8	57	7	-43	15.4 WITH 4806	897 158 A19
		F70P	8	56	59	-49	7.3	922
W0		F71P	8	57	20	-48	12.3	897
W3		F72P	8	57	28	-44	15.9	158 419 897 A19
		F73P	8	57	43	-43	32.7	897 922
		F74P	8	57	52	-42	31.4	897
		F75P	8	57	53	-43	9.2	897
		F76P	8	57	53	-47	44.6	A 7
		F77P	8	58	0	-44	52.1	897
		F78P	8	58	28	-43	45.8	899
		F79P	8	58	41	-46	45.5	897
		F80P	8	58	57	-43	37.4	897

SD3	U4	SD4	CEL	NONSTAR	R.A. (2000)	DEC.	-----REMARKS-----	----------REFERENCES--
W0			G 1P		8 58 53	-47 14.2		158 505 897 780 781 884 901 753
			G 2P		8 59 4	-43 25.4		899 922
W0			G 3P		8 59 22	-42 36.1		897
W6			G 4P		8 59 21	-43 21.3	WITH -42 4864	897
			G 5P		8 59 25	-47 2.1		899
			G 6P		8 59 31	-44 11.8		899
			G 7P		8 59 43	-45 2.4		897
			G 8P		8 59 44	-48 9.1		899
W3			G 9P		9 0 22	-43 10.3		752 897 901 884 158
			G10P		9 0 17	-47 14.0		922
			G11P		9 0 26	-43 54.9		897
W0			G12P		9 0 22	-46 42.8		897
			G13P		9 0 29	-45 43.6		899
			G14P		9 0 40	-43 20.4		922
			G15P		9 0 46	-43 51.4		897
			G16P		9 0 46	-45 53.7		897
			G17P		9 0 54	-45 37.9		897
			G18P		9 1 4	-47 14.4		922
			G19P		9 2 7	-46 27.4		897 922
W3			G20P		9 2 22	-42 30.1		922
W0			G21P		9 2 26	-43 58.1		897
.36			G22P		9 2 35	-42 42.3		897
			G23P		9 2 37	-45 39.6		899
			G24P		9 2 43	-46 10.4		899
			G25P		9 2 46	-44 38.6		897
W0			G26P		9 2 49	-44 14.7		897
			G27P		9 2 48	-46 57.8		897
W0			G28P		9 2 57	-42 53.0		922
			G29P		9 2 52	-46 23.8		899
			G30P		9 3 4	-45 23.0		922
			G31P		9 3 18	-44 54.2		899 922
			G32P		9 3 22	-44 2.9		922
			G33P		9 4 45	-43 16.0		897
			G34P		9 5 4	-45 52.5		922
			G35P		9 5 39	-45 9.6		897
			G36P		9 7 42	-44 37.9		897 419 158 A19