

PART I

AUXILIARY TABLES

DESCRIPTION OF THE AUXILIARY TABLES

Table I.1. Formats

This table explains different formats in the numbering of the sources in the catalogues, mainly those described in the Dictionary of Acronyms (=Table II) :
 serial number, number based on the equatorial or galactic coordinates (especially the so called "Parkes Format"), numbering including a field or a plate number, etc...

In a few cases, the acronym itself is split into 2 pieces and one serial number is in between :

Ex. : G...B for Giclas Blue-Red stars (a peculiar object is then G271-B11A).

R...F for two additional lists in ref. 1960F1 (Notice that, as a consequence, R NNF and R NN are two completely independent stars, for instance R31F is foreground to the LMC while R31 is foreground to the SMC).

Additional letters (for instance A, B, ..., a, b...) are very usual to discriminate between several components of a source (or of a star) ; other letters (for instance N, S... for north, south) or roman numerals always indicate a subdivision as in NGC 6334I (where I is a roman numeral) or W75(OH) : we consider they are "specifiers" and do not include them in the format.

Table I.2a. Wavelengths

Table I.2b. Types of objects

We describe here only the types of objects, which are used in Table II, V, VI for explaining the content of a catalogue. For instance "Black hole" is not quoted, as no catalogue of black holes is presently available.

Table I.3. Comprehensive lists, Catalogs, Systems of Nomenclature, Data Centers

The references selected for table I.3 were chosen on one of the following criteria :

- collection of (many) small discovery lists, which are merged into a new unique Nomenclature :

Ex. : Double stars (IDS), Planetary Nebulae (PK), Variable Stars (V *) ...

- very complete merged list, even without unification of the nomenclature or discussion of the data :

Ex. : 1982GE CIO Catalogue, no acronym

- discussion of previous cross-identifications and (or) new ones :

Ex. : 1973JU CSI, Catalogue of Stellar Identification (Data Center C 16)

- extensive census and bibliography on a type of sources :

Ex. : 1982GF, Ap Am stars

- homogenization of data.

The entries in Table I.3 are as follows :

Col. 1	Type of objects (ordered stellar stellar associations non stellar [galactic or extragalactic])
Col. 2	Code number referring to Table III
Col. 3	(First) Author, or remark
Col. 4,5	Acronym and format found in this reference
Col. 6	(Remark R1) : S means that the acronym is systematic, i.e. it can be extended in the future and thus is unlimited in number (also used in col. 2 of Table II)
Col. 7	Here we indicate whether a Data Center or an individual astronomer is updating the Catalogue. The Data Center number is from Codata Bulletin, 1980. At the end of the table, the main informations on the Data Centers are given

TABLE I.1 - LIST AND EXPLANATION OF THE FORMATS(extension of Kesteven and Bridle, 1977, J. Roy. Astron. Soc. Canada, 71, p. 31)

+	}	Stand for a sign
-		
±		
± DD.dd		Degrees of declination and decimals
HH.hh		Hours of right ascension and decimals
MM.m		Minutes of right ascension (and tenths) or of declination
S		Seconds of right ascension or of declination
D		Tens of degrees of declination
HHMM±DDd		Parkes format, coordinates for 1950 equinox and <u>truncated</u>
LLL.ℓℓ		Degrees of galactic longitude (and two decimals)
± BB.bb		Degrees of galactic latitude (and two decimals)
LLLℓ		Degrees of galactic longitude (and one decimal)
± BBb		Degrees of galactic latitude (and one decimal)
		The galactic coordinates are ℓII, bII as defined in 1960
NNN		Ordinal numbers within source catalogue (no positional information)
NN.N		Is not a subdivision of the object numbered NN, but an object inserted between 2 adjacent ones. Ex. : OCℓ 157.1 is inserted between OCℓ 157 and OCℓ 158 (ref. 1970AR B, ordering by ℓ, b)
F		For field or plate number
G		Greek letter
R		Roman numeral
T		Type of objects
V		Velocity
Y		Year (2 or 4 digits)
A,B,C,a,b..		Subdivisions or suffixes Ex. : HD 48915 B = Sirius B

EXAMPLES OF FORMATS

LLL±BB N	For PK, ref. 1967PK
FFF-TTT NN	For ESO, ref. 1974H1
YYYYA or a	For SN, ref. 1974SS and 1967PK
LLL.ℓ±BB.b±VVV	For HVC, ref. 1975H1

REMARK ON SPECIFICATORS

	Besides the suffixes A, B, .. a, b, other usual specificators are :								
IRS	Infrared source Ex. : NGC 7538 IRS7 is the 7th infrared source discovered in NGC 7538								
OH	or any molecule Ex. : DR21 (OH) Sometimes (OH)2 or (OH)II for the 2nd OH source discovered								
N,S	(north, south) Ex. : W 75N A 3 steps hierarchy in the subdivisions has been proposed for GF (globular filaments, ref. 1979S1) :								
	<table><tr><td> GF12</td><td> A1a </td><td>—</td><td>3 steps hierarchy</td></tr><tr><td> </td><td> </td><td>—</td><td>running number</td></tr></table>	GF12	A1a	—	3 steps hierarchy			—	running number
GF12	A1a	—	3 steps hierarchy						
		—	running number						
	Acronym								

TABLE I.2

a) WAVELENGTH

(Far IR) = Far Infrared
 (IR) = Infrared
 (OPT) = Optical
 (RAD) = Radio

(UV) = Ultraviolet
 (X) = X-Ray
 (Gamma) = γ -Ray

b) TYPE OF OBJECTS

We collected in the Table a number of types of objects, with or without abbreviations according to the following criteria :

Some abbreviations are widely used (ex. : PSR). The abbreviation is mainly made out of capital letters. Some others are less common : we then

proposed (for use in the different Tables) a clearer, often longer, form.

A few specialized acronyms are also listed but considered to be rather relevant to the Dictionary (ex : GF). The figure in col. 4 refers to the Notes following the table.

Type of object	Explanation	Note	Type of object	Explanation	Note
(1)	(2)	(3)	(1)	(2)	(3)
*	Star	Stellar	DCLD *	Star in a Dark Cloud	Stellar
* Ring	Stellar ring	Group of stars	Double *	Double star	Stellar
A *	Spectral type	Stellar	DW. or Dw.	Dwarf	
Am, Ap	"	"	DW.M*	Dwarf M Star	
ASS.C	Stellar Association		E	Elliptical galaxy	Exgl
OB			E0 to E7	Type of galaxy	Exgl
R			EB	Eclipsing Binary	Stellar
T			E11	Elliptical Galaxy	Exgl
B *	Spectral type	Stellar	EM.*	Emission line star	Stellar
B(G)	Type of galaxy	Exgl	EM. G	Emission line Galaxy	Exgl
BDN	Bright Dark Nebula	Galactic non stellar	EM. OBJ.	Emission line Object	
BL	BL Lac type	Exgl	EXGL	Extragalactic	Exgl
Blue *	Blue or faint blue * (different from OB*)	Stellar	EXGL C	Extragalactic Cluster (may be different from cluster of galaxies)	Exgl
Blue G	Blue Galaxy	Exgl			
BSO	Blue Stellar Object	Exgl	EXGL EM.* etc.	Extragalactic Emission line star	Exgl
(B)SO }					
C	Cluster (see also OCL, GCL) : <u>stellar</u> cluster if not otherwise specified.	1, 2	F *	Spectral type	Stellar
Carbon *	Spectral type	Stellar	Faint *	Faint star (low luminosity star)	
CG	Cometary Globule We use Refl. N or RFN	Galactic non stellar	Flare *	Flare star	
		1	FXP	Flaring X-ray Pulsar	
CLD	Cloud, see also dark CLD, DC, DCLD, MCLD	Galactic non stellar	G	a Galaxy	Exgl 3
		2	GC	Galactic Centre	Galactic non stellar
CLD *	Star in a cloud	Stellar	GCL	Globular Cluster	
Cluster *	Star belonging to a cluster	Stellar	GCL*	Star belonging to a Globular Cluster	Stellar
Cluster of G	Cluster of Galaxies	Exgl	GF	Globular Filament, a subtype of Dark Cloud	Galactic non stellar 1
CN	Cometary Nebula, We use Refl. N or RFN	Galactic non stellar	Group of G	Group of Galaxies	Exgl
Dark N	Dark Nebula	Galactic non stellar	GS	Giant HI Shells We use HI shell	
DC			H2O	Molecular source	Non stellar 4
DCLD			HH	Herbig-Haro object	Galactic 1

TABLE I.2 (continued)

Type of object (1)	Explanation (2)	(3)	Note (4)	Type of object (1)	Explanation (2)	(3)	Note (4)
HI CLD	HI Cloud	Non stellar		Position *		Stellar	
HI Complex				Poss. EM *	Possible emission line star	Stellar	
HI Ridge							
HI Shell							
HI SP. ARM	HI Spiral Arm			Poss. PN	Possible Planetary Nebula	Non stellar	
HI Standard							
HII	HII region	Non stellar		Poss. V *	Possible variable star	Stellar	
HV *	High Velocity star	Stellar		PSR	Pulsar		1
HVC	High Velocity Cloud	Non stellar	1	QSO	Quasi Stellar Object	Exgl	1
IG	Interacting Galaxies	Exgl		R *	Spectral type	Stellar	
Im	Magellanic-type Irregular galaxy	Exgl		Rad. cont.	Radio continuum	Non stellar	
IRR	Irregular galaxy	Exgl		Red *	Red star	Stellar	
IRS	Infrared Source, we use (IR)		1	Red Giants	Red Giant star	Stellar	
IVC	Intermediate Velocity Cloud	Non stellar	1	Region	Region in the sky	Non stellar	
K *	Spectral type	Stellar		Ref1.N=RFN	Reflection Nebula	Non stellar	
Late *	Late type star	Stellar		R G } R (G) }	Type of galaxy	Exgl	
LMC	Large Magellanic Cloud	Exgl		RSF	Region of star formation	Non stellar	1
LMC *	Star belonging to the Large Magellanic Cloud	Stellar, Exgl		R(SO) } (R)SO }	Type of QSO	Exgl	
LMC C	Cluster belonging to the Large Magellanic Cloud	Exgl		S *	Spectral type	Stellar	
M *	Spectral type	Stellar		SB	Spectroscopic binary	Stellar	
MCLD=MC	Molecular Cloud	Non stellar	1,2	Sa,Sb,Sc,S0, Seyfert	Type of galaxy	Exgl	
MVC	Medium Velocity Cloud	Non stellar		SGP	South Galactic Pole	Area in the sky	
N	Nebula	Non stellar		SMC	Small Magellanic Cloud	Exgl	
N *	Star of spectral type N	Stellar		SMC *	Stars in Small Magellanic Cloud	Exgl	
NGP	North Galactic Pole	Area in the sky		SN	Supernova	Stellar	1
Nova	Nova-type Star	Stellar		SNR	Supernova Remnant (see also PLE SNR)	Non stellar	
NSO				Susp. V *	Suspected Variable star	Stellar	
(N)SO }	Types of QSO	Exgl		Susp. WD	Suspected White Dwarf	Stellar	
N(SO)				UV OBJ.	Ultraviolet excess Object		
O *	Spectral type	Stellar		V *	Variable star	Stellar	
OB *	Spectral type	Stellar		V *?	Possibly Variable star	Stellar	
OCL	Open cluster			WD	White Dwarf	Stellar	1
OCL *	Open cluster star	Stellar		WR	Wolf-Rayet star	Stellar	1
OH	OH Molecular source		1				
OH/IR	OH/IR objects						
OH-Mira	Mira-type stars displaying OH maser lines	Stellar					
Pec.G	Peculiar Galaxy	Exgl		NOTE TO TABLE			
PLE SNR	Plerion (or Plethoric Supernova Remnant)	Non stellar		1 used as an acronym in the Dictionary			
PM *	Proper Motion star	Stellar		2 C or CL stands for cluster or clustering, CLD for cloud. However, C is used for cloud in a number of cases : LMC, SMC, DC, HVC, MC			
PN	Planetary Nebula	Non stellar		3 G stands for a galaxy (except in Table 1:G for "galactic coordinates"), EXGL for extragalactic			
				4 usually refers to water maser emission			

TABLE I.3 - COMPREHENSIVE CATALOGS, SYSTEMS OF NOMENCLATURE, DATA CENTERS

Type of objects	Code number (see table III)	(First) Author	Acronym	Format	R1	Updating or Data Center
STARS						
(General)	1973JU	Jung+, C.S.I. (Catalogue of stellar Identifications) and Bibliography				C 16
Ap stars	1974BF	Bertaud+	-	-		
Ap, Am stars	1982GF	Gerbaldi+				
(Bright)	1964HF, 1982HJ	Hoffleit, Hoffleit+	BS=HR			
		Also gives : Bayer's Nomenclature Flamsteed's Nomenclature		α Constell. NNN Constell.		
Blue Objects	1977BF	Berger+	PG	NNNN		
Central stars in planetary nebulae	1982AC	Acker+; see also 1967P01		NNN		
Double stars	1963JV	Jeffers	IDS	HHMM.m ^S DDMM (1900 eq.coord.)	S	C 17, C 26, C 28
Dwarf novae	1982VB	Vogt+		HHMM±DD	S	
Emission line stars	1970WA	Wackerling	-			
	1972HR	Herbig+	HRC	NNN		
Masers (stellar)	1979EN	Engels		LLL.ℓℓ±BB.bb	S	
Novae			Nova	YYYY.N Constell.	S	C 25
O stars	1980GY	Goy		NNN		
OH/IR	1979EN	Engels		LLL.ℓℓ±BB.bb	S	
Position stars	See Introduction 1974EC	Sevarlic+ (3 ref.) Eichhorn	- -	- -		- -
Proper motion stars	1979LU	Luyten	-			
Pulsars	1976TD	Terzian+	PSR	HHMM±DDd		C 46
Radial velocities	1972AB	Abt				C 52
Spectroscopic binaries	1978BF	Batten = C 45	Batten	NNN		C 45
Stars in SMC	1982AZ	Azzopardi+	AZV	NNN		
Suspected variable stars	1951KP	Kukarkin+	CSV	NNNNNN		C 25
	1982KH	Kholopov	NSV	NNNNN		C 25
Supernovae	1974SS	Sargent+	SN	YYYYa	S	C.T. Kowal, C 25
Trigonometric Parallaxes	1982VA	Van Altena	-			
T Tau Stars	1972HR	Herbig+	HRC	NNN		C 25
Variable stars	1969KP	Kukarkin+	V	see Notes to Table II	S	C 25
White dwarfs	1977MS	McCook+	WD	HHMM±DD	S	
Wolf Rayet stars	1981VH	Van der Hucht+	WR	NNN		K. Van der Hucht
Wolf Rayet stars in LMC	1981BR	Breysacher	WR	NNN		J. Breysacher

Type of objects	Code number (see table III)	(First) Author	Acronym	Format	R1	Updating or Data Center
<u>SYSTEM OF STARS</u>						
Associations	1970AR	Alter+, see also part V	Constell. C Constell. OB Constell. R Constell. T	NN NN NN NN	S S S S	
Clusters (open or globular)	1979LY	Lyngå	C	HHMM±DD	S	C 12
Globular cluster (galactic)	1970AR	Alter+	GCL	NN.N	(S)	C 23, C 32
Globular cluster (extragal.)			GCL	HHMM±DD	S ?	
Open cluster	1970AR	Alter+	OCL	NN.N	(S)	C 12, C 24
Stars in cluster	1981WG	Working Group of I.A.U. comm. 37				
<u>NON STELLAR</u>						
Bipolar Nebula	1978CC	Calvet+				
BL Lac objects	1980HB	See Quasi Stellar Objects				
Clusters of Galaxies	1982FM	Fernandez+				CEDAG
Cometary Nebulae	1979PS	Parsamian+	PP	NNN		
Galaxies			...	Parkes		
H II regions	1974MA	Marsalkova	Marsalkova	NNN		
Masers (non stellar)	1983BE	Braz+		LLL.ℓℓ±BB.bb		N. Epchtein
Molecular clouds (galactic)	1982SN	Snyder+	MC	LLL.ℓℓ±BB.bb		
Nebulae (galactic)	1982NE	Neckel				
(see also : Cometary N, Reflection N, Plane- tary N)						
Objects in Galaxies	1982WG	Working Group of I.A.U. Comm. 28	Search for a systematic nomen- clature within galaxies			
Planetary Nebulae	1967PK	Perek+ Bibliography : ref. 1967PK A,B,D Index of discovery lists : 1967PK A,C, E,F,G,H	PK	LLL DD N		A. Acker S.L. Kohoutek R. Weinberger
Quasi Stellar Objects	1980HB	Hewitt+	QSO	Parkes	S	
Radio continuum			G	LLL.ℓℓ±BB.b	S	C 21, C 50
Reflection Nebulae	NO COMPILATION AVAILABLE No cross-identifications or merged list of the main catalogues : see acronyms DG, RK, VDB, VDBH					
Supernovae remnants	1973VM 1976CC 1979ML 1980WP	Van den Bergh+ Clark+ Milne Weiler+ (plerions)	} No specific acronym			
						?

Nº 4		Auxiliary Tables				1.9		
Type of objects	Code number (see table III)	(First) Author	Acronym	Format	R1	Updating or Data Center		
<u>SURVEYS</u>								
Infrared	1982GE	Gezari+						
Optical	1982LA	Lauberts	ESO	HHMSS±DDMM.m				
			A, CTIO, CW	Parkes		S		
			KP			S		
			PG, PS			S		
			RG, RSO			S		
			UKS			S		
			etc.					
Radio continuum			G	LLL.ℓ±BB.b	S	C 21, C 50		
Variable radio sources	1981G1	Gregory+	GT	Parkes	S			
X-ray sources	1982AM	Amnuel+ see part IV		Parkes	S	C 38, C 70		
γ-ray sources		see part IV		LLL.ℓ±BB.b	S	C 38, C 70		

NOTES TO TABLE I.3 : DATA CENTERS

(Title, Affiliation, Director, Address)

The informations are mostly from C. Jaschek, CODATA Bull. 36, January 1980 p. 13-44. Codata Directory of Data Source for Sciences and Technology, Chapt. 3 (Astronomy), section C.

General centers are C3 (Japan), C16 (Strasbourg), C43 (NASA), the Data Centers of Moscou and Potsdam. We quote also all the specialized centers having a concern with new discovery lists and Nomenclature.

Central Institute for Astrophysics Sternwarte Babelsberg, Rosa Luxemburg Strasse 17a .1502 Potsdam - Babelsberg, German Democratic Republic	C4 Bibliographical Star Index Observatoire de Paris (France) F. SPITE .Observatoire de Meudon 92195 Meudon Principal Cedex, France
Data Center Astron. Council of the USSR, Acad. Sci. O.B. DLUZHNEVSKAYA .109017, MOSCOW 17, Pyatnitskaya 48, U.S.S.R.	C11 Catalogues complémentaires des binaires spectroscopiques Observatoire du Pic-du-Midi et de Toulouse (France) A. PEDOUSSAUT .Observatoire de Toulouse, 1 Av. C. Flammarion, 31500 Toulouse, France
CEDAG Centre de Données sur les Amas de Galaxies Observatoire de Paris - Meudon L. NOTTALE .92195 Meudon Principal Cedex, France	C12 Catalogue of open clusters Measurements Center at Lund Observatory G. LYNGBÅ .Lund Observatory, Box 1107 S-221 04 Lund, Sweden
C3 Kanazawa Data Center (Astronomical Data Service) Computer Center, Kanazawa Institute of Technology Y. TERASHITA .P.O. Kanazawa-South, Ishikawa 921, Japan	C16 Centre de Données Stellaires Observatoire de Strasbourg C. JASCHEK .11, rue de l'Université, 67000 Strasbourg, France

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|--|--|
| <p>C17 Centre d'étoiles doubles de l'Observatoire de Nice
Observatoire de Nice (France)
P. COUTEAU
.Observatoire de Nice, B.P. 252,
06007 Nice Cedex, France</p> <p>C18 Centro de Dados de Estrelas Duplas
Observatorio Nacional
Rio de Janeiro (Brazil)
R.R. de FREITAS MOURAO
.Rua General Bruce, 586 - São Cristóvão,
20.000 Rio de Janeiro, Brazil</p> <p>C21 Continuum Astronomical Data Files
Parkes Radio Astronomy Observatory
Epping (Australia)
J.G. BOLTON, R.F. HAYNES, R.N. MANCHESTER
.CSIRO Division of Radiophysics, P.O. Box 76,
Epping NSW 2121, Australia</p> <p>C22 Data Center for Astrometric Catalogs
Astronomisches Rechen-Institut Heidelberg
T. LEDERLE
.Mönchhofstrasse 12-14, 6900 Heidelberg 1
Federal Republic of Germany</p> <p>C23 Data on Globular Star Clusters
Sternberg State Astron. Inst. of Moscow University
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.117234, Moscow 234, Universitetskij prosp. 13,
Sternberg State Astron. Institute, U.S.S.R.</p> <p>C24 (Data on Open Clusters)
Department of Astrophysics
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Dept. Astron. Mécán. Céleste, Obs. Roy. de Belgique
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Astrometry and Astrophysics Division,
U.S. Naval Observatory
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|--|--|

C43 National Space Science Data Center
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C50 Radio Observatory
Ohio State University
R.S. DIXON
.2015 Neil Avenue, Columbus, Ohio 43210, U.S.A.

C45 (Orbital Elements of Spectroscopic Binaries)
Dominion Astrophys. Obs.,
Herzberg Inst. of Astrophysics
A.H. BATTEN
.5071 W. Saanich Road, Victoria,
B.C., V8X 3X3, Canada

C52 Stellar Radial Velocities
Observatoire de Marseille
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C46 Observational Data on Pulsars
Cornell Univ. Nat. Astron. and Ionosphere Center
Y. TERZAN
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C70 (X-ray Observations)
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PART II

DICTIONARY OF ACRONYMS

This list of acronyms cannot aim at being complete. As an example most of the discovery lists of double stars are omitted. For instance

β (Burnham), ..h, H (John F.W. Herschel), O Σ (O. Struve), in ref. 1960B1 (BDS) Burnham Part II, p.iii-viii
Ald for Alden, .. CPO for Cape Observatory... in ref.1963JV (IDS, Part 1, table I, p.XVII).

The names of catalogues are not included in this table, the reader should refer to the Catalogues of catalogues quoted in the introduction. For instance the name RNGC (a revision of the NGC catalogue) is not quoted here because it does not introduce a new designation.

In this table, the correspondances between synonyms are not systematically indicated ; they can be found in Table III, or in the compilations quoted in Table I.3, if no coded reference is given.

EXPLANATION FOR THE COLUMNS OF TABLE II

Col. 1 Acronyms, in alphabetical order.

Due to the peculiar nature of the material being classified, it was necessary to adopt the following set of rules for ordering the acronyms. Arabic or roman numerals before an acronym or just behind it have the same function as a serial number. Thus numerals were ordered before letters. Following usual practice, we also ignored any separators (including blanks) and did not differentiate between small and capital letters.

Fictitious examples are :

1S, 1SA, ...1SZ, 2S..., S, S1, S1A, ..., S2, S A, S.A, SA ...;

Gr, GR, GrB, GS ...

When synonyms exist, we select one where full information is given. For the others, in column 8, instead of giving the (first) author, we refer to the selected acronym by :

- identical to (no marked preference)

- use (the selected acronym is to be chosen).

Col. 2 Qualification of the acronym (does not qualify the content of the catalogue).

A might be considered as defined once and for all.

R Specific of a large compilation :

Ex. : Batten, ref. 1978BF

S Systematic designation, that is unlimited in number :

Ex. : PK ref. 1967PK

G format LLL.&& ±BB.bb, for galactic radio continuum sources or molecular clouds.

C Acronym defined in one of the compilations of Table I.3 and there cross-identified with a designation qualified R or S. The relevant compilation is quoted in Col. 8.

In contrast, the other qualifications mean that the acronym should imperatively be defined and supplemented by at least another name (or coordinates) :

D Discovery lists (often small lists) mostly those not yet included in a large compilation.

E Should absolutely be explained. Several identical acronyms for designating different objects.

Ex. : W and all single letter acronyms.

O Old or obsolete (as a rule, no coded reference is given).

P We will quote the proposal of CDS (Data Center C16) or ours in a subsequent publication

- For acronyms having too many synonyms :

Ex. : PLX=Yale=YCTSP etc ...

- Or authors or observatories liable to a number of different abbreviations :

Ex. : MK=MKR=Mark=Markarjan, etc ...

- Or the same author (or observatory) producing many different lists :

Ex. : Ton (Tonantzintla), Sanduleak.

Z To be avoided absolutely.

Col. 3 Format (see Table I.1).

Col. 4 Number of objects included in the catalogue(s).

This number may differ from the number of the last object (because of subdivisions, or missing numbers etc...).

Details on the numbering can be found in the remarks at the end of the table, or in Table III.

Col. 5 Type of object (see table I.2).

Col. 6 Refers to a remark at the end of table II.

Col. 7	Coded reference, referring to table III. The bibliography, given in table III, is ordered by year (in case of an acronym defined in a series, the year of first appearance of the acronym is coded, see for instance LKH, ref. 1954H1 A, 1954H1 B ... ; 1954H1 P is the 16th reference, issued in 1974). The complete reference is given as well as detailed remarks on the numbering or peculiarities and synonyms. As a rule there is no coded reference for acronyms collected in a compilation (ex. : PK Nomenclature) nor for acronyms qualified 0 (Obsolete) in col. 2.
Col. 8	First author, possibly a short comment - "See ... Nomencl." refers to the most usual of the compilations defined in Table I.3 : - C Nomencl. ref. 1979LY, see also 1970AR (2 ref.) for clusters discovered prior to 1973 - IDS Nomencl. ref. 1963JV - PK Nomencl. ref. 1967PK (8 ref.) - V* Nomencl. ref. 1969KP (3 ref.) - WD Nomencl. ref. 1977MS (2 ref.) - WR Nomencl. ref. 1981VH - "Identical to ..." or "use ..." refers to a synonymous acronym for which full information and a possible remark at the end of Table II are given. "Use" means that the acronym selected for full information is to be chosen.
Col. 9	Meaning of the acronym or its origin.

TABLE II - DICTIONARY OF ACRONYMS

Acronym	R1	Format	Number	Type of object	R2	Code number	Reference	Meaning
1ASE		HHMM±DD	16	(X)		-	See table IV.2	American Science and Engineering
2A	A	HHMM±DDd	105	(X)		-	See table IV.2	Ariel Satellite
2ASE		HHMM±DD	116	(X)		-	See table IV.2	American Science and Engineering
3A	A	HHMM±DDd	-	(X)		-	See table IV.2	Ariel Satellite
A = ADS	C	NNNNNA	17180	Double *		-	Use ADS; see IDS Nomencl.	Aitken
A		NNNN	-	Flare *		-	Use V * Nomencl.	Asiago
A=Abel=Abell	Z	NN	13	GCL		1955A1	Abell. These clusters are identical to Palomar 1-13	Author's initial
A=Abel=Abell	C,Z	NN	73	PN	R	-	Abell, 1955; see PK Nomencl. Obsolete	Author's initial
A=A'	C,E	NN	86	PN	R	-	Abell, 1966; see PK Nomencl.	Author's initial
A	E	R or R(a) or R.N	-	HVC		1968H1	Hulsbosch; 2 ref. (1968, 1973). See also ref.1975H1	Cloud Complex labelled A
A=Ariel		HHMM±DD	-	(X)		-	See table IV.2	Ariel Satellite
A	E	HHMM±DDd	-	G		-	Often used, for instance by de Vaucouleurs, ref. 1976D3	Anonymous galaxy
A=Abell=ABGC	E	NNNN	2712	Cluster of G		1958A1	Abell	Author's initial
A'		NN	86	PN		-	Identical to A (Abell 1966, PN)	
A1-		NNN	129	Blue OBJ.		1968B1	Barbieri+; 2 ref. (1968, 1982)	Asiago field 1
A2-		NNNa	487	Blue OBJ.		1972B1	Barbieri+	Asiago field 2
AB		NNN	175	(UV)		1970B3	Braccisi+	A. Braccisi
Abel=Abell		-	-	-		-	Identical to A=Abell; consult the 3 different entries	Author's name
Abetti	C	NN	23	Double *		-	Use IDS Nomencl.	Discoverer's name
ABGC		NNNN	2712	Cluster of G		1958A1	Identical to A=Abell	Abell Galaxy Clusters
ABT=Abetti	Z,C	NN	23	Double *		-	Use IDS Nomencl.	Discoverer's name
AC	E	±DD NNNNA ±DD NNNN-NNN DD.NNNNN	-	*		-	Described by Eichhorn, 1974, ref.1974EC	Astrographic Catalogues
AC	E,C	NN	20	Double *		-	Use IDS Nomencl.	Alvan Clark
AC	E	R	1	HVC		1968H1 1975H1	Hulsbosch, 2 ref. (1968, 1973) Hulsbosch, 2 ref. (1975, 1980)	Anticentre Cloud Complex
A.D.=AD	A	YYYYa	-	SN		-	See V * Nomencl. Historical Supernovae	Anno Domini
ADS	C	NNNNNA	17180	Double *		1932A1	Aitken, see also IDS Nomencl.	Aitken double stars
AE		N	1	V * He-rich OBJ.		1975E1	Elvius, see also V * Nomencl.	A. Elvius

2.6		A. Fernandez, M.-C. Lortet, F. Spite						Nº 4	
Acronym	R1	Format	Number	Type of object	R2	Code number	Reference	Meaning	
AF	Z	NNNN	~3100	(IR)		1975W1	Identical to AFCRL	Air Force	
AFCRL	O	NNN-NNNN	2363	(IR)		1972W1	Walker+	Air Force Cambridge Research Lab.	
AFCRL		NNNN	~3200	(IR)		1975W1	Walker+ ; identical to CRL. Updated by AFGL	Air Force Cambridge Research Lab.	
AFCRL-UOA		NN	27	(IR)		1973L2	Identical to UOA	Air Force Cambridge Research Lab., Univ. of Arizona	
AFGL	R	NNNN	3500	(IR)		1976P1	Price+ ; 2 ref. (1976, 1977) Updates AFCRL	Air Force Geophysics Lab.	
AG		±DD NNN	180000	*		-	Identical to AGK	Astr. Gesellschaft Katalog	
AGC		NN	15	Double *		-	Use IDS Nomencl.	A.G. Clark	
AGK		-	-	*		-	Superseded by AGK3	Astr. Gesellschaft Katalog	
AGK2=AGK/2		-	-	*		-	Superseded bt AGK3	Astr. Gesellschaft Katalog	
AGK3=AGK/3	A	±DD NNNN	180000	*		1975H2	Heckmann+	Astr. Gesellschaft Katalog	
AGK3R		NNNNN	21499	*			See Eichhorn, ref.1974EC	AGK3 reference stars	
Agüero		NN	48	G		1971A1	Agüero	Author's name	
Aitken	A,C	NNNNNAA	17180	Double *		-	Use ADS	Discoverer's name	
Akn		NNN	591	G		1975A2	Identical to Arakeljan	Author's name	
Aℓ	C	-	1	PN		-	Allen, 1973 ; = PK 6-8°1 ; see PK Nomencl.	Author's name	
AL-		NNN	446	LMC EM**		1964A1	Andrews+	Author's initials	
Aℓ1-	C		1	PN		-	Identical to Aℓ		
Aℓ2-	C	A	19	PN		-	Allen, 1979; see PK Nomencl.	Author's name	
Ali	C	NNNN	1192	Double *		-	Use IDS Nomencl.	Author's name	
Alter	C	-	1	OCL		-	=King 14=C 0029+628	Author's name	
AM-		N	4	GCL		1979M1	Madore+ ; 2 ref. (1979, 1982)	Authors' initials	
An	E	-	4	OCL		1977P1	Identical to An Cℓ	Anonymous	
An=Anon=Anonym	E	-	-	-		-	Several types of objects	Anonymous	
Anon	Z	NN	85	* ring		1968I1B 1968I1C	Uranova Uranova, supplement to 1968I1A (SR acronym)	Anonymous	
AN	O,C	-	-	V *		-	Use V * Nomencl.	Astronomische Nachrichten	
An 1 XRS		HHMM±DD	-	(X)		-	See table IV.2. Identical to 1XRS	X-ray sources	
An 2 XRS	R	HHMM±DDd	-	(X)		1982AM	See table IV.2. Identical to 2XRS	X-ray sources	
An (Bok)		-	1	OCL		1977P2	Identical to Bok	Anonymous Bok	
An Cℓ		-	4	OCL	R	1978P3	Pfleiderer+ ; C Nomencl. given in the remark	Anonymous Cluster	
ANS		HHMM±DD	-	(X)		-	See table IV.2	Astronomical Netherland Satellite	
AO		NNN	253	*		1973G1	Identical to GAT	Astrometric orbit ?	
AO		HHMM±DD	35	(RAD)		1976H1	Hazard+, several ref. from 1967 to 1970	Arecibo Occultation	
AP	D,O	HHMM±DD	-	PSR		1976TDA	Obsolete ; use PSR	Arecibo Pulsar	
Ap1- to Ap5-	C		12+1+1 +1+1	PN		-	Apriamasvili+ (1962,1964) ; see PK Nomencl. ; Ap5-1 is not a PN	First author's name	
APG		NNN	338	Pec.G		1966A1	Identical to Arp, 1966	Atlas of Peculiar Galaxies	
APM		NNN	≥ 540	G	R	-	Arp + Madore ?	?	

Acronym	R1	Format	Number	Type of object	R2	Code number	Reference	Meaning
Apriamasvili	C	-	1	OCL		1964A2	Apriamasvili ; = C 1845-059 = Basel 1	Author's name
Arakelian		NNN	591	G		1975A2	Identical to Arakeljan	Author's name
Arakeljan = Arakelyan		NNN	591	G		1975A2	Arakeljan	Author's name
Ard	C	-	-	Double *		-	Use IDS Nomenc1.	?
ARDB		NNN	583	LMC *		1972A3	Identical to Ardeberg	First author's name
Ardeberg		NNN	583	LMC *		1972A3	Ardeberg+	First author's name
ARG	C,E	NN	99	Double *		-	Use IDS Nomenc1.	Argelander
ARG	E	a	8	(RAD)		1974G1	Gillespie	A.R. Gillespie
Ariel		HHMM±DD	-	(X)		-	See table IV.2	Ariel Satellite
ARMA		NNN	125	* in LMC		1977A3	Ardeberg+	Authors' names
ARO	C	NNN	557	PN		-	Higgs, 1971	Algonquin Radio Obs.
ARO		HHMM±DD	15	(RAD)		1972R1	Ross	Algonquin Radio Obs.
Arp=APG	E	NNN	338	G		1966A1	Arp	Author's name
ARP	E	N	2	GCL		1960A1	Arp+ ; see C Nomenc1.	First author's name
As	E,C	-	-	V *		-	Use V * Nomenc1.	Asiago Flare stars
AS		NNN	521	EM*	R	1950M1	Merrill+ ; 2 ref. (1950, 1951) ; continues MWC	Additional stars
ASB		NN	79	(RAD)		1964B2	Bennett	A.S. Bennett
ASh		NN	10	Blue OBJ.		1958A2	Ambartsumian+	Authors' initials
Ass-	C	NN.N	89	ASS.		1970AR	Alter+ ; 2 ref. (1970,1981)	Associations
ASV		FFFF-NNN or (V * name)- NNNN	-	*		1899H1	Hagen+ ; several fields ; several years ; 1899 : first series. Comparison stars for Variable Stars	Atlas Stellarum Variabilium
Av		N	4	OCL+EM.Region		1972A2	Antalova	Author's name
Av-Hunter	C	N	1	OCL		-	= C 2334+481, see also ref.1970AR	Authors' name
Aveni-Hunter	C	N	1	OCL		-	Identical to Av-Hunter	Authors' names
AWM		N	7	Cluster of G		1977A2	Albert+	Authors' initials
AZO		NNa	524	SMC *		1982AZ	Identical to AzV	Author's name
AzV		NNNa	524	SMC *		1975A1 1982AZ	Azzopardi+ ; several ref. from 1975 to 1981	Authors' names
AZVI		NNNa	524	SMC *		1975A1	Identical to AzV	Authors' names
/								
B=Boss	Z	NNNN	33342	*		-	Use GC	Boss
B	Z	NNN	978	SB		1978BF	Use Batten	First author's initial
B	Z	-	-	OCL		-	Identical to Bailey	Author's initial
B	E	NNN	370	DCLD		1927B1	Barnard	Author's initial
B	E	R		HVC		1968H1 1975H1	Hulsbosch, 2 ref.(1968,1973) Hulsbosch, 2 ref.(1975,1980)	Cloud Complex labelled B
B	E	NNN	175	(UV)		1970B3	Identical to AB ; it would be better to use Braccesi	First author's initial
B=BBB	E	NNN	377	SMC *		1967B1	Basinski+	First author's initial
B1	E	A	11	(RAD)		1954B1	Bolton+	First author's initial, 1st list
B1,B1S	E	HHMM±DDA	654+38	(RAD)		1965B1	Braccesi+ ; table I, table II	First Bologna Catalogue
B2	E	NNN	104	(RAD)		1954B2	Bolton+	First author's initial ; 2nd list

Acronym	R1	Format	Number	Type of object	R2	Code number	Reference	Meaning
B2	E	HHMM±DDA	9923	(RAD)		1970C1	Colla+; several ref. from 1970 to 1974, hereafter named B2.1 to B2.4 in order to differentiate between the four parts of the catalogue	Second Bologna Survey
B2.1		HHMM±DDA	3235	(RAD)		1970C1A	Colla+	Second Bologna Survey, part 1
B2.2		HHMM±DDA	3313	(RAD)		1970C1B	Colla+	id., part 2
B2.3		HHMM±DDA	3227	(RAD)		1970C1C	Colla+	id., part 3
B2.4		HHMM±DDA	448	(RAD)		1970C1D	Fanti+	id., part 4
Ba	E	NN.N	(20)	OCL		-	Identical to Basel	-
Ba	O,C	N	1	PN		-	Baade, 1935; = PK 171-25°1; see PK Nomencl.	Author's name
Baade-Swope		NNN	203	EXGL V *		1961B1	Baade+	Authors' names
BAC	Z	NNN before acronym	-	*		-	See Eichhorn ref.1974EC Use a more correct designation	Bordeaux Astrographic Catalogue
Badalian=Badaljan	C	NN	31	V * in OCL		-	Badaljan+, 1972; cross-identified with SVS number. Use V * Nomencl.	First author's name
Bailey	C		?	OCL		-	Bailey; see C Nomencl. ?	Author's name
Barkhatova	C	N	2	OCL		1958B1	Barkhatova; see C Nomencl.	Author's name
Barnard		NNN	370	DCLD		1927B1	Barnard	Author's name
Basel	C	NN.N	20	OCL	R	1971B1	Becker+; see C Nomencl.	Astr. Institute
BASV		NNN	203	EXGL V *		1961B1	Identical to Baade-Swope	Baade-Swope Variables
Batten	R	NNN	978	SB		1978BF	Batten+	First author's name
Bax	C	-	-	V *		-	Use V * Nomencl.	Baxendell
B & B	Z	NN	21	G		1970B2	Bahcall+	Authors' initials
BBB	E	NNN	377	SMC *		1967B1	Basinski+	Authors' initials
BBW		LLLBB	41	H II		1955B2	Bok+	Authors' initials
BC		NN	≥ 98	Carbon *		1977A1	Alksnis+; 2 ref.(1977,1978)	Baldone Carbon *
BD	A	±DD NNNNN	324188	*		1886A1	Schönfeld, revision of Argelander's first edition	Bonner Durchmusterung
BDA,BDB		NN	10+24	(RAD)		1968B4	Blum+	Authors' initials and field A or B
BDN-		NN	30	BDN		unpubl.	FitzGerald M.P., 1980 See also Thumbprint Nebula =BDN=BDN1, in part VI	Bright dark nebulae
BDS	E,C	NNNNN	13665	Double *		1960B1	Burnham. Use IDS Nomencl.	Burnham's Double Star Catalogue
BDS	E,C	-	1	PN		-	Blaauw+, 1975; =PK 293+10°1; see PK Nomencl.	Authors' initials
Be	E,C	NNN	104?	OCL		-	Identical to Berkeley	Berkeley Univ.
Be	E	NNN	160	H II and RFN		1977B1	Identical to Bernes	Author's name
BE-	E	NNN	625	EXGL EM**		1974B1	Bohannan+	Authors' initials
BEN		NN	79	(RAD)		1963B1	Bennett	Author's name
Ber		NNN	160	H II and RFN		1977B1	Identical to Bernes	Author's name
Bernacca		NNNN	3075	*		1970B1	Bernacca+; ref. from 1970 to 1973	First author's name
Berkeley	C	NNN	104?	OCL	R	-	See C Nomencl.	Berkeley Univ.
Bernes		NNN	160	H II and RFN		1977B1	Bernes	Author's name
BFS		NN	65	H II and RFN		1982B1	Blitz+	Authors' initials
BG		HHMM±DDA or HHMMDDA or HHMMDDd or HHMMDDNN	586	(RAD)		1974F1	Fanti+; 2 ref. (1974,1981) See BGE for extended sources	Bologna Galactic
BGC	C	NNNNN	13665	Double *		1906B1	Identical to BDS. Use IDS Nomencl.	Burnham General Catalogue

Acronym	R1	Format	Number	Type of object	R2	Code number	Reference	Meaning
BGE		HHMM±DDA	77	(RAD)		1977F2	Felli+	Bologna Galactic Extended (sources)
BHJ		NN	83	ASS. *		1959B1	Blaauw+	Authors' initials
Bi		NNN or NN-NNN	1540	EM.*		1954B3	Bidelman (15 tables each beginning by No. 1)	Author's name
BIRS		NNN	137	(IR)		1980E1	Elmegreen	Bright Infrared Stars
Biur	C	NN	13	OCL		-	Identical to Biurakan	Biurakan
Biurakan	C	NN	13	OCL		-	See C Nomencl.	Biurakan
Bjurakan	C	NN	13	OCL		-	Identical to Biurakan	Biurakan
Bℓ	E	NN	25	EM.*		1961B2	Blanco, table I	Author's name
Bℓ	E,C	A	16	PN		1961B2	Blanco, table II; see PK Nomencl.; BℓJ=BℓK	Author's name
Bℓ2-	C	N	1	PN		-	Blanco, 1964. Private communication; PK 104+0°1	Author's name
Bℓ3-	C	NN	14	PN	R	-	Wehinger+, 1964. Private communication. See PK Nomencl.	Author's name
Blanco	E	NNNN	20705	*		1968B3	Identical to USN	Author's name
Blanco	E	NN	11	EM.OBJ.		1962B2	Blanco	Author's name
Blanco	E,C	N	1	OCL		1949B1	Blanco; = C 0001-302	Author's name
BℓDz	E,C	N	1	PN		-	Identical to BDS 1 = PK 293+10°1	Authors' names
BℓFg		NN	26	EM.*		1964B1	Blanco+	Authors' names
BM		NNN	542	*		1955B1	Blanco+; 7 tables	Authors' initials
BN	A	-	1	(IR)		1967B5	Becklin+, see 1973R2	Authors' initials
BNKL	A	-	1	(IR)		-	Infrared sources in Orion Nebula ; consists of BN (Point Source) and KL (extended source)	Discoverers' initials
Bo	C	NN	15	OCL		-	Identical to Bochum	Bochum Astr. Inst.
BoBn	C	N	1	PN		-	Boeshaar+, 1977; =PK 108-76°1; see PK Nomencl.	Authors' names
Bochum	C	NN	15	OCL		1975M1	Moffat+, several ref. from 1975 to 1976 ; see C Nomencl.	Bochum Astr. Inst.
Bok	C	-	1	OCL		1977P2	Philip ; see C Nomencl.	Discoverer's name
Boss		NNNN	33342	*		1937B1	Use GC	Author's name
BP		NNN	198	(RAD)		1968B2	Bailey+	Authors' initials
BPM		NNNN	98218	PM *		1963L3	Luyten	Bruce Proper Motion Survey
Br	E	-	-	*		-	Identical to Brodskaja (2 entries)	Author's name
Br=BR	E	FFF-NNNN	44926	*		1957B1	Identical to Brun	Author's name
BRABCMS-	C	N	7	PN		-	Van den Bergh+, table 1 ; see PK Nomencl.	Authors' initials
Braes		NNNN	1113	*		1967B3	Braes	Author's name
BRAID		NNN	474	Cluster of G		1978B2	Braid+	First author's name
Breys		NNN	100	WR in LMC		1981BR	Identical to Breysacher	Author's name
Breysacher	R	NNN	100	WR in LMC		1981BR	Breysacher	Author's name
Brodskaja	E	NNN	400	OB *		1953B1	Brodskaja	Author's name
Brodskaja	E	NNNN	5752	*		1955B3	Brodskaja	Author's name
Brüggemann		NNN	190	Cluster *		1935B1	Brüggemann ; 1935,1937	Author's name
Brun		FFF-NNNN	44926	*		1957B1	Brun	Author's name
Bs	E	NNN	160	H II and RFN		1977B1	Identical to Bernes	Author's name

Acronym	R1	Format	Number	Type of object	R2	Code number	Reference	Meaning
BS		NNNN	9110	*		1964HF } 1982HJ }	Hoffleit; 2 ref.(1964,1979) Hoffleit+, 1982	Bright Star Catalogue
BSC	Z	NNNN	9110	*		1964HF } 1982HJ }	Use BS or HR	Bright Star Catalogue
BSD		FFF-NNNN	173599	*		1935S1	Schwassmann+; several ref. from 1935 on	Bergedorfer Spektral Durchmusterung
BS0	E	NN	31	BS0		1965S1	Sandage+	Blue Stellar Objects
BS0	E	N	2	BS0		1979A1	Arp+	Blue Stellar Objects
BSp		FFF-NNNN	173599	*		1935S1	Use BSD	Bergedorfer Spektral
BSS		HHMM±DDd	7	QSO		1980M1	Markarian+	Biurakan Second Survey
Buc		NNN	212	V *		-	Use V * Nomencl.	Bucarest
BV	O,C	NNNN	1641	V *		-	Use V * Nomencl.	Bamberg Variables
BV	C	N	3	PN		1956B1	Böhm-Vitense, table V ; see PK Nomencl.	Author's name
BV	O	NN	21+23	G		1956B1	Böhm-Vitense, tables I to IV	Author's name
1C	A	NN.NN	50	(RAD)		1950R1	Ryle+	First Cambridge Catalogue of Radio sources
1CG		LLL±BB	13	(Gamma)		-	See table IV.1	First Cos B Catalogue
2C.	A	NNNN	1936	(RAD)		1955S1	Shakeshaft+	Second Cambridge Catalogue
2CG	A	LLL±BB	25	(Gamma)		-	See table IV.1	Second Cos B Catalogue
3C	A	NNN	471	(RAD)		1959E1	Edge+	Third Cambridge Catalogue
3CR=3C (revised)		NNN.N	328	(RAD)		1962B1	Bennett	3C Revised
4C	A						See 4C1 and 4C2	
4C1 or 4C		4CDD.NN or 4C-DD.NN or 4C DD.NN	1219	(RAD)		1965P2	Pilkinton+	Fourth Cambridge Catalogue
4C2 or 4C		4C-DD.NN or 4C DD.NN	3624	(RAD)		1967G1	Gower+	Fourth Cambridge Catalogue
4CP		-	1551	(RAD)		1966C1	Caswell	?
4CT=4C(T)		DD.NN.N	726	(RAD)		1969C1	Caswell+; table II	?
5C1.		NNN	106	(RAD)		1966K2	Kenderdine+	Fifth Cambridge Catalogue
5C2.		NNNa	207	(RAD)		1968P2	Pooley+	id.
5C3.		NNN	213	(RAD)		1969P1	Pooley+	id.
5C4.		NNN	189	(RAD)		1970W1	Willson	id.
5C5.		NNNa	250	(RAD)		1975P1	Pearson	id.
5C6.,5C7.		NNN	656	(RAD)		1978P2	Pearson+	id.
5C9.		NNN	214	(RAD)		1977W1	Waggett	id.
5C10.		NNNa	313	(RAD)		1981S1	Schuch	id.
5C12.		NNNa	364	(RAD)		1982B2	Benn+	id.
5C8.,5C11., 5C13. to 5C17.				(RAD)		-	Still unpublished (see 1982B2, recapitulation)	id.
5C1. to 5C17.				(RAD)		1982B2	Benn+. Recapitulation	id.
C=Case	E	NNN	693	Carbon *		1954N1	Use Case	Case Observatory
C=Ci 18	E	NNNN	3164	PM *		1918P2	Identical to Ci 18	Cincinnati
C	Z,C	N	3	WD		1960S1	Stephenson; 2 ref.(1960, 1962). Use WD Nomencl.	Case Observatory

Acronym	R1	Format	Number	Type of object	R2	Code number	Reference	Meaning
C=Cox	E	NNNA	116	Cluster *		1955C1	Cox	Author's initial
C	S	HHMM±DDd	-	OCL		1979LY	Lynga ^a , systematic designation; 2 ref.(1979,1982)	Cluster
C	Z	NNN	286	H II		1955G1	Identical to GS	?
C	E	R or RA	-	HVC		1968H1	Hulsbosch; 2 ref.(1968, 1973)	Cloud Complex labelled C
						1975H1	Hulsbosch; 2 ref.(1975, 1980)	
C	E	NN	72	LMC *		1972A3	Ardeberg+; 2 ref.(1972, 1973)	Complementary
CA	E	N	2	(IR)		1976W1	Identical to Calar Alto	Calar Alto
CA	E	HHMM±DDd	6	Cluster of G		1975M2	Melnick+	Calan
CALAN		FFF-NNN	186	G + Cluster of G		1974S1	Identical to SER	Calan
Calar Alto		N	2	(IR)		1976W1	Weinberger+	Calar Alto
CaPa-	C	N	1	PN		-	Caloi+, 1974; see PK Nomencl.;=PK 65-27°2	Authors' names
Case=CASE	E	NNN	693	Carbon *		1954N1	Nassau+; 2 ref.(1954,1957)	Case
CB	O	NNN	476	A *		1959B2	Bertaud	Author's initials
CBS		NN	28	Blue *	R	-	Pesch+, 1983, table 3	Case blue star
CC=Ci 20	E	NNNN	1474	*		1930P1	Identical to Ci 20	Cincinnati
CCS		NNNN	3219	Carbon *		1973S3	Stephenson	Cool Carbon Stars
Cd	E,Z	NNN	763	Cluster *		1971C2	Cudworth	Author's name
CD	A	±DD NNNNN	~515000	*		1892T1	Thome; several ref. from 1892 to 1932	Cordoba Durchmusterung
CDM	Z	±DDNNNNN	-	*		1892T1	Use CD	Cordoba Durchmusterung
CDN		-	1	BDN		1974F3	FitzGerald	Comparison Dark Nebula
CED		NNN	215	H II and RFN		1946C1	Cederblad	Author's name
Cederblad		NNN	215	H II and RFN		1946C1	Identical to CED	Author's name
CeGi-	C	NN	33	PN		1973C1	Cesco+, 1973, table 2; see PK Nomencl. See also Y-C	Authors' names
CEL			5068	UV OBJ.		1973D3	Davis+	Telescope Catalog
CF	O,Z	NNNN	20554	*		1939S2	Spencer+	Catalogue of Faint Stars
CG	Z	NN	18+33	Red * + PN		1973C1	Identical to Y-C. Identical to CeGi for 33 PN	Authors' initials
CG	E	NNA	16	RFN	R	1976H1	Hawarden+; 2 ref. in 1976 subsequently continued	Cometary Globules
CG=1CG	E	LLL±BB	13	(Gamma)		-	See table IV.1	Cos B Gamma
CG	E,S	HHMM±DD	2	Compact G	R	1975A3	Arp+	Compact Galaxy
CG		NN	71	G	R	-	Pesch+, 1983; table 1	Case galaxy
CgHα		NN	81	EM. *		1976M1	McCarthy	Castel Gandolfo Hα
CGO		NNN	664	O *		1974C2	Cruz-Gonzalez+	Cruz Gonzales O stars
Chavira		NNN	419	Blue * near SGP		1958C1	Identical to Ton S; use Ton S	Author's name
Ci 18=Cin 18		NNNN	3164	PM *		1918P2	Porter+	Cincinnati Obs. Publ. no. 18
Ci 20=Cin 20		NNNN	1474	PM *		1930P1	Porter+	Cincinnati Obs. Publ. no. 20
CIT		NN	14	*		1966U1	Ulrich+	California Inst. of Technology
Cλ	E	HHMM±DDMM	-	Cluster of G		1956H1	Use HMS	Cluster
CL	E	N	7	(RAD)		1973K2	Keen+	Cygnus Loop

Acronym	R1	Format	Number	Type of object	R2	Code number	Reference	Meaning
CL	E	HHMM±DD	590	(RAD)		1975V3	Viner+	Clark Lake
Cloud	E	NA	5	CLD		1968H2	Heiles	Type of object
Cloud	E	A	7	CLD		1969V1	Verschuur	id.
Cloud	E	NN	15	CLD		1972S1	Scoville+	id.
Cloud	E	NN	14	CLD		1973H2	Heiles	id.
Cn1-	C	N	6	PN		-	Cannon, 1921; see PK Nomencl.	Author's name
Cn2-	C	N	1	PN		-	Cannon, 1923; = PK 356-4°1 see PK Nomencl.	Author's name
Cn3-	C	N	1	PN		-	Cannon, 1926; = PK 38+12°1 see PK Nomencl.	Author's name
CnMy	C	NN	1	PN	R	-	Cannon+, 1938; CnMy17 = PK 1-6°1; see PK Nomencl.	Authors' names
CO	S	LLL.l±BB.b	-	MCLD		-	Systematic designation	CO Molecular Cloud
COD=CoD		±DD NNNNN	-	*		1892T1	Use CD	Cordoba Durchmusterung
Collinder	C	NNN	471	OCL		1931C1	Collinder; see C Nomencl.	Author's name
Coo=CoO	O,C	NNN	-	Double *		-	Supersedes Cor; obsolete; use IDS Nomencl.	Cordoba Observatory
Cor	O,C	NNN	-	Double *		-	Obsolete; use IDS Nomencl.	Cordoba
Cornell	O	N	2	(Gamma)		-	See table IV.1	Cornell Univ.
COU	C	NNNN	1850	Double *		-	Identical to Couteau; use IDS Nomencl.	Author's name
COU	O	-	104	H II		1951C1	Courtes	Author's name
Couteau	C	NNNN	~2000	Double *		-	Use IDS Nomencl.	Author's name
Cox		NNNA	116	Cluster *		1955C1	Cox	Author's name
CP		-DD NNNNN	-	*		1896G1	Use CPD	Cape Photographic
CP	D,O	HHMM±DD		PSR		1976TDA	Superseded by PSR	Cambridge Pulsar
CPD	A	-DD NNNNN	454875	*		1896G1	Gill+; several ref. from 1896 to 1903	Cape Photographic Durchmusterung
CPG		NNN	603	Pairs of G		1972K2	Identical to Karachentsev	Catalogue of Pairs of Galaxies
Cr=CR	E	NNN	471	OCL		1931C1	Identical to Collinder	Author's name
CR	E	-	562	(RAD)		1966C2	Crowther	Author's name
CR	E	NN	47	G		1971C1	Chincarini+	Authors' initials
CRI		NNN	130	(RAD)		1969A1	Andrievski+	Crimee?
CRL		NNNN	3100	(IR)	R	1975W1	Walker+; see also AFGL ref. 1976P1	Cambridge Research Lab.
C-S		NN	21	* near HH		1980C2	Cohen+	Authors' initials
CSO		NN	59	Blue OBJ.	R	-	Pesch+, 1983, table 2	Case blue object
CSV	A	NNNNNN	9877 + 3137	Susp. V *		1951KP	Kukarkin+; 2 ref.(1951, 1965) updated and superseded by NSV	Catalogue of stars suspected of variability
CT		NN	27	G		1973T1	Tifft+	Coma Tifft?
CTA		NNN	106	(RAD)		1960H1	Harris+	Caltech A list
CTB		NNN	110	(RAD)		1960W1	Wilson+	Caltech B list
CTC	O	-	-	(RAD)		-	Private list, obsolete	Caltech C list
CTD		NNN	143	(RAD)		1965K1	Kellermann	Caltech D list
CTIO	C	HHMM-DD	1	PN		-	Smith+, 1976; = PK 298+34°1 see PK Nomencl.	Cerro Tololo Inter-american Obs.
CUL		HHMM±DD	2068	(RAD)		1973S1	Sleet+; several ref. from 1973 to 1977	Culgoora
CV	O,C	-	-	V *		-	Use V * Nomencl.	Cordoba Variables
CW	S?	HHMM±DDd	-	(OPT)		1982S1	Shore	Case Western Reserve University

Acronym	R1	Format	Number	Type of object	R2	Code number	Reference	Meaning
CWRU	.O	N	1	(Gamma)		-	See table IV.1	Case Western Reserve University
Czernic=Czernik		NN	45	OCL		1966C3	Czernik; see C Nomencl.	Author's name
D	E	NN	12	(RAD)		1959D2	Drake	Author's initial
D	E	NNN	149	(RAD)		1965D1	Identical to DGVW	First Author's initial
DA		NNN	615	(RAD)		1968G2	Galt+	Dominion list A
DB		NNN	124	(RAD)		1968B5	Bridle+	Dominion list B
DC	E	NNNNN	44076	Faint red *		1947L1	See D0	Dearborn Catalogue
DC	E	LLL-N	46	H II		1971D2	Dottori+	Authors' initials
DC	E	N	3	G		1976R1	Richter+	Double compact
Dd	C	N	1	PN		-	= PK 78+5°1; identical to Do	Author's name
DdDm	C	N	1	PN		-	= PK 61+41°1; identical to DoDz	Authors' names
DDO		NNN	243	Dwarf G		1959V1	Van den Bergh; 2 ref. (1959,1966)	David Dunlap Obs.
DeHt	C	N	5	PN		-	Identical to DHW; see PK Nomencl.	Authors' names
Dejc		-	1	GCL		1963D1	Dejc=Deutsch	Author's name
DELALANDE		NNNNN	47390	*		1847B1	Use LALANDE	Author's name
DEM L		NNN	329	LMC H II		1976D1	Davies+; table II; should be DEM LMC	Authors' initials
DEM S		NNN	167	SMC H II		1976D1	Davies+; table III; should be DEM SMC	Authors' initials
Deutsch		-	1	GCL		1963D1	Identical to Dejc	Author's name
DEV G		NN	54	Group of G		1975D1	De Vaucouleurs	De Vaucouleurs Group
DG-		NNN	192	RFN		1963V1	Von Dorschner+	Authors' initials
DGVW		NNN	149	(RAD)		1965D1	Davis+	Authors' initials
DHW		N	5	PN		-	Dengel+, 1980: see PK Nomencl.	Authors' initials
DM		±DD NNNNN	900000	*	R	-	Durchmusterung Nomencl. (BD,CD or CPD) introduced in the HD Catalogue	Durchmusterung
Do	C	N	1	PN		-	Dolidze, 1971; = PK 78+5°1; see PK Nomencl.	Author's name
D0		NNNNN	44076	Faint red *		1947L1	Lee+; later DC	Dearborn Observatory
Do-Ar		NN	88	EM-* in ASS.		1959D1	Dolidze+	Authors' names
DoDz		-	1	PN		-	Dolidze+, 1966; = PK 61+41°1 see PK Nomencl.	Authors' names
Dolidze		NN	47	OCL		1961D1	Dolidze, 1961; see C Nomencl.	Author's name
Dolidze-Džim-šelejšvili		NN	11	OCL		1966D1	Dolidze+, 1966; see C Nomencl.	Authors' names
Don	C	NNNN	1031	Double *		1955R1	Rossiter. Use IDS Nomencl.	Discoverer's name: H.F. Donner
DOW		NNN	117	SNR		1971D3	Downes; see SNR	Author's name
Downes		NNN	117	SNR		1971D3	Identical to DOW	Author's name
DR	A	NN	27	(RAD)	R	1966D2	Downes+	Authors' initials
DRIL		NN	51	SGP *		1977D2	Drilling	Author's name
DU		NNN	527	H II		1976D2	Identical to DUBOUT	Author's name
DUB		NNN	527	H II		1976D2	Identical to DUBOUT	Author's name
DUBOUT		NNN	527	H II		1976D2	Dubout-Crillon	Author's name

Acronym	R1	Format	Number	Type of object	R2	Code number	Reference	Meaning
Dufay		-	1	GCL		-	= OHP1 = C 1727-299 = Anon (Dufay, Berthier, Morignat)	Author's name
DV		NN	54	Group of G		1975D1	Identical to DEV G	De Vaucouleurs
DW		HHMM±DD	188	(RAD)		1967D1	Davis	Dwingeloo
DWB		NNN	193	H II		1969D1	Dicke1+	Authors' initials
1E	A	HHMM.m±DDMM or HHMMSS±DDMM.m		(X)		-	See table IV.2	Einstein Obs.
E	E	NNNA	1568	M*+ Carbon *		1970N1	Identical to Edinburgh	Edinburgh Obs.
E		N	3	GCL		1976L1	Lauberts	ESO(B) plates?
E		N	-	Region		1962C1	Cousins+	Harvard E regions
Edinburgh		NNNA	1568	M*+ Carbon *		1970N1	Nandy; several ref. from 1970 to 1978	Edinburgh Obs.
EG		NNN	266	WD		1965E1	Eggen+; several ref. from 1965 to 1969; continued by GR numbers, ref.1970G1	Authors' initials
Eggen-Greenstein		NNN	266	WD		1965E1	Identical to EG	Authors' names
EGGR		NNN	558	WD		1965E1	Identical to EG for Nos 1-266	Eggen-Greenstein
						1970G1	Identical to GR for Nos 267-558	
EGM		NNNa or NNNA or NNNA	> 823	PM *		1976E1	Eggen	Eggen Motion ?
EIC		NNN	896	(IR)		1978S1	Sweeney+	Equatorial Infra-red Catalogue
Elias		NN	30	(IR)		1978E1	Elias	Author's name
Em		N	7 (3PN)	EM*+ PN		1961M1	McCuskey; Nos 1, 2, 5 are PN, see PK Nomencl.	Emission objects
ES		NNN	~ 120	Cluster *		1961E1	Eggen+	Authors' initials
ESO	C	FFF-TTT NN	18438	(OPT)	R	1974H1	Holmberg+; several ref. from 1974 to 1981. Superseded by ESO format HHMMSS±DDMM.m, ref.1982LA	European Southern Observatory
ESO	R	HHMMSS±DDMM.m	18438	(OPT)	R	1982LA	Lauberts	European Southern Observatory
Event		YY-N	24	Transient γ sources		-	See table IV.1	Type of object
F		NNN	124	*		1975A1B	Azzopardi+, table 2	Foreground stars before SMC
F	E	NNN	114	Blue *		1958F1	Identical to Feige	Author's initial
F=F-	E	NNN	360	G		1977F1	Identical to Fairall	Author's initial
Fairall		NNN	360	G		1977F1	Fairall; several ref. from 1977 to 1981	Author's name
FB		NNN	189	Blue *		1974G2	Greenstein+	Faint blue
FC		NNN	460	Central * of PN		1982AC	Acker+	Finding Chart
FD		NN	80	LMC WR *		1976F1	Fehrenbach+	Two first authors' initials
Feig=FEIG		NNN	114	Blue *		1958F1	Identical to Feige	Author's name
Feige=FEIGE		NNN	114	Blue *		1958F1	Feige	Author's name
Feinstein	C	-	1	OCL		1964F1	Feinstein. =C 1103-595, see C Nomencl.	Author's name
FF		NN	73	Cluster *		1974F2	Feinstein+	Authors' initials

Acronym	R1	Format	Number	Type of object	R2	Code number	Reference	Meaning
Fg	C	N	3	PN	R	-	Fleming, 2 lists; see PK Nomencl.	Author's name
FJ		HHMM±DD	175	(RAD)		1973F1	Finlay+	Authors' initials
FJM		N	6	(Far IR)		1972F1	Furniss+	Authors' initials
FK3		NNNN	1595	*		-	Identical to (and superseded by) FK4	Fundamental Katalog
FK/4		NNNN	1595	*		1963F1	Use FK4	id.
FK4		NNNN	1595	*		1963F1	Fricke+	id.
FM		NN	52	OCL *		1971F1	Feinstein+ (beginning of the table I)	Authors' initials
FMH=FM H		NN	17	OCL *		1971F1	Feinstein+ (end of the table I)	Authors' initials and H for Hogg cluster number 15
FR		NNN	120	Cluster of G		1966F1	Fomalont+	Authors' initials
FR0		HHMM±DD	175	(RAD)		1973F1	Identical to FJ	Fleurs Radio Obs.
Frolov	C	-	1	OCL		1977F3	Frolov; see C Nomencl.	Author's name
FXP		HHMM±DD	1	Flaring (X) PSR		-	See table IV.2	Flaring X-ray Pulsar
G	E	FFF-NNN	11923	PM *		1971G1	Identical to Giclas	Author's initial
G	Z	NNa	97	H II		1955G2	Use Gum	Author's initial
G	Z	HHMMSS±DDMM	19	(RAD)		1975R1	Ross	Goldstone Sources
G	S	LLL.ℓ±BB.b or two decimals	-	(RAD)		-	Systematic designation (radio continuum, molecular clouds, etc...)	Galactic
G	Z	NNN	1073	LMC *		1970F1	Fehrenbach+; several ref. from 1970 to 1981	Etoiles de Grande Vitesse
G	E	NN	54	Group of G		1975D1	Identical to DEV G	Group
GAT		NN	253	*		1973G1	Gatewood+; several ref. 1973 to 1980	First author's name
G....-B		FFF-BNNA	?	PM *		1971G1C	Giclas+	Giclas Blue
GB	E	YYMMDD	-	(Gamma)		-	See table IV.1	Gamma-Ray Burst
GB	E	HHMM±DD.d	1158	(RAD)		1971M1	Maslowski; 3 ref. in 1971 and 1972	Green Bank
GB	E	N	1	G		1967B4	Burbidge+	G. Burbidge
GB2		HHMM±DDd	2022	(RAD)		1978M1	Machalski	Green Bank Second Survey
GC		NNNNN	33342	*		1937B1	Boss	General Catalogue
GC	E	HHMM±DD	830	(RAD)		1971D1	Davis; 3 ref. in 1971 and 1972	Green Bank C
GCℓ-	C	NNN.N	137	GCL		1970AR	Alter+; 2 ref. (1970,1981)	Globular Clusters
GCℓ	C,S?	HHMM±DDd	-	GCL		-	Used by West and Bartaya, Astr. Astrophys. Suppl. 38, 69 for a globular cluster at 83±12 kpc (= C 0422-213)	Globular Clusters
GCX		LL±B	-	(X)		-	See table IV.2	X-Ray source near Galactic Center
GD-		NNNN	1712	Susp. WD, Blue *		1980G1	Giclas+	Giclas White Dwarf
GF		NNANa	23	GF		1979S1	Schneider+	Globular Filaments

Acronym	R1	Format	Number	Type of object	R2	Code number	Reference	Meaning
G-G		NNN	411	EM**		1954G1	Gonzalez+; 2 ref.(1954, 1956). Longitudes 103° to 180°	Authors' initials
G-G		NNN	212	EM**		1956G1	Gonzalez+; Longitudes 59° to 90°	Authors' initials
GGD		NN	37	Poss. HH		1978G2	Gyulbudaghian+	Authors' initials
GH		F-NNN	292	WD		1962G1	Use HG	Giclas Hyades
Giclas		FFF-NNN	11923	PM *		1971G1	Giclas+; several ref.	Author's name
Gingrich		NN	20	OCL		1922G1	Gingrich	Author's name
Giovaneili		NNN	799	HVC, IVC		1975H1B	Giovaneili	Author's name
GJ		NNNNA	~ 500	*		1969G1B	Gliese+; continues Gliese	Authors' initials
GL	E,C	-	-	WD		1969G1	See WD Nomencl. Use Gliese	Gliese
GL	E	NNNN	3500	(IR)		1976P1	Identical to AFGL. Use AFGL	Geophysics Lab.
Gliese		NNN or NNN A or NNN.N or NNN.NA	1529	*		1969G1	Gliese	Author's name
GM	E	NNN	275	EM. OBJ.		1976G1	Gomez+	Authors' initials
Gmb		NNNN	4243	*		1905D1	Identical to Groombridge	First observer's name
GN	E	NN	28	(RAD)		1965N2	Nicolson	G. Nicolson
GNO		NN	92	Group of G		1982H1	Huchra+	Group No.
Goy		NNN	971	O *		1980GY	Goy	Author's name
Gr	Z	±DD NNNNN	~ 300000	*			Use AC Nomencl., see Eichhorn ref.1974EC	Greenwich
Gr	Z	NNNN	4243	*		1905D1	Identical to Groombridge	First observer's name
Gr=GR	E	NNN	292	WD		1970G1	Greenstein; several ref. from 1970 to 1980; follows on from the EG numbers, begins with No. 267	Author's name
GR-	E	NNN	504	Red *		1980G1	Giclas+	Giclas Red
GR	E	NNN	172	V *		-	Use V * Nomencl.	G. Romano
GR	E	HHMM±DD	1009	(RAD)		1978B1	Braude+; 3 ref. from 1978 to 1981	Grakova Radio Astron. Obs.
GR=G.R.	Z	NN	66	G		1956R1	Reaves	G. Reaves
Graff		-	1	OCL		-	= IC 4756=C 1832+051; see C Nomencl.	Author's name
Graham		-	1	OCL		-	= C 1054-627; see C Nomencl.	Author's name
Grasdalen		-	1	OCL		1975V4	Vrba+. See C Nomencl.	Author's name
Grb		NNNN	4243	*		1905D1	Identical to Groombridge	First observer's name
GRB		YY-N	-	(Gamma)		-	See table IV.1. See also GB (Gamma-Ray Burst)	Gamma-Ray Burst
Groombridge		NNNN	4243	*		1905D1	Dyson+	First observer's name
GS	E	NNN	286	H II		1955G1	Gaze+	Authors' names
GS	E	LLL±BB±VV or LLL±BB±VVV	63	H I shell	R	1979H1	Heiles	Galactic Shell
GT	E,S	HHMM±DDd	-	Variable radio sources		1981G1	Gregory+	Authors' initials
Gum	A	NNa	97	H II	R	1955G2	Gum	Author's name
GV		NNN	328	(RAD)		1968G3	Grueff+	Authors' initials
GW	C	?	?	WD		-	See WD Nomencl.	Greenwich
GX	O	LLL±BB or LLL.ℓ	-	(X)		-	See table IV.2	Galactic X-ray

Acronym	R1	Format	Number	Type of object	R2	Code number	Reference	Meaning
Gyul'budagyan		NN	13	RFN		1982G1	Gyul'budagyan	Author's name
GY		-	-	(Gamma)		-	See table IV.1	Galactic γ -ray
H	E	NN	-	PN, Poss. PN		-	Identical to H1=-Haro2- or to H2=-Haro3-; see PK Nomencl.	Author's initial
H	E	NN	69(6PN)	bright N		1953H5	Identical to Hoffleit	Author's initial
H	E	NN	24	(RAD)		1954H2	Haddock+	First author's initial
H	E	NN	31	(RAD)		1966H1	Identical to HIG	Author's initial
H	E	HHMM $\pm$ DD	458	(RAD)		1967H2	Identical to NRAO	Author's initial
H	E	-	-	(X)		-	See table IV.2	HEAO-A1
H	E	HHMM $\pm$ DD	60+114	(X)		-	See table IV.2, 2 ref.	HEAO-A2
H1-	E,C	NN	67	PN		-	Haro, 1952, table 1; see PK Nomencl.	Author's initial
H2-	E,C	NN	48	Poss. PN	R	-	Haro, 1952, table 2; see PK Nomencl.	Author's initial
H3-	E,C	NN	2	PN		1953H4	Haro, 1953; see PK Nomencl. See also Haro 6-	Author's initial
H4-	E,C	N	1	PN		-	Haro, 1951; =PK 49+88°1	Author's initial
H20	S	LLL.x $\pm$ BB.b	-	Maser or MCLD	R	-	See 1979EN (stellar) and 1983BE (non stellar)	H ₂ O em. Source
Ha		NN or (N)	27	OCL		1957H1	Identical to Haffner	Author's name
HA		N	7	(RAD)		1972A4	Arp	H. Arp
Haffner	C	NN or (N)	26	OCL		1957H1	Haffner; see C Nomencl.	Author's name
Haro	E,P	NNN	255	EM. OBJ.		1953H2	Identical to Haro 4-	Author's name
Haro	E,P	NN	10+34	EM.G + blue G		1956H4	Haro	Author's name
Haro 1-	E	NN	17	EM**		1949H1	Haro	Author's name
Haro 2-	E	NN	67	PN		-	Haro, 1952, table 1. Identical to H1-	Author's name
Haro 3-	E	NN	48	Poss. PN		-	Haro, 1952, table 2. Identical to H2-	Author's name
Haro 4-	E	NNN	255	EM.OBJ.		1953H2	Haro	Author's name
Haro 5-	E	NN	98	EM**		1953H3	Haro+	First author's name
Haro 6-	E	NN	75 (2PN)	EM**		1953H4	Haro+; 2 PN are designated H3- and are compiled in PK Nomencl.	First author's name
Harvard	C	NN	47	OCL		-	See C Nomencl.	-
Haute Provence	C	N	-	GCL		-	Identical to OHP	-
Havlen-Moffat	C	-	1	OCL		1977H1	Havlen+; see C Nomencl.	Authors' names
Hb=HB	E	NN	12	PN		-	Identical to Hubble	Author's name
HB	E	NN	23	(RAD)		1953H1	Hanbury Brown+	Authors' initials
Hbg		NNNN	1660	OB *		1966K3	Identical to KS	Heidelberg objective prism survey
HBH	O	NN	23	(RAD)		1953H1	Use HB	Authors' initials
HBMR		NN	31	(RAD)		1964H1	Higgs+	Authors' initials
HBV	C	NNN	-	V *		-	Use V * Nomencl.; HBV 475 =V1329 Cyg is a M4+WN5 symbiotic *; see ref. 1981VH, p. 277	Hamburg-Bergedorf Variables

Acronym	R1	Format	Number	Type of object	R2	Code number	Reference	Meaning
HC		NN	45	(RAD)		1969H1	Holden+	Authors' initials
HD	A	NNNNNN	225300	*		1918C1	Cannon+	Henry Draper Catalogue
HDE	A	NNNNNN	~ 130000	*		1925C1	Cannon; 2 ref. (1925,1945) often named HD	Henry Draper Extension
He	E,C	?	?	WD		-	See WD Nomencl.	Hertzsprung
HE	Z	NNNN	1929	EM**	R	1976H2	Use He3-	Author's name
HE	Z	NNN	468	PN		-	Use He2-	Author's name
He1=He 1-	C	N	7	PN		-	Henize, 1961; see PK Nomencl.	Author's name
He2-=He 2-	C	NNN	468	PN		-	Henize, 1967; see PK Nomencl.	Author's name
He3-=He 3-		NNNN	1929	EM**	R	1976H2	Henize	Author's name
HEN	Z	NNNN	1929	EM**		1976H2	Use He3-	Author's name
HEN	Z	NNN	468	PN		-	Use He2-	Author's name
Herbig		NN	33	RFN		1954H1F	Herbig, tables 3 and 4, EM** in RFN	Author's name
Hf	C	NN	69 (6PN)	bright N	R	1953H5	Hoffleit; 6 objects of the list are compiled as PN; see PK Nomencl.	Author's name
Hf 2-	C	N	2	PN		1953H5	Hoffleit; 2 objects! mentioned in this ref. are compiled as PN; see PK Nomencl.	Author's name
HFE		NN	72	(Far IR)		1971H1	Hoffmann+	Authors' initials
HFG	C	N	1	PN ?		-	Heckathorn+, 1982; =PK 136+5(1); see ref. 1967PK F	Authors' initials
HG	C	F-NNN	292	WD		1962G1	Giclas+; see WD Nomencl.	Hyades Giclas
HG	E	NN	92	Group of G		1982H1	Identical to GNO	Authors' initials
HH-=H-H=HH		NNN, NN(N)	61	HH	R	1974H2	Herbig; several ref. from 1974 to 1977; use HH-	Herbig-Haro objects
HIG		NN	31	(RAD)		1966H1	Higgs	Author's name
Hilt		NNNN	1259	OB *		1956H3	Identical to Hiltner	Author's name
Hiltner		NNNN	1259	OB *		1956H3	Hiltner	Author's name
H-K		NN	30	Red Dw.		1965K2	Klare+	Heidelberg Königstuhl Obs.
HL		NNNN	8725	Faint blue * + QSO		1962H1	Use PHL	Authors' initials
HLF		NA	4	Field		1966P2	Philip; extension of LF program	High latitude field
HLF2		DD NNN	1895	*		1966P2	Philip	High latitude field 2
Hln		NN	17	Double *		1974H4	Holden (addendum to the table, p. 911)	Author's name
HM	E	NN	32	EM**		1973H3	Henize+	Authors' initials
HM	E	NNNN	1293	(RAD)		1965H2	Howard+	Authors' initials
HM	E	HHMM±DDA or HHMM±DD.d	389	(RAD)		1970H1	Use ML0	Authors' initials
HMS		HHMM±DDMM	159	Cluster of G		1956H1	Humason+; 2 ref. (1956, 1973)	Authors' initials
H.O.	E	+DD A	2544	* near NGP		1973H1	Häggkvist+	Authors' initials
Ho	E	NNN	133	OCL		1965H1	Identical to Hogg; see C Nomencl.	Author's name
Ho	E	R	5	G		1950H1	Identical to Holmberg	Author's name
Hodge		NN	?	GCL in LMC		-	Used for certain globular clusters in LMC, especially Hodge 11 (Walker, M.N.R.A.S. 186, 767).	Discoverer's name

Acronym	R1	Format	Number	Type of object	R2	Code number	Reference	Meaning
Hoffleit		NN	69(6PN)	bright N		1953H5	Hoffleit; see also Hf and Hf2-	Author's name
Hogg		NNN	133	OCL		1965H1	Hogg; see C Nomencl.	Author's name
Hol	E	?	?	OCL		-	Identical to Holetschek	Author's name
Holetschek		?	?	OCL	R	-	See C Nomencl.?	Author's name
Holm		R	5	G		1950H1	Identical to Holmberg	Author's name
Holmberg		R	5	G		1950H1	Holmberg	Author's name
HP	D ₃ O	HHMM±DD	-	PSR		1976TDA	Superseded by PSR	Harvard Pulsar
HR	A	NNNN	9110	*		1964HF 1982HJ	} Identical to BS	Harvard Revised photometry
HR	Z	NN	55	(RAD)		1969H2		Authors' initials
HRC	A	NNN	323	EM*		1972HR	Herbig+	Herbig Rao Catalog
HS	E	NN	75	QSO		1977H2	Hoag+	Authors' initials
HS		NNN	455	OCL in LMC		1966H2	Hodge+	Authors' initials
Hu1-	C	N	2	PN		-	Humason, 1921; see PK Nomencl.	Author's name
Hu2-	C	N	1	PN		-	Humason, 1922; = PK 51+9°1; see PK Nomencl.	Author's name
Hub	C	NN	12	PN		-	Identical to Hubble	Author's name
Hubble	C	NN	12	PN	R	-	Hubble, 1921; see PK Nomencl.	Author's name
HV	C	NNNN	15000	V *		-	See V * Nomencl.	Harvard Variables
HVC	A?	LLL.±BB.b ±VVV	90	HVC		1975H1	Hulsbosch; 3 ref. from 1975 to 1981	High velocity Cloud
HW		NN	86	SMC OCL		1974H3	Hodge+	Authors' initials
HXR	A?	HHMM±DD	-	(X)		-	See table IV.2	Hard X-rays
H-Z		NN	48	Blue *		1947H1	Use HZ	Authors' initials
HZ		NN	48	Blue *		1947H1	Humason+	Authors' initials
I (letter)	Z	NNNN	5386	(OPT)		1895D1	Use IC	Abbreviation for IC
I (roman figure)	Z	NNNN	1529	(OPT)		1895D1A	Identical to IC I; use IC	1st list of Index Cat.
II (roman figure)	Z	NNNN	3857	(OPT)		1895D1B	Identical to IC II; use IC	2nd list of Index Cat.
IAU	O	HH ^N _S DA	38	(RAD)		1955P1	Pawsey	International Astronomical Union
IC	A	NNNN	5386	(OPT)		1895D1	Dreyer; 1st and 2nd cat. 1895 and 1908, reprinted in 1953	Index Catalogue
IC I		NNNN	1529	(OPT)		1895D1A	Dreyer 1st list; use IC	Index Cat., 1st list
IC II		NNNN	3857	(OPT)		1895D1B	Dreyer 2nd list; use IC	Index Cat., 2nd list
IDS	A?	HHMM.m ^N _S DDMMA	64000+	Double *		1963JV	Jeffers+; see table I.3	Index Catalogue of Double Stars
ILF-1=ILF 1		+DD NNN	938	*		1952M1	Identical to MacRae; stars in the field ILF-1	Intermediate latitude Field no. 1
ILS		NNN	440	*		1969M1	Melchior+	International Latitude Service
INN=Innes				V *			Innes Discovery list; see V * Nomencl.	Author's name
Ir-Ch	E	NN	55	EM*		1956I1	Iriarte+	Authors' names
IRc	E	N	5	(IR)		1973R2	Rieke+, in Orion	IR compact
IRC	A?	±DNNNN	~20000	(IR)	R	1969N1	Neugebauer+	Infrared Catalogue
IRe		N	2	(IR)		1973R2	Rieke+, in Orion	IR extended
IRS		N	-	(IR)		-	Commonly used as a specifier for infrared sources in a larger object	Infrared Source

Acronym	R1	Format	Number	Type of object	R2	Code number	Reference	Meaning
Iskudarian		-	1	OCL		1961I1	Iskudarian+; see C Nomencl.	First author's name
I SZ, II SZ		NNN		G		1978R2	Roman numeral, see letters	Southern Zwicky, first and second field
IVC	A	LLL.ℓ±BB.b ±VVV	(90)	IVC		1975H1	Hulsbosch	Intermediate Velocity Cloud
J	E	NNN	3355	*	R	-	Jonckheere, 1962. Nos 320, 475 and 900 are PN, see PK Nomencl. For double stars, use IDS Nomencl.	Author's initial
J1	O	NNN	152	H II + PN + RFN		1955J1A	Johnson; 36 objects of this list are new and prefixed YM	Author's initial + No. of the list
J2	O	NN	32	H II + PN + RFN		1956J1B	Johnson; 11 objects of this list are new and prefixed YM	Author's initial + No. of the list
JB		NNN	100	WR in LMC		1981BR	Identical to Breysacher	J. Breysacher
Jenkins		NNNN or NNNN.N	7534	*		1952J1	Jenkins; supplement in 1963. Updated by Van Altena, ref. 1982VA	Author's name
Jessup	C	NNN	803	Double *		1955R1	Identical to Jsp. Use IDS Nomencl.	Discoverer's name
JL		NNN	296	*		1969J1	Jaidee+	Authors' initials
Jn	C	N	1	PN		-	Miller+, 1949 and 1950; = PK 104-29°1; see PK Nomencl.	Discovered by Miss Rebecca Jones
JP	D,O	HHMM±DD	?	PSR		1967TDA	Superseded by PSR	Jodrell Bank Pulsar
Jsp	C	NNN	803	Double *		1955R1	Rossiter. Use IDS Nomencl.	Discoverer's name: Jessup
K	E	NNN	205	Blue *		1962K1	Use Klemola	Author's initial
K	E,C	NN	7	Flare *		-	Szécsényi-Nagy; see V * Nomencl.	Konkoly Obs.
K	E,P	NNN	797	Dark N		1955K1	Khavtasi; identical to Kh=KH	Author's initial
K	E,P	NNN	762	Dark N		1960K1	Khavtasi; identical to Kh=KH	Author's initial
K=KLNS	E	NN	57	(RAD)		1960K2	Use KLNS	First author's initial
K	E	NNN	603	Pairs of G		1972K2	Identical to Karachentsev	Author's initial
K1-	C	NN	33	PN		-	Kohoutek; several ref. from 1962 to 1977: see PK Nomencl.	Author's initial
K2-	C	NN	17	Poss. PN		-	Kohoutek; several ref. from 1963 to 1977; see PK Nomencl.	Author's initial
K3-	C	NN	94	PN		1969K1	Kohoutek; several ref. from 1965 to 1972; see PK Nomencl.	Author's initial
K4-	C	NN	60	Poss. PN		1969K1	Kohoutek; several ref. from 1965 to 1972; see PK Nomencl.	Author's initial
Ka		NNN	466	G		1979K1	Identical to Kazarian	Author's name
Ka1-	C	N	2	PN	R	-	Kazarian, 1966; see PK Nomencl.	Author's name
Ka2-	C	N	2	PN		-	Kazarian, 1976; see PK Nomencl.	Author's name
KaPa	C	N	8	PN		-	Kazarian+, 1971; see PK Nomencl.	Authors' names

Acronym	R1	Format	Number	Type of object	R2	Code number	Reference	Meaning
Karachentsev		NNN	603	Pairs of G		1972K2	Karachentsev	Author's name
Kazarian		NNN	466	G		1979K1	Kazarian; 4 ref. from 1979 to 1982	Author's name
KCB	Z	NNNN	807	*		1971P1	Pavlov+	Cyrillic letters should be KSV for Katalog Sluzhbij Vremeni
Ke		NN	80	(RAD)		1968K1	Use Kes	Author's name
Kes		NN	80	(RAD)		1968K1	Kesteven	Author's name
Kesteven		NN	80	(RAD)		1968K1	Identical to Kes	Author's name
KGX	0	LLL±BB	< 10	(X)		-	See table IV.2	?
Kh=KH	E,P	NNN	797	Dark N		1955K1	Khavtasi; Catalogue	Author's name
Kh=KH	E,P	NNN	762	Dark N		1960K1	Khavtasi; Atlas	Author's name
Khav	E,P	NNN	-	Dark N		-	Identical to Kh (2 entries)	Author's name
Khavtasi =Khavtassi	E,P	NNN	-	Dark N		-	Identical to Kh (2 entries)	Author's name
King		NN	21	OCL		1949K1	King; see C Nomencl.	Author's name
Kj1-	C	N	2	PN		-	Kazarian, 1966; identical to Ka1-	Author's name
Kj2-	C	N	2	PN		-	Kazarian, 1976; identical to Ka2-	Author's name
KjPn	C	N	8	PN		-	Kazarian+, 1971; identical to KaPa	Authors' names
KL	A	-	1	(IR)		1967K2	Kleinmann+. Extended source in Orion	Authors' initials
KLEM	E,P	NN	44	Cluster of G		1969K2	Klemola	Author's name
Klemola	E,P	NNN	205	Blue *		1962K1	Klemola	Author's name
Klemola	E,P	NN	44	Cluster of G		1969K2	Identical to KLEM	Author's name
KLNS		NN	57	(RAD)		1960K2	Kuz'min+	First author's initial
Ko=KO	E	NNN	431	OCL *		1959K1	Koelbloed	Author's name
KO	E,C	N	1	PN		-	Kazarian+, 1973; =PK 61+41°1 see PK Nomencl.	Authors' initials
Koch		NNN	300	Cluster * + V *		1974K1	Koch+	First author's name
Kohoutek		Na	10	H II		1969K1	Kohoutek; 2 ref.(1969,1972)	Author's name
KOM		NN	49	(RAD)		1966K1	Komesaroff	Author's name
KP	S	HHMM.m±DD.dA	-	Susp. Optical QSO		-	Hoag+Burbidge, in preparation	Kitt Peak
Kr1-	C	N	2	PN		-	Krasnogorskaja, 1962; see PK Nomencl.	Author's name
Kr2-	C	N	2	Poss. PN		-	Krasnogorskaja, 1962; see PK Nomencl.	Author's name
Kron		NN	69	SMC OCL		1956K1	Kron	Author's name
KS	E	NNNN	1660	OB *	R	1966K3	Klare+	Authors' initials
KS	E	NNN	168	OCL *	R	1967K1	Krzeminski+	Authors' initials
Ku	0	NNN	> 648	*		-	Kustner, 1921. Ku 648 = PK 65-27°1	Author's name
KUV		HHMMm±DDMM	669	UV OBJ.+WD		1980N1	Noguchi+; 2 ref.(1980,1982)	Kiso UV-excess objects
Kuzmin		NN	57	(RAD)		1960K2	Identical to KLNS	First author's name
KW	E	NNN	577	OCL *		1927K1	Klein-Wassink	Author's name
KW	E	N	9	(RAD)		1972K1	Kap-Herr+	Authors' initials
KZP		NNNNNN	≈ 12000	Susp. V *		1951KP	Use CSV	Katalog Zvezd Zapodozrennykh v Pere-mennosti

Acronym	R1	Format	Number	Type of object	R2	Code number	Reference	Meaning
L	E	NNNN	47390	*		1847B1	Use Lalande	Author's initial
L	E	FFFF-NNNN	~ 500	PM *		1942L1	Luyten ; several ref. from 1942 to 1949 ; see BPM, LTT, LFT	Author's initial
L		NN	96	WD		1949L1	Luyten	Author's initial
L	E	N	6	H II		1965L2	Lyngå	Author's initial
L	E	LLL.ℓℓ±BB.bb	1125	H II		1965L1	Identical to LBN	Author's initial
L	E	NNNN	1802	Dark N	R	1962L1	Identical to LDN	Author's initial
L-	E	NNN	358	LMC EM•*		1963L1	Lindsay	Author's initial
L1, L2, L3		NN	44	EM•*		1962T1	Thé	Dark lanes 1, 2 or 3
LAL		NNNN	47390	*		1847B1	Use Lalande	Discoverer's name
Lalande=LALANDE		NNNN	47390	*		1847B1	Baily	Discoverer's name
Lanning		NN	82	UV OBJ.		1973L1	Lanning	Author's name
Latysev		-	1	OCL		-	= C 0249+272 ; see C Nomencl.	Author's name
LB		NNNN	11444	Blue *		1953L1	Luyten ; several lists from 1953 to 1958	Luyten Blue
LBN		LLL.ℓℓ±BB.bb	1125	H II		1965L1	Lynds	Lynds Bright Nebulae
LD	E	NN	58	V *		-	Dahlmark, 1982. Use V * Nomencl.	L. Dahlmark
LD	E	LLL.ℓℓ±BB.bb	1125	H II		1965L1	Use LBN	Author's name
LD	E	NNNN	1802	Dark N		1962L1	Use LDN	Lynds Dark Nebulae
LDN		NNNN	1802	Dark N	R	1962L1	Lynds	Lynds Dark Nebulae
LDS		NNNN	3014	PM *		1941L1	Luyten ; several ref. from 1941 to 1972	Luyten Double Stars
Lee		NNN	365	Carbon *		1940L1	Lee+ ; 2 ref.(1940,1947)	First author's name
LF		FFa FFa±DD NNN	- -	Field *		1947M2	McCuskey ; several ref. from 1947 to 1970	Luminosity Function Region
LFT		NNNN	1849	*		1955L1	Luyten ; continued by LHS	Luyten's Five Tenths
LGS		N	5	G		1979T1	Thuan+	Local Group Suspect.
LH		NNN	122	ASS. in LMC		1970L1	Lucke+	Authors' initials
LHE		NNN	559	(RAD)		1963L2	Long+	Authors' initials
LHS		NNNNa	~ 4000	*		1979L1	Luyten ; LFT complement	Luyten High Velocity Stars ?
LHα	Z	NNN	100	EM•*		1954H1	Herbig, 2 ref. ; became later LkHα and is continued by several ref. ; see LkH	Lick Hα
LHα	Z	NNN	468	PN		-	Henize, 1967 ; use He2-	Lamont-Hussey Hα
LHα 115-N	D	NN	90	SMC H II		1956H2	Henize, table 4 ; use "N in SMC"	Field 115 for SMC 120 for LMC N stands for nebulae S for stars
LHα 115-S	D	NN	65	SMC EM•*		1956H2	Table 3	
LHα 120-N	D	NNN	221	LMC H II		1956H2	Table 2 ; use "N in LMC"	
LHα 120-S	D	NNN	172	LMC EM•*		1956H2	Table 1	
LHα 332-	Z	NN	3	EM•*			Discovery list ; use HRC or HM numbers	Lamont-Hussey Hα
Lick Hα		NNN	359	EM•*		1954H1	Identical to LkH	Lick Obs., Hα emission stars
Liller	C	R	1	GCL		1977L2	Liller	Author's name
LIN		NNN	593	EM.OBJ. in SMC		1961L2	Lindsay	Author's name
Lindsay		NNN	116	SMC OCL		1958L1	Lindsay	Author's name
Lk		NNN	471	OCL		1931C1	Identical to Lundmark= Collinder ; see C Nomencl. for Collinder	Author's name

Acronym	R1	Format	Number	Type of object	R2	Code number	Reference	Meaning
LkH	A	NNN	359	EM•*		1954H1	Herbig; several ref. from 1954 to 1979; supersedes and continues LH α (Herbig)	Lick H α
LkH α	A	NNN	359	EM•*		1954H1	Identical to LkH	Lick H α
LLP		NNN	144	OCL *		1968M1	McCarthy+	Low Luminosity Pleiades ?
LMC	Z	N	9	H II supershell		1980M2	Meaburn	Large Magellanic Cloud
LMC-BW		NNN	111	Carbon and late * in LMC		1980B1	Blanco+	LMC, Bar West
LMC-O		NNN		Carbon and late * in LMC		1980B1	Blanco+	LMC, Optical Center
LMC-R		NN		Carbon and late * in LMC		1980B1	Blanco+	LMC, Radio Center
LMC X-		N	4	(X) in LMC	R	-	See p. 4.1	Large Magellanic Cloud, X-ray source
LMH		NN	51	(RAD)		1961L1	Large+	Authors' initials
Lo	C	NN	18	PN	R	-	Longmore, 1977; see PK Nomencl.	Author's name
Lodén	C	FFFF or FFFF-NN	-	OCL OCL *		1977L3	Lodén; see C Nomencl.	Author's name
Loop		R, sometimes N	5	Galactic SNR ?		1973B2	Berkhuijsen; several ref. from 1973 to 1976	Morphological structure
LoTr	C	NN	11	PN		-	Longmore+, 1980; see PK Nomencl.	Authors' names
LP		FFF-NNNN	29000	PM *		1963L4	Luyten; several ref. from 1963 to 1981	Luyten Palomar
LPD		NNN	524	PM *		1969L1	Luyten; 2 ref.(1969,1970)	Luyten Palomar Double
LPM		NNN	904	PM *		1941L2	Luyten; use LHS	Luyten proper motion
L-Pr		N	7	WD		1953L2	Luyten; table III	Luyten - Praesepe
LRLWW			1	Dwarf G		1977L1	Lautsen+	Authors' initials
LS	A	R $\pm$ DD NNN	7425	Northern OB *		1959H1	Hardorp+; 6 volumes (R=I to VI) 1959 to 1971	Luminous stars
LS	Z	NNNN	5132	Southern OB *		1971S4	Use LSS	Luminous stars
LS	Z	NNN	16	WR		1968S2	Use LSWR	Lindsey Smith
LSN		R $\pm$ DD NNN	7425	OB *		1959H1	Use LS (Northern OB *)	Luminous stars Northern Milky Way
LSS	A	NNNN	5132	OB *		1971S4	Stephenson+	Luminous stars Southern Milky Way
LSSMW		NNNN	5132	OB *		1971S4	Identical to LSS	Luminous stars Southern Milky Way
LSWR	C	NN	16	WR	R	1968S2	Smith; see WR Nomencl. ref. 1981VH	Lindsey Smith, WR stars
LT		NN	40	Ring G		1977T1	Thompson	L. Thompson
LTT		NNNN	18546	*		1957L1	Luyten; several ref. from 1957 to 1962	Luyten's two tenths
Lü		HHMM $\pm$ DD	40	Pec. G		1971L2	Identical to YC	Author's name
Lundmark= LUNDMARK	C	NNN	471	OCL		1931C1	Identical to Collinder; see C Nomencl.	Author's name
LW		NNN	435	Cluster in LMC		1963L5	Lyngå+	Authors' initials
Ly		NNN	284	OB		1968L2	Lyngå	Author's name
Ly	C	NN	14	OCL		1964L1	Identical to Lyngå	Author's name
Lynds=LYNDS		LLL.LL $\pm$ BB.bb	1125	H II		1965L1	Use LBN	Author's name
Lynds=LYNDS	R	NNNN	1802	Dark N		1962L1	Use LDN	Author's name
Lyngå	C	NN	14	OCL		1964L1	Lyngå, 1964; see C Nomencl.	Author's name

Acronym	R1	Format	Number	Type of object	R2	Code number	Reference	Meaning
1M	A	HHMM±DDd	138	(X)		-	See Table IV.2	Massachusetts
M	E	NNN	208	V *		1975M3	Maffei; use V * Nomencl.	Author's initial
M	E	NN	45	OCL *		1961M2	Identical to M+0	First author's initial
M	E	Ra or R.N		HVC		1968H1	Hulsbosch; 2 ref. (1968, 1973)	Cloud Complex discovered by Mathewson
						1975H1	Hulsbosch; 2 ref. (1975, 1980)	
M	A	NNN	110	(OPT)		1784M1	Messier	Author's initial
M	E	NN	51	(RAD)		1965M2	Identical to MM	Author's initial
M	E	NN	19	G		1961M3	Minkowski	Author's initial
M1-		NNN	80+22	PN+ H II		1946M1	Identical to Min 1-	Author's initial
M2-		NN	56+18	PN+ H II		1947M1	Identical to Min 2-	Author's initial
M3-		NN	55+7	PN+ H II		1948M1	Identical to Min 3-	Author's initial
M4-		NN	18	PN		-	Identical to Min 4-, unpublished	Author's initial
Ma	E	NN	50	OCL		1951M1	Identical to Markarian	Author's name
MA	E	HHMM±DD	55	(RAD)		1974B2	Brandie+	Michigan
MaC1-	C	NN	17	PN		-	MacConnell, 1978; see PK Nomencl.	Author's name
MaC2-	C	NN	5	PN		-	MacConnell, 1982; see PK Nomencl.	Author's name
MacC H		NN	24	EM**		1968M3	MacConnell, table 4A	MacConnell objects having H α emission
MacC sH		NN	20	Poss. EM**		1968M3	MacConnell, table 4B	MacConnell objects suspected of H α emission
MacRae		±DD NNN	938	*		1952M1	MacRae, stars in the field ILF-1	Author's name
Maffei		N	2	G		1968M2	Maffei	Author's name
Manova		NN	32	EM**		1959M1	Manova	Author's name
Mark	P	NN	50	OCL		1951M1	Identical to Markarian	Author's name
Mark	P	NNN	1500	G		1967M1	Identical to Markarian	Author's name
Markarian =Markarjan	P,E	NN	50	OCL		1951M1	Markarian; see C Nomencl.	Author's name
Markarian =Markarjan	P,E	NNN	1500	G	R	1967M1	Markarian; several ref. from 1967 to 1981	Author's name
Maršalková	R	NNN	698	H II		1974MA	Marsalkova	Author's name
Mayer		-	3	OCL		-	Mayer; see C Nomencl.	Author's name
MB	E	NNNN	1088	EM**		1933M2	Use MWC	Author's initials
MC	E	N	4	(OPT)		1976C2	Cohen+	Martin Cohen
MC	E	NN or A	102	(RAD) in LMC		1972M1	McGee+; 2 ref. in 1972	Magellanic Cloud
MC1		HHMM±DDdA	1545	(RAD)		1973D2	Davies+	Molonglo Catalogue 1
MC2		HHMM±DDdA	609	(RAD)		1974S4	Sutton+, table 2	Molonglo Catalogue 2
MC3		HHMM±DDdA	657	(RAD)		1974S4	Sutton+, table 3	Molonglo Catalogue 3
MC4		HHMM±DDdA	1349	(RAD)		1976C1	Clarke+	Molonglo Catalogue 4
MC5		HHMM±DDdA	-	(RAD)	R	-	Large+, unpublished	Molonglo Catalogue 5
McC=MCC		NNN	895	M *		1943V1	Vysotsky; several ref. from 1943 to 1958	McCormick Observatory
McD		NN	78	H II		1939S1	Struve+; 3 ref. in 1939	McDonald Observatory
MCG		±FF-FF-NNNN	30200	G	R	1962V1	Vorontsov-Vel'yaminov+; several ref. from 1962 to 1974	Morphological Catalogue of Galaxies
MCS		NNN	655	EXGL EM. OBJ.		1977M1	Identical to UM	Michigan Curtis Schmidt

Acronym	R1	Format	Number	Type of object	R2	Code number	Reference	Meaning
MD		NNN	440	*		1969M1	Use ILS	Authors' initials
MD		N	7	(RAD)		1972M2	Martin+	Authors' initials
Me1-	C	N	1	PN		-	Merrill, 1941; =PK 52-2°1; see PK Nomencl.	Author's name
Me2-	C	N	2	PN		-	Merrill, 1942; see PK Nomencl.	Author's name
Me _l		NNN	245	OCL+GCL		1915M1	Identical to Melotte	Author's name
Melotte	C	NNN	245	OCL+GCL		1915M1	Melotte; see C Nomencl.	Author's name
MHR		NN	66	(RAD)		1962M1	Mathewson+	Authors' initials
MH _α	D,0	FFF-NNN	< 1500	EM*		-	Discovery list; superseded by AS or MWC	Merrill H _α ?
Mills		HH±DA	77	(RAD)		1952M3	Mills	Author's name
Min 1-	C	NN	80	PN		1946M1	Minkowski, table I; see PK Nomencl.	Author's name
Min 1-		NNN	22	H II		1946M1	Minkowski, table II	Author's name
Min 2-	C	NN	56	PN	R	1947M1	Minkowski, table I; see PK Nomencl.	Author's name
Min 2-		NN	18	H II		1947M1	Minkowski, table II	Author's name
Min 3-	C	NN	55	PN		1948M1	Minkowski, tables I and II; see PK Nomencl.	Author's name
Min 3-		NN	7	H II		1948M1	Minkowski, table III	Author's name
Min 4-	C	NN	18	PN		-	Minkowski, 1959, unpublished; see PK Nomencl.	Author's name
MK		?	?	WD		-	See WD Nomencl.	Markarian
Mk=MK	P	NNN	1500	G		1967M1	Identical to Markarian	Author's name
MKN	P	NNN	1500	G		1967M1	Identical to Markarian	Author's name
Mkr	P	NNN	1500	G		1967M1	Identical to Markarian	Author's name
MKW		NN and Ns	12+4	G		1975M4	Morgan+	Authors' initials
MLO		HHMM±DDA or HHMM±DD.d	389	(RAD)		1970H1	Hoskins+	Molonglo
MM		NN	51	(RAD)		1965M2	Moran	M. Moran
M+O		NN	45	OCL *		1961M2	Markarian+	Authors' initials
Moffat		-	1	OCL		1976M2	Moffat; see C Nomencl.	Author's name
MP	D,0	HHMM±DD	-	PSR		1976TDA	Superseded by PSR	Molonglo Pulsar
MR		NN	11	Red *		1956L2	Luyten+, table II	Minnesota Red
MR		NNN	123	WR		1962R1	Identical to Roberts	M. Roberts
MR		HHMM±DDd	1	QSO		1978R1	Ricker+ (better use QSO)	?
Mrk=MRK	P,E	NNN	1500	G		1967M1	Identical to Markarian	Author's name
MS		NN	76	*		1973M1	Morrison+	Authors' initials
MS	E	R	6	HVC		1977M2	Mathewson+	Magellanic Stream
MSB		NN	75	N * + S *		1933M1	Merrill+; 2 ref.(1933,1942)	Authors' initials
MSH		HH±DNN	2270	(RAD)		1958M1	Mills+; 3 ref. from 1958 to 1961	Authors' initials
Mt.W.		FFF-NNN, FFF-NNNs	67491	*		1930S1	Seares+; s for the supplementary lists	Mount Wilson
Mu		NN	34	H II		1955M1	Münch	Author's name
MUL		NNa	27	(RAD)		1959M2	Muller	Author's name
MW	E	NNN	319	EM*		1925M1	Merrill+; several ref. from 1925 to 1942; use MWC	Mount Wilson
MW	E	HHMM±DD	320	(RAD)		1972W2	Willson	M. Willson
MWC	A	NNNN	1088	EM*	R	1933M2	Merrill+; several ref. from 1933 to 1949	Mount Wilson Cat.
MX		HHMM±DD	?	(X)		-	See table IV.2	Massachusetts X-ray

Acronym	R1	Format	Number	Type of object	R2	Code number	Reference	Meaning
MXB	A ?	HHMM±DD	31	(X)		-	See table IV.2	Massachusetts X-ray burster
My	(C)	NNN	139 (17PN)	EM. OBJ.		-	Mayall, 1951; see PK Nomencl.	Author's name
MyCn	(C)	NN	39 (2PN)	EM. OBJ.		-	Mayall+, 1940; see PK Nomencl.	Authors' names
Mz	(C)	N	5 (3PN)	EM. OBJ.		-	Menzell, 1922; see PK Nomencl.	Author's name
MZC 2α		NNN	612	*		1958Y1	Yasuda+	Mitaka Zenith Star Catalogue
N	C,S	Constell. YYYY.N	-	Nova		-	Identical to Nova	Nova
N	Z	NNNN	7840	(OPT)		1888D1	Use NGC	Abbreviation of acronym
N	E	NNN	311	LMC and SMC H II		1956H2	Identical to LHα 115-N or LHα 120-N. Use "N in SMC" or "N in LMC"	Nebula
N/30		NNNN	5268	*		1952M2	Identical to N30	Normal System epoch 1930
N30		NNNN	5268	*		1952M2	Morgan	Normal System epoch 1930
Na	C	N	2	PN		1964N1	Nassau+, table 5; see PK Nomencl.	First author's name
NAB		HHMM±DD	9	QSO		1973B1	Bahcall+	N.A. Bahcall
NAIC		HHMM±DD	3118	(RAD)		1975D2	Durdin+	National Astronomy and Ionospheric Center
NB		DD.NN	558	(RAD)		1967B2	Branson	N. Branson ?
NGC	A	NNNN	7840	(OPT)		1888D1	Dreyer and later ref.	New General Catalogue
NGP		DD-NNN	4027	Late *		1962U1	Uppgren	North Galactic Pole
NIPSS	D	FFFFCINN	1183	Red Stellar OBJ.	R	1979C1	Craine+; RS0, RS01 are names for the catalogues	Near Infrared Photographic Sky Survey
NK		NN	117	(RAD)		1970K1	Kawajiri	N. Kawajiri
NML		Constell.	2	(IR)		1965N1	Neugebauer+	Authors' initials
NOV	C	Constell. YYYY.N	-	Nova		-	Identical to Nova	Nova
Nova=NOVA	C	Constell. YYYY.N	-	Nova		-	Use V * Nomencl.	Type of object
NP	D,0	HHMM±DD	-	PSR		1976TDA	Superseded by PSR	NRAO Green Bank Pulsars
NRAO	E	NNN or NNNN	> 726	(RAD)		1966P1	Pauliny-Toth+	National Radio Astronomy Obs. Survey
NRAO	E	HHMM±DD	458	(RAD)		1967H2	Höglund	National Radio Astronomy Obs.
NRAO	E	HHMM±DDA	2	(RAD)		1972R1	Ross; the same ref. contains ARO	National Radio Astronomy Obs.
NRC		NN	30	(RAD)		1965R1	Roghavarao+	National Research Council of Canada
Ns		NNN	568	O-B5 *		1975N1	Nordström; No: 238 = PK 254+0°1	Author's name
NS	P	-DD NNN	1272	LMC *		1970S1	Identical to Sk	N. Sanduleak
NSC		NN	100	*		1964N1	Nassau+; tables 1 to 4	Authors' initials
NSC	C	N	2	PN		1964N1	Nassau+; table 5, see PK Nomencl.	Authors' initials
NSV	A	NNNN	14811	Susp. V *		1982KH	Kholopov; updates and supersedes CSV	New Catalogue of suspected variable Stars
Numerova		NNNN	5024	*		1958N1	Numerova	Author's name

Acronym	R1	Format	Number	Type of object	R2	Code number	Reference	Meaning
OA- or OA		NNN or NNN.N	217	(RAD)		1964K1	Kraus ; several ref. from 1964 to 1966	Ohio list A
OA0		HHMM±DD		(X)		-	See table IV.2	Orbiting Astronomical Observatory
OB to OZ		-DNN.N or <u>DNN.N</u>	~ 19000	(RAD)		1967S1	Rinsland+ ; several ref. from 1967 to 1975	0 stands for Ohio, B to Z (omitting 0) for hours of right ascension
OBH to OZH		- <u>DNN</u> or <u>DNN</u>	52	HVC		1970M1	Meng+, table I	0 stands for Ohio, B to Z (omitting 0) for hours of right ascension, H for high velocity
OBM to OZM		- <u>DNN</u> or <u>DNN</u>	69	MVC		1970M1	Meng+, table IV	id., M stands for medium velocity
OC&-	C	NNNN.N	1114	OCL		1970AR	Alter+ ; 2 ref.(1970,1981)	Open clusters
OH	S	LLL.ℓ±BB.b or LLL.ℓℓ±BB.bb or HHMM±DD	-	OH		-	Systematic designation	OH sources
OHP	C	N	6 ?	GCL	R	-	Except for OHP1, Terzan numbers are often used instead	Observatoire de Haute Provence
OM	E	NNN	106	HV *		1971C3	Carozzi+ ; 2 ref.(1971,1974)	Observatoire de Marseille
OMC=OMC-	Z	N	3	MCLD		1974G3	Use Ori MC	Ori molecular cloud
ON	E	N	4	OH		1970W2	Winnberg	Onsala
OP	O	HHMM±DD	-	PSR		-	Use PSR	Ooty Radio Telescope Pulsar
Ori MC		N	2	MCLD		1974G3	Gatley (3 ref. in 1974)	Ori molecular cloud
OS	E	HHMM±DD	1	(X)		-	See table IV.2	from OS0 8
OTL		HHMM±DD or HHMM±DDd	31	(RAD)		1971S1	Swarup+ ; 2 ref.(1971,1973)	Ooty Lunar Occultation
OV	O,C	NN	28	V *		-	Use V * Nomencl.	Oklahoma Variables
OX	E,C	?	?	WD		-	See WD Nomencl.	Oxford
P	Z	NNNN	2250	Galactic *		1970F1	Fehrenbach+ ; several ref. from 1970 to 1981	Petite vitesse
P	O	HHMM±DD	468	PSR		1976TD	Use PSR	Pulsar
P	E	NNN	300	Cluster * + V *		1974K1	Identical to Penna. Use Koch	Pennsylvania
P	E,C	-	-	V *		-	Prager, 1934 and 1937. Use V * Nomencl.	Author's initial
P	E	NNNN	2982	Ori cluster *		1954P1	Parenago	Author's initial
P	Z	HHMM±DD	2177	(RAD)		-	Use PKS	Parkes
P	E	NN	26	(RAD)		1964P1	Identical to PD	First author's initial
Paℓ		NN	15	GCL		1955A1	Identical to Palomar	Palomar Obs.
Palomar		NN	15	GCL	R	1955A1	Abell	Palomar Obs.
Parsamian =Parsamyan		NN	23	Cometary N		1965P1	Parsamian	Author's name
PB		NNNN	9495	* + compact OBJ.		1977BF	Berger+ ; 3ref. from 1977 to 1983	Palomar-Berger
PB	C	NN	10	PN		-	Peimbert+, 1960; see PK Nomencl.	Authors' initials

Acronym	R1	Format	Number	Type of object	R2	Code number	Reference	Meaning
PC	C	NN	14	PN	R	-	Peimbert+, 1961; see PK Nomencl.	Authors' initials
PD		NN	26	(RAD)		1964P1	Pike+	Authors' initials
PE		NNN	142	GCL *		1972D1	Dickens	Photoelectric standard * ?
Pe1-	C	NN	21	PN		-	Perek, 1960, table 1; see PK Nomencl.	Author's name
Pe2-	C	NN	16	Poss. PN	R	-	Perek, 1960, table 2; see PK Nomencl.	Author's name
Penna		NNN	300	Cluster * + V *		1974K1	Identical to Koch	Pennsylvania
PFKSZ		NNNN	587	Faint *		1958Z1	Zverev+	Russian acronym
PG	O	N	1	*		1975G1	Harns	Patricia Guida
PG	S ?	HHMM±DDd	5	UV. OBJ. + QSO		1976G2	Green+; several ref. from 1976 to 1982	Palomar-Green
PHL		NNNN	8725	Faint blue *		1962H1	Haro+	Palomar-Haro-Luyten
Pis		NN	26	OCL + GCL		1959P1	Identical to Pismis (2 entries)	Author's name
Pismis		NN	24	OCL		1959P1	Pismis, table I	Author's name
Pismis		NN	2	GCL		1959P1	Pismis, table II	Author's name
PK	S	LLL±BB N	~ 1500	PN	R	1967PK	Perek+; several ref. from 1967 to 1981	Authors' initials
PKS		HHMM±DD	2177	(RAD)		1969E1	Ekers; 2 ref.(1968,1969)	Parkes
PKS		HHMM±DDd	-	(RAD)		1979B1	Bolton+	Parkes
PLE		-	-	PLE SNR	R	1980WP	Weiler+	Plerion
Plf	C	-	-	Pleiades Flare *		-	Kholopov, 1981; use V * Nomencl.	Pleiades flare stars
PLX		NNNN or NNNN.N	7534	*		1952J1	Identical to Jenkins	Parallax
POT	Z	FFF-NNNN	66703	*		1929B1	Identical to PSD	Potsdamer Spektral-durchmusterung
Poul	C	N	9	Flare *		-	Poulakos, 1977; use V * Nomencl.	Author's name
Poulakos	C	N	9	Flare *		-	Identical to Poul	Author's name
POX	Z	NNN	-	EM. OBJ.		1981K1	Kunth+	Prism Objective X
PP	D,O	HHMM±DD	-	PSR		1976TDA	Superseded by PSR	Pushchino Pulsars
PP	E,R	NNN	106	Cometary N		1979PS	Parsamian+	Authors' initials
PP	E	HHMM±DD	8	(RAD)		1972P1	Peckham+	Authors' initials
PRF		NNN	894	(RAD) *		1961F1	Foster	P.R. Foster
PrR		NNN	189	Red *		1956L1	Luyten; 2 ref.(1956,1962)	Praesepe Red *
PRRF		NNN	894	(RAD) *		1961F1	Identical to PRF	P.R.R. Foster
Ps	C	N	1	PN		-	Pease, 1928; = PK 65-27°1 see PK Nomencl.	Author's name
PS=PSII=PS...II	E	NNN	180	*		1968P1	Philip+	Authors' initials
PS=PSVI=PS...VI		NNN	539	*		1972P2	Philip+	Authors' initials
PS	E	FFFF-NNNN	-	*		-	Used by Andersen, 1982 IBVS no. 2091	Palomar Schmidt
PSD		FFF-NNNN	66703	*		1929B1	Becker; several ref. from 1929 to 1938. Extends BSD	Potsdamer Spektral-durchmusterung
PSM		NNNN	11444	*		1968L1	Luyten; 2 ref.(1968,1970)	Palomar Survey Proper Motion ?
PSR	S	HHMM±DD	~ 500	PSR		1976TD	Terzian+; several ref. from 1976 to 1982	Pulsar
Pu	C	N	2	PN		-	Purgathofer, 1978 and 1980; see PK Nomencl.	Author's name
PuWe	C	N	1	PN			Purgathofer+, 1980. =PK 158+17°1; see PK Nomencl.	Authors' names

Acronym	R1	Format	Number	Type of object	R2	Code number	Reference	Meaning
Q		HHMM±DDd	-	QSO	R	198001	Identical to QSO. Systematic designation	Quasi-stellar object
Q		HHMM±DDd	125	QSO	R	198001	Osmer+; 2 ref. in 1980	Quasi-stellar object
QL		NN	22	(RAD)		1966Q1	Quigley+	Authors' initials
QS		HHMM±DDM	1	QSO		1969S2	Stockton	Quasi-stellar
QSO	S	HHMM±DDd	1491+58	QSO BL. OBJ.		1980HB	Hewitt+	Quasi-stellar objects
R=Ross	E	NNNN	1070	*		1925R1	Use Ross	Author's initial
R	(Z)	NN	16	Red *		1960L1	Luyten	Red (stars)
R	Z	NN	19	*		1960R1	Rodgers	Author's initial
R=RCW	Z	NNN	182	H II		1960R2	Use RCW	First author's initial
R	E	R	3	IVC		1971R1	Rickard	Author's initial
R	E	NNN	93	(RAD)		1958R1	Rishbeth	Author's initial
R=RMHB	E	NN	30	(RAD)		1965R1	Identical to NRC	First author's initial
R	E	NNN	158	SMC * + LMC *		1960F1	Feast+	Radcliffe Observatory
Raab		NNN	152	OCL		1922R1	Raab	Author's name
Rb	E	NNN	152	OCL		1922R1	Identical to Raab	Author's name
RB	E	NNN	271	G		1967R1	Rood+	Authors' initials
RCG		NN	38	Group of G		1977R1	Rose	Rose Compact Groups
RCW	A	NNN	182	H II	R	1960R2	Rodgers+	Authors' initials
RDE		NNa	12	(RAD)		1973E2	Ekers	R.D. Ekers
RDM		±DD NNNNN	900000	*		-	Use DM	?
RDS	C	NNNN	8065	Double *		1955R1	Rossiter. Use IDS Nomencl.	Rossiter Double star
RG		HHMM-DDMM	2	Faint red *		1981R1	Reid+; 2 ref. in 1981	Authors' initials
RHP		NNNN	9110	*		1964HF 1982HJ	Use BS or HR	Revised Harvard Photometry
RK		NNN	108	RFN		1968R1	Rojkovskij+	Authors' initials
RL		NN	63	Blue *		1971R2	Rubin+	Authors' initials
RMB		NNN	228	Blue OBJ.		1967R2	Rubin+	Authors' initials
RMHB		NN	30	(RAD)		1965R1	Identical to NRC	Authors' initials
RN		NN	87	(RAD)		1962R2	Ryle+	Authors' initials
RNO		NNN	150	Red Nebulous OBJ.		1980C1	Cohen	Red Nebulous object
Roberts	C	NNN	123	WR	R	1962R1	Roberts; see WR Nomencl. ref. 1981VH	Author's name
Rochester		-	1	(Gamma)		-	See table IV.1	Author's name
Ros	C	N	7	OCL		1960R3	Identical to Roslund	Author's name
Rose		NNN	124	Cluster of G		1976R2	Rose	Author's name
Roslund		N	7	OCL		1960R3	Roslund	Author's name
Ross=ROSS		NNNN	1070	*		1925R1	Ross; several ref. from 1925 to 1939	Author's name
Rossiter	C	NNNN	5534	Double *		1955R1	Identical to Rst	Author's name
ROT		NNNN		*		-	Use Uesugi ref. 1970U1 or Bernacca ref. 1970B1	Rotational velocities
ROX		NN	67	(X)		-	See table IV.2	Rho Oph X-ray sources

Acronym	R1	Format	Number	Type of object	R2	Code number	Reference	Meaning
RS		NN	53	Blue OBJ.		1965R2	Richter+	Authors' initials
RSF		LLL.ℓ±BB.b	330	RSF		1981A2	Avedisova	Region of Star formation
RS0		N	1	QS0		1979A1	Arp+	Radio-Source Object
RS0 or RS01				Red stellar OBJ.		1979C1	Craine+; the acronym is NIPSS	Red Stellar Object
Rst	C	NNNN	5534	Double *		1955R1	Rossiter. Use IDS Nomenc1.	Author's name
Ru	C	NNN	≥ 176	OCL		1966R1	Identical to Ruprecht	Author's name
Rup	C	NNN	≥ 176	OCL		1966R1	Identical to Ruprecht	Author's name
Ruprecht	C	NNN	176	OCL		1966R1	Ruprecht. See C Nomenc1.	Author's name
RW		NN	17	G in cluster of G		1973R1	Robinson+	Authors' initials
RWT		NNN	89	Blue *		1971R2B	Rubin+; continues RL designation, ref. 1971R2 A	Authors' initials
I SZ=ISZ		NNN	348 ?	Compact G		1978R2	Rodgers+	Southern Zwicky First Field
II SZ=IISZ		NN	76 ?	Compact G		1978R2	Rodgers+	Southern Zwicky 2nd Field
1S	A	HHMM±DDd	-	(X)		-	See table IV.2	
2S	A	HHMM±DDd	677 ?	(X)		-	See table IV.2	
S	Z	NNN	110	*		1970F1	Fehrenbach+	Liste supplémentaire
S	E	NNN	274	*		1976S2	Use Sand	Author's initial
S	E	NNNNN	> 10447	V *		-	Identical to Son	Sonneberg Variables
S	E	NN	40	*		1958S1	Use Strand	First author's initial
S	E	NNN	313	H II	R	1959S3	Identical to Sh2-	Sharpless
S	Z	NNN	306	H II	R	1950S1	Identical to Simeis	Simeis Obs.
S	Z	HHMM±DD.N	121	(RAD)		1971L1	Identical to Simeis	Simeis Obs.
S	E	NNN	237	SMC and LMC EM.*		1956H2	Identical to LHα 115-S or LHα 120-S	Stars
S	E	NNN	216	SMC *		1968S1	Identical to Sk	Sanduleak
SA	E	FFF-NNNN	67941	*		1918P1	Pickering+; 3 ref. from 1918 to 1924	Selected areas
SA	E	FF-NNNNN	~100000	*		-	Use SASpecial	Selected areas
Sa1-	C	N	8	PN	R	-	Sanduleak, 1974; see PK Nomenc1.	Author's name
Sa2-	C	NNN	392	PN		-	Sanduleak, 1975, table 1; see PK Nomenc1.	Author's name
Sa3-	C	NNN	153	PN		1967PKE	Sanduleak, 1976, table II; see PK Nomenc1.	Author's name
Šahbazjan		R or N	1	Cluster of G		1957S1	Not a GCL, identical to Shakhbazian	Author's name
Sand=SAND	P	NNN	274	*		1976S2	Sanduleak	Author's name
Sand	P	N	5	WR		1971S5	Sanduleak	Author's name
Sanduleak	P	NNN	274	M *		1976S2	Identical to Sand	Author's name
Sanduleak	P	N	5	WR		1971S5	Sanduleak	Author's name
Sanduleak	P	N	6	T Tau * in Orion		1971S2	Sanduleak	Author's name
Sanduleak	P	N or NNN	-	PN		-	Identical to Sa1-, Sa2- or Sa3-	Author's name
Sanduleak	P	-DD NNN	1272	LMC *		1970S1	Identical to Sk	Author's name
Sanduleak	P	NNN	216	SMC *		1968S1	Identical to Sk	Author's name

Acronym	R1	Format	Number	Type of object	R2	Code number	Reference	Meaning
SA0	A	NNNNN	258997	*		1966S2	Anon. Smithsonian Astrophys. Obs.	Smithsonian Astrophysical Obs.
SASpecial		FF-NNNN	~200000	*		1952V1	Van Rhijn, 2 ref. in 1952	Selected areas of the special plan
SaSt1-	C	N	3	PN		-	Sanduleak+, 1972 P.A.S.P. 84, 816; see PK Nomencl.	Authors' names
SaSt2-	C	NN	23	PN		-	Sanduleak+, 1972 Ap. J. 178, 183, table I; see PK Nomencl.	Authors' names
SB		NNN	737	SB		1967B6	Superseded by Batten, ref. 1978BF	Spectroscopic binaries
SB	E	NNN	957	SGP *		1971S3	Slettebak+	Authors' initials
SB	E,C	N	6	WR		1975S1	Stenholm	Stenholm B.
SBS		NN	84	Blue *		1961S1	Slettebak+	Authors' initials
SC	E	HHMM±DDd	10	Cluster of G identified with X-ray sources		1978L1	Lugger	Southern Clusters
Schulte		N	2	OB *		1956S1	Schulte	Author's name
Schuster	C	N	1	OCL			=C 1002-556 (ref.1979LY B)	Author's name
Schuster-West	C	N	1	OCL			=C 0149-447 (ref.1979LY B)	Authors' names
SchuWe-	P,C	N	2+1	Poss. PN + PN		-	Schuster+, 2 ref. (1976, 1980), see PK Nomencl.	Authors' names
SCHWE=ScWe	P,C	N	2+1	Poss. PN + PN		-	Identical to SchuWe-	Authors' names
Sd	P,C	N	1	PN		-	=PK 78+0°1; identical to She-	Author's name
SD	E	-DD NNNNN	-	*		-	Use BD	Südliche Bonner Durchmusterung
SEG		NN	83	*		1969S1	Sofia+	Authors' initials
SER		FFF-NN	186	G+ cluster of G		1974S1	Sersic	Author's name
Sersic		FFF-NN	186	G+ cluster of G		1974S1	Identical to SER	Author's name
Sersic Cluster	C	1	1	Probable GCL			=C 0435-589 (ref.1979LY B)	Author's name
SG	Z	NNN	306	H II		1950S1	Use Simeis	Authors' initials
Sh=SH	Z	NNN	-	H II		-	Identical to Sh1-, Sh2- or Simeis	Author's or observatory name
Sh1-	O	NNN	142	H II + RFN	R	1953S1	Sharpless; superseded by Sh2- for H II	Author's name
Sh2-	A	NNN	313	H II	R	1959S3	Sharpless	Author's name
SHA	Z	NNN	142	H II + RFN		1953S1	Identical to Sh1-	Author's name
SHA-		-	-	QSO		-	Quoted in SHB without any reference	Authors' names, list A
Shah=Shakhbazian		R	1	Cluster of G		1957S1	Shakhbazian. Not a GCL, see ref.1973RI; =No. 1 of Shakhbazian, ref.1973S4	Author's name
Shakhbazian		NNN	377	Cluster of G		1973S4	Shakhbazian; several ref. from 1973 to 1979	Author's name
SHB	Z	NNN	313	H II		1959S3	Identical to Sh2-	Author's name
SHB-		NNN	403	QSO		1977S1	Smith-Haenni	Authors' names list B
She-	E,C	N	1	PN		-	Sherwood, 1969; =PK 78+0°1 see PK Nomencl.	Author's name
Sher	C	N	1	OCL		1964S1	Sher; see C Nomencl.	Author's name
SHZ	Z	NNN	306	H II		1950S1	Use Simeis	Authors' names
Simeis=Simeiz		NNN	306	H II	R	1950S1	Shajn+; several ref. from 1950 to 1954	Simeis Obs.
Simeis=Simeiz		HHMM±DD.N	121	(RAD)		1971L1	Larionov+	Simeis Obs.
Siv		NN	11	H II		1974S3	Sivan	Author's name

Acronym	R1	Format	Number	Type of object	R2	Code number	Reference	Meaning
Sk	P	-DD NNN	1272	LMC *	R	1970S1	Sanduleak	Author's name
Sk=SK	P	NNN	216	SMC *		1968S1	Sanduleak; 2 ref. (1968, 1969)	Author's name
SKK	-	-	1	(RAD)		1974S2	Sistla+	Authors' initials
SL	E	NNN	137	DCLD		1976S1	Sandqvist+; 2 ref. (1976, 1977)	Authors' initials
SL	E	NNN	898	LMC OCL		1963S1	Shapley+	Authors' initials
SLS	Z	NNNN	5132	OB *		1971S4	Use LSS	Southern Luminous Stars
Sm		N	4	PN		-	Use Ste-	Author's name
SMC	Z	N	1	H II Super-shell		1980M2	Meaburn	Small Magellanic Cloud
SMC-B		NN	83	Carbon and		1980B1	Blanco+	SMC, bar
SMC-W		NN	56	late * in SMC		1980B1	Blanco+	SMC, wing
SMC X-		N	-	(X) in SMC		-	See p. 4.1	Small Magellanic Cloud, X-ray source
Smith		NN	16	WR		1968S2	Identical to LSWR	Author's name
Sn	E,C	N	1	PN			=PK 13+32°1; see PK Nomencl.	Shane
S.N.		YYYYA or a	-	SN		-	Use SN	Supernova
SN	C,S	YYYYA or a	-	SN		-	See V * Nomencl.; see also SN (Sargent+, ref.1974SS)	Supernova
SN	C,S	YYYYA	~ 380	SN		1974SS	Sargent+	Supernova
SNOW		NN	34	Cluster of G		1970S2	Snow	Author's name
SNR		LLL.±BB.b	124	SNR	R		Several ref., see Table I.3	Supernova Remnant
Son=SON	C	NNNNN	> 10447	V *		-	Several ref. from 1947 on; use V * Nomencl.	Sonneberg Variables
Sp	O	N	5	PN		-	Shapley, 1936; see PK Nomencl. for Nos 1-3	Author's name
SP	E		-	HVC		1968H1	Hulsbosch	South Pole Complex
SPF3		NNN	671	*		1974L1	Loyola+	Santiago - Pulkovo
SPZ	C	NNNN	> 2100	V *		-	Identical to SVS. Use V * Nomencl.	Sovetskaya Pere-menna ya Zvezda
SR	E	NN	26	EM**		1949S1	Struve+	Authors' initials
SR	E	NNNN	> 1002	* ring		1968I1	Isserstedt; 3 ref. from 1968 to 1973	Sternringe
SRN		NNa	-	* in RFN		-	See VdB (northern hemisphere); VdBH (southern hemisphere)	Stars in Reflection Nebulae
SRS		NNNNN	24900	Position *		1976H3	Hog+	Southern Reference Stars
S-S	E	NN	74	H II		1962S1	Struve+	Authors' initials
SS	E	NNN	601	* near NGP		1959S1	Identical to SSI or SSII	Authors' initials
SS	E	NNNN	5132	OB *		1971S4	Use LSS	Authors' initials
SS	E	NNN	455	EM**		1977S2	Stephenson+. We propose SS77-	Authors' initials
SS	E	NNN	179	EM. OBJ.		1973S2	Sanduleak+. We propose SS73-	Authors' initials
SS I	E	NNN	365	*		1959S1	Slettebak+, table 1	Authors' initials
SS II	E	NNN	236	*		1959S1	Slettebak+, table 2	Authors' initials
SSC		FF>NNNN	2550	*		1951E1	Elvius	Stockholm Spectral Catalogue
SSV		NN	70	(IR)		1976S5	Strom+; followed by STVS	Authors' initials
St		NN	42	H II		1950S2	Identical to Str (Strohmeier)	Author's name

Acronym	R1	Format	Number	Type of object	R2	Code number	Reference	Meaning
ST	E,P	N	5	WR		1966S1	Stephenson	Author's name
St1-	C	N	1	PN		-	St1-1 = Sa1-1; see note for Sa1-	Observer's name C.B. Stephenson
St2-	C	NNN	5	PN		1967PKE	Sanduleak, 1976, table 2; 5 objects from Sa3- list	Observer's name C.B. Stephenson
St3-	C	N	1	PN		-	Stephenson, 1978; = PK 217+2°1	Author's name
Ste	C	N	4	PN		1975S1	Stenholm, 1975, table II; see PK Nomencl.	Author's name
Stephenson	P	NNN	741	S *		1976S3	Stephenson	Author's name
Stephenson	P	N	1	OCL		1959S2	Stephenson, 1959; see C Nomencl.	Author's name
ST0		NNN	890	Supergiants in LMC		1976S7	Stock+	First author's name
ST0		NNN	~ 3400	(OPT)	R	1972S2	Stock+	First author's name
Stock	C	N	2	OCL	R	1956S2	Stock, see C Nomencl.	Discoverer's name
Stockton		HHMM±DDM	1	QS0		1969S2	Identical to QS	Author's name
Str	E	NN	42	H II		1950S2	Strohmeier	Author's name
STR	E	NN	40	PM *		1958S1	Identical to Strand	Author's name
STR	E	HHMM-DDd	957	Cluster of G		1977D1	Duus+	Stromlo Obs.
Strand		NN	40	PM *		1958S1	Strand+	First author's name
Stromlo		NNa	97	H II		1956G2	Use Gum	Stromlo Obs.
STSV		NN	19	* in DCLD		1976S8	Strom+	Authors' initials
STVS		NN	25	(IR)		1976S6	Strom+; follows SSV	Authors' names
StWr, StWr1- to StWr4-	C	NN	78	PN + Poss. PN	R	1972S2	Stock+, 1972; see PK Nomencl.	Authors' names
Supernova		NNNA or a	-	SN		-	Use SN	Type of object
SuWt	C	N	2+1	Poss. PN + PN			Identical to SchuWe	Authors' names
Svop		N	5	*		1969S3	Svopoulos	Author's name
SVS	C	NNNN	> 2100	V *		-	Several ref. from 1918 on. Use V * Nomencl.	Soviet Variable Stars
SwSt-	C	N	1	PN		-	Swings+, 1940; =PK 1-6°2; see PK Nomencl.	Authors' names
Sz		NNN	140	DCLD EM**		1974H2C	Schwartz, 1977, tables 3 to 9	Author's name
T	P	NNNN	1589	Blue * near NGP		1957I1	Identical to Ton	Tonantzintla Obs.
T	P	NNN	419	Blue * near SGP		1958C1	Identical to Ton S	Tonantzintla south galactic pole
T	Z	NNN	334	OCL		1930T1	Sometimes used for Trumpler	Author's initial
T=T62		NN	13	SMC *		1962T5	Thackeray	Author's initial
T	E	N	8	G		1973T2	Tifft+	First author's initial
T	P	NN	44	EM. G + Blue G		1956H4	Identical to Haro	Tonantzintla
Tau MC		N	2	MCLD		1978C1	Churchwell+	Tau Molecular Cloud
Tc	C	N	1	PN		-	Thackeray, 1950; =PK 345-8°1 see PK Nomencl.	Author's name
Terzan	C	NN	12	OCL + GCL		1971T1	Terzan, see C Nomencl.	Author's name
TG	E	NNN	103	Group of G		1976T1	Turner+	Authors' initials
Th1-	C	A	10	PN		1962T4	Thé, 1962, table V; see PK Nomencl.	Author's name
Th2-	C	A	3	PN		1962T3	Thé, 1962, table IV; see PK Nomencl.	Author's name

Acronym	R1	Format	Number	Type of object	R2	Code number	Reference	Meaning
Th3-	C	NN	68 (39PN)	*		-	Thé, 1964 and private communication; Th3-22 is a nova; see PK Nomencl.	Author's name
Th4-	C	NN	11	PN		-	Thé, 1964, Table I; see PK Nomencl.	Author's name
Th α 10-		NN	27	EM*		1961T1	Thé, table 2	Th stands for author's name, α for H α emission * and 10 for Contrib. Bosscha Obs. No. 10
Th α 14-		NN	62	EM*		1962T4	Thé, tables II, III, IV	Contrib. Bosscha Obs. No. 14
Th α 15-		NN	44	EM*		1962T1	Thé	Contrib. Bosscha Obs. No. 15
Th α 17-		NN	90	EM*		1962T3	Thé, tables I, II, III	Contrib. Bosscha Obs. No. 17
Th α 23-		NN	32	EM*		1964T1	Thé+, table II	Contrib. Bosscha Obs. No. 23
Th α 27-		N	8	EM*		1964T2	Thé	Contrib. Bosscha Obs. No. 27
Th α 34-		NN	43	EM*		1966T1	Thé, table I	Contrib. Bosscha Obs. No. 34
Th α -35-		NNN	231	EM*		1966T2	Thé, Tables II, III	Contrib. Bosscha Obs. No. 35
TMC=TMC-	Z	N	3	MCLD		1978C1	Use Tau MC	Tau Molecular Cloud
TME		NNNN	4135	*		1962T2	Tuzi	Tokyo Mitaka Catalogue of Equatorial stars
TMSS				(IR)			This is the name of the Catalogue. Use IRC for the source names	Two Micron Sky Survey
TN	P	NNNN	?	WD		1957I1	See WD Nomencl. Use Ton	Tonantzintla Obs.
Tol=TOL		NNN	116	EM.G+ QSO		1976S4	Smith+	Tololo Obs.
Tombaugh	C	N	(5)	OCL		1938T1	Tombaugh; see C Nomencl.	Author's name
Ton=TON	P	NNNN	1589	Blue * near NGP		1957I1	Iriarte+; 2 ref.(1957,1959)	Tonantzintla Obs.
Tonantzintla	P	NNN	78	Flare *		-	Harot+, 1969: use V * Nomencl.	Tonatzintla Obs.
TonS=Ton S=TON S	P	NNN	419	Blue * near SGP		1958C1	Chavira	Tonantzintla South
Tr	E	NNN	334	OCL		1930T1	Identical to Trumpler	Author's name
TR	E	-	1	Dwarf G		1977T2	Thonnard+	Authors' initials
TrBr		N	4 (1PN)	Diffuse OBJ.		-	Terzan+, 1978; TrBr 4 = PK 357+1°3; see PK Nomencl.	Authors' names
Trumpler	C	NNN	334	OCL		1930T1	Trumpler; see C Nomencl.	Author's name
TS		NNN	?	WD		1958C1	Use Ton S	Tonantzintla South
TTV=TTV-		N	3	V *		-	Kestlane+, 1970; use V * Nomencl.	Tartu Variables (Tartu Obs.)
TV	E	N	5	V *		-	Kaho, 1956; use V * Nomencl.	Tokyo Variables
1U	A	HHMM $\pm$ DD	-	(X)		-	See table IV.2	Uhuru satellite
2U	A	HHMM $\pm$ DD	125	(X)		-	See table IV.2	id.
3U	A	HHMM $\pm$ DD	161	(X)		-	See table IV.2	id.
4U	A	HHMM $\pm$ DD	339	(X)		-	See table IV.2	id.
U	Z?	NN	19	UV OBJ. + QSO		1980A1	Arp	Ultraviolet
U	Z	NNNN	12921	G		1973N1	Use UGC	Uppsala General Catalogue
UB		NN	16	UV OBJ.		1979A2	Arp+	Ultraviolet-Blue

Acronym	R1	Format	Number	Type of object	R2	Code number	Reference	Meaning
UBA		NNa	27	(RAD)		1959M2	Identical to MUL	University of Bonn List A
UCL		NNa	46	(Far IR)		1973E1	Emerson+; 2 ref. (1973, 1975)	University College London
Uesugi		NNNN	3951	*		1970U1	Uesugi+	First author's name
UGC	A?	NNNN	12921	G		1973N1	Nilson	Uppsala General Catalogue
UGCG	Z	NNNN	12921	G		1973N1	Use UGC	Uppsala General Catalogue of Galaxies
UH α		NNN	141	EM*		1973W2	Welin	Uppsala H α
UI	E	DD-NNN	1127	*		1963U1	Upgren	Upgren Intermediate spectral type
UKS	S	HHMM-DDd	?	(OPT)	R	-	-	United Kingdom Schmidt
UL	E	DD-NNN	4027	Late *		1962U1	Identical to NGP	Upgren late spectral type
UM	E	NNN	655	EXGL. EM.OBJ.		1977M1	MacAlpine+; several ref. from 1977 to 1981	University of Michigan
UOA		NN	27	(IR)		1973L2	Low	University of Arizona
UoB	E	NNa	27	(RAD)		1959M2	Identical to MUL	University of Bonn
Upgren		NNN	253	*		1968G1	Identical to VVO; use VVO	One of the authors
Upgren		-	1	OCL		1965U1	Upgren+; see C Nomencl.	First author's name
US	E	NNNN	2363	Faint blue OBJ.		1981U1	Usher; several ref. from 1981 to 1982	Author's name
USN	O	NNNNN	20705	*		1968B3	Blanco+. Superseded by CDS (Strasbourg center) updated compilation	US Naval Observatory
UT	E	HHMM $\pm$ DDd	3263	(RAD)		1973D1	Douglas+; 3 ref. from 1973 to 1975	University of Texas
UTRAO	E	HHMM $\pm$ DDd	3263	(RAD)		1973D1	Identical to UT	University of Texas Radio Astron. Obs.
UV	S	HHMM $\pm$ DD	-	UV OBJ.		1983C1	Carnochan+	Ultraviolet object
V		NNN	895	M *		1943V1	Vyssotsky. Use McC	Author's initial
V	S		~30000	V *	R	1969KP	Kukarkin+; several ref. from 1969 to 1976; V * Nomencl.	Variable stars
vA=VA		NNN	778	Cluster *		1969V2	Van Altena	Author's name
Van Bueren		NNN	152	* in Hyades		1952V2	Van Bueren	Author's name
Van den Bergh		NNN	9	OCL		1957V1	Van den Bergh; see C Nomencl.	Author's name
Van den Bergh	P	NNN	243	Dwarf G		1959V1	Identical to DDO	Author's name
Van den Bergh-Hagen	P	NNN	262	OCL + GCL		1975V2	Van den Bergh-Hagen	Authors' names
Van Wijk		NN	16	LMC *		1952V3	Van Wijk	Author's name
VAR=VAR.		-	-	V *		-	Use V * Nomencl.	Variable
vB=VB	E	NNN	152	* in Hyades		1952V2	Identical to van Bueren	Author's name
vB=VB	E	NN	29	Faint *		1961V1	Van Biesbroeck	Author's name
VB	O,C	NN	16	V *		-	Use V * Nomencl.	Variables Bologna
VB=VBe	C	N	3	PN	R		Van den Bergh, 1978 and 1979	
vBH=VBH	P	NNa or NNa'	212	* in RFN		1975V1	Use VdBH	Authors' initials
VBRC	C	N	7	PN			Identical to BRABCMS	Authors' names

Acronym	R1	Format	Number	Type of object	R2	Code number	Reference	Meaning
Vd 1-		N	9	PN		-	Vandervort, 1964 ; see PK Nomencl.	Author's name
vdB=VdB=VDB		NNNa	188	* in RFN		1966V1	Van den Bergh ; 2 ref. (1966, 1968)	Author's initials
vdB=VdB=VDB		NNN	158	RFN		1966V1A	Van den Bergh	Author's name
vdBH=VdBH		NNa or NNa'	212	* in RFN		1975V1	Van den Bergh+ ; several ref. from 1975 to 1980	Authors' initials
vdBH=VdBH		NN	93	RFN		1975V1A	Van den Bergh+	Authors' initials
Ve		NN	7	PN		1957V2	Velghe, 1957 ; see PK Nomencl.	Author's name
Ve1- to Ve7-		NN	93	EM**+ PN		1957V2	Velghe	Author's name
VES		NNN	504	EM**	R	1974C1	Coyne+ ; several ref. from 1974 to 1978	Vatican Emission Stars
vMa	C	N	2	*	R	-	See WD Nomencl.	Van Maanen
Von Zeipel		NNNN	1571	* in GCL		1908V1	Von Zeipel	Author's name
VR	E	?		(RAD)			Identical to VR0, ref. ? (which one)	
VRMF		NNN	124	EM**		1980V1	Vega+	Authors' initials
VR0	E	NN	69	(RAD)		1964Y1	Yang+	Vermilion River Obs.
VR0	E	DD.HH.NN	1591	(RAD)		1965M1	MacLeod+ ; several ref. from 1965 to 1971	Vermilion River Obs.
VS	E	NN	31	DCLD *		1975V4	Vrba+	2 first authors' initials
VSF		FFF	2	V *		1978G1	Grayzeck	Variable Star Field
VSS		NNN	317	* in DCLD		1976V2	Vrba+ ; 5 tables each numbered from 1	Authors' initials
VSST		NN	18	(IR)		1976V1	Vrba+	Authors' names
VV	E,C	NNN	~ 500	V *		-	Use V * Nomencl.	Vatican Variables
VV	P,C	NNN	288	PN	R	-	Vorontsov-Vel'jaminov, 1948 ; see PK Nomencl.	Author's initials
VV'	P,C	NNN	584	PN	R	-	Vorontsov-Vel'jaminov, 1962 ; see PK Nomencl.	Author's initials
V-V1-	P	N	9	PN+ H II		1961V2	Vorontsovo-Vel'jaminov, 1961 ; see PK Nomencl. for the 6 PN. Might be VV1-	Author's initials
V-V2=VV2-							is not used	
V-V3=VV3-	C	N	6	PN		-	Identical to VVKDA	First author's initials
VVKDA-	C	N	6	PN		-	Vorontsov-Vel'jaminov+, 1972 ; see PK Nomencl.	Authors' initials
VV0		NNN	272	PM *	R	1968G1	Grossenbacher+ ; several ref. from 1968 to 1983	Van Vleck Obs.
Vy1-		N	4(3PN)	*		-	Vyssotsky, 1942 ; see PK Nomencl. except for No.3	Author's name
Vy2-		N	3	PN	R	-	Vyssotsky+, 1945 ; see PK Nomencl.	Author's name
VYS		NNN	895	M *		1943V1	Use MCC	Author's name
VYSM		NNN	895	M *		1943V1	Use MCC	Author's name
VYSS0.M.		NNN	895	M *		1943V1	Use MCC	Author's name
VYSS0-M.		NNN	895	M *		1943V1	Use MCC	Author's name
v.Z.		NNNN	1571	* in GCL		1908V1	Identical to Von Zeipel	von Zeipel

Acronym	R1	Format	Number	Type of object	R2	Code number	Reference	Meaning
19W	D	NNN	123	(RAD)	R		Wouterloot+, 1979	W stands for Wester-bork
36W	D	NNN	?	(RAD)	R	1983B1	Bystedt+	W stands for Wester-bork
W	(Z)	NNNN	15106	*		1953W1	Identical to Wilson	Author's initial
W	Z	NNNN	1744	*		1970W3	Identical to Woolley	Author's initial
W		NNNN	1566	*		1919W1	Use Wolf	Author's initial
W	E	NNN	239	Cluster * + V *		1956W1	Identical to WALK	Author's initial
W	Z	NNNN	1887	EM. OBJ.		1966W2	Identical to WR15-	Author's initial
W	E	NNNN	13820	Faint OBJ.		-	Unpublished. Cited in Weistrop, 1972, Astron. J. 77, 366	Weistrop
W	A ?	NN	82	(RAD)		1958W1	Westerhout	Author's initial
WALK		NNN	239	Cluster * + V *		1956W1	Walker; NGC 2264 *	Author's name
Walker		NNN	239	Cluster * + V *		1956W1	Identical to WALK	Author's name
WAMS		NNN	550	*		1980W3	Wamsteker	Author's name
Wat		N	7	OCL		1979M2	Moffat+; several ref. from 1979 to 1980. See C Nomencl.	Waterloo (Canada)
WB	E	NNN	110	(RAD)		1960W1	Use CTB	Authors' initials
WD	S	HHMM±DDA or HHMM±DDd	560	WD		1977MS	McCook+; 2 ref.(1977,1980)	White Dwarfs
We	C	a	6	PN		-	Weinberger, 1982; see PK Nomencl. ref. 1967PK F	Author's name
We1-	C	NN	12	PN		-	Weinberger, 1977; see PK Nomencl.	Author's name
We2-	Z,C	NNN	6	PN	R	1967PKC	Weinberger, 1977; see PK Nomencl.	Author's name
We3-	C	N	1	PN		-	Weinberger, 1978; =PK 44+10°1; see PK Nomencl.	Author's name
Weedman		N	9	BSO		1971W1	Weedman	Author's name
Weinberger	P	NNN or A	225	G		1980W1	Weinberger; 2 ref. in 1980	Author's name
WeSa=WeSb	C	N	6	PN		-	Weinberger+, 1981; see PK Nomencl.	Authors' names
Westerlund		N	2	OCL	R	1968W1	Westerlund; see C Nomencl.	Author's name
Wg	E	NN	54	WD		1973W1	Wegner; 2 ref.(1973,1975)	Author's name
WIL		NNNN	15106	*		1953W1	Use Wilson	Author's name
Willey		NNN	299	GCL *		1961W1	Willey	Author's name
WILS		NNNN	15106	*		1953W1	Use Wilson	Author's name
Wilson		NNNN	15106	*		1953W1	Wilson	Author's name
WK	E	NNN	478	(RAD)		1969W1	Windram+	Authors' initials
WKB		HHMM/±DD.d	1069	(RAD)		1966W1	Williams+	Authors' initials
Wolf=WOLF		NNNN	1566	*		1919W1	Wolf	Author's name
Woolley		NNNN	1744	*		1970W3	Woolley+	First author's name
WOR	E	NN	27	M *		1962W1	Worley	Author's name
WORC		NNN	302	Carbon * in LMC		1978W1	Westerlund+	Authors' initials
WP	E	NN	15	Red *		1977W3	Weinberger+	Authors' initials
WPC		NNN	20705	*		1968B3	Identical to USN	Washington Photo-electric Catalogue
Wr	E	NNN	188	V *		-	Use V * Nomencl.	Weber R.
WR	E,R	NNN	159	WR		1981VH	Van der Hucht+	Wolf-Rayet Stars
WR15-		NNNN	1887	EM* *	R	1966W2	Wray, table XV	Author's name

Acronym	R1	Format	Number	Type of object	R2	Code number	Reference	Meaning
WR16-		NNN	423	PN		1966W2	Wray, table XVI	Author's name
WR17-		NNN	113	Poss. PN		1966W2	Wray, table XVII	Author's name
WR18-		NNN	323	Carbon * + S *		1966W2	Wray, table XVIII	Author's name
WR19-		NN	55	EM. OBJ.	R	1966W2	Wray, table XIX	Author's name
WRA		NNNN	1887	EM. OBJ.		1966W2	Identical to WR15-	Author's name
WRAY	E	NNNN	1887	EM. OBJ.		1966W2	Identical to WR15-	Author's name
WS	E	NN	53	WR in LMC		-	Westerlund+, 1963; compiled in ref. 1981BR	Authors' initials
WSDH	C	N	1	PN		-	Weinberger+, 1982; =PK 197-6(1); see ref. 1982AC	Authors' initials
WSRT		HHMM±DDWNA	1942	(RAD)		1973K1	Katgert+; several ref. from 1973 to 1978	Westerbork Synthesis Radio Telescope
WU	E	HHMM±DD.d	12	(Far IR)		1974F4	Friedlander+	Washington University
1XRS	A	HHMM±DDd	517	(X)		-	See table IV.2. Identical to AN 1 XRS	X-ray sources
2XRS	A	HHMM±DDd	677	(X)		1982AM	See table IV.2. Identical to AN 2 XRS	X-ray sources
XB	A	HHMM±DDd	-	(X)		-	See table IV.2	X-ray burster
Y	E	±DD NNNN	~130000	*		1934S1	Identical to YZ	Yale Catalogue
Y	E	NN	69	(RAD)		1964Y1	Identical to VRO	First author's initial
Yale	P	NNNN-N	7534	*		1952J1	Identical to Jenkins	Yale Obs. Univ. Catalogue
Y-C	E,P	NN	18	Very red *		1973C1	Cesco, table 1	Yale - Columbia
Y-C	E,P	NN	33	PN		1973C1	Cesco, table 2; see PK Nomencl. Identical to CeGi-	Yale - Columbia
YC	P	NNNN.N	7534	*		1952J1	Identical to Jenkins	Yale Catalogue
YC	E,P	HHMM±DD	40	Pec. G		1971L2	Identical to Lü	Yale - Columbia
YCSP	P	NNNN.N	7534	*		1952J1	Identical to Jenkins	Yale Catalogue of Stellar Parallaxes
YCTSP	P	NNNN.N	7534	*		1952J1	Identical to Jenkins	Yale Catalogue of Trigonometric Stellar Parallaxes
YM		NN	47	H II + RFN	R	1955J1	Johnson; 2 ref. (1955, 1956)	Yerkes-McDonald Observatories
YP	P	NNNN.N	7534	*		1952J1	Identical to Jenkins	Yale Catalogue of Parallaxes
YW	E	NN	69	(RAD)		1964Y1	Identical to VRO	Authors' initials
YZ=YZC	E	±DD NNNN	~130000	*		1934S1	Schlesinger+; several ref. from 1934 to 1954	Yale Zone Catalogue
I Zw to VIII Zw		NNNa	~4200	G		1971Z1	Zwicky+; 2 ref.(1971,1975)	Authors' names
Z	E,S	HHMM±DDd or NN	-	(RAD)		1981A1	Amizkhanyan+	Zelenchukskaya Survey
Z	E	FFF-NNN or FFF-NNN/N	31350	G		1960Z1	Zwicky+; several ref. from 1960 to 1968	First author's name

Acronym	R1	Format	Number	Type of object	R2	Code number	Reference	Meaning
Z	E	FFFNNN	737	G		1976T1	Turner+	Zwicky field
ZI(letter)	Z			V *		-	Zinner, 1929 ; see V * Nomencl.	Zinner
ZI(numeral)	O,Z	NNN	216	SN	R	-	Zwicky. Cross-identified with SN	Zwicky, first
ZII(numeral)	O,Z	NNN	> 357	SN	R	-	Zwicky, revised. Cross- identified with SN	Zwicky, second
ZC	E	HHMM±DDMM	~ 9700	Cluster of G		1960Z1	Parkes designation for Zw	Zwicky Clusters
ZL	E	NNN	218	Blue *		1967Z1	Zwicky+	Authors' initials
ZNG	E	NN	154	GCL *		1972Z1	Zinn+	Authors' initials
Z-SN	O,Z	NNN		SN	R	-	Zwicky ; cross-identified with SN	Zwicky-Supernova
Zw	E,P	FF-NN	~ 9700	Cluster of G		1960Z1	Zwicky+ ; several ref. from 1960 to 1968	First author's name
ZwC ₂		HHMM±DDMM	~ 9700	Cluster of G		1960Z1	Identical to ZC	Zwicky Clusters
ZWICKY	P		1 ?	GCL ?		1970ARB	Identical to Palomar 15 =C 1657-004	
γ		LLL±DD	-	(Gamma)		-	See table IV.1 Identical to Gy	Gamma-ray
π		NNNN	2982	Ori Cluster *		1954P1	Identical to P (Parenago)	Russian letter

REMARKS TO TABLE II

Acronym	Code number	Remark
A	-	73PN, Abell 1955 ; 86 PN, Abell 1966 Might be designated as A55 and A66. The 1955 list is obsolete
AnC ℓ	1978P3	These clusters are C 0104+653, C 1755-050, C 2306+606, C 2348+620 (Lyngå, 1983, private communication)
APM	-	Quoted in Lü, 1971, A.J. 76, 775 (YC=Lü). Is it Arp and Madore, 1977, Quart. J. Roy. Astr. Soc. 18, 234-241, or a later catalogue ?
AS	1950M1	39 are compiled as PN, see PK Nomencl.
Basel=Ba	1971B1	The last discovered cluster is Basel 20 = C 0931-561, Topaktas+Fenkart, 1982, Astr. Astrophys. Suppl., 49, 475-482. Ref. 1979LY also quotes number 11.1 and 11.2
Berkeley	-	Ref. 1979LY gives 90 clusters numbered between 1 and 104. First published in the first edition of the Catalogue of Star Clusters and Associations, 1958 ? (see ref. 1970AR A)
B ℓ 3-	-	14 PN excerpted from a list of 22 objects
CBS	-	Case blue star
CG	-	Case Galaxy
CG	1975A3	Compact G. Also format H/MM+DD or HH/MM+DD (rounded, not truncated, coordinates)
CnMy	-	1 PN excerpted from a list of 21 objects
CRL	1975W1	First defined in ref. 1975W1 (identical to AFCRL, format NNNN). The confirmed sources are in the AFGL Catalogue (ref. 1976P1) with the same number. CRL 618 = PK 166-6°1 and CRL 2688 = PK 80-6(1) are considered as protoplanetary nebulae ; CRL 2688 is also called the Egg Nebula
CSO	-	Case stellar object, see remark for CBS
DM	-	Durchmusterung Nomenclature, first introduced in the HD Catalogue (2nd column) : BD for stars north of δ (1875) = - 23°, CD (Cordoba) for - 23° > δ 1875 > - 52°, CPD (Cape) for stars south of - 52° See BD, CD or CPD. 900 000 stars
DR	1966D2	Nos 2, 8, 14, 24, 25, 26 are not defined
ESO	1974H1 and 1982LA	687 objects from these catalogues are compiled as PN
Fg	-	3 PN excerpted from a list of 31 objects
GS	1979H1	The numbering GS1 and GS2 has been introduced by Watanabe (ref. 1982W1) for two H I shells in the anticenter. See Weaver's Jet in Table VI.
Gum	1955G2	Nos 27, 47, 52, 60 are compiled as PN
H2-	-	H2-9 is a Nova
H2O	-	May be either an acronym (with format LLL. $\ell\ell$ $\pm$ BB.bb) or a specifier
He3-	-	23 objects are compiled as PN, see PK Nomencl.
Hf	1953H5	Nos 4, 38, 39, 48, 62, 69 are compiled as PN
HH-	1974H2	HH-28 = LP 415-1166, HH-29 = LP 415-171, see ref. 1954H1 Q
Holetschek	-	OCL ; not quoted in 1970AR nor in 1979LY
Hubble	-	PN ; Nos 10 and 11 are not compiled as PN
IRC	1969N1	The first two digits (the second is zero) indicate a range in declination : - 10 for - 15 to - 5, 0 for - 5 to + 5, + 10 for + 5 to + 15 The catalogue is often named TMSS (Two-Micron Sky Survey)
J	-	Jonckheere, R., 1962, Catalogue général de 3350 étoiles doubles de faible éclat observées de 1906 à 1962. Edit. Observatoire de Marseille, Marseille Nos 1 - 3355. References for these objects are collected p. 7 and in the Index, which gives 2000 right ascension. Nebulae, Novae are listed p. 418
Ka1-=Kj1-	-	No.1 is Sh2-272
KS	1966K3 1967K1	OB * OCL *
L=LDN	1962L1	This acronym is also used for stars in the RCrA association : Knox-Shaw, H., 1920, Helwan Obs. Bull. No.20, quoted by Glass+, 1975, M.N.R.A.S., 172, 227-233 L 134N is the core of L 183
LMC X-	-	X-ray sources in LMC, see a soft-ray study and positions accurate to 8" in Long+, 1981, Ap. J., 248, 925-944

Acronym	Code number	Remark
Lo	-	Longmore, 1977 ; No.15 is not compiled as PN
LSWR	1968S2	Nos 1, 2, 9, 10, 13 were deleted from the WR Catalogue, ref. 1981VH No.1 = St1-1 = PK 284-5°1 is a PN
Markarian	1967M1	Galaxies ; about 2% of these objects are galactic (Huchra, 1977, Ap. J. Suppl., 35, 171): for instance Markarian 914 = LkH α 233 belongs to Lac OB1
MC5	-	In preparation for Monthly Notices microfiche Area : α = 01h15m to 11h30, δ + 10° to + 12°, flux density limit 0.2 Jy (M.I. Large, february 1983, private communication)
MCG	1962V1	The first 5: digits, separated by a hyphen, correspond to a field of the POSS prints (see Appendix B of Dixon and Sonneborn, 1980) for instance, 9-11-46 is the 46th in the field 11 of the 9th declination zone (+ 54°)
Min 2-	1947M1	Min2-1 (Table I) is stated to be non existent in ref. 1967PK A
MWC	1933M2	15 are compiled as PN, see ref. 1967PK F
NIPSS	1979C1	The letter C in the format stands for « chart »
OH	-	May be either an acronym (with format LLL.ll±BB.bb) or a specifier, as in DR 21 (OH)
OHP=HP= Haute Provence	-	OHP1=An. (Dufay, Berthier, Morignat) = C 1727-299 OPH2, 3, 4, 5, are Terzan1, 2, 4, 6 respectively
Palomar	1955A1	Nos. 1 - 13, Abell ; subsequently : Palomar 14 = Arp1 = C 1608+150, see ref. 1960A1 Palomar 15 = An. (Zwicky) = C 1657-004
PC	-	(Planetary Nebulae) Nos 11 - 24, a continuation of PB (Peimbert+,1960)
Pe2-	-	No. 6 is a Nova (ref. 1967PK A)
PK	1967PK	PN and possible PN (8 ref.) It is noteworthy that a number of objects cross-identified with a PK number are not planetary nebulae (a list of misclassified nebulae is given in 1967PK A, C, E, F, G, H). However they keep this designation, which is subsequently no more available for another object
PLE	1980WP	Might be advisable to use as an acronym for plerions SNR, instead of G
Q	1980O1	As a type of object, Q may mean QSO <u>or</u> old nova
RCW	1960R2	26 objects are compiled as PN
Roberts=MR	1962R1	19 stars are deleted from the WR Catalogue, see ref. 1981VH, table IV
S		S for Sh2- (H II region, Sharpless) is of current use except in eastern Europa where it generally stands for Simeis (H II region, Shajn + Gaze)
=Sh2- or Simeis	1959S3 1950S1	S 147, a wellknown galactic SNR, should be labelled Simeis 147
Sal-	-	8 PN; Sanduleak, 1974, P.A.S.P. 86, 215-216, Table 1. Under this acronym, we wish to illustrate how confusing and inconsistent acronyms may originate and prolifer. The objects are not numbered in the original paper, as each is given one (or two) name(s) then available (see below, col. 2). Subsequently, the acronym Sal- was introduced (ref. 1967PK C) but only for Nos 4, 5, 8, though all objects are quoted under their PK names in the same reference : this follows the very common use of quoting only one synonym. The other names quoted in 1967PK C, (col. 5 below) make use of 3 new acronyms, namely St1- (for Stephenson), StWr, VVKDA. Later (ref. 1967PK F, first draft, 1982), they were transformed into Spl-, StWr2- and StWr4- (differentiating between the different tables of PN in ref. 1972S2 ; a reference which contains 30 tables all without any proposed acronym) and V-V3- (acronym introduced by Kohoutek, ref. 1967PK G). We collected here all the available synonyms. Col. 1, 2, 3 : serial number (not printed), name of the object and observer, as quoted in the original paper : CBS = C.B. Stephenson, NS = N. Sanduleak, SW = Stock + Wroblewski ; notice that HEN means He3- and WRA means WR15- (Table XV in Wray's Thesis). Col. 4 : PK number (from ref. 1967PK C and G ; PK number 330-2°2 and -2°3 are erroneous in ref. 1967PK F). Col. 5 : Sa2- Col. 6 : only synonym with the PK number given in ref. 1967PK C. Col. 7 : other synonyms given in ref. 1967PK F.

Acronym	Code number	Remark						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Sa1- (continued)		Sanduleak, 1974			Ref. 1967PK C	Ref. 1967PK F		Note
	Serial number	Name of the object	Observer	PK	Name	Sa2-	Other synonyms	
	1	WRA 490, HEN 358	CBS	284-5°1	St1-1	51	Sp1-1	(1)
	2	HEN 959	SW	317+19°1	StWr 9	102	StWr4-9	
	3	WRA 1407	NS,SW	336+8°1	StWr 10	132	StWr4-10	
	4	WRA 1441	NS	330-2°3	Sa1-4	138	Sa1-4	
	5	WRA 1633	NS	340-4°1	Sa1-5	177	Sa1-5	
	6	WRA 1818	SW	340-14°1	StWr 41	278	StWr2-41	
	7	HEN 1716	NS	14-5°1	VVKDA 5	351	V-V3-5, V-V Anon.2	
	8	AS 326	NS	20-5°1	Sa1-8	370		
(1) This is also LSWR 1, first misclassified as a WR star.								
Obviously the Sa1-, StWr, V-V Anon. and VVKDA acronyms are to be forgotten, as unnecessary or confusing.								
Sh1-	1953S1	Nos 3, 5, 6, 15, 72, 89, 118 are compiled as PN, see ref. 1967PK F						
Sh2-	1959S3	Nos 4, 6, 20, 52, 61, 71, 95, 116, 167, 176, 179, 189, 267, 274, 290, 313 are planetary nebulae, see ref. 1967PK ; Nos 80, 99, 128, 207, 266, 267, 271, 272, though compiled as PN, are H II regions.						
Simeis	1950S1	See the remark for S=Simeis						
Sk	1970S1	LMC *. Sometimes quoted with the format NNN-DD or -DD/NNN						
SMC X-		See also the X-ray surveys of SMC by Seward+, 1981, Ap. J. 243, 736-743 ; Inoue+, 1983, I.A.U. Sympos. 101, held Venice, in press.						
SNR	-	This acronym, though used only for "Kepler's SNR" and similar cases, might be advisable instead of G for galactic supernovae, as well as PLE for plerions						
STO	1972S2	The authors proposed no acronyms for the objects of 30 Tables. These objects have been later quoted under different acronyms, even IIc (or similar), from the Table numbering. See remarks for Sa1- and StWr						
Stock	1956S2	The other clusters (Stock, 1956, 1957) were published for the first time in the first edition of the Catalogue of Star Clusters and Associations, 1958, see ref. 1970AR A						
StWr, StWr1- to StWr4-	1972S2	PN ; this paper contains 4 Tables of PN or possible PN. Only a few objects are compiled in the PK Nomenclature. StWr without a serial number for the table number may be confusing, see remark for Sa1-						
UKS	-	Quoted in Ap. J. 237, 432 (1980). Plates taken with the 48 inch UK Schmidt Telescope						
V	1969KP	Variable Star Nomenclature : defined in the General Catalogue of Variable Stars (GCVS) (Ref. 1969KP). The first 334 stars discovered to be variable in a constellation are designated by capital letters and their combinations (R,S,...Z,RR,...RZ,SS,...ZZ, AA...AZ,...QZ ; notice that the J letter is never used), supplemented with the 3 letters abbreviated constellation designation (ex. R And, IV Cep). The following stars are designated V335, V336 and so on, also with constellation abbreviated.						
VB=VBe	-	VBe1 = G 339.2-0.4 = PK 339-0°1 is described in ref. 1973VM B, § Vd p. 124 ; VBe2 and VBe3 are near the SNR G 326.3-1.8						
VES	1974C1	The numbering in 1974C1 E does not continue in sequence, the Nos 420 - 595 being set apart for stars at longitudes between 94° and 127° to be studied later						
vMa	-	The only star thus quoted is vMa2 = Gliese 35 = Wolf 28 = van Maanen's star. This star is a white dwarf with large proper motion. Use Gliese 35						
VV		Vorontsov-Velyaminov, 1948 ; Nos 13, 25, 145, 183, 187, 200, 231, 277, 280, 282, 283 are not compiled as PN in ref. 1967PK F						
VV'		Vorontsov-Velyaminov, 1962 ; Nos 19, 36, 57, 100, 106, 188, 337, 408, 416, 437, 517, 566, 570, 572, 573, 582 are not compiled as PN in ref. 1967PK F						
VVKDA		PN. Acronym introduced in ref. 1967PK C (1977) while Kohoutek (Ref. 1967 PK G, same year) uses V-V3.						

Acronym	Code number	Remark
VV0	1968G1	List XV, just issued, is : Upgren + Kuzma, 1983, A.J. <u>88</u> , 132-134. Table 1, N = 19 (Nos 254 - 272)
Vy2-		The PN are Nos 2, 3, 11, excerpted from a longer list
19W	-	Wouterloot+, 1979, Astr. Astrophys. Suppl. <u>36</u> , 323-330
36W	1983B1	
etc.		
		New Nomenclature used for Westerbork surveys in selected regions ; the first two digits characterize a given paper (it may contain more than one field). 19W32 = PK 359+1°3
We2-	1967PK C	A "private numbering", only quoted in the 2nd column of ref. 1967PK C for 6 objects
Westerlund	1968W1	Westerlund 1 = C 1644-457, Westerlund 2 = C 1022-575
WR15-	1966W2	53 objects are compiled as PN (ref. 1967PK F)
WR19-	1966W2	4 objects are compiled as PN (ref. 1967PK F)
YM	1955J1	YM 16, 28, 29 are PK 38+2°1, 204-8°1, 205+14°1 respectively
ZI, ZII, Z-SN	-	Zwicky Master Lists of supernovae since 1885, cross-identified with SN number in Kukarkin+, ref. 1969PK, 2nd suppl. 1974, p. 354, 3d suppl. 1976, p.339 ZII revised list different from ZI and different from Z-SN ZI Nos 1 - 216 used up to the middle of 1968 ZII reaches no. 413 in 1974

PART III
REFERENCES

The references are ordered by year and, inside the same year, by the first author's initial followed by a serial number (or by a second letter for the comprehensive Catalogues collected in Table I.3 ; this letter is ordered before the serial number : Ex. : 1974BF, 1974B1, 1974B2...).

The year is generally the year of first introduction of the corresponding acronym. Thus, the acronym LKH (= LKH α) was introduced in 1954 and continued in several publications ; the corresponding references are coded 1954H1 A (1st publication, issued in 1954), 1954H1 B,..., 1954H1 Q (issued in 1979).

In the right column the acronyms and all their synonyms are given. In the case of several acronyms introduced in different tables of the same paper, the acronyms are written on the line where the relevant table is described, instead of the first line. The acronyms given qualification Z in col. 2 of Table II (which means : to be rejected) are given in parentheses.

Tables IV, V, VI include their own references.

TABLE III - REFERENCES

1784M1	MESSIER, C. published in : <i>Connaissance des Temps</i>, 1784, Paris N = 110 (Nos 1 - 110) . Reproduced in : Mallas, J.H., Kreimer, E. 1978, <i>The Messier Album</i>, Sky Publ. Corp., Cambridge	M
1847B1	BAILY, F. 1847, <i>Brit. Ass. Adv. Sci.</i>, London A catalogue of those stars in the "Histoire Céleste Française" of J. DELALANDE for which tables of reduction to the epoch 1800 have been published by Professor SCHUMACHER. N = 47390 (Nos 1 - 47390) The most often quoted Lalande stars are often in the FK4 catalogue.	LALANDE = Lalande = Delalande (= L) = LAL
1886A1	Bonner Durchmusterung des nördlichen Himmels. ARGELANDER, F., revised by KÜSTNER, F. 1903, <i>Marcus + Weber's Verlag</i>, Bonn Northern part $\delta > -1^\circ$ (Nos $-1^\circ 1$ to $+89^\circ 38$) SCHÖNFELD, E. 1886, <i>A. Marcus</i>, Bonn Southern part $\delta > -22^\circ$ (Nos $-2^\circ 1$ to $-22^\circ 6265$) Total number : N = 324188 Reprinted in reduced size, <i>Dümmler Verlag</i>, Bonn, 1949, 1951	BD
1888D1	DREYER, J.L.E. 1953, <i>Mem. R.A.S. London</i> (1888 Catalogue reprinted) New general catalogue of nebulae and clusters of stars N = 7840. Also contains IC, thus : 13226 objects in total. Lists of corrections have been published by Dreyer himself and others. The most up-to-date revision of NGC is : SULENTIC, J.W., TIFFT, W.G. 1973, <i>Univ. Arizona Press</i>, Tucson, Arizona, USA The revised new general catalogue of non-stellar objects. N = 7840	NGC (= N)
1892T1 A	THOME, J.M. 1892, <i>Results of National Argentine Obs.</i>, vol. 16, 1-604 Cordoba Durchmusterung Declination - 22° to -32° N = 179800	CD = CDM = COD = CoD
1892T1 B	THOME, J.M. 1894, <i>Results of National Argentine Obs.</i>, vol. 17, 1-538 Cordoba Durchmusterung Declination - 32° to -42° Errata p. 539-541 N = 160415	CD
1892T1 C	THOME, J.M. 1900, <i>Results of National Argentine Obs.</i>, vol. 18, 1-502 Cordoba Durchmusterung Declination - 42° to -52° N = 149447	CD

3.4	A. Fernandez, M.-C. Lortet, F. Spite	N° 4
1892T1 D	THOME, J.M. 1914, <i>Results of National Argentine Obs.</i> , vol. 21, 1-305 Cordoba Durchmusterung Declination - 52° to - 62° N ~ 18000	CD
1892T1 E	PERRINE, C.D. 1932, <i>Results of National Argentine Obs.</i> , vol. 21, 1-140 Cordoba Durchmusterung Declination - 62° to - 90° N ~ 7800	CD
1895D1 A	DREYER, J.L.E. 1895 Index catalogue of nebulae Reprinted in 1953 : see Ref. 1888D1 Nos 1 - 1529	IC = (I) = (IC I)
1895D1 B	DREYER, J.L.E. 1908 Second index catalogue of nebulae and clusters of stars (Reprinted <i>R. Astron. Soc., London</i> , 1953) : see Ref. 1888D1 N = 3857 (Nos 1530 - 5386)	IC = (I) = (IC II) = (II)
1896G1 A	GILL, D., KAPTEYN, J.C. 1896, <i>London, Ann. Cape Obs.</i> , vol. III Cape photographic Durchmusterung for the equinox 1875 (- 18° to - 37°)	CPD = CP
1896G1 B	GILL, D., KAPTEYN, J.C. 1897, <i>London, Ann. Cape Obs.</i> , vol. IV Cape photographic Durchmusterung for the equinox 1875 (- 38° to - 52°)	CPD
1896G1 C	GILL, D., KAPTEYN, J.C. 1900, <i>Edinburgh, Ann. Cape Obs.</i> , vol. V Cape photographic Durchmusterung for the equinox 1875 (- 53° to - 89°)	CPD
1896G1 D	GILL, D. 1903, <i>Edinburgh, Ann. Cape Obs.</i> , vol. IX Revision of the Cape photographic Durchmusterung for the equinox 1875	CPD
1899H1	HAGEN, I.G. 1899, <i>First serie (several series, several years, several authors)</i> BEROLINI (Roma ?, Washington) Ed. Use standard-names or coordinates Note : type of object : sequences of stars around variables stars.	ASV
1905D1	DYSON, F.W., THACKERAY, W.G., CHRISTIE, W.H.M. 1905, <i>Royal Obs. Greenwich</i> , printed in Edinburgh New reduction of Groombridge's catalogue of circumpolar stars Nos 1 - 4243	Groombridge = Gmb (= Gr) = Grb
1906B1	BURNHAM, S.W. 1906, <i>Carnegie Inst. of Washington</i> , Publ. n° 5, 2 Vol., 256+1086 pp, Washington A general catalogue of double stars within 121° of the North Pole Superseded by Aitken's New General Catalogue, see ADS, and by IDS Nomenclature N = 13665 (Nos 1 - 13665) The main information is merged in IDS	BDS (= BGC)
1908V1	VON ZEIPEL, M.H. 1908, <i>Ann. Obs. Paris, Mem.</i> , 25, F1-F101 Catalogue de 1571 étoiles contenues dans l'amas globulaire Messier 3 (NGC 5272) N = 1571	Von Zeipel = V.Z. = v.Z.
1915M1	MELLOTTE, P.J. 1915, <i>Mem. R.A.S.</i> , 60, 175-186 and plates 16 and 17 A catalogue of star clusters shown on the Franklin-Adams chart plates N = 245 (Nos 1 - 245)	Melotte = Mel

N° 4	References	3.5
1918C1	CANNON, A.J., PICKERING, E.C. 1918-1924, <i>Ann. Astron. Obs. Harvard College</i> , vol. 91-99. Reprinted by Bell and Howell. Corrected version available on magnetic tape and microfiche at CDS Strasbourg Henry Draper Catalogue Continued by HDE (Ref. 1925C1 A and 1925C1 B) N = 225300 (Nos 1 - 225300)	HD
1918P1 A	PICKERING, E.C., KAPTEYN, J.C. 1918, <i>Ann. Astron. Obs. Harvard College</i> , 101 Durchmusterung of selected areas, declination from +90° to 0° (Fields 1 - 115) N = 67941	SA
1918P1 B	PICKERING, E.C., KAPTEYN, J.C. 1923, <i>Ann. Astron. Obs. Harvard College</i> , 102 Durchmusterung of selected areas, declination from -15° to -30° (Fields 116 - 163) N = 67941	SA
1918P1 C	PICKERING, E.C., KAPTEYN, J.C. 1924, <i>Ann. Astron. Obs. Harvard College</i> , 103 Durchmusterung of selected areas, declination from -45° to -90° (Fields 164 - 206) N = 67941	SA
1918P2	PORTER, J.G., YOWELL, E.J., SMITH, E.S. 1918, <i>Publ. Cincinnati Obs.</i> n° 18 Catalogue of proper motion stars N = 3164 $\mu > 0''.1$ See Ci 20 (Ref. 1930P1) Cross-identified with DM where possible, and with other proper-motion catalogues	Ci 18 - (= C) = Cin 18 -
1919W1	WOLF, M. 1919, <i>Veröff. Sternwarte zu Heidelberg</i> , 7, n° 10, 195 Katalog von 1053 starken bewegten Fixsternen Nos 1 - 1053 Numerous lists in <i>Astron. Nachr.</i> , 209 to 236, 1919 to 1929 Total number N = 1566	Wolf (= W) = WOLF
1922G1	GINGRICH, C.H. <i>Ap. J.</i> , 56, 139-144 Parallaxes of stars in the region of BD+31°643 N = 20 (Nos 1 - 19 and π) (the star BD+31°643 is designated as π)	Gingrich
1922R1	RAAB, S. 1922, <i>Medd. Lunds.</i> , Ser. II, n° 28 A research on open clusters N = 152	Raab = Rb
1925C1 A	CANNON, A.J. 1925-1936, <i>Ann. Astron. Obs. Harvard College</i> , vol. 100 The Henry Draper extension N = 46850 Stars numbered 225301 - 272150, as a continuation of HD number Designation often abbreviated as HD	HDE = (HD)
1925C1 B	CANNON, A.J., WALTON MAYALL, M. 1949, <i>Ann. Astron. Obs. Harvard College</i> , 112, 1-295 The Henry Draper extension. II. N $\approx$ 87000 (Nos 272151 - 359083) Designation often abbreviated as HD Identification charts, no tables. These volumes are available on mag tape. Errata have been published in the <i>Bull. Inf. CDS</i> Nos 2 and 10. Cross identification of these stars, where available, is listed on the CDS microfiche No 4008. The spectral classification of the Southern stars is superseded by the Michigan Catalogue.	HDE

1925M1 A	MERRILL, P.W., HUMASON, M.L., BURWELL, C.G. 1925, <i>Ap. J.</i> , 61, 389-417 and plate XI Discovery and observations of stars of class Be N = 95 (Nos 1 - 95)	MW
1925M1 B	MERRILL, P.W., HUMASON, M.L., BURWELL, C.G. 1932, <i>Ap. J.</i> , 76, 156-183 Discovery and observations of stars of class Be : Second paper N = 138 (Nos 96 - 233)	MW
1925M1 C	MERRILL, P.W., BURWELL, C.G., MILLER, W.C. 1942, <i>Ap. J.</i> , 96, 15-19 Discovery and observations of stars of class Be : Third paper N = 86 (Nos 234 - 319)	MW
1925R1	ROSS, F.E. 1925-1939, <i>A. J.</i> , vol. 36 to 48 New proper motion stars Eleven successive lists, stars numbered 1- 86, 87- 252, 253- 397, 398- 540, 541- 680, 681- 787, 788- 859, 860- 869, 870- 985 with errata, 986- 1001, 1002 to 1069b. N = 1070	Ross (= R) = ROSS
1927B1	BARNARD, E.E. 1927, <i>Carnegie Institution of Washington</i> A photographic Atlas of selected regions of the Milky Way N = 370	Barnard (= B)
1927K1	KLEIN - WASSINK, W.J. 1927, <i>Publ. Kapteyn Astron. Lab.</i> , 41 The proper motion and the distance of the Praesepe cluster N = 577	KW
1929B1 A	BECKER, F. 1929, <i>Publ. Astrophys. Obs. Postdam</i> , 27, n° 88 Spektral - Durchmusterung der Kapteyn - Eichfelder des Südhimmels. I. Pol und Zone - 75°. (Feld 200 - 206) N = 3639	PSD (= POT)
1929B1 B	BECKER, F. 1930, <i>Publ. Astrophys. Obs. Postdam</i> , 27, n° 89 Spektral - Durchmusterung der Kapteyn - Eichfelder des Südhimmels. II. Zone - 60° (Feld 188 - 189). N = 11753	PSD
1929B1 C	BECKER, F. 1931, <i>Publ. Astrophys. Obs. Postdam</i> , 27, n° 90 Spektral - Durchmusterung der Kapteyn - Eichfelder des Südhimmels. III. Zone - 45° (Feld 164 - 187). N = 17730	PSD
1929B1 D	BRÜCK, H. 1935, <i>Publ. Astrophys. Obs. Postdam</i> , 28, n° 91 Spektral - Durchmusterung der Kapteyn - Eichfelder des Südhimmels. IV. Zone - 30° (Feld 140 - 163) N = 17045	PSD
1929B1 E	BECKER, F. 1938, <i>Publ. Astrophys. Obs. Postdam</i> , 28, n° 92 Spektral - Durchmusterung der Kapteyn - Eichfelder des Südhimmels. V. Zone - 15° (Feld 115 - 139) N = 16536	PSD

1930P1	PORTER, J.G., YOWELL, E.J., SMITH, E.S. 1930, <i>Publ. Cincinnati Obs.</i> , n° 20 A catalogue of 1474 stars with proper motions exceeding four-tenths of a second per year N = 1474 Cross identifications	Ci 20 - = CC = Cin 20
1930S1	SEARES, F.H., KAPTEYN, J.C., VAN RHIJN, P.J. 1930, <i>Carnegie Institution of Washington, Washington</i> Mount Wilson Catalogue of Photographic Magnitudes in selected areas 1- 139 N = 67491 Supplementary stars are numbered FFF - NNNs	Mt.W.
1930T1	TRUMPLER, R.J. 1930, <i>Lick Obs. Bull.</i> , XIV, 154-188 and plate V Preliminary results on the distances, dimensions and space distribution of open star clusters N = 334	Trumpler = Tr (= T)
1931C1	COLLINDER, P. 1931, <i>Ann. Obs. Lund</i> , n° 2 On structured properties of open galactic clusters and their spatial distribution N = 471	Collinder (= Cr) (= CR) (= LK) = Lundmark
1932A1	AITKEN, R.G. 1932, <i>Carnegie Institution of Washington</i> , <i>Publ.</i> n° 417, Washington, 2 Vol., XIII + 1488 pp. New general catalogue of double stars within 120° of the North Pole 12 pages of corrections, Washington 1934 N = 17180 Essential information is merged in IDS (Ref. 1963JV) See Table I-3 Cross- identified with BDS, where possible.	ADS (= A) (= Aitken)
1933M1 A	MERRILL, P.W., SANFORD, R.F., BURWELL, C.G. 1933, <i>P.A.S.P.</i> , 45, 306-308 Additional stars of classes N and S (Nos 1 - 42)	MSB
1933M1 B	MERRILL, P.W., SANFORD, R.F., BURWELL, C.G. 1942, <i>P.A.S.P.</i> , 54, 107-109 Additional stars of classes N and S - Second list N = 33 (Nos 43 - 75)	MSB
1933M2 A	MERRILL, P.W., BURWELL, C.G. 1933, <i>Ap. J.</i> , 78, 87-140 Catalogue and Bibliography of stars of classes B and A whose spectra have bright hydrogen lines. (Nos 1 - 416)	MWC (= MB)
1933M2 B	MERRILL, P.W., BURWELL, C.G. 1943, <i>Ap. J.</i> , 98, 153-184 Supplement to the Mount Wilson Catalogue and Bibliography of stars of classes B and A whose spectra have bright hydrogen lines N = 250 (Nos 417 - 666)	MWC
1933M2 C	MERRILL, P.W., BURWELL, C.G. 1949, <i>Ap. J.</i> , 110, 387-419 Second supplement to the Mount Wilson Catalogue and Bibliography of stars of classes B and A whose spectra have bright hydrogen lines N = 422 (Nos 667 - 1088) Extended by AS (Ref. 1950M1)	MWC
1934S1 A	SCHLESINGER, F., BARNEY, I., GESLER, C. 1934, <i>Trans. Astron. Obs. Yale Univ.</i> , 10 Catalogue of the positions and proper motions of "nnn" stars. Zone between declination +20° and +25°	YZ (= Y) = YZC

1934S1 B	SCHLESINGER, F., BARNEY, I. 1939, <i>Trans. Astron. Obs. Yale Univ.</i> , <u>11</u> Zone from -10° to -14°	YZ
1934S1 C	SCHLESINGER, F., BARNEY, I. 1940, <i>Trans. Astron. Obs. Yale Univ.</i> , <u>12</u> Part I : Zone from -14° to -18° Part II : Zone from -18° to -20°	YZ
1934S1 D	SCHLESINGER, F., BARNEY, I. 1943, <i>Trans. Astron. Obs. Yale Univ.</i> , <u>13</u> Part I : Zone from -20° to -22° Part II : Zone from -27° to -30° Idem, vol. <u>14</u> . Zone from -22° to -27°	YZ
1934S1 E	BARNEY, I. 1945, <i>Trans. Astron. Obs. Yale Univ.</i> , <u>16</u> Zone from -6° to -10° Idem <u>17</u> : Zone from -2° to -6°	YZ
1934S1 F	BARNEY, I. 1947, <i>Trans. Astron. Obs. Yale Univ.</i> , <u>18</u> Zone from $+15^{\circ}$ to $+20^{\circ}$	YZ
1934S1 G	BARNEY, I. 1948, <i>Trans. Astron. Obs. Yale Univ.</i> , <u>19</u> Zone from $+10^{\circ}$ to $+15^{\circ}$	YZ
1934S1 H	BARNEY, I. 1949, <i>Trans. Astron. Obs. Yale Univ.</i> , <u>20</u> Zone from $+1^{\circ}$ to $+5^{\circ}$	YZ
1934S1 I	BARNEY, I. 1950, <i>Trans. Astron. Obs. Yale Univ.</i> , <u>21</u> Zone from -2° to $+1^{\circ}$ Idem, <u>22</u> , part I : Zone from $+5^{\circ}$ to $+9^{\circ}$ Idem, <u>22</u> , part II : Zone from $+9^{\circ}$ to $+10^{\circ}$	YZ
1934S1 J	BARNEY, I. 1951, <i>Trans. Astron. Obs. Yale Univ.</i> , <u>23</u> Supplementary volume to the Yale Zone Catalogues. Zone from -30° to $+30^{\circ}$	YZ
1934S1 K	BARNEY, I. 1953, <i>Trans. Astron. Obs. Yale Univ.</i> , <u>24</u> Revised catalogue of the positions and proper motions of "nnn" stars. Zone from $+25^{\circ}$ to $+30^{\circ}$	YZ
1934S1 L	BARNEY, I. 1954, <i>Trans. Astron. Obs. Yale Univ.</i> , <u>25</u> Zone from $+20^{\circ}$ to $+25^{\circ}$	YZ
1935B1	BRÜGGEMANN, H. 1935, 1937, <i>Astr. Abh. Hamburger Sternw. Bergedorf</i> , <u>4</u> (n° 7), 157-200 Der offene Sternhaufen Messier 34 (Nos 1 - 190) Stars in M34 (NGC 1039)	Brüggemann
1935S1	SCHWASSMANN, A., VAN RHIJN, P.J., PLAUT, L. <i>Bergedorf, Verlag der Sternkarte</i> , 64+303 pp. (in German) Bergedorf Spektral Durchmusterung (for 115 northern Kapteyn selected areas, containing, for stars down to 13th photographic magnitude, the spectra from surveys with the Lippert astrograph of the Hamburg Observatory at Bergedorf, and the magnitudes from surveys of the Harvard College Observatory, determined by the Kapteyn Astronomical Laboratory of Groningen) 1935, Vol. 1 Selected areas 1-19, decl. 90° , 75° , 60° 1938, Vol. 2 " " 20-43, " 45° 1947, Vol. 3 " " 44-67, " 30° 1951, Vol. 4 " " 68-91, " 15° 1953, Vol. 5 " " 92-115, " 0° N = 173599 (Nos 001 - 0001 to 115 - 0619)	BSD

N° 4	References	3.9
1937B1	BOSS, B. 1937, <i>Carnegie Institution of Washington, Publ.</i> n° 468, vol. 1-5 Reprinted by <i>Johnson Reprint Corp.</i> , New York 1963 General catalogue of 33 342 stars for the epoch 1950, Dudley Observatory Albany, N.Y. N = 33342 On magnetic tape	GC = Boss
1938T1	TOMBAUGH, C.W. 1938, <i>P.A.S.P.</i> , 50, 171 Two new faint galactic star clusters N = 2 Nos 3 - 5 defined later on	Tombaugh
1939S1 A	STRUVE, O., ELVEY, C.T. 1939, <i>Ap. J.</i> , 89, 119-124 Observations made with the nebular spectrograph of the McDonald Observatory Table 1 (Nos 1 - 35)	McD
1939S1 B	STRUVE, O., ELVEY, C.T. 1939, <i>Ap. J.</i> , 89, 517-525 Observations made with the nebular spectrograph of the McDonald Observatory. II. Table 1 (Nos 36 - 48)	McD
1939S1 C	STRUVE, O., ELVEY, C.T., LINKE, W. 1939, <i>Ap. J.</i> , 90, 301-308 Observations made with the nebular spectrograph of the McDonald Observatory. III. Table 1 : (Nos 49 - 78)	McD
1939S2	SPENCER-JONES, H., JACKSON, J. 1939, <i>London</i> (on magnetic tape) Catalogue of 20554 faint stars in the Cape astrographic zone -40° to -52° for the equinox of 1900.0, Royal Observatory Cape of Good Hope	CF

3.10	A. Fernandez, M.-C. Lortet, F. Spite	N° 4
1940L1 A	LEE, O.J., BALDWIN, R.B., HAMLIN, D.W., KINNAIRD, R.F. 1940, <i>Ann. Dearborn Obs.</i> , 4, part 16 Carbon stars in zones - 4° to + 22° N = 156 (Nos 1 - 156)	Lee
1940L1 B	LEE, O.J., BARTLETT, T.J. 1947, <i>Ann. Dearborn Obs.</i> , 5, part 3 Carbon stars in zones + 22° to +40° (Nos 157 - 233)	Lee
1940L1 C	LEE, O.J., BARTLETT, T.J. 1947, <i>Ann. Dearborn Obs.</i> , 5, part 7 Carbon stars in zones + 22° to +40° (Nos 234 - 365)	Lee
1941L1 A	LUYTEN, W.J. 1941, <i>Publ. Astron. Obs. Univ. Minnesota</i> , 3, n° 3, 33-50 Catalogue of 832 double stars with common proper motion in the Southern hemisphere N = 832 (Nos 1 - 832)	LDS
1941L1 B	LUYTEN, W.J. 1969, <i>University of Minnesota</i> Proper motion survey with the forty-eight inch Schmidt Telescope. XXI. Double stars with common proper motion N = 1230 (Nos 833 - 2062)	LDS
1941L1 C	LUYTEN, W.J. 1970, <i>University of Minnesota</i> Proper motion survey with the forty-eight inch Schmidt Telescope. XXV. N = 451 (Nos 2063 - 2513)	LDS
1941L1 D	LUYTEN, W.J. 1972, <i>University of Minnesota</i> Proper motion survey with the forty-eight inch Schmidt Telescope. XXIX. N = 501 (Nos 2514 - 3014)	LDS
1941L2	LUYTEN, W.J. 1941, <i>Publ. Astron. Obs. Univ. Minnesota</i> , 3, n° 1 A catalogue of 904 stars in the Southern Hemisphere with proper motions exceeding 0".5 annually (Nos 1 - 904) Use LFT and LHS	LPM
1942L1 A	LUYTEN, W.J. (without date, after 1942, before 1945), <i>Publ. Astron. Obs. Univ. Minnesota</i> , 2, n° 12, p. 242 New stars with proper motions exceeding 0".5 annually. Old list of proper motion stars (to which BPM, LTT or LFT names have now been given) which should not have been quoted by the authors ; the numbering is the BRUCE plates system. N = 8 (Nos 1750 - 12 to 1945 - 4)	L
1942L1 B	LUYTEN, W.J. 1944, <i>Publ. Astron. Obs. Univ. Minnesota</i> , 3, n° 4, p. 53-76 Bruce Proper Motion Survey : three catalogues. Old list of proper motion stars (to which BPM, LTT or LFT names have now been given) which should not have been quoted by the authors ; the numbering is the BRUCE plates system. N ~ 500 (Nos 290 - 28 to 1007 - 60)	L

N° 4	References	3.11
1943V1 A	VYSSOTSKY, A.N. 1943, <i>Ap. J.</i> , <u>97</u> , 381-387 Dwarf M stars found spectrophotometrically. First List N = 82 (Nos 1 - 82)	McC = MCC = VYS = VYSM = VYSS0.M = VYSS0-M
1943V1 B	VYSSOTSKY, A.N., JANSSEN, E.M., MILLER, W.J., S.J., WALTHER, M.E. 1946, <i>Ap. J.</i> , <u>104</u> , 234-238 Dwarf M stars found spectrophotometrically. Second List N = 135 (Nos 83 - 217)	McC
1943V1 C	VYSSOTSKY, A.N., MATEER, B.A. 1952, <i>Ap. J.</i> , <u>116</u> , 117-121 Dwarf M stars found spectrophotometrically. Third List N = 133 (Nos 218 - 350)	McC
1943V1 D	VYSSOTSKY, A.N. 1956, <i>A. J.</i> , <u>61</u> , 201-213 Dwarf M stars found spectrophotometrically. Fourth List N = 526 (Nos 351 - 876)	McC
1943V1 E	VYSSOTSKY, A.N. 1958, <i>A. J.</i> , <u>63</u> , 211-212 Dwarf M stars found spectrophotometrically. Supplementary List N = 19 (Nos 877 - 895)	McC
1946C1	CEDERBLAD, S. 1946, <i>Medd. Lunds</i> , series II, n° 119 Studies of bright diffuse galactic nebulae with special regard to their spatial distribution N = 215 (Nos 1 - 215)	CED = Cederblad
1946M1	MINKOWSKI, R. 1946, <i>P.A.S.P.</i> , <u>58</u> , 305-309 Table I, N = 80 (Nos 1-80) Table II, N = 22 (Nos 81-103)	Min 1 - = M1 - PN H II
1947H1	HUMASON, M.L., ZWICKY, F. 1947, <i>Ap. J.</i> , <u>105</u> , 85-91 A search for faint blue stars N = 48	HZ = H - Z
1947L1 A	LEE, O.J., BALDWIN, R.J., HAMLIN, D.W. 1947, <i>Ann. Dearborn Obs.</i> , <u>5</u> , part 1 A Dearborn catalog of faint red stars Nos 1 - 8151 (later re-named DC)	DO = DC
1947L1 B	LEE, O.J., BARTLETT, T.J. 1947, <i>Ann. Dearborn Obs.</i> , <u>5</u> , part 1 B Dearborn catalog of faint red stars Nos 8141 - 22680 The stars numbered 8141 - 8151 in part 1 A are identically repeated in part 1 B	DO = DC
1947L1 C	LEE, O.J., GORE, G.D., BARTLETT, T.J. 1947, <i>Ann. Dearborn Obs.</i> , <u>5</u> , part 1 C Dearborn catalog of faint red stars Nos 22681 - 44076	DO = DC
1947M1	MINKOWSKI, R. 1947, <i>P.A.S.P.</i> , <u>59</u> , 257-259 Table I, N = 56 (Nos 1 - 56) Table II, N = 18 (Nos 57 - 74)	Min 2 - = M2 - PN H II

3.12	A. Fernández, M.-C. Lortet, F. Spite		Nº 4
1947M2 A	McCUSKEY, S.W., SEYFERT, C.K. 1947, <i>Ap. J.</i> , 106, 1-19 Variations in the stellar luminosity function Continued by several authors, see Collins 11.180 to 11.186 (LF 1 to LF 10) and Wooden, 1970, next reference.	LF	
1947M2 Z	WOODEN, W.H. III 1970, <i>A. J.</i> , 75, 324-336 UBV photoelectric photometry in four southern Milky Way fields Table I (Nos 11 - 14) Tables III to V : photoelectric sequences	LF	
1948M1	MINKOWSKI, R. 1948, <i>P.A.S.P.</i> , 60, 386-388 Tables I and II, N = 55 (Nos 1 - 55) Table III, N = 7 (Nos 56 - 62)	PN H II	Min 3 - = M3 -
1949B1	BLANCO, V.M. 1949, <i>P.A.S.P.</i> , 61, 183-184 A new galactic star cluster in Sculptor N = 1 (Dzeta Scl cluster = C 0001 - 302)		Blanco
1949H1	HARO, G. 1949, <i>A. J.</i> , 54, 188-189 Faint spectra showing H α in emission in the obscuring clouds of Ophiuchus and Scorpius and in a region in Sagittarius N = 17		Haro 1 -
1949K1	KING, I. 1949, <i>Harvard Bull.</i> , n° 919, 41-42 Some new galactic clusters N = 21 (among which 9 suspected) later continued up to No.26		King
1949L1	LUYTEN, W.J. 1949, <i>Ap. J.</i> , 109, 528-531 An Atlas of identification charts of White Dwarfs Nos 1 - 96		L
1949S1	STRUVE, O., RUDKJØBING, M. 1949, <i>Ap. J.</i> , 109, 92-94 Stellar spectra with emission lines in the obscuring clouds of Ophiuchus and Scorpius N = 26		SR

N° 4	References	3.13
1950H1	HOLMBERG, E. 1950, <i>Medd. Lunds</i> , Ser. II, n° 128 A photometric study of nearby galaxies N = 5 Ho I, II, III in M 81 region Ho, IV, V in M 101 region	Holmberg = Ho = Holm
1950M1 A	MERRILL, P.W., BURWELL, C.G. 1950, <i>Ap. J.</i> , 112, 72-89 Additional stars whose spectra have a bright H α line N = 519 (Nos 1 - 519) continues MWC (Ref. 1933M2)	AS
1950M1 B	MILLER, W.C., MERRILL, P.W. 1951, <i>Ap. J.</i> , 113, 624-625 Spectroscopic observations of Be stars N = 2 (Nos 520 and 521)	AS
1950R1	RYLE, M., SMITH, F.G., ELSMORE, B. 1950, <i>M.N.R.A.S.</i> , 110, 508-523 A preliminary survey of radio stars in the northern hemisphere. First Cambridge catalogue of radio sources N = 50 λ = 3.7 m	1C
1950S1 A	SHAJN, G.A., GAZE, V.F. 1950, <i>Izv. Krym. Astrofiz. Obs.</i> , 6, 3-27 A few results of the study of emissive galactic nebulae Table : 2nd column : Nos 1 - 9 (1st column is numbered from 1 to 35)	Simeis (= S) = SG = Sh = SH = SHZ = Simeiz
1950S1 B	GAZE, V.F., SHAJN, G.A. 1951, <i>Izv. Krym. Astrofiz. Obs.</i> , 7, 93-98 Second list of diffuse nebulae Table : 2nd column : Nos 10 - 105 (1st column is numbered from 1 to 101) Simeis 31 is not real (Gaze + Shajn, 1954) Simeis 106 is defined nowhere	Simeis
1950S1 C	GAZE, V.F., SHAJN, G.A. 1952, <i>Izv. Krym. Astrofiz. Obs.</i> , 8, 17-18 Two new filamentary nebulae near α^2 and α^1 Cygni N = 2 (S 107 and S 108) (photographs ibid fig. 8 between p. 6 and 7)	Simeis
1950S1 D	GAZE, V.F., SHAJN, G.A. 1951, <i>Izv. Krym. Astrofiz. Obs.</i> , 9, 52-67 Third list of diffuse emission nebulae Table : 2nd column : Nos 109 - 279 (1st column is numbered from 1 to 250) S 121 is not real (Gaze + Shajn, 1954)	Simeis
1950S1 E	GAZE, V.F., SHAJN, G.A. 1954, <i>Izv. Krym. Astrofiz. Obs.</i> , 11, 39-41 Fourth list of diffuse emission nebulae Table : 2nd column : Nos 280 - 301) (1st column is numbered from 1 to 31) (Cross identifies previous lists with NGC, IC, Mi I or II = Min 1 - or 2 -) (Cross identified with IC, NGC, Mi I = Min 1 -) S 106, 302, 303, 304 are defined nowhere . S 305 and 306 are Nos C 257 and C 258 in Gaze and Shajn's catalogue defining C number (<i>Izv. Krym. Astrofiz. Obs.</i> , 15, 11-30, first column, Ref. 1955G1)	Simeis
1950S2	STROHMEIER, W. 1950, <i>Z. Astrophys.</i> , 27, 49-55 Rote Nebel in der Wintermilchstrasse N = 42	Str (= St)

3.14	A. Fernandez, M.-C. Lortet, F. Spite	N° 4
1951C1	COURTES, G. 1951, <i>C.R. Acad. Sci.</i> , 232 Etude de la voie lactée en lumière monochromatique H α p. 795-797 : de 320 à 350° et de 25 à 80° de longitude galactique p. 1283-1285 : de 80 à 180° de longitude galactique Total number N = 104	COU
1951E1	ELVIUS, T. 1951, <i>Stockholm Obs. Ann.</i> , 16, n° 4, 1-79 Catalogue of magnitudes, colours, spectral types and spectrophotometric measurements for 2550 stars in Kapteyn's Selected Areas Nos 2, 6, 7, 15, 16, 17, 18, 19, 20, 40, 41 and 42 N = 2550	SSC
1951KP A	KUKARKIN, B.V., PARENAGO, P.P., EFREMOV, Yu.N., KHOLOPOV, P.N. 1951, <i>Moscow, Academy of Sciences of the USSR, Shternberg State Astron. Inst.</i> , 240 pp. (in Russian) Catalogue of suspected variable stars N = 8000 : Nos 1 - 5835 and 100000 - 102299 (doubtful cases)	CSV = KZP
1951KP B	KUKARKIN, B.V., KHOLOPOV, P.N., EFREMOV, Yu.N., KUROCHKIN, N.E. 1965, <i>Moscow, Astronomical Council of the Academy of Sciences of the USSR and Shternberg State Astronomical Institute</i> (in Russian and English) Second catalogue of suspected variable stars N = 4000 : Nos 5836 - 9877 and 102300 - 103137 (doubtful cases) <u>Updated and superseded by NSV</u> (New Catalogue of Suspected Variable Stars) Ref. 1982KH, which contains 5954 new suspected V* since 1965	CSV = KZP
1951M1	MARKARIAN, B.E. 1951, <i>Soobshch. Byurakansk. Obs.</i> , n° 9 On the classification of open (galactic) stellar clusters. II. Preliminary list of open O-type star clusters N = 50	Markarian (= Ma) = Mark = Markarjan
1952J1 A	JENKINS, L.F. 1952, <i>Yale Univ. Obs., New Haven, USA</i> , 9+253 pp. General catalogue of trigonometric stellar parallaxes. Yale Univ. Obs. New Haven, Conn. N = 5822 (Nos 1 - 5822)	Jenkins = PLX = Yale = YC = YCSP = YCTSP = YP
1952J1 B	JENKINS, L.F. 1963, <i>Yale Univ. Obs., New Haven, USA</i> , 47 pp. Supplement to the general catalogue of trigonometric stellar parallaxes. Yale Univ. Obs. New Haven, Conn. N = 1712 Errata to the General Catalogue and 1963 Supplement : Hoffleit, D., 1982, <i>Bull. Inf. CDS</i> , 22, 112-117 <u>Updated by Van Altena, Ref. 1982VA</u>	Jenkins
1952M1	MacRAE, D.A. 1952, <i>Ap. J.</i> , 116, 592-611 Stellar spectra and colours in Cygnus at galactic latitude +14° N = 938 (Stars in the field ILF-1)	MacRae = ILF 1 = ILF-1
1952M2	MORGAN, H.R. 1952, <i>Astron. Pap. prep. Am. Ephemeris and Naut. Alm.</i> , 13, part III, 109-321 Catalog of 5268 standard stars, 1950.0 based on the normal system N30 N = 5268 (Fundamental stars)	N30 = N/30
1952M3	MILLS, B.Y. 1952, <i>Austral. J. Sci. Res. serie A</i> , 5, 266-287 The distribution of the discrete sources of cosmic radio radiation N = 77 ν = 101 MHz	Mills

N° 4	References	3.15
1952V1 A	VAN RHIJN, P.J. 1952, <i>Kapteyn Astronomical Laboratory, Groningen, Netherlands</i> Durchmusterung of selected areas of the special plan. Vol. I containing the areas 1 to 29 N ~ 100000	SASpecial = SA
1952V1 B	VAN RHIJN, P.J. 1952, <i>Kapteyn Astronomical Laboratory, Groningen, Netherlands</i> Durchmusterung of selected areas of the special plan. Vol. II containing the areas 30 to 46 N ~ 100000	SASpecial
1952V2	VAN BUEREN, H.G. 1952, <i>B.A.N.</i> , <u>11</u> , 385-402 On the structure of the Hyades cluster N = 152 (Nos 1 - 152)	Van Bueren = vB = VB
1952V3	VAN WIJK, U. 1952, <i>Harvard Bull.</i> , n° 921, 7-8 A photoelectric magnitude sequence in the Large Magellanic Cloud N = 16 (Nos 1 - 16)	Van Wijk
1953B1	BRODSKAJA, Eh.S. 1953, <i>Izv. Krym. Astrofiz. Obs.</i> , <u>10</u> , 104-119 (in Russian) Spectra and magnitudes for 400 O- to B5 stars in a Milky Way field with centre $\alpha = 23^{\text{h}}27^{\text{m}}$, $\delta = +61^{\circ}$ N = 400 See also Brodskaja, Ref. 1955B3	Brodskaja
1953H1	HANBURY BROWN, R., HAZARD, C. 1953, <i>M.N.R.A.S.</i> , <u>113</u> , 123-133 A survey of 23 localized radio sources in the Northern hemisphere N = 23	HB (= HBH)
1953H2	HARO, G. 1953, <i>Ap. J.</i> , <u>117</u> , 73-82 H α emission stars and peculiar objects in the region of the Orion nebula N = 255	Haro 4 - = Haro
1953H3	HARO, G., MORENO, A. 1953, <i>Bol. Obs. Tonantzintla y Tacubaya</i> , <u>1</u> , n° 7, p. 11-22 Estrellas con H α en emision en las cercanías de IC 434 N = 98 Identification charts ; no coordinates given	Haro 5 -
1953H4	HARO, G., IRIARTE, B., CHAVIRA, E. 1953, <i>Bol. Obs. Tonantzintla y Tacubaya</i> , <u>1</u> , n° 8, p. 3-18 Nuevas estrellas con emision en las regiones oscuras del Toro-Auriga-Orion investigadas por Joy N = 75 ; Nos 29 and 75 are PN and are designated H3 - by Perek +, Ref. 1967PK A Identification charts, no coordinates given	Haro 6 - H3 -
1953H5	HOFFLEIT, D. 1953, <i>Harvard Ann.</i> , <u>119</u> , 37-68 A preliminary survey of nebulosities and associated B-stars in Carina N = 69 (catalogue of bright nebulosities) 6 objects among this list are PN and are prefixed Hf by Perek +, Ref. 1967PK A 2 objects at the bottom of the p. 52 are PN and are named Hf2-1 and Hf2-2 by Perek +, Ref. 1967PK A	Hoffleit = H Hf Hf 2 -

- 1953L1 LUYTEN, W.J. LB
 Various lists under the general title : A Search for Faint Blue Stars. I to L
 (50 papers)
 Numerous lists for different regions ; first lists in *A.J.*, 58, 59, 61
 (1953 to 1956) then in monographies : *The Observatory, Univ. Minnesota,*
Minneapolis, Minnesota. See Collins 19.148 - 19.181
 N = 11444
- 1953L2 LUYTEN, W.J. L - Pr
 1953, *A.J.*, 58, 75-78
 A further search for faint blue stars
 N = 7 (Table III)
- 1953S1 SHARPLESS, S. Sh1 -
 1953, *Ap. J.*, 118, 362-369 = Sh = SH
 A catalogue of emission nebulae near the galactic plane = SHA -
 (Superseded by Sh2-for H II)
 N = 142
- 1953W1 WILSON, R.E. Wilson
 1953, *Carnegie Inst. Washington Publ.*, n° 601 = (W)
 General catalogue of stellar radial velocities = WIL
 Reprinted around 1963. On magnetic tape = WILS
 Superseded by Abt + (Ref. 1972A1). See Data Center C52
 N = 15106
- 1954B1 BOLTON, J.G., WESTFOLD, K.C., STANLEY, G.J., SLEE, O.B. B1
 1954, *Austral. J. Phys.*, 7, 96-109
 Galactic radiation at radio frequencies. VII. Discrete sources with large
 angular widths.
 N = 11
- 1954B2 BOLTON, J.G., STANLEY, G.J., SLEE, O.B. B2
 1954, *Austral. J. Phys.*, 7, 110-129
 Galactic radiation at radio frequencies. VIII. Discrete sources at 100 Mc/s
 between declinations +50° and -50°
 N = 104
- 1954B3 BIDELMAN, W.P. Bi
 1954, *Ap. J. Suppl.*, 1, 175-267
 Catalogue and bibliography of emission-line stars of types later than B
 N = 1540
 The content of the 15 different tables Nos 1 - 15 (stars numbered from 1 in
 each table) is described p. 176.
 Format is sometimes NN-NNN; the first number is the table number
- 1954G1 A GONZALEZ, Gr., CONZALEZ, Gu. G - G
 1954, *Bol. Obs. Tonantzintla y Tacubaya*, 1, n° 9, 3-20 (in Spanish)
 Estrellas Be-Ae in Casiopea y Perseo (Be and Ae stars in Perseus and Cassiopeia)
 N = 192 (Nos 1 - 192)
- 1954G1 B GONZALEZ, Gr., GONZALEZ, Gu. G - G
 1956, *Bol. Obs. Tonantzintla y Tacubaya*, 2, n° 14, 19-30 (in Spanish)
 Estrellas con H α en emision en longitudes galacticas de 103° a 180°.
 (Stars with H α in emission in galactic longitudes 103° to 180°)
 N = 219 (Nos 193 - 411)
- 1954H1 A HERBIG, G.H. LkH
 1954, *Ap. J.*, 119, 483-495 = Lick H α
 Emission-line stars associated with the nebulous cluster NGC 2264 = LkH α
 N = 84 (Nos 1 - 84)
First quoted as LH α , then changed into LkH α or LkH

N° 4	References	3.17
1954H1 B	HERBIG, G.H. 1954, <i>P.A.S.P.</i>, 66, 19-22 Bright-Hα stars in IC 348 N = 16 (Nos 85 - 100) <u>First quoted as LHα, then changed into LkH and continued by LkH</u>	LkH
1954H1 C	HERBIG, G.H. 1956, <i>P.A.S.P.</i>, 68, 353-356 The source of illumination of NGC 1579 (No 101) <u>The acronym LkH (or LkHα) supersedes and continues LHα introduced by Herbig</u>	LkH
1954H1 D	HERBIG, G.H. 1957, <i>Ap. J.</i>, 125, 654-660 Emission-line stars in the vicinity of Messier 8, Messier 20 and Simeis 188 (Nos 102 - 119 and 121 - 130) No 120 defined in Ref. 1954H1 K	LkH
1954H1 E	HERBIG, G.H. 1958, <i>Ap. J.</i>, 128, 259-266 NGC 7000, IC 5070, and the associated emission-line stars (Nos 131 - 195)	LkH
1954H1 F	HERBIG, G.H. 1960, <i>Ap. J. Suppl.</i>, 4, 337-368 The spectra of Be- and Ae-type stars associated with nebulosity Defines LkHα 196 - 234 Tables 3 and 4, N = 33 : Be and Ae stars associated with nebulosity	LkH Herbig
1954H1 G	HERBIG, G.H. 1960, <i>Ap. J.</i>, 131, 516-517 Emission-line stars in IC 5146 Nos 235 - 257	LkH
1954H1 H	HERBIG, G.H. 1961, <i>Ap. J.</i>, 133, 337-340 Observations of RY Tauri N = 2 (Nos 258 and 259) No identification chart.	LkH
1954H1 I	WALKER, M.F. 1961, <i>Ap. J.</i>, 133, 438-456 Studies of extremely young clusters. IV. NGC 6611 N = 2 (Nos 260 and 261)	LkH
1954H1 J	ROSINO, L., ROMANO, G. 1962, <i>Contr. Oss. Astrofis. Univ. Padova in Asiago</i>, n° 127, 1-15 Research on nebular variables. II. Variable stars associated with the nebula NGC 7023 in Cepheus N = 4 (Nos 425, 427, 428, 513) Hα em. stars discovered by Herbig, numbers assigned by Rosino through a misunderstanding.	LkH
1954H1 K	HERBIG, G.H. 1962, <i>Adv. Astron. Astrophys.</i>, 1, 47-103 The properties and problems of T Tauri stars and related objects N = 8 (Nos 120, 262 - 276)	LkH
1954H1 L	in NGC 1333 (<i>unpublished</i>) N = 9 (Nos 277 - 285)	LkH
1954H1 M	HERBIG, G.H., KUHI, L.V. 1963, <i>Ap. J.</i>, 137, 398-400 Emission-line stars in the region of NGC 2068 N = 35 (Nos 286 - 320)	LkH

1954H1 N	Unpublished (near LkHα 120) N = 2 (Nos 322 and 323) No 321 defined in Ref. 1954H1 O	LkH
1954H1 O	HERBIG, G.H., RAO, N.K. 1972, <i>Ap. J.</i> , 174, 401-423 Second catalogue of emission-line stars of the Orion population <u>Table 1 is the HRC catalogue</u> (Nos 1 - 323). Among them are LkH Nos 321, 324 - 350.	LkH
1954H1 P	HERBIG, G.H. 1974, <i>Lick Obs. Bull.</i> , n° 658, 11 pp. Draft catalogue of Herbig-Haro objects (HH-1 to HH-43) N = 7 (Nos 351 - 357) Charts only, NGC 1333 region.	LkH
1954H1 Q	CUDWORTH, K.M., HERBIG, G.H. 1979, <i>A.J.</i> , 84, 548-551 Two large-proper-motion Herbig-Haro objects (H-H 28 and 29) N = 2 (Nos 358 and 359) (Fig. 1 also shows other objects).	LkH
1954H2	HADDOCK, F.T., MAYER, C.H., SLOANAKER, R.M. 1954, <i>Nature</i> , 174, 176-177 Radio observations of ionized hydrogen nebulae and other discrete sources at a wave-length of 0.4 cm N = 24 (Nos 1 - 24)	H
1954N1 A	NASSAU, J.J., BLANCO, V.M. 1954, <i>Ap. J.</i> , 120, 129-138 Carbon stars at the galactic equator in a zone 4° wide N = 271 (Nos 1 - 271) All cross-identified with BD	Case = C = CASE
1954N1 B	NASSAU, J.J., BLANCO, V.M. 1957, <i>Ap. J.</i> , 125, 195 Carbon stars in two north milky way zones N = 422 (Nos 272 - 693) All cross-identified with BD	Case
1954P1	PARENAGO, P.P. 1954, <i>Trudy Gos. Astron. Inst. Shternberga</i> , n° 25, 3-547 (in Russian) Investigation of stars in the region of the Orion nebula N = 2982	P = II
1955A1	ABELL, G.O. 1955, <i>P.A.S.P.</i> , 67, 258-261 Globular clusters and planetary nebulae discovered on the National Geographic Society-Palomar Observatory Sky Survey Table I (Nos 1 - 13) GCL The Palomar designation has been continued since then Table II (Nos 1 - 73) PN	A = Abel = Abell = Pal = Palomar A
1955B1	BLANCO, V.M., MUNCH, L. 1955, <i>Bol. Obs. Tonantzintla y Tacubaya</i> , n° 12, 17-29 Estrellas rojas entre Popa y Cruz (red stars between Puppis and Crux) Table IV (Nos 1 - 172) Carbon * Table V (Nos 1 - 311) M * Table VI (Nos 1 - 15) M supergiant * Table VII (Nos 1 - 13) S * Table VIII (Nos 1 - 31) Stars with possible IR emission Total number : N = 542	BM

Nº 4	References	3.19
1955B2	BOK, B.J., BESTER, M.J., WADE, C.M. 1955, <i>Daedalus : Proc. Am. Acad. Arts Sci.</i> , <u>86</u> , 9-16 = <i>Harvard Repr.</i> n° 416 Catalogue of H(II) regions in the Milky Way for longitudes 250° - 355° N = 41 The format uses l^I , b^I galactic coordinates and the minus sign for latitude is indicated by italics for the 2 lasts digits.	BBW
1955B3	BRODSKAJA, Eh.S. 1955, <i>Izv. Krym. Astrofiz. Obs.</i> , <u>14</u> , 139 pp. (in Russian) Catalogue of spectral classes, magnitudes and colour indices of 5752 stars in a Milky Way field with centre $\alpha = 23^h25^m$, $\delta = 61^\circ30'$ N = 5752 Includes stars (not all) of Brodskaja (Ref. 1953B1) but the numbering is different.	Brodskaja
1955C1	COX, A.N. 1955, <i>Ap. J.</i> , <u>121</u> , 628-636 A study of the galactic cluster NGC 2516 N = 116	Cox
1955G1	GAZE, V.F., SHAJN, G.A. 1955, <i>Izv. Krym. Astrofiz. Obs.</i> , <u>15</u> , 11-30 (in Russian) Catalogue of emission nebulae N = 286 First column is C number, last column is Simeis = S. Photographs with Simeis numbers identified.	GS = C
1955G2	GUM, C.S. 1955, <i>Mem. R.A.S.</i> , <u>67</u> , 155-177 A survey of southern H II regions N = 97 (Nos 1 - 85)	GUM = G = Stromlo
1955J1 A	JOHNSON, H.M. 1955, <i>Ap. J.</i> , <u>121</u> , 604-610 Symmetric galactic nebulae 152 objects among which 36 are new (YM 1 - 36)	J1 -, YM
1955J1 B	JOHNSON, H.M. 1956, <i>Ap. J.</i> , <u>124</u> , 90-92 Symmetric galactic nebulae. II. 32 objects among which 11 are new (YM 37 - 47)	J2 -, YM
1955K1	KHAVTASI, D.Sh. 1955, <i>Byull. Abastumansk. Astrofiz. Obs.</i> , n° 18, 29-114 (in Russian) A statistical study of dark nebulae (catalogue) N = 797 The same author used different numbering for atlas, Ref. 1960K1	Kh = K = KH = Khav = Khavtasi = Khavtassi
1955L1	LUYTEN, W.J. 1955, <i>The Lund Press, Minneapolis, Minnesota, USA</i> , 40 pp. Luyten's Five Tenths. A catalogue of 1849 stars with proper motions exceeding 0.5" annually N = 1849 <u>Superseded by LHS.</u>	LFT
1955M1	MÜNCH, L. 1955, <i>Bol. Obs. Tonantzintla y Tacubaya</i> , <u>2</u> , 28-35 Catalogo de nebulosas de emision en la Vía Lactea del sur. (Catalogue of emission nebulae in the southern Milky Way) N = 34	Mu
1955P1	PAWSEY, J.L. 1955, <i>Ap. J.</i> , <u>121</u> , 1-5 A catalogue of reliably known discrete sources of cosmic radio waves N = 38 N and S stand for North and South respectively.	IAU

- 1955R1 ROSSITER, R.A.
1955, *Publ. Obs. Univ. Michigan*, 11
Catalogue of southern double stars
N = 1031 (Nos 1 - 1057)
N = 803 (Nos 1 - 854)
N = 8065 (Nos 1 - 8065)
N = 5534 (Nos 1 - 5560)
The main information is included in IDS Nomencl. (Ref. 1963JV).
Don
Jsp = Jessup
RDS
Rst = Rossiter
- 1955S1 SHAKESHAFT, J.R., RYLE, M., BALDWIN, J.E., ELSMORE, B., THOMSON, J.H.
1955, *Mem. R.A.S.*, 67, 106-154
A survey of radio sources between declinations -38° and $+83^\circ$. Second
Cambridge catalogue
N = 1936, $\nu = 81.5$ MHz, HP BW = $1.0^\circ \times 7.5^\circ$ 2C.
- 1956B1 BÖHM - VITENSE, E.
1956, *P.A.S.P.*, 68, 430-436
Extragactic nebulae close to the galactic plane
Tables I, II (Nos 1 - 23) extragal. neb.
Tables III, IV (Nos 1 - 21) extragal. neb.
Table V (Nos 1 - 3) PN : see PK Nomenclature
BV
BV = BV 5 -
- 1956G1 GONZALEZ, Gr., GONZALEZ, Gu.
1956, *Bol. Obs. Tonantzintla y Tacubaya*, 2, n° 15, 16-26 (in Spanish)
Estrellas con H α en emision en las longitudes galacticas de 59° a 90° . Stars
With H α in emission in galactic longitudes 59° to 90°
N = 212 (Nos 1 - 212) G - G
- 1956H1 A HUMASON, M.L., MAYALL, N.U., SANDAGE, A.R.
1956, *A.J.*, 61, 97-162
Redshifts and magnitudes of extragalactic nebulae
N = 21
HMS
= Cl
- 1956H1 B NOONAN, T.W.
1973, *A.J.*, 78, 26-31
List of clusters of galaxies with published redshifts
N = 138
HMS
- 1956H2 HENIZE, K.G.
1956, *Ap. J. Suppl.*, 2, 315-344
Catalogues of H α -emission stars and nebulae in the Magellanic Clouds
Table 1, N = 172 LMC EM*
Table 2, N = 221 LMC H II
Table 3, N = 65 SMC EM*
Table 4, N = 90 SMC H II
LH α 120 - S = (S)
LH α 120 - N = (N)
LH α 115 - S = (S)
LH α 115 - N = (N)
- 1956H3 HILTNER, W.A.
1956, *Ap. J. Suppl.*, 2, 389-462
Photometric polarization and spectrographic observation of O and B stars
Table 5, N = 1259 (Nos 1 - 1259)
Hiltner
= Hilt
- 1956H4 HARO, G.
1956, *Bol. Obs. Tonantzintla y Tacubaya*, 2, n° 14, 8-18
Nota preliminar sobre galaxias azules con lineas de emision. Preliminary note
on blue galaxies with emission lines
N = 10 (Nos 1 - 10) Em-G
N = 34 (Nos 11 - 44) Blue G
Haro
= T
- 1956I1 IRIARTE, B., CHAVIRA, E.
1956, *Bol. Obs. Tonantzintla y Tacubaya*, 2, 31-34
Lista de estrellas con H α en emision entre $l = 338^\circ$ y $l = 33^\circ$
(List of stars with H α emission between $l = 338^\circ$ and $l = 33^\circ$)
N = 55 (Nos 1 - 55) Ir - Ch

N° 4	References	3.21
1956K1	KRON, G.E. 1956, <i>P.A.S.P.</i> , <u>68</u> , 125-130 Star clusters in the Small Magellanic Cloud. I. Identification of 69 clusters N = 69	Kron
1956L1 A	LUYTEN, W.J. 1956, <i>The Observatory, University of Minnesota, Minneapolis, Minnesota, USA</i> , p. 1-4 A search for faint blue stars. VII. The region of Praesepe Additional table for red stars : Table III (Nos 1 - 36) See Ref. 1953L1	PrR
1956L1 B	LUYTEN, W.J. 1962, <i>The Observatory, University of Minnesota, Minneapolis, Minnesota, USA</i> , 24 pp. A search for faint blue stars. XXXI. One thousand blue stars in the region of Praesepe Additional table for red stars : Table V (Nos 37 - 189)	PrR
1956L2	LUYTEN, W.J., MILLER, F.D. 1956, <i>The Observatory, University of Minnesota, Minneapolis, Minnesota, USA</i> , 5-13 A search for faint blue stars. VIII. A systematic galactic survey Table II (Nos 1 - 11) Red stars (Nos 401 - 1200) Faint blue *	MR LB
1956R1	REAVES, G. 1956, <i>A.J.</i> , <u>61</u> , 69-76 Dwarf galaxies in the Virgo cluster Tables I and II, N = 66. Dwarf-like or IC 3475-type objects in the Virgo region.	GR = G.R.
1956S1	SCHULTE, D.H. 1956, <i>Ap. J.</i> , <u>123</u> , 250-252 Some recent results of low-dispersion spectral classification N = 2	Schulte
1956S2	STOCK, J. 1956, <i>Ap. J.</i> , <u>123</u> , 258-266 Magnitudes and colors for stars in two new galactic clusters N = 2 : Stock 1 = C 1933 + 251, Stock 2 = C 0211 + 590	Stock
1956W1	WALKER, M.F. 1956, <i>Ap. J. Suppl.</i> , <u>2</u> , 365-387 Studies of extremely young clusters. I. NGC 2264 N = 239 (Nos 1 - 239)	WALK = W = Walker
1957B1	BRUN, A. 1957, <i>Atlas des 139 "Selected Areas" du Mt Wilson, Obs. Lyon, St Genis-Laval</i>	Brun = Br = BR
1957H1	HAFFNER, H. 1957, <i>Z. Astrophys.</i> , <u>43</u> , 89-94 Neue galaktische Sternhaufen in der südlichen Milchstrasse N = 27 (Nos 1 - 22 and (1) to (5)) ALTER and RUPRECHT transformed Ha(1) into Haffner 23, and Ha(3) to (5) into Haffner 24 to 26.	Haffner = Ha
1957I1 A	IRIARTE, B., CHAVIRA, E. 1957, <i>Bol. Obs. Tonantzintla y Tacubaya</i> , <u>2</u> , n° 16, 3-36 (in Spanish) Estrellas azules en el casquete galáctico norte. (Finding list of blue stars in high galactic latitudes) Nos 1 - 817	Ton = TON = T
1957I1 B	CHAVIRA, E. 1959, <i>Bol. Obs. Tonantzintla y Tacubaya</i> , <u>2</u> , n° 18, 3-30 (in Spanish) Estrellas azules en el casquete galáctico norte. II. (Finding list of blue stars in the North Galactic Pole. II) Nos 818 - 1589	Ton

- 1957L1 A LUYTEN, W.J. LTT
 1957, *The Lund Press, Minneapolis, Minnesota, USA*.
 Luyten's two tenths.
 A catalogue of 9867 stars in the Southern Hemisphere with proper motions exceeding 0".2 annually
 (Nos 1 - 9867)
- 1957L1 B LUYTEN, W.J., ANDERSON, J.H. LTT
 1961, *Publ. Astron. Obs. Univ. Minnesota*, 3, n° 8
 Faint stars with large proper motions
 (Nos 9868 - 9911 and 38 other large proper motion stars given with LP numbers)
- 1957L1 C LUYTEN, W.J. LTT
 1961, *The Lund Press, Minneapolis, Minnesota, USA*.
 A catalogue of 7127 stars in the Northern Hemisphere
 (Nos 10001 - 17127)
- 1957L1 D LUYTEN, W.J. LTT
 1962, *The Observatory, University of Minnesota, Minneapolis, Minnesota, USA*, 20 pp.
 First supplement to the LTT catalogues
 (Nos 17128 - 18635)
The stars of the 3 catalogues and their supplement are all included in the new LTT (NLTT) catalogue, Ref. 1979LU
- 1957S1 SHAKHBAZIAN, R.K. Shakhbazian
 1957, *Astr. Cirk.*, n° 177, 11-12 (in Russian) = Sahbazjan
 On a stellar cluster in Ursa Major = Shah
 N = 1 Shah I = Shah 1 in Shakhbazian Ref. 1973S4, cluster of 17 galaxies
 This object was considered as GCL (stellar cluster) in 1970AR and designated with transliteration rules then available.
- 1957V1 VAN DEN BERGH, S. Van den Bergh
 1957, *Ap. J.*, 126, 323-325
 A search for Cepheids in galactic clusters
 N = 9
- 1957V2 VELGHE, A.G.
 1957, *Ap. J.*, 126, 302-317
 H α -emission stars and planetary nebulae in the vicinity of M8 and M20 and in Vela from $\ell^I = 230^\circ$ to $\ell^I = 241^\circ$ along the galactic equator
- | | | | |
|-------------------------|-----------------|-------------------|-------|
| Table 1 (Nos 1 - 31) | H α em** | } near M8 and M20 | Ve1 - |
| Table 2 (Nos 32 - 58) | " | | Ve2 - |
| Table 3 (Nos 59 - 62) | PN | | Ve3 - |
| Table 4 (Nos 63 - 66) | red * | | Ve4 - |
| Table 5 (Nos 1 - 10) | H α em** | } in Vela | Ve5 - |
| Table 6 (Nos 11 - 25) | " | | Ve6 - |
| Table 7 (Nos 26 and 27) | PN | | Ve7 - |
- See PK Nomenclature for Nos 22, 26, 27 (in Vela) and 59 - 62 (near M8 and M20) which are given the designation Ve.
- 1958A1 ABELL, G.O. A
 1958, *Ap. J. Suppl.*, 3, 211-288
 The distribution of rich clusters of galaxies (epoch 1855 Coordinates, 1, b
 and magnitudes) = Abel
 = Abell
 = ABGC
 N = 2712
 Positions on POSS prints and 1950 coordinates : see Sastry + Rood, 1971,
Ap. J. Suppl., 29, 371-419.
- 1958A2 AMBARTSUMIAN, V.A., SCHACHBAZIAN, R.K. ASh
 1958, *Doklady Akad. Nauk Armyanskoy S.S.R.*, 26, 277-279
 Galaxies multiples et radio-galaxies. IV. Objets bleus proches et galaxies elliptiques
 N = 10

Nº 4	References	3.23
1958B1	BARKHATOVA, K.A. 1958, <i>Astr. Zh.</i> , <u>35</u> , 448-457 = <i>Sov. Astron.</i> , <u>2</u> , 410-419 Clusters in the region of the North America Nebula N = 2 Barkhatova 1 = C 2052 + 458, Barkhatova 2 = C 2142 + 509	Barkhatova
1958C1	CHAVIRA, E. 1958, <i>BoL. Obs. Tonantzintla y Tacubaya</i> , n° 17, 15-31 (in Spanish) Estrellas azules en el casquete galactico Sur (A finding list of blue stars in the South Galactic Pole) N = 419 (Nos 1 - 419)	TonS = Chavira = Ton S = TON S = T
1958F1	FEIGE, J. 1958, <i>Ap. J.</i> , <u>128</u> , 267-272 A search for underluminous hot stars N = 114 An Atlas of identification for 113 of these stars is given in <i>Ap. J.</i> , <u>129</u> , 600	Feige = F = Feig = FEIG = FEIGE
1958L1	LINDSAY, E.M. 1958, <i>M.N.R.A.S.</i> , <u>118</u> , 172-182 The cluster system of the Small Magellanic Cloud Table III, N = 116 (Nos 1 - 116) 1900 coordinates, a few cross identifications 14 "Additional possible clusters" (Nos 1 - 14 of Table II) are not included in Table III.	Lindsay
1958M1 A	MILLS, B.Y., SLEE, O.B., HILL, E.R. 1958, <i>Austral. J. Phys.</i> , <u>11</u> , 360-387 A catalogue of radio sources between declinations + 10° and - 20° N = 1159 <u>This catalogue supersedes the preliminary MSH published in 1957</u>	MSH
1958M1 B	MILLS, B.Y., SLEE, O.B., HILL, E.R. 1960, <i>Austral. J. Phys.</i> , <u>13</u> , 676-699 A catalogue of radio sources between declinations - 20° and - 50° N = 892	MSH
1958M1 C	MILLS, B.Y., SLEE, O.B., HILL, E.R. 1961, <i>Austral. J. Phys.</i> , <u>14</u> , 497-507 A catalogue of radio sources between declinations - 50° and - 80° N = 219	MSH
1958N1	NUMEROVA, A.B. 1958, <i>Izv. Krym. Astrofiz. Obs.</i> , <u>19</u> , 230-340 (in Russian) A catalogue of the spectra, photographic magnitudes and colour indices of 5000 stars in Cygnus in an area of 6° × 6° with the centre at $\alpha_{1950} = 20^{\text{h}}05^{\text{m}}$, $\delta_{1950} = +36^{\circ}$ N = 5024	Numerova
1958R1	RISHBETH, H. 1958, <i>Austral. J. Phys.</i> , <u>11</u> , 550-563 Radio emission from the Vela - Puppis region Table 1 (Nos 1 - 77) : sources observed at $\lambda = 3.5\text{m}$ Table 2 (Nos 100 - 115) : sources observed at $\lambda = 15.2\text{m}$ Total number : N = 93	R
1958S1	STRAND, K.Aa., LENHAM, A., OWEN, T. 1958, <i>A.J.</i> , <u>63</u> , 337-339 A survey of stars with large proper motions in the region of the Orion constellation N = 40 (Nos 1 - 40)	Strand = STR
1958W1	WESTERHOUT, G. 1958, <i>B.A.N.</i> , <u>14</u> , 215-260 A survey of the continuous radiation from the galactic system at a frequency of 1390 Mc/s N = 82	W

3.24	A. Fernandez, M.-C. Lortet, F. Spite	N° 4
1958Y1	YASUDA, H., HARA, H. 1958, <i>Ann. Tokyo Astron. Obs.</i> , Ser. 2, 6, 1-53 The catalogue of the right ascension of 612 zenith stars for the equinox 1950.0. Observed with Gautier meridian circle N = 612	MZC 2 α
1958Z1	ZVEREV, M.S., POLOZHENTSEV, D.D. 1958, <i>Trudy Glav. Astron. Obs. Pulkovo</i> , Ser. 2, 72, 5-76 (in Russian) A preliminary general catalogue of fundamental faint stars with declinations from +90° to -20° (PFKSZ) N = 587 (Nos 2 - 931)	PFKSZ
1959B1	BLAAUW, A., HILTNER, W.A., JOHNSON, H.L. 1959, <i>Ap. J.</i> , 130, 69-79 Photoelectric photometry of the association III Cephei. Partly cross-identified with HD, BD, Brodskaja, Münch, ADS Erratum in <i>Ap. J.</i> , 131, 327 (1960) N = 83	BHJ
1959B2	BERTAUD, C. 1959, <i>J. Observateurs</i> , 42, 45-73 Catalogue et bibliographie des étoiles A à spectre particulier (Catalogue and bibliography of A stars with peculiar spectra) <u>Superseded by : Bertaud + Floquet</u> , N = 1049 + (possible) 189 stars, Ref. 1974BF N = 476	CB
1959D1	DOLIDZE, M.V., ARAKELYAN, M.A. 1959, <i>Astr. Zh.</i> , 36, 444-447 = <i>Sov. Astron. AJ</i> , 3, 434-438 (in Russian) The I-association near ρ Ophiuchi N = 88	Do - Ar
1959D2	DRAKE, F.D. 1959, <i>Paris Symposium on Radio Astronomy</i> , Stanford University Press = IAU <i>Symposium n° 9 and URSI Symposium n° 1</i> , paper 65, 339-346 The nature of the radio source Cygnus X N = 12	D
1959E1	EDGE, D.O., SHAKESHAFT, J.R., McADAM, W.B., BALDWIN, J.E., ARCHER, S. 1959, <i>Mem.R.A.S.</i> , 68, 37-60 A survey of radio sources at a frequency of 159 Mc/s. 3C survey N = 471 $\nu = 159$ MHz, HP BW = 72' $\times$ 460'	3C
1959H1 A	HARDORP, J., ROHLFS, K., SLETTEBAK, A., STOCK, J. 1959, <i>Hamburger Sternwarte - Warner and Swasey Obs., Hamburg-Bergedorf</i> Luminous stars in the Northern Milky Way. I. Hamburg spectral survey N = 1910	LS = LSN
1959H1 B	STOCK, J., NASSAU, J.J., STEPHENSON, C.B. 1960, <i>Hamburger Sternwarte - Warner and Swasey Obs., Hamburg-Bergedorf</i> Luminous stars in the Northern Milky Way. II. (This volume presents 1095 stars between galactic longitudes 45° and 80°) N = 1095	LS
1959H1 C	HARDORP, J., THEILE, I., VOIGT, H.H. 1964, <i>Hamburger Sternwarte - Warner and Swasey Obs., Hamburg-Bergedorf</i> Luminous stars in the Northern Milky Way. III. N = 1800	LS
1959H1 D	NASSAU, J.J., STEPHENSON, C.B. 1963, <i>Hamburger Sternwarte - Warner and Swasey Obs., Hamburg-Bergedorf</i> Luminous stars in the Northern Milky Way. IV. N = 800	LS

N° 4	References	3.25
1959H1 E	HARDORP, J., THEILE, I., VOIGT, H.H. 1965, <i>Hamburger Sternwarte - Warner and Swasey Obs., Hamburg-Bergedorf</i> Luminous stars in the Northern Milky Way. V. N = 1320	LS
1959H1 F	NASSAU, J.J., STEPHENSON, C.B., MacCONNELL, D.J. 1965, <i>Hamburger Sternwarte - Warner and Swasey Obs., Hamburg-Bergedorf</i> Luminous stars in the Northern Milky Way. VI. N = 500 Identification charts : <i>Hamburger Sternwarte, Warner and Swasey Observatory</i> : Iia 1962 Stephenson, C.B., Nassau, J.J. IVa 1963 Stephenson, C.B., Nassau, J.J. VIa 1965 Stephenson, C.B., Nassau, J.J., MacConnell, D.J. No published identification charts for Vol. I, III, V.	LS
1959K1	KOELBLOED, D. 1959, <i>B.A.N.</i> , 14, 265-278 Three-colour photometry of the three southern open clusters NGC 3532, 6475 (M7) and 6124 Table 3 (Nos 1 - 255) * in NGC 3532 Table 6 (Nos 1 - 130) * in NGC 6475 Table 7 (Nos 1 - 46) * in NGC 6124	KO
1959M1	MANOVA, G.A. 1959, <i>Astr. Zh.</i> , 36, 187-190 Newly detected emission stars in Orion N = 32	Manova
1959M2	MULLER, H.G. 1959, <i>Veröff. Univ.-Sternw. Bonn</i> , n° 52, 49 pp. (in German) Messung des kosmischen Radiokontinuums bei 1420 MHz mit hoher Temperaturaufösung (Measurement of the cosmic radio continuum at 1420 MHz with high temperature resolution) N = 27 (Nos 1 - 25)	MUL = UBA = UoB
1959P1	PISMIS, P. 1959, <i>Bol. Obs. Tonantzintla Tacubaya</i> , 2, n° 18, 37-38 New Southern star clusters Table I (Nos 1 - 24) OCL Table II (Nos 1 - 2) GCL The GCL were subsequently given n° 25 and 26 by Alter et al., Ref. 1970AR	Pismis = Pis
1959S1	SLETTEBAK, A., STOCK, J. 1959, <i>Astron. Abh. Hamburg, Sternw. Bergedorf</i> , 5, 105-128 A finding-list of stars of spectral type F2 and earlier in a north galactic pole region Table 1 (Nos 1 - 365) Table 2 (Nos 1 - 236) Non BD stars, finding charts	SS SSI SSII
1959S2	STEPHENSON, C.B. 1959, <i>P.A.S.P.</i> , 71, 145-150 and plate I A possible new galactic cluster involving δ Lyrae N = 1, C 1851 + 368	Stephenson
1959S3	SHARPLESS, S. 1959, <i>Ap. J. Suppl.</i> , 4, 257-279 A catalogue of H II regions N = 313 24 are PN (see PK Nomenclature) ; Sh2-191 probably is Maffei 1, Sh2-197 is Maffei 2 (extragalactic sources) ; Sh2-172 may be extragalactic (4C 60.01 ?)	Sh2 - = S = Sh = SH = SHB -

- 1959V1 A VAN DEN BERGH, S. DDO
1959, *Publ. David Dunlap Obs.*, 2, 145-156 = Van den Bergh
A catalogue of dwarf galaxies
N = 222 (Nos 1 - 222)
 $\delta > -23^\circ$
- 1959V1 B VAN DEN BERGH, S. DDO
1966, *A.J.*, 71, 922-926
Luminosity classifications of dwarf galaxies
N = 21 (Nos 223 - 243), $-33^\circ < \delta < -23^\circ$.

N° 4	References	3.27
1960A1	ARP, H., VAN DEN BERGH, S. 1960, <i>P.A.S.P.</i> , <u>72</u> , 48 and plate A new faint Globular Cluster Arp 1 = Pal 14 = C 1608+150 Arp 2 (defined later) = C 1925 - 304	Arp
1960F1	FEAST, M.W., THACKERAY, A.D., WESSELINK, A.J. 1960, <i>M.N.R.A.S.</i> , <u>121</u> , 337-385 The brightest stars in Magellanic Clouds Table II, N = 158 Nos 1 - 50 SMC Nos 51 - 158 LMC Table III, Proven foreground stars Nos 1F - 30F SMC Nos 31F - 103F LMC	R R...F
1960H1	HARRIS, D.E., ROBERTS, J.A. 1960, <i>P.A.S.P.</i> , <u>72</u> , 237-255 Radio source measurements at 960 Mc/s N = 106 among which 6 new sources : CTA1, 21, 26, 80, 97, 102.	CTA
1960K1	KHAVTASI, D.Sh. 1960, <i>Abastumani Astrophysical Observatory, Georgia S.S.R.</i> (in Russian) Atlas of galactic dark nebulae N = 762 The same author used different numbering for the catalogue , Ref. 1955K1.	Kh = K = KH = Khav = Khavtasi = Khavtassi
1960K2	KUZ'MIN, A.D., LEVCHENKO, M.T., NOSKOVA, R.I., SALOMONOVICH, A.E. 1960, <i>Astr. Zh.</i> , <u>37</u> , 975-978 Observations of discrete sources of radio emission on 9.6 cm N = 57	KLNS = K = Kuzmin
1960L1	LUYTEN, W.J. 1960, <i>The Observatory, University of Minnesota, Minneapolis, Minnesota, USA</i> , 4 pp. A search for faint blue stars. XXI. Proper motions for 150 faint stars (Nos 1 - 16) Red stars.	R
1960R1	RODGERS, A.W. 1960, <i>M.N.R.A.S.</i> , <u>120</u> , 163-172 Three-colour photometry in the Southern Coalsack N = 19 (Nos 1 - 19)	R
1960R2	RODGERS, A.W., CAMPBELL, C.T., WHITEOAK, J.B. 1960, <i>M.N.R.A.S.</i> , <u>121</u> , 103-110 A catalogue of H α -emission regions in the southern Milky Way N = 182 26 are PN (see PK Nomenclature).	RCW (= R)
1960R3	ROSLUND, C. 1960, <i>P.A.S.P.</i> , <u>72</u> , 205-207 Remarks on some new and some known galactic clusters N = 7 (Nos 1 - 7)	Roslund = Ros
1960S1 A	STEPHENSON, C.B. 1960, <i>P.A.S.P.</i> , <u>72</u> , 387-392 A spectroscopic search of white dwarfs in the Ursa Major Cluster N = 1. See WD Nomenclature	C
1960S1 B	STEPHENSON, C.B. 1962, <i>P.A.S.P.</i> , <u>74</u> , 210-214 A spectroscopic search for new white dwarfs N = 2 (Nos 2 - 3). See WD Nomenclature	C
1960W1	WILSON, R.W., BOLTON, J.G. 1960, <i>P.A.S.P.</i> , <u>72</u> , 331-347 A survey of galactic radiation at 960 Mc/s N = 110 Revised by Wilson, 1963, <i>A.J.</i> , <u>68</u> , 181-185	CTB = WB

3.28	A. Fernandez, M.-C. Lortet, F. Spite		N° 4
1960Z1 A	ZWICKY, F., HERZOG, E., WILD, P. 1960, <i>California Institute of Technology, Pasadena, California, USA</i>, 320 pp. Catalogue of galaxies and of clusters of galaxies. Vol. I Format FFF - NN Cluster of G ZW Format FFF - NNN or FFF - NNN/N G Z Format HHMM ± DDMM Cluster of G ZC = ZWC&		
1960Z1 B	ZWICKY, F., HERZOG, E. 1963, <i>California Institute of Technology, Pasadena, California, USA</i>, 8 + 371 pp. Catalogue of galaxies and of clusters of galaxies. Vol. II	ZW, Z, ZC	
1960Z1 C	ZWICKY, F., HERZOG, E. 1966, <i>California Institute of Technology, Pasadena, California, USA</i>, 9 + 394 pp. Catalogue of galaxies and of clusters of galaxies. Vol. III, covering the Palomar survey fields of the declination zones +36°, +42°, +48°, +54° between 5h30m and 20h00m in right ascension	ZW, Z, ZC	
1960Z1 D	ZWICKY, F., HERZOG, E. 1968, <i>California Institute of Technology, Pasadena, California, USA</i>, 11 + 294 pp. Catalogue of galaxies and clusters of galaxies. Vol. IV, covering the Palomar survey fields of the declination zones +60°, +66°, +72°, +78°, +84°, +90°	ZW, Z, ZC	
1960Z1 E	ZWICKY, F., KARPOWICZ, M., KOWAL, C.T. 1965, <i>California Institute of Technology, Pasadena, California, USA</i>, 11 + 319 pp. Catalogue of galaxies and of clusters of galaxies. Vol. V, covering the Palomar survey fields of the declination zones 0°, +6°, +12°, +18° between 19h30m and 6h00 in right ascension	ZW, Z, ZC	
1960Z1 F	ZWICKY, F., KOWAL, C.T. 1968, <i>California Institute of Technology, Pasadena, California, USA</i>, 14 + 246 pp. Catalogue of galaxies and clusters of galaxies. Vol. VI, covering the Palomar survey fields of the declination zones +24°, +30°, +36°, +42°, +48°, +54° in the southern galactic cap N ~ 9700 for the 6 volumes	ZW, Z, ZC	
1961B1	BAADE, W., SWOPE, H.H. 1961, <i>A.J.</i>, 66, 300-347 The Draco System, a dwarf galaxy N = 203 (Variable stars)	Baade Swope = BASV	
1961B2	BLANCO, V.M. 1961, <i>Contr. Bosscha Obs.</i>, n° 13, 12 pp. A catalogue of Hα emission objects in the galactic center region Table I (Nos 1 - 25) : Hα emission stars Table II (A - Q), N = 17: PN, see PK Nomenclature Identification charts	B&	
1961D1	DOLIDZE, M.V. 1961, <i>Astr. Cirk.</i>, n° 223, 11-12 and subsequent references N = 47 (No 7 is missing)	Dolidze	
1961E1	EGGEN, O.J., STOY, R.H. 1961, <i>R. Obs. Bull.</i>, Ser. E, n° 24, p. E29-E35 Photometry of the cluster NGC 2477 N ~ 120 (Nos 85 - 998)	ES	
1961F1	FOSTER, P.R.R. 1961, <i>Ph. D. Thesis, University of Cambridge</i> A study of radio stars N = 894	PRF = PRRF	

N° 4	References	3.29
1961I1	ISKUDARIAN, S.G., SAAKIAN, K.A. 1961, <i>Astr. Cirrk.</i> , n° 221, 6-9 The cluster of white dwarfs in Lyra N = 1 (C 1846+368)	Iskudarian
1961L1	LARGE, M.I., MATHEWSON, D.S., HASLAM, C.G.T. 1961, <i>M.N.R.A.S.</i> , 123, 113-122 A radio survey of the galactic plane at a frequency of 408 MHz. I. The discrete sources N = 51	LMH
1961L2	LINDSAY, E.M. 1961, <i>A.J.</i> , 66, 169-185 A new catalogue of emission-line stars and planetary nebulae in the Small Magellanic Cloud Nos 1 - 593, 1900 coordinates, a few cross-identifications Identification charts	LIN
1961M1	McCUSKEY, S.W. 1961, <i>P.A.S.P.</i> , 73, 264-265 Emission objects near Selected Area 158 N = 7 Nos 1, 2, 5 are PN, see PK Nomenclature	Em
1961M2	MARKARIAN, B.E., OGANESIAN, Eh. Ya. 1961, <i>Soobshch. Byurakansk. Obs.</i> , n° 29, 71-80 (in Russian) White dwarfs in Praesepe (NGC 2632) Table 1 (Nos 1 - 28) Table 2 (Nos 1 - 17)	M + O (= M)
1961M3	MINKOWSKI, R. 1961, <i>A.J.</i> , 66, 558-561 NGC 6166 and the cluster Abell 2199 N = 19	(M)
1961S1	SLETTEBAK, A., BAHNER, K., STOCK, J. 1961, <i>Ap. J.</i> , 134, 195-206 Spectra and colors of early-type stars near the North Galactic pole N = 84	SBS
1961T1	THE, P.-S. 1961, <i>Contrib. Bosscha Obs.</i> , n° 10, 8 pp. H α -emission stars in the vicinity of NGC 6334 and NGC 6357 Table 2 : N = 27 (Nos 1 - 27)	TH α 10 -
1961V1	VAN BIESBROECK, G. 1961, <i>A.J.</i> , 66, 528-530 A search for stars of low luminosity Table I : N = 12 (Nos 1 - 12) Table II : N = 17 (Nos 13 - 29)	VB = vB
1961V2	VORONTSOV-VEL'YAMINOV, B.A. 1961, <i>Astron. Zh.</i> , 38, 375-376 New planetary and peculiar gas nebulae Nos 1 - 9 See PK Nomenclature V-V1-2 (Sh2-207), V-V1-3 (Sh2-269), V-V1-4 (Sh2-271), V-V1-5 (Sh2-267) are H II regions.	V - V1 -
1961W1	WILDEY, R.L. 1961, <i>Ap. J.</i> , 133, 430-437 The color-magnitude diagram of 47 Tuc Nos 1 - 300 (No 197 is missing). Identif. Chart Photoelectric standards designated by greek and roman letters ($\alpha\beta$; a b d e g l m n ; A B P X Y).	Wildey

1962B1	BENNETT, A.S. 1962, <i>Mem. R.A.S.</i> , 68, 163-172 The revised 3C catalogue of radio sources N = 328 v = 178 MHz	3CR = 3C (revised)
1962B2	BLANCO, V.M. 1962, <i>P.A.S.P.</i> , 74, 330-332 Faint H α -emission objects in Cepheus IV Epoch 1950 coordinates.	Blanco
1962C1	COUSINS, A.W.J., STÖY, R.H. 1962, <i>Roy. Obs. Bull.</i> , 49 Standard magnitudes in the E regions UBVRI standards, identif. charts and 1980 coordinates in : Graham, J.A., 1982, <i>P.A.S.P.</i> , 94, 244-265	E
1962G1	GICLAS, H.L., BURNHAM, R.Jr., THOMAS, N.G. 1962, <i>Lowell Obs. Bull.</i> , 5, n° 118, 257-280 A proper motion survey in the Hyades Table 1 : Nos HG7 - 1 to HG7 - 259 Table 2 : Nos HG8 - 1 to HG8 - 82 Total number : N = 292	HG
1962H1	HARO, G., LUYTEN, W.J. 1962, <i>Bol. Obs. Tonantzintla y Tacubaya</i> , 3, 37-117 Faint blue stars in the region near the South Galactic Pole N = 8725	PHL = HL
1962K1	KLEMOLA, A.R. 1962, <i>A.J.</i> , 67, 740-756 Mean absolute magnitude of the blue stars at high galactic latitude N = 205 Cross-identified	Klemola = K
1962L1	LYNDS, B.T. 1962, <i>Ap. J. Suppl.</i> , 7, 1-52 Catalogue of dark nebulae N = 1802 The galactic coordinates are incorrect, they have been revised by B.T. Lynds for 381 clouds, see Dieter, 1973, <i>Ap. J.</i> , 183, 449.	LDN = L = LD = Lynds = LYNDS
1962M1	MATHEWSON, D.S., HEALEY, J.R., ROME, J.M. 1962, <i>Austral. J. Phys.</i> , 15, 354-368 A radio survey of the southern Milky Way at a frequency of 1440 MHz. I. The isophotes and the discrete sources N = 66 (Nos 1 - 66)	MHR
1962R1	ROBERTS, M.S. 1962, <i>A.J.</i> , 67, 79-85 The galactic distributions of the Wolf-Rayet stars Table I, N = 123 (Nos 1 - 123) See WR Nomenclature, Ref. 1981VH Some stars are not WR stars.	Roberts = MR
1962R2	RYLE, M., NEVILLE, A.C. 1962, <i>M.N.R.A.S.</i> , 125, 39-56 A radio survey of the north polar region with a 4.5 minute of arc pencil-beam system N = 87	RN
1962S1	STRUVE, O., STRAKA, W.C. 1962, <i>P.A.S.P.</i> , 74, 474-487 Notes on diffuse galactic nebulae N = 74	S - S

N° 4	References	3.31
1962T1	THE, P.-S. 1962, <i>Contrib. Bosscha Obs.</i> , n° 15, 13 pp. On faint H α - emission stars in Lupus and Scorpius Table I : Dark lane L1 (Nos 1 - 7) Table II : Dark lane L2 (Nos 8 - 13) Table III : Dark nebulosity L3 (Nos 14 - 44)	TH α 15 - L1 L2 L3
1962T2	TUZI, K. 1962, <i>Ann. Tokyo Astron. Obs.</i> , Ser. 2, 8, 1-181 Tokyo Mitaka catalogue of equatorial stars for the equinox 1950.0 (TME) N = 4135	TME
1962T3	THE, P.-S. 1962, <i>Contrib. Bosscha Obs.</i> , n° 17, 18 pp. Faint H α - emission objects in nebulosities surrounding the star m Cen. Table I, II, III : Nos 1 - 90 H α em* (among which 78 are new) Table IV : Nos A, B, C PN (see PK Nomenclature)	Th α 17 - Th2 -
1962T4	THE, P.-S. 1962, <i>Contrib. Bosscha Obs.</i> , n° 14, 19 pp. H α -emission objects in a dark region in Aquila and Scutum Table II, III, IV : Nos 1 - 62 H α em* Identification charts Table V PN	Th α 14 - Th1 -
1962T5	THACKERAY, A.D. 1962, <i>M.N.A.S. South Africa</i> , 21, 74-76 New members of the Small Magellanic Cloud N = 13 (Nos 4 - 40) (several missing numbers) 1875 coordinates. No magnitudes Foreground or doubtful : Nos 27 and 37	T = T62
1962U1	UPGREN, A.R., Jr. 1962, <i>A.J.</i> , 67, 37-78 The space distribution of late-type stars in a north galactic pole region N = 4027 Identification charts (no coordinates) 1855 declination zones	NGP = UL
1962V1 A	VORONTSOV-VEL'YAMINOV, B.A., KRASNOGORSKAYA, A.A. 1962, <i>Trudy Gos. Astron. Inst. Shternberga</i> , 32, 207 pp. (in Russian) Morphological catalogue of galaxies. Part I. Catalogue of 7200 galaxies between declinations +90° and +45° N = 7200	MCG
1962V1 B	VORONTSOV-VEL'YAMINOV, B.A., ARKHIPOVA, V.P. 1964, <i>Moscow, USSR</i> , 288 pp. (in Russian) Morphological catalogue of galaxies. Part II. Catalogue of 9650 galaxies between declinations +45° and +15° N = 9650	MCG
1962V1 C	VORONTSOV-VEL'YAMINOV, B.A., ARKHIPOVA, V.P. 1963, <i>Trudy Gos. Astron. Inst. Shternberga</i> , 33, 260 pp. (in Russian) Morphological catalogue of galaxies. Part III. Catalogue of 6740 galaxies between declinations +15° and -9° N = 6740	MCG
1962V1 D	VORONTSOV-VEL'YAMINOV, B.A., ARKHIPOVA, V.P. 1968, <i>Trudy Gos. Astron. Inst. Shternberga</i> , 38, 206 pp. (in Russian) Morphological catalogue of galaxies. Part IV. Catalogue of 5410 galaxies between declinations -9° and -33° N = 5410	MCG

- 1962V1 E VORONTSOV-VEL'YAMINOV, B.A., ARKHIPOVA, V.P. MCG
 1974, *Moscow State University*
 Morphological catalogue of galaxies. Part V.
 N = 1200
 Total Number : 30200
- 1962W1 WORLEY, C.E. WOR
 1962, *A.J.*, 67, 396-402
 A visual survey of M-dwarf stars for duplicity
- 1963B1 BENNETT, A.S. BEN
 1963, *M.N.R.A.S.*, 127, 3-13
 A survey of extended sources of radio emission
 N = 79
- 1963D1 DEJČ, A.N. = DEUTSCH, A.N. Dejč
 1963, *Astr. Cirk.*, n° 259, 1-2 = Deutsch
 New intergalactic globular cluster ?
 N = 1 (C 0234 + 209)
- 1963F1 FRICKE, W., KOPFF, A., GLIESE, W., GONDOLATSCH, F., LEDERLE, T., FK4
 NOWACKI, H., STROBEL W., STUMPFF, P. also named
 1963, *Veröff. Astron. Rechen-Inst. Heidelberg*, 10, 144 pp. FK3
 Fourth Fundamental Catalogue (FK4)
 Revision of FK3. Includes FK3 Suppl.
 Catalogue of 1535 fundamental stars for the equinox and epoch 1950.0 and 1975.0
 N = 1595 (Nos 1 - 925 and 1001 - 1670)
 Published annually in the *Apparent places of fundamental stars*.
- 1963JV JEFFERS, H.M., VAN DEN BOS, W.H., GREEBY, F.M. IDS
 1963, *Publ. Lick. Obs.*, 21, 17 + 263 pp. (part I) and 804 pp. (part II)
 Index catalogue of visual double stars, 1961.0
 Table III in part II (1900 and 2000 coordinates)
 N ~ 64000
 Compiles about 240 discovery lists (Index of discoverer numbers, see Part I, Table II). The stars are named according to the format : HHMM.mNDDMMA (1900 coord.) where N (or S) stands for positive (or negative) declination and A (B, ..) for components.
 Further compilations of double stars continues in the IDS Nomenclature system.
 See Data Centers C17, C26, C28 in Table I.3.
- 1963L1 LINDSAY, E.M. L -
 1963, *Irish Astr. J.*, 6, 127-132
 Second list of emission-line objects in the Large Magellanic Cloud
 N = 358 (Nos 1 - 358)
 First list in *Irish Astr. J.*, 6, 51-55 (Lindsay + Mullan), third list is
 Ref. 1964A1, acronym AL -
- 1963L2 LONG, R.J., HASELER, J.B., ELSMORE, B. LHE
 1963, *M.N.R.A.S.*, 125, 313-324
 A survey of radio sources at 408 MHz
 N = 559
 In Dixon Master List, 1970, *Ap. J. Suppl.*, 20, 1-504 ; unpublished, often
 quoted in QSO Catalogues.
- 1963L3 LUYTEN, W.J. BPM
 1963, *University of Minnesota, Minneapolis, Minnesota, USA*
 Bruce proper motion survey. The general catalogue. Vol. I, II
 N = 98218

- 1963L4 LUYTEN, W.J. LP
1963 to 1981, *Univ. Minnesota, Minneapolis*, fascicules 1 to 57
Proper motion survey with the 48 inch Schmidt telescope
The largest proper motions are collected in the NLTT Catalogue, Luyten, *Univ. Minnesota*, 1979-1980 Ref. 1979LU
N = 29000
- 1963L5 LYNGÅ, G., WESTERLUND, B.E. LW
1963, *M.N.R.A.S.*, 127, 31-36
A catalogue of clusters in the outer parts of the Large Magellanic Cloud
Nos 1 - 435, 1975 and ξ , η coordinates
- 1963S1 SHAPLEY, H., LINDSAY, E.M. SL
1963, *Irish Astr. J.*, 6, 74-91
A catalogue of clusters in the Large Magellanic Cloud
N = 898
- 1963U1 UPGREN, A.R. UI
1963, *A.J.*, 68, 194-206
Space distribution of stars of intermediate spectral type in a north galactic pole region
N = 1127
Spectral type F2 to G5
1855 declination zones
(see also : Upgren late spectral type, UL)
- 1963V1 VON DORSCHNER, J., GÜRTLER, J. DG -
1963, *A.N.*, 287, 257-260
Untersuchungen über Reflexionsnebel am Palomar Sky Survey. I. Verzeichnis von Reflexionsnebeln
N = 192
- 1964A1 ANDREWS, A.D., LINDSAY, E.M. AL -
1964, *Irish Astr. J.*, 6, 241-247
Third list of emission-line objects in the Large Magellanic Cloud
(Epoch 1975 coordinates. Cross-identification with Henize, 1956)
N = 446 (Nos 1 - 446)
The second list is Ref. 1963L1, acronym L -
- 1964A2 APRIAMASHVILI, S.P. Apriamashvili
1964, *Astr. Cirk.*, n° 280, 1-2
On a new open cluster in Scutum
N = 1
- 1964B1 BLANCO, V.M., FITZGERALD, M.P. B&Fg
1964, *P.A.S.P.*, 76, 438-439
Faint H α -emission objects near ζ Cephei
N = 26
- 1964B2 BENNETT, A.S. ASB
1964, *M.N.R.A.S.*, 127, 1-13
A survey of extended sources of radio emission
N = 79
- 1964F1 FEINSTEIN, A. Feinstein
1964, *The Observatory*, 84, 111-117
A group of stars around the helium star HD 96446
N = 1
- 1964HF A HOFFLEIT, D. BS
1964, *Yale University Observatory, New Haven, Connecticut*
Catalogue of bright stars. Third revised edition = (BSC)
= HR
N = 9110
On magnetic tape. Microfiche available at CDS Strasbourg. Errata : *Bull. Inf. CDS*, 13, 14-23. Superseded by the new edition (Ref. 1982HJ).

1964HF B	HOFFLEIT, D. 1979, <i>Bull. Inf. CDS</i> , 17, 38-65 Discordances in star designations	BS
1964H1	HIGGS, L.A., BROTEN, N.W., MEDD, W.J., RAGHAVARAO, R. 1964, <i>M.N.R.A.S.</i> , 127, 367-375 The Cygnus X complex Table 1 : N = 31	HBMR
1964K1 A	KRAUS, J.D. 1964, <i>Nature</i> , 202, 269-272 Maps of M31 and surroundings at 600 and 1415 megacycles per second N = 51	OA -
1964K1 B	DIXON, R.S., MENG, S.Y., KRAUS, J.D. 1965, <i>Nature</i> , 205, 755-758 Maps of the Perseus region at 600 and 1415 megacycles per second N = 59	OA
1964K1 C	NASH, R.T. 1965, <i>A.J.</i> , 70, 846-848 Some high galactic latitude observations at 600 and 1415 Mc/s N = 25	OA
1964K1 D	KRAUS, J.D., DIXON, R.S., FISHER, R.O. 1966, <i>Ap. J.</i> , 144, 559-567 A new high-sensitivity study of the M31 region at 1415 Mc/s N = 82	OA
1964L1	LYNGÅ, G. 1964, <i>Medd. Lunds</i> , Ser. II, n° 140 Studies of the Milky Way from Centaurus to Norma. II. Open clusters Table III : N = 14 suspected new clusters Identification charts	Lyngå = Ly
1964N1	NASSAU, J.J., STEPHENSON, C.B., CAPRIOLI, G. 1964, <i>Ap. J.</i> , 139, 864-868 Spectral classification for new or unclassified late-type variables, emission-line stars, S stars, and planetary nebulae N = 102 Table 1 : (Nos 1 - 56) Long period variables Table 2 : (Nos 1 - 20) Additional em. line * Table 3 : (Nos 1 - 8) Miscellaneous variables Table 4 : (Nos 1 - 16) S-type * Table 5 : (Nos 1 and 2) Planetary nebulae	NSC
1964P1	PIKE, E.M., DRAKE, F.D. 1964, <i>Ap. J.</i> , 139, 545-550 A high-resolution map of the Cygnus X region N = 26 (Nos 1 - 26)	PD
1964S1	SHER, D. 1964, <i>The Observatory</i> , 84, 263-266 and plates VIII and IX A search for star clusters listed near eta Carinae N = 1 (C 1058 - 601)	Sher
1964T1	THE, P.-S., LIM, H.-K. 1964, <i>Contr. Bosscha Obs.</i> , n° 23 New H α emission stars in a region to the east of the T-association near ρ Ophiucchi Table II, N = 32 (Nos 1 - 32)	Tha23 -
1964T2	THE, P.-S. 1964, <i>Contr. Bosscha Obs.</i> , n° 27, 1-3 Note on a group of faint H α -emission stars associated with a dark nebulosity in Ophiucus Nos 1 - 8 Identif. Chart	Tha27 -

N° 4	References	3.35
1964Y1	YANG, K.S., WEST, L.A. 1964, <i>A.J.</i> , 69, 246-250 Cygnus X region at 610.5 Mc/s N = 69 (Nos 1 - 69)	VRO = Y = YW
1965B1	BRACCESI, A., CECCARELLI, M., FANTI, R., GELATO, G., GIOVANNINI, C., HARRIS, D., ROSATELLI, C., SINIGAGLIA, G., VOLDERS, L. 1965, <i>Lab. Naz. Radioastron. Inst. Fis. Univ. Bologna</i> , 33 p. = <i>Nuovo Cimento B</i> , 40, 267-294 A catalogue of radiosources from declination - 30° to - 20° at 408 MHz Table I : N = 654 Table II : N = 38	B1 B1S
1965D1	DAVIS, M.M., GELATO-VOLDERS, L., WESTERHOUT, G. 1965, <i>B.A.N.</i> , 18, 42-50 A catalogue of discrete sources observed at 400 Mc/s N = 149	DGVW = D
1965E1 A	EGGEN, O.J., GREENSTEIN, J.L. 1965, <i>Ap. J.</i> , 141, 83-108 Spectra, colors, luminosities and motions of the white dwarfs N = 166	EG = Eggen - Greenstein = EGGR
1965E1 B	EGGEN, O.J., GREENSTEIN, J.L. 1965, <i>Ap. J.</i> , 142, 925-933 Observations of proper-motion stars. II. N = 12 (Nos 167 - 178)	EG
1965E1 C	EGGEN, O.J., GREENSTEIN, J.L. 1967, <i>Ap. J.</i> , 150, 927-942 Observations of proper-motion stars. III. N = 31 (Nos 179 - 202)(in fact goes back to 172)	EG
1965E1 D	GREENSTEIN, J.L. 1969, <i>Ap. J.</i> , 158, 281-293 The Lowell suspect white dwarfs N = 63 (Nos 203 - 266)	EG
1965H1	HOGG, A.R. 1965, <i>Mem. Mt. Stromlo Obs.</i> , 4, n° 2, 17 pp. Catalogue of open clusters south of - 45° declination N = 133	Hogg = Ho
1965H2	HOWARD, W.E., III, MARAN, S.P. 1965, <i>Ap. J. Suppl.</i> , 10, 1-330 General catalogue of discrete radio sources N = 1293 (Nos 1 - 1293)	HM
1965K1	KELLERMANN, K.I., READ, R.B. 1965, <i>Publ. Owens Valley Radio Obs.</i> , 1, 1-5 A continuum survey for discrete radio sources at 1421 MHz N = 143 ν = 1421 MHz, HPBW = 33'	CTD
1965K2	KLARE, G., SCHAIFERS, K. 1965, <i>Observatory</i> , 85, 202-203 Survey for red dwarfs in the solar neighbourhood N = 30 Most stars are cross-identified with HD, CG or Gliese number	H - K
1965L1	LYNDS, B.T. 1965, <i>Ap. J. Suppl.</i> , 12, 163-185 Catalogue of bright nebulae N = 1125	LBN = L = LD = Lynds = LYNDS

1965L2	LYNGÅ, G. 1965, <i>Medd. Lunds</i> , Ser. II, <u>15</u> , n° 142, 3-16 Studies of the Milky Way from Centaurus to Norma. IV. Galactic structure N = 6	L
1965M1 A	MacLEOD, J.M., SWENSON, G.M., Jr., YANG, K.S., DICKEL, J.R. 1965, <i>A.J.</i> , <u>70</u> , 756-764 A 610.5 Mc/s survey of the sky between declinations +40° and +44° N = 239	VRO
1965M1 B	DICKEL, J.R., YANG, K.S., McVITTIE, G.C., SWENSON, G.W., Jr., 1967, <i>A.J.</i> , <u>72</u> , 757-768 A survey of the sky at 610.5 MHz. II. The region between declinations +15° and +22° N = 625	VRO
1965M1 C	WENDKER, H.J., DICKEL, J.R., YANG, K.S. 1970, <i>A.J.</i> , <u>75</u> , 148-157 A survey of the sky at 610.5 MHz. III. The region between declinations +22° and +27° N = 320	VRO
1965M1 D	DICKEL, J.R., WEBBER, J.C., YANG, K.S. 1971, <i>A.J.</i> , <u>76</u> , 294-304 A survey of the sky at 610.5 MHz. IV. The region between declinations +27° and +31.5° N = 336	VRO
1965M1 E	WEBB, H.D., DICKEL, J.R. 1971, <i>A.J.</i> , <u>76</u> , 223-230 Galactic radio emission at 610.5 MHz. III. The region between galactic longitudes 108° and 138° N = 71	VRO
1965M2	MORAN, M. 1965, <i>M.N.R.A.S.</i> , <u>129</u> , 447-452 Observations of the radio emission from the galactic plane at a frequency of 610 Mc/s N = 51	MM = M
1965N1	NEUGEBAUER, G., MARTZ, D.E., LEIGHTON, R.B. 1965, <i>Ap. J.</i> , <u>142</u> , 399-401 and plates Observations of extremely cool stars N = 2 NML Tau = IRC + 10050 = IK Tau NML Cyg = IRC + 40448	NML
1965N2	NICOLSON, G.D. 1965, <i>P.A.S.P.</i> , <u>77</u> , 260-268 A survey of southern galactic radiation at 960 Mc/s N = 28 (Nos 1 - 28)	GN
1965P1	PARSAMYAN, Eh.S. 1965, <i>Izv. Akad. Nauk Armianskoi SSR., Ser. Fiz.-Math. Nauk</i> , <u>18</u> , 146-148 (in Russian) Catalogue of cometary nebulae discovered on Palomar maps N = 23	Parsamian
1965P2	PILKINTON, J.D.H., SCOTT, P.F. 1965, <i>Mem. R.A.S.</i> , <u>69</u> , 183-224 A survey of radio sources between declinations 20° and 40° N = 1219, ν = 178 MHz See also 4CT	4C1
1965R1	RAGHAVARAO, R., MEDD, W.J., HIGGS, L.A., BROTEN, N.W. 1965, <i>M.N.R.A.S.</i> , <u>129</u> , 159-168 and plates 1 to 5 Survey of 9.4 cm radio emission in Cassiopeia and Cepheus N = 30, HPBW = 37.6'	NRC = R = RMHB

N° 4	References	3.37
1965R2	RICHTER, N., SAHAKJAN, K. 1965, <i>Mitt. Karl-Schwarzschild Obs. Tautenburg</i> , 24, p. 5 Statistics of blue objects near the Galactic North Pole N = 53	RS
1965S1	SANDAGE, A., VERON P. 1965, <i>Ap. J.</i> , 142, 412-414 Photometric results of a special survey for interlopers N = 31	BSO
1965U1	UPGREN, A.R., RUBIN, V.C. 1965, <i>P.A.S.P.</i> , 77, 355-358 An old open cluster near the North Galactic Pole N = 1 (C 1232 + 365)	Upgren
1966A1	ARP, G.C. 1966, <i>California Institute of Technology, Pasadena, California, USA</i> , 19 p. + 57 p. of plates Atlas of peculiar galaxies Nos 1 - 338	Arp = APG
1966C1	CASWELL, J.L. 1966, <i>Ph. D. Dissertation, Univ. Cambridge, England</i> The angular structure of radio sources observed at 178 Mc/s. The 4CP survey N = 1551, HPBW = 28' in α and 18' $\times$ sec(52°10'- δ) in δ .	4CP
1966C2	CROWTHER, J.H. 1966, <i>Ph. D. Dissertation, Univ. Cambridge, England</i> High resolution observations at a wavelength of 1.7 metres N = 562	CR
1966C3	CZERNIK, M. 1966, <i>Acta Astron.</i> , 16, 93-94 New open star clusters N = 45	Czernic = Czernik
1966D1	DOLIDZE, M.V., DŽIMŠELEJŠVILI, G.N. 1966, <i>Astron. Cirk.</i> , n° 382, 7-8 New possible star clusters N = 11	Dolidze - Džimšelejšvili
1966D2	DOWNES, D., RINEHART, R. 1966, <i>Ap. J.</i> , 144, 937-942 Microwave observations of the Cygnus X region N = 27	DR
1966F1	FOMALONT, E.B., ROGSTAD, D.H. 1966, <i>Ap. J.</i> , 146, 528-541 Radio emission from clusters of galaxies N = 120	FR
1966H1	HIGGS, L.A. 1966, <i>M.N.R.A.S.</i> , 132, 67-78 The γ -Cygni region of the Cygnus X radio source N = 31 (Nos 1 - 31)	HIG = H
1966H2	HODGE, P.W., SEXTON, J.A. 1966, <i>A.J.</i> , 71, 363-368 457 new star clusters of the Large Magellanic Cloud Table II : Nos 1 - 455, 1975 coord.	HS
1966K1	KOMESAROFF, M.M. 1966, <i>Austral. J. Phys.</i> , 19, 75-92 A southern Milky Way survey at 408 Mc/s N = 49	KOM

3.38	A. Fernandez, M.-C. Lortet, F. Spite	Nº 4
1966K2	KENDERDINE, S., RYLE, M., POOLEY, G.G. 1966, <i>M.N.R.A.S.</i> , <u>134</u> , 189-210 Some observations of weak radio sources with the Cambridge one-mile telescope N = 106 ν = 408 and 1407 MHz	5C1•
1966K3	KLARE, G., SZEIDL, B. 1966, <i>Veröff. Landessternw. Heidelberg-Königstuhl</i> , <u>18</u> , 9-50 OB-stars of the southern Milky Way N = 1660 (Nos 1 - 1660) MK spectral types for 1113 stars are given in Ref. 1977G1	KS = Hbg
1966P1	PAULINY-TOTH, I.I.K., WADE, C.M., HEESCHEN, D.S. 1966, <i>Ap. J. Suppl.</i> , <u>13</u> , 65-12 Positions and flux densities of radio sources + unpublished lists N = 726 + ?	NRAO
1966P2	PHILIP, A.G.D. 1966, <i>Ap. J. Suppl.</i> , <u>12</u> , 391-447 The stellar space distribution in Pegasus at $b^{\text{II}} = -29^\circ$ Fields defined p. 392 (HLF1, HLF2a, HLF2, HLF2b) Table 3 (HLF2 catalogue of data) : 1895 stars (from 11° to 20° of declination), format DD NNN N = 1895	HLF HLF2
1966Q1	QUIGLEY, M.J.S., LARGE, M.I. 1966, <i>M.N.R.A.S.</i> , <u>134</u> , 239-243 A radio study of the North Polar Spur. III. A catalogue of discrete sources N = 22	QL
1966R1	RUPRECHT, J. 1966, <i>B.A.C.</i> , <u>17</u> , 33-44 Classification of open star clusters	Ruprecht = Ru = Rup
1966S1	STEPHENSON, C.N. 1966, <i>A.J.</i> , <u>71</u> , 477-481 Search for new northern Wolf-Rayet stars N = 5 (Nos 1 - 5) Identification charts Use WR numbers	ST
1966S2	SMITHSONIAN ASTROPHYSICAL OBSERVATORY 1966, <i>Smithsonian Institution, Washington, D.C., USA</i> Smithsonian Astrophysical Observatory star catalog. Positions and proper motions of 258997 stars for the epoch and equinox of 1950.0 Also on magnetic tape N = 258997	SAO
1966T1	THE, P.-S. 1966, <i>Contrib. Bosscha Obs.</i> , n° 34, 5 + 3 pp. New H α - emission stars in the region of the OB association Sgr III. Table I : N = 43 (Nos 1 - 43)	Tha34 -
1966T2	THE, P.-S. 1966, <i>Contrib. Bosscha Obs.</i> , n° 35, 10 + 11 p. A catalogue of new H α - emission stars in the eta Carinae nebula region Table II, N = 170 (Nos 1 - 170) Table III, N = 61 (Nos 1 - 61)	Tha35 -
1966U1	ÜLRICH, B.T., NEUGEBAUER, G., MCCAMMON, D., LEIGHTON, R.B., HUGHES, E.E., BECKLIN, E. 1966, <i>Ap. J.</i> , <u>146</u> , 288-290 Further observations of extremely cool stars N = 14 Cross-identified with IRC by Strecker, D.W., Ney, E.P., 1974, <i>A.J.</i> , <u>79</u> , 1410	CIT

N° 4	References	3.39
1966V1 A	VAN DEN BERGH, S. 1966, <i>A.J.</i> , <u>71</u> , 990-998 A study of reflection nebulae N = 158, the number identifies the nebula around a BD of CD star Also gives a list of 13 R Associations	VdB = VDB
1966V1 B	RACINE, R. 1968, <i>A.J.</i> , <u>73</u> , 233-245 Stars in reflection nebulae Table II (and identification charts, fig. 5 p. 244) introduces additional stars (format NNNA) N = 188	VdB
1966W1	WILLIAMS, P.J.S., KENDERDINE, S., BALDWIN, J.E. 1966, <i>Mem. R.A.S.</i> , <u>70</u> , 53-110 A survey of radio sources and background radiation at 38 Mc/s N = 1069	WKB
1966W2	WRAY, J.D. 1966, <i>Univ. Microfilm Inc., Ann Arbor, Michigan</i> A study of H α - emission objects in the Southern Milky Way Table XV (Nos 1 - 1887) EM.* Table XVI (Nos 1 - 423) PN Table XVII (Nos 1 - 113) Poss.PN Table XVIII (Nos 1 - 323) C*, S* Table XIX (Nos 1 - 55) EM.OBJ.	WR15 - =(W) = WRA = WRAY WR16 - WR17 - WR18 - WR19 -
1967B1	BASINSKI, J.M., BOK, B.J., BOK, P.F. 1967, <i>M.N.R.A.S.</i> , <u>137</u> , 55-67 A colour-magnitude array for a region in the core of the Small Magellanic Cloud Photographic B, V photometry (U for about 50%) for 377 stars. No coordinates. Identification chart.	B
1967B2	BRANSON, N.J.B.A. 1967, <i>M.N.R.A.S.</i> , <u>135</u> , 149-174 A radio survey of the sky north of declination 70° at a frequency of 81.5 Mc/s N = 558	NB
1967B3	BRAES, L.L.E. 1967, <i>B.A.N. Suppl.</i> , <u>2</u> , 1-58 Determination of proper motions in the region of the association Scorpius OB1 N = 1113 Photos	Braes
1967B4	BURBIDGE, E.M., BURBIDGE, G.R., SHELTON, J.W. 1967, <i>Ap. J.</i> , <u>150</u> , 783-786 and plate 1 A peculiar galaxy that may be at a young evolutionary stage N = 1	GB
1967B5	BECKLIN, E.E., NEUGEBAUER, G. 1967, <i>Ap. J.</i> , <u>147</u> , 799-802 Observations of an infrared star in the Orion nebula N = 1 (point source) For precise position, see KL (Ref. 1967K2, note p. L4)	BN
1967B6	BATTEN, A.H. 1967, <i>Publ. Dominion Astrophys. Obs.</i> , <u>13</u> , 119-251 Sixth catalogue of the orbital elements of spectroscopic binary systems N = 737 <u>Superseded by the 7th catalogue, Ref. 1978BF</u>	
1967D1	DAVIS, M.M. 1967, <i>B.A.N.</i> , <u>19</u> , 201-226 A 1417 MHz search for radio sources having a flux excess at short wavelengths N = 188	DW

3.40	A. Fernandez, M.-C. Lortet, F. Spite	Nº 4
1967G1	GOWER, J.F.R., SCOTT, P.F., WILLS, D. 1967, <i>Mem. R.A.S.</i> , <u>71</u> , 49-144 A survey of radio sources in the declination ranges -07° to 20° and 40° to 80° N = 3624, ν = 178 MHz, format - DD.NN or DD.NN See also 4CT, Ref. 1969C1	4C = 4C2
1967H1 A	HAZARD, C., GULKIS, S., BRAY, A.D. 1967, <i>Ap. J.</i> , <u>148</u> , 669-688 Lunar occultation studies of five weak radio sources of small angular size. Arecibo occultation studies N = 5	A0
1967H1 B	HAZARD, C., GULKIS, S., SUTTON, J. 1968, <i>Ap. J.</i> , <u>154</u> , 413-422 Occultation studies of weak radio sources : list 2 N = 10	A0
1967H1 C	GULKIS, S., SUTTON, J., HAZARD, C. 1969, <i>Ap. J.</i> , <u>157</u> , 1047-1053 Arecibo occultation studies : list 3 N = 10	A0
1967H1 D	LANG, K.R., SUTTON, J., HAZARD, C., GULKIS, S. 1970, <i>Ap. J.</i> , <u>160</u> , 17-23 Additional occultation studies of weak radio sources at Arecibo Observatory : list 4 N = 10	A0
1967H2	HÖGLUND, B. 1967, <i>Ap. J. Suppl.</i> , <u>15</u> , 61-96 Pencil-beam survey of radio sources between declinations $+18^{\circ}$ and $+20^{\circ}$ at 750 and 1410 MHz N = 458	NRAO = H
1967K1	KRZEMINSKI, W., SERKOWSKI, K. 1967, <i>Ap. J.</i> , <u>147</u> , 988-1002 Photometric and polarimetric observations of the nearby strongly reddened open cluster Stock 2 N = 168 (Nos 1 - 168)	KS
1967K2	KLEINMANN, D.E., LOW, F.J. 1967, <i>Ap. J. Lett.</i> , <u>149</u> , L1-L4 Discovery of an infrared nebula in Orion N = 1 λ = 22 μ , extended source	KL
1967M1 A	MARKARIAN, B.E. 1967, <i>Astrophysics</i> , <u>3</u> , 24-38 Galaxies with an ultraviolet continuum N = 70 (Nos 1 - 70) Identification charts	Markarian = Mark = MK = MKN = Mkr = Mrk = MRK
1967M1 B	MARKARIAN, B.E. 1969, <i>Astrophysics</i> , <u>5</u> , 206-225 The galaxies with ultraviolet continuum. II. N = 130 (Nos 71 - 200) Identification charts	Markarian
1967M1 C	MARKARIAN, B.E. 1969, <i>Astrophysics</i> , <u>5</u> , 286-301 Galaxies with ultraviolet continuum. III. N = 102 (Nos 201 - 302) Identification charts	Markarian
1967M1 D	MARKARIAN, B.E., LIPOVETSKIY, V.A. 1971, <i>Astrophysics</i> , <u>7</u> , 299-310 Galaxies with ultraviolet continuum. IV. N = 99 (Nos 303 - 401) Identification charts	Markarian

N° 4	References	3.41
1967M1 E	MARKARIAN, B.E., LIPOVETSKIJ, V.A. 1972, <i>Astrophysics</i> , 8, 89-99 Galaxies with ultraviolet continuum. V. N = 106 (Nos 402 - 507) Identification charts	Markarian
1967M1 F	MARKARIAN, B.E., LIPOVETSKIJ, V.A. 1973, <i>Astrophysics</i> , 9, 283-295 Galaxies with ultraviolet continuum. VI. N = 97 (Nos 508 - 604) Identification charts	Markarian
1967M1 G	MARKARIAN, B.E., LIPOVETSKIJ, V.A. 1974, <i>Astrophysics</i> , 10, 185-194 Galaxies with ultraviolet continuum. VII. N = 96 (Nos 605 - 700) Identification charts	Markarian
1967M1 H	MARKARIAN, B.E., LIPOVETSKIJ, V.A. 1976, <i>Astrophysics</i> , 12, 241-254 Galaxies with ultraviolet continuum. VIII. N = 97 (Nos 701 - 797) Identification charts	Markarian
1967M1 I	MARKARIAN, B.E., LIPOVETSKIJ, V.A. 1976, <i>Astrophysics</i> , 12, 429-442 Galaxies with ultraviolet continuum. IX. N = 98 (Nos 798 - 895) Identification charts	Markarian
1967M1 J	MARKARIAN, B.E., LIPOVETSKIJ, V.A., STEPANIAN, J.A. 1977, <i>Astrophysics</i> , 13, 116-125 Galaxies with ultraviolet continuum. X. N = 100 (Nos 896 - 995) Identification charts	Markarian
1967M1 K	MARKARIAN, B.E., LIPOVETSKIJ, V.A., STEPANIAN, J.A. 1977, <i>Astrophysics</i> , 13, 215-228 Galaxies with ultraviolet continuum. XI. N = 100 (Nos 996 - 1095) Identification charts	Markarian
1967M1 L	MARKARIAN, B.E., LIPOVETSKIJ, V.A., STEPANIAN, J.A. 1979, <i>Astrophysics</i> , 15, 130-141 Galaxies with ultraviolet continuum. XII. N = 99 (Nos 1096 - 1194) Identification charts	Markarian
1967M1 M	MARKARIAN, B.E., LIPOVETSKIJ, V.A., STEPANIAN, J.A. 1979, <i>Astrophysics</i> , 15, 235-250 Galaxies with ultraviolet continuum. XIII. N = 108 (Nos 1195 - 1302) Identification charts	Markarian
1967M1 N	MARKARIAN, B.E., LIPOVETSKIJ, V.A., STEPANIAN, J.A. 1979, <i>Astrophysics</i> , 15, 363-376 Galaxies with ultraviolet continuum. XIV. N = 97 (Nos 1303 - 1399) Identification charts	Markarian
1967M1 O	MARKARIAN, B.E., LIPOVETSKIJ, V.A., STEPANIAN, J.A. 1981, <i>Astrophysics</i> , 17, 321-332 Galaxies with ultraviolet continuum. XV. N = 101 (Nos 1400 - 1500) Identification charts	Markarian
1967PK A	PEREK, L., KOHOUTEK, L. 1967, Prague, Czechoslovakia, Academia publishing house of the Czechoslovak Academy of Sciences, 276 p. Catalogue of galactic planetary nebulae Compilation N = 1036	PK
1967PK B	ACKER, A., MARCOUT, J. 1977, <i>Astr. Astrophys. Suppl.</i> , 30, 217-221 Bibliographical index of planetary nebulae for the period 1965-1976 N = 148	PK

- 1967PK C WEINBERGER, R. PK
 1977, *Astr. Astrophys. Suppl.*, 30, 335-341
 A list of possible, probable and true planetary nebulae detected since 1966
 335 objects (Nos 1 - 335 of first column should never be used)
 Defines We2 - in col. 2.
- 1967PK D ACKER, A., MARCOUT, J., OCHSENBEIN, F. PK
 1981, *Astr. Astrophys. Suppl.*, 43, 265-266
 Catalog and bibliographical index of planetary nebulae (magnetic tape and microfiche)
 N = 1455
 (Contains Perek and Kohoutek, 1967, and Weinberger, 1977).
- 1967PK E SANDULEAK, N. PK
 1976, *Publ. Warner and Swasey Obs.*, Vol. 2, n° 3, 57-68
 Objective-prism spectroscopy of planetary nebulae in the Southern Milky Way
 Table 1 (Nos 1 - 179) Misclassified and doubtfully classified planetary nebulae
 Table 2 (Nos 1 - 150) Faint, suspected planetary nebulae Sa3 -
 Table 3 Undetected objects previously classified as Planetary Nebulae
 (identified by PK or Wray number).
- 1967PK F ACKER, A., MARCOUT, J., OCHSENBEIN, F. PK
 1982
 Index of discovery lists of true, probable and possible planetary nebulae.
 Distributed by Data Center C16 (CDS, Strasbourg) as complement of the catalogue Ref. 1982AC. A new version is in preparation for *Astr. Astrophys. Suppl.*
- 1967PK G KOHOUTEK, L. PK
 1978, *I.A.U. Sympos.* 76, "Planetary Nebulae", held at Ithaca, Ed. Y. Terzian, D. Reidel Publish. Comp., p. 47-62
 New and misclassified planetary nebulae
 First supplementary list to the Catalogue of Galactic Planetary Nebulae :
 Table 1 : 226 new PN discovered between 1966 and 1977
 Appendix to table 1 : 9 possible proto-planetary nebulae
 Table 2 : 34 misclassified Planetary Nebulae
- 1967PK H KOHOUTEK, L. PK
 1983, *I.A.U. Sympos.* 103, "Planetary Nebulae", held in London 1982 (in press)
 New and misclassified planetary nebulae
 Second supplementary list to the Catalogue of Galactic Planetary Nebulae
 Table 1 : 85 new PN (discovered 1978 - 1981)
 Table 2 : 33 misclassified planetary nebulae
- 1967R1 ROOD, H.J., BAUM, W.A. RB
 1967, *A.J.*, 72, 398-406
 Photographic brightness profiles of Coma Cluster galaxies. I. Catalogue
 N = 271
- 1967R2 RUBIN, V.C., MOORE, S., BERTIAU, F.C. RMB
 1967, *A.J.*, 72, 59-64
 Faint blue objects in the Virgo Cluster region
 N = 228
 Table 1 indicates 1950 coordinates (and references for finding charts) for 228 RMB objects and 5 TON objects.
- 1967S1 RINSLAND, C.P., DIXON, R.S., KRAUS, J.D. OB to OZ
 1975, *A.J.*, 80, 759-770
 Ohio Survey supplement 2
 N ~ 19000
 Table I and fig. 1 of this paper are a recapitulation of the 8 previous papers containing the 1415 MHz Ohio survey, begun in 1967, Scheer + Kraus, *A.J.*, 72, 536-543 (Collins Nos 52.113, 115 to 122 ; several authors).

- 1967Z1 ZWICKY, F., LUYTEN, W.J. ZL
1967, *The Observatory, University of Minnesota, Minneapolis, Minnesota, USA*, 4 pp.
A search for faint blue stars. XLV. Ultrafaint blue stars and compact objects
observed with the 200-inch telescope
N = 218
- 1968B1 A BARBIERI, C., ERCULIANI, L., ROSINO, L. A1 -
1968, *Publ. Oss. Astron. Padova*, n° 143
Studies of blue objects in high galactic latitudes. I. Blue faint objects in the
field of 88 Leonis
N = 129, identification charts, 1950 coordinates, field centered $\ell = 243^\circ$, $b = 67^\circ$.
- 1968B1 B ERCULIANI ABATI, L. A1 -
1982, *Astr. Astrophys. Suppl.*, 48, 333-343
The physical nature of the blue objects in the field of 88 Leonis
- 1968B2 BAILEY, F.A., POOLEY, G.G. BP
1968, *M.N.R.A.S.*, 138, 51-66
Fan-beam observations of radio sources at 408 and 1407 MHz
N = 198
- 1968B3 BLANCO, V.M., DEMERS, S., DOUGLASS, G.G., FITZGERALD, M.P. USN
1968, *Publ. U.S. Naval Obs.*, Second Ser., 21 (on magnetic tape) = Blanco
Photoelectric catalogue, magnitudes and colors of stars in the UBV and U_CBV = WPC
systems
N = 20705
Superseded by the Data Center C16 (CDS, Strasbourg) updated compilations.
- 1968B4 BLUM, E.J., DAVIS, M.M.
1968, *Ap. J. Lett.*, 2, L41-L44
Spectral characteristics of radio sources from a limited survey at 6 cm
Table I N = 10 (Nos 1 - 10) (Field A) BDA
Table II N = 24 (Nos 1 - 24) (Field B) BDB
- 1968B5 BRIDLE, A.H., PURTON, C.R. DB
1968, *A.J.*, 73, 717-726
Observations of radio sources at 10.03 MHz
N = 124
- 1968G1 A GROSSENBACHER, R., MESROBIAN, W.S., UPGREN, A.R. VVO
1968, *A.J.*, 73, 744-746 = Upgren
Parallaxes and proper motions of stars from plates with the Van Vleck 20-inch
refractor
N = 9 (Nos 1 - 9)
- 1968G1 B MESROBIAN, W.S., NELSON, R.M., UPGREN, A.R., GROSSENBACHER, R. VVO
1969, *A.J.*, 74, 752-754
Parallaxes of fourteen stars from plates taken with the Van Vleck 20-inch
refractor
N = 14 (Nos 10 - 23)
- 1968G1 C UPGREN, A.R., MESROBIAN, W.S., NELSON, R.M., GROSSENBACHER, R., KERRIDGE, S.J. VVO
1970, *A.J.*, 75, 319-320
Parallaxes and proper motions of 22 stars
N = 22 (Nos 24 - 45)
- 1968G1 D KERRIDGE, S.J., GROSSENBACHER, R., UPGREN, A.R. VVO
1971, *A.J.*, 76, 77-78
Parallaxes and proper motions. IV.
N = 28 (Nos 46 - 73)

3.44	A. Fernandez, M.-C. Lortet, F. Spite		Nº 4
1968G1 E	UPGREN, A.R., MESROBIAN, W.S. 1971, <i>A.J.</i> , <u>76</u> , 78-80 Parallaxes and proper motions. V. Photographic measures of six double stars N = 12 (Nos 74 - 85)	VVO	
1968G1 F	MESROBIAN, W.S., UPGREN, A.R. 1971, <i>A.J.</i> , <u>76</u> , 1133-1134 Parallaxes and proper motions. VI. N = 30 (Nos 86 - 115)	VVO	
1968G1 G	MESROBIAN, W.S., GRIESS, T.D., TITTER, J.C. 1972, <i>A.J.</i> , <u>77</u> , 392-394 Parallaxes and proper motions. VII. Double-star measures N = 8 (Nos 116 - 123)	VVO	
1968G1 H	TITTER, J.C., MESROBIAN, W.S., UPGREN, A.R. 1972, <i>A.J.</i> , <u>77</u> , 875-877 Parallaxes and proper motions. VIII. N = 24 (Nos 124 - 147)	VVO	
1968G1 I	UPGREN, A.R., BURT, S.E., MESROBIAN, W.S. 1974, <i>A.J.</i> , <u>79</u> , 708-709 Parallaxes and proper motions. IX. N = 20 (Nos 148 - 167)	VVO	
1968G1 J	UPGREN, A.R., WEIS, E.W. 1975, <i>A.J.</i> , <u>80</u> , 711-713 Parallaxes and proper motions. X. N = 20 (Nos 168 - 187)	VVO	
1968G1 K	BURT, S.E., WEIS, E.W. 1976, <i>A.J.</i> , <u>81</u> , 551-553 Parallaxes and proper motions. XI. Double-star measures N = 10 (Nos 188 - 197)	VVO	
1968G1 L	WEIS, E.W., UPGREN, A.R. 1976, <i>A.J.</i> , <u>81</u> , 1144-1146 Parallaxes and proper motions. XII. N = 30 (Nos 198 - 227)	VVO	
1968G1 M	UPGREN, A.R., BREAKIRON, L.A. 1980, <i>A.J.</i> , <u>85</u> , 71-73 Parallaxes and proper motions. XIII. N = 7 (Nos 228 - 234) Cross-identified.	VVO	
1968G1 N	BREAKIRON, L.A., UPGREN, A.R., WEIS, E.W. 1982, <i>A.J.</i> , <u>87</u> , 141-144 Parallaxes and proper motions. XIV. N = 19 (Nos 235 - 253)	VVO	
1968G2	GALT, J.A., KENNEDY, J.E.D. 1968, <i>A.J.</i> , <u>73</u> , 135-151 Survey of radio sources observed in the continuum near 1420 MHz, declinations - 5° to + 70°. Dominion list A N = 615, ν = 1420 MHz ; HPBW = 36'.	DA	
1968G3	GRUEFF, G., VIGOTTI, M. 1968, <i>Astrophys. Lett.</i> , <u>2</u> , 113-120 A pencil-beam deep sky survey at 408 MHz N = 328	GV	

N° 4	References	3.45
1968H1 A	HULSBOSCH, A.N.M. 1968, <i>B.A.N.</i>, 20, 33-39 High-velocity hydrogen complexes at high galactic latitudes A, AC etc... stand for hydrogen complexes, then subcomponents or clouds are specified as AI, AII, ... Tables 1, 2 and maps define ACI to III, CI to III, MI and MII $\lambda = 21$ cm, HPBW = $0.61^\circ \times 0.66^\circ$.	A, AC, B, C K, M, SP
1968H1 B	GIOVANELLI, R., VERSCHUUR, G.L., CRAM, T.R. 1973, <i>Astr. Astrophys. Suppl.</i>, 12, 209-262 High resolution studies of high velocity clouds of neutral hydrogen $\lambda = 21$ cm, HPBW = $9'.7$ Table 4 9 concentrations in complex A (format R·N) Table 5 2 concentrations in complex C (format RA) Table 7 6 concentrations in complex M (format R·N) Also studies concentrations in OMM360 and HVC 112+2-139 HI maps at different velocities. See also HVC and IVC (Ref. 1975H1 A and B) and Weaver's Jet in Table V.	A, C, M
1968H2	HEILES, C. 1968, <i>Ap. J.</i>, 151, 919-934 Normal OH emission and interstellar clouds Cloud 1 - 5. Search for OH emission Maps for clouds 1, 2, 4 Numbering is different from that in Heiles, 1973.	Cloud
1968I1 A	ISSERSTEDT, J. 1968, <i>Veröff. Astron. Inst. Univ. Bochum</i>, n° 1, 1-79 Sternringe, eine neue Art von Sternaggregaten und ihre Beziehung zur galaktischen Struktur. (Stellar rings, a new kind of stellar association and their relation to galactic structure) N = 1002	SR
1968I1 B	URANOVA, T.A. 1973, <i>Astr. Cirk.</i>, n° 772, 4-6 (in Russian) Supplement list of stellar rings. I. Nos Anon 1 to Anon 46	SR
1968I1 C	URANOVA, T.A. 1973, <i>Astr. Cirk.</i>, n° 773, 3-5 (in Russian) Supplement list of stellar rings. II. Nos Anon 47 to Anon 85	SR
1968K1	KESTEVEN, M.J.L. 1968, <i>Austral. J. Phys.</i>, 21, 369-376 A catalogue of galactic radio sources N = 80	Kes = Ke = Kesteven
1968L1 A	LUYTEN, W.J. 1968, <i>University of Minnesota, Minneapolis, Minnesota, USA</i>, 219 pp. Proper motion survey with the forty-eight-inch Schmidt telescope. The North Polar cap N = 10592	PSM
1968L1 B	LUYTEN, W.J. 1970, <i>University of Minnesota, Minneapolis, Minnesota, USA</i>, 36 pp. Proper motion survey with the 48-inch Schmidt telescope. XXII. Special catalogue for the zone $+70^\circ$ to $+75^\circ$ N = 852 (Nos 11015 - 18010), numbers are missing.	PSM
1968L2	LYNGÅ, G. 1968, <i>Ark. Astron.</i>, 5, 181-196 A catalogue of faint OB stars between Carina and Centaurus N = 284	LY

- 1968M1 McCARTHY, M.F., TREANOR, P.J. LLP
1968, *Ric. Astron. Specola Vaticana*, 7, 367-398
A finding list of late type members of the Pleiades cluster
N = 144
- 1968M2 MAFFEI, P. Maffei
1968, *P.A.S.P.*, 80, 618-621
Infrared object in the region of IC 1805
N = 2
Maffei 1 is a galaxy.
- 1968M3 MCCONNELL, D.J.
1968, *Ap. J. Suppl.*, 16, 275-298
A study of the Cepheus IV association
Table 4A (Nos 1 - 24) : objects having H α in emission MacC H
Table 4B (Nos 1 - 20) : objects suspected of H α emission MacC sH
Identification charts. See also Ref. 1976 C2
- 1968P1 PHILIP, A.G.D., SANDULEAK, N. PS
1968, *Bol. Obs. Tonantzintla y Tacubaya*, 4, 253-268 = PSII
A finding list of stars of spectral type A7 and earlier in regions at high = PS...II
galactic latitudes. II. South galactic pole
Table 1 (Nos 1 - 118) (Cross-identified with BD or CD)
Table 2 (Nos 1 - 62) (not in BD nor CD)
Total number : N = 180
- 1968P2 POOLEY, G.G., KENDERDINE, S. 5C2.
1968, *M.N.R.A.S.*, 139, 529-550
The 5C2 survey of radio sources
N = 207
HPBW = 80"(α) $\times$ 100"(δ) and 23" $\times$ 30" at 1407 MHz.
- 1968R1 ROJKOVSKIJ, D.A., KURCHAKOV, A.V. RK
1968, *Acad. Sci. Kazan. Trudi Astr. Inst.*, XI, p. 3-42 + tables
The catalog of the reflection nebulae
N = 118 (Nos 1 - 118)
- 1968S1 A SANDULEAK, N. Sk
1968, *A.J.*, 73, 246-250 = SK = (S)
A finding list of proven or probable Small Magellanic Cloud members = Sanduleak
N = 169 (Nos 1 - 169). Identif. charts.
- 1968S1 B SANDULEAK, N. Sk
1969, *A.J.*, 74, 877-878
Proven and probable members in the wing of the Small Magellanic Cloud
N = 47 (Nos 170 - 216). Identif. charts.
- 1968S2 SMITH, L.F. LSWR
1968, *M.N.R.A.S.*, 138, 109-121 = LS
A revised spectral classification system and a new catalogue for galactic = Smith
Wolf-Rayet stars
Nos 1 - 16
See WR Nomenclature, Ref. 1981VH
- 1968W1 WESTERLUND, B.E. Westerlund
1968, *Ap. J. Lett.*, 154, L67-L68 and plate L1
On the extended infrared source in Ara
N = 1 (C 1644 - 457)
1950 { α = 16h43.2min
 δ = -45° 45.2'
First defined in Westerlund, 1961, *P.A.S.P.*, 73, 51
Westerlund 2 (defined elsewhere) = C 1022 - 575

N° 4	References	3.47
1969A1	ANDRIEVSKI, A.E., SPANGENBERG, E.E., VALTZ, I.E., GINDILIS, L.M., GORSHKOV, A.G., IVANOV, V.N., KONNIKOVA, V.K., KURILCHIK, V.N., LARIONOV, M.G., MOISEEV, I.G., NIKITIN, V.V., PORTMAN, V.I., SOGLASNOV, V.A. 1969, <i>Astr. Cirk.</i> , n° 494, 1-3 Flux densities of discrete radio sources at 3.5 cm wavelength N = 130	CRI
1969C1	CASWELL, J.L., CROWTHER, J.H. 1969, <i>M.N.R.A.S.</i> , 145, 181-196 A pencil-beam survey of radio sources at 178 MHz (revision and implement of 4C) N = 726 among which 86 are new HPBW = 23' in α and $18.4 \times \sec(52^\circ 10' - \delta)$ in δ .	4CT = 4C(T)
1969D1	DICKEL, H.R., WENDKER, H.J., BIERITZ, J.H. 1969, <i>Astr. Astrophys.</i> , 1, 270-280 The Cygnus X region. V. Catalogue and distances of optically visible HII regions N = 193	DWB
1969E1 A	EKERS, J.A. 1969, <i>Austral. J. Phys. Suppl.</i> , n° 7, 75 pp. The Parkes catalogue of radio sources, declination zone $+20^\circ$ to -90° This list replaces and improves the earlier four lists (1964 to 1966). N = 1780 ν = 2700 MHz ; 210 - foot telescope.	PKS
1969E1 B	SHIMMINS, A.J., DAY, G.A. 1968, <i>Austral. J. Phys.</i> , 21, 377-403 The Parkes catalogue of radio sources. Declination zone $+20^\circ$ to $+27^\circ$ N = 397 ν = 635, 1410 and 2650 MHz ; 210 - foot telescope.	PKS
1969G1 A	GLIESE, W. 1969, <i>Veröff. Astron. Rechen-Inst. Heidelberg</i> , n° 22, 117 pp. Catalogue of nearby stars, edition 1969 N = 1529 (Nos 1.0 - 965.0)	GLIESE = Gliese = GL = G1
1969G1 B	GLIESE, W., JAHREISS, H. 1979, <i>Astr. Astrophys. Suppl.</i> , 38, 423-448 Nearby star data published 1969-1978 Table 1 : Nos 1000 - 1294 Nearby stars Table 2 : Nos 2001 - 2159 Suspected nearby stars	GJ
1969H1	HOLDEN, D.J., CASWELL, J.L. 1969, <i>M.N.R.A.S.</i> , 143, 407-435 178 MHz observations of galactic radio sources N = 45 Cross-identified with K, A, W, CTB, M, LMH, D, 3CR, ASB (defined p. 409).	HC
1969H2	HUGHES, V.A., ROUTLEDGE, D. 1969, <i>A.J.</i> , 74, 604-607 A detailed survey of the galactic plane at a wavelength of 9.26 cm between longitudes 32° and 49° Table II, N = 55.	(HR)
1969J1	JAIDEE, S., LYNGB, G. 1969, <i>Ark. Astron.</i> , 5, 345-379 A search for faint violet stars in southern galactic latitudes N = 296	JL
1969KP A	KUKARKIN, B.V., KHOLOPOV, P.N., PSKOVSKIJ, Yu.P., EFREMOV, Yu.N., KUKARKINA, N.P., KUROCHKIN, N.E., MEDVEDEVA, G.I., PEROVA, N.B., FEDOROVICH, V.P., FROLOV, M.S. 1971, <i>Astronomical Council of the Academy of Sciences in the USSR, Sternberg State Astronomical Institute of the Moscow State University, Moscow</i> , 336 p. (in Russian) General catalogue of Variable Stars. 3d edition, volumes I - III This catalogue is often designated as GCVS.	V

- 1969KP B KUKARKIN, B.V., KHOLOPOV, P.N., EFREMOV, Yu.N., KUKARKINA, N.P., KUROCHKIN, N.E., MEDVEDEVA, G.I., PEROVA, N.B., FEDOROVICH, V.P., FROLOV, M.S. V
1972, 1976, *Academy of Sciences of the USSR, Astronomical Council, Sternberg State Astronomical Institute of the Moscow State University, Moscow*, 234 p. (in Russian and English)
Special supplements to the third edition of the General Catalogue of Variable Stars, containing the list of stars arranged in the order of right ascension for the equinox 1950.0
- 1969KP C KUKARKIN, B.V., KHOLOPOV, P.N., EFREMOV, Yu.N., KUKARKINA, N.P., KUROCHKIN, N.E., MEDVEDEVA, G.I., PEROVA, N.B., PSKOVSKIJ, Yu.P., FEDOROVICH, V.P., FROLOV, M.S. V
1971, 1974, 1976, *Academy of Sciences of the USSR, Astronomical Council, Sternberg State Astronomical Institute of the Moscow State University, Moscow*, 414 p. (in Russian and English)
Three supplements to the third edition of the General Catalogue of Variable Stars, containing information on variable stars designated recently, and improved information on previously designated stars
- 1969K1 A KOHOUTEK, L.
1969, *B.A.C.*, 20, 307-312
Hamburg Schmidt-camera survey of faint planetary nebulae. Galactic anticenter region
Table 5 (Nos 1 - 5) : Compact HII regions Kohoutek
Table 2 (Nos 64 - 72) : PN K3 -
Table 3 (Nos 47 - 50) : PN K4 -
- 1969K1 B KOHOUTEK, L.
1972, *Astr. Astrophys.*, 16, 291-300
Hamburg Schmidt-camera survey of faint planetary nebulae. Cygnus-Perseus region
Table 5 (Nos 6, 7a, 7b, 7c, 8) : HII regions Kohoutek
Table 2 (Nos 73 - 94) : PN K3 -
Table 3 (Nos 51 - 60) : PN K4 -
- 1969K2 KLEMOLA, A.R. KLEM
1969, *A.J.*, 74, 804-806 = Klemola
Groups and clusters of southern galaxies
N = 44
1875 coordinates, angular diameter, magnitude of the brightest galaxy.
- 1969L1 A LUYTEN, W.J. LPD
1969, *University of Minnesota, Minneapolis, USA*
Proper motion survey with the 48-inch Schmidt telescope. XIX. Special catalogue in the North Polar Cap
N = 313 (Nos 1 - 313)
- 1969L1 B LUYTEN, W.J. LPD
1970, *University of Minnesota, Minneapolis, USA*, 36 pp.
Proper motion survey with the 48-inch Schmidt telescope. XXII. Special catalogues for the zone + 70 to + 75.
N = 216 (Nos 314 - 524)
- 1969M1 MELCHIOR, P., DEJAFFE, R. ILS
1969, *Ann. Obs. R. Belgique*, 3e sér., 10, 63-339 (in French) = MD
Calcul des déclinaisons et mouvements propres des étoiles du Service International des Latitudes à partir des catalogues méridiens
N = 440
See also Melchior + Dejaiffe, *Obs. R. Belgique*, Comm. Ser. B n° 74(1973)
- 1969N1 NEUGEBAUER, G., LEIGHTON, R.B. IRC
1969, *NASA*, SP-3047 (= TMSS)
Two-micron sky survey : a preliminary catalog. Caltech infrared Catalog
N ~ 20000
- 1969P1 POOLEY, G.G. 5C3.
1969, *M.N.R.A.S.*, 144, 101-127
5C3 : A radio continuum survey of M31 and its neighbourhood
N = 213
 $\nu = 408$ MHz, HPBW = 80" $\times$ 120"
 $\nu = 1407$ MHz, HPBW = 23" $\times$ 35"

N° 4	References	3.49
1969S1	SOFIA, S., EICHORN, H., GATEWOOD, G. 1969, <i>A.J.</i> , <u>74</u> , 20-24 A study of the positions and proper motions of 83 stars in the region of Sco X-1 N = 83	SEG
1969S2	STOCKTON, A. 1969, <i>Ap. J. Lett.</i> , <u>155</u> , L141-L142 Spectroscopy of a new, faint quasi-stellar object N = 1	QS = Stockton
1969S3	SVOPOULOS, S.N. 1969, <i>A.N.</i> , <u>291</u> , 129-130 Distribution of luminous stars in the region of one high velocity hydrogen cloud $l^{II} = 72^{\circ}.6$, $b^{II} = + 15^{\circ}.9$	Svop
1969V1	VERSCHUUR, G.L. 1969, <i>Astrophys. Lett.</i> , <u>4</u> , 85-87 Some very cold HI clouds found in emission N = 7 (Cold HI clouds)	Cloud
1969V2	VAN ALTENA, W.F. 1969, <i>A.J.</i> , <u>74</u> , 2-19 Low luminosity members of the Hyades cluster. II. N = 778 List first given in <i>A.J.</i> , <u>71</u> , 482, 1966 (positions are better here).	vA = VA
1969W1	WINDRAM, M.D., KENDERDINE, S. 1969, <i>M.N.R.A.S.</i> , <u>146</u> , 265-288 Extension of the radio source luminosity function. I. Observations Nos 1 - 478	WK

- 1970AR A ALTER, G., RUPRECHT, J., VANYSEK, J.
1970, *Akad. Kiado, Budapest, Hungary*, 3086 p., 2nd edition
Catalogue of star clusters and associations + supplements
N = 70 Associations Ass -
N = 125 Globular clusters GC -
N = 1044 Open clusters OC -
- 1970AR B RUPRECHT, J., BALAZS, B., WHITE, R.E.
1981, *Akad. Kiado, Budapest, Hungary*
Catalogue of star clusters and associations. Suppl. 1 to the 2nd edition,
part A, B1 and B2.
New objects :
N = 19 Associations Ass -
N = 12 Globular clusters GC -
N = 70 Open clusters OC -
The bibliography is complete up to 1973
Errata to part A : *Bull. Inf. CDS*, 23, 74, 1982.
- 1970B1 A BERNACCA, P.L., PERINOTTO, M. Bernacca
1970, *Contr. Oss. Astrofis. Asiago, Univ. Padova*, n° 239
A catalog of stellar rotational velocities
I. Main sequence single stars (numbered 1 - 1005)
II. Main sequence spectroscopic binaries and eclipsing systems (numbered 1 - 360)
- 1970B1 B BERNACCA, P.L., PERINOTTO, M. Bernacca
1971, *Contr. Oss. Astrofis. Asiago, Univ. Padova*, n° 250
A catalog of stellar rotational velocities
III. Stars with peculiar spectrum
a) Be and shell stars (Nos 1 - 189)
b) Bp, Ap, Apec and Am stars (Nos 1 - 243)
- 1970B1 C BERNACCA, P.L., PERINOTTO, M. Bernacca
1973, *Contr. Oss. Astrofis. Asiago, Univ. Padova*, n° 294
A catalog of stellar rotational velocities
IV. Evolved stars
(Nos 1 - 1278)
- 1970B2 BAHCALL, J.N., BAHCALL, N. B & B
1970, *P.A.S.P.*, 82, 721-729
On the galaxies in the direction of TON 256 and B 264
N = 21 (2 tables numbered 1 - 21)
1950 coordinates and estimated m_V ; identif. charts
- 1970B3 BRACCESI, A., FORMIGGINI, L., GANDOLFI, E. AB
1970, *Astr. Astrophys.*, 5, 264-279 = B
Magnitudes, colours and coordinates of 175 ultraviolet excess objects in the
field 13h, +36°
N = 175
It would be better to use Braccesi.
- 1970C1 A COLLA, G., FANTI, C., FANTI, R., FICARRA, A., FORMIGGINI, L., GANDOLFI, E.,
GRUEFF, G., LARI, C., PADRIELLI, L., ROFFI, G., TOMASI, P., VIGOTTI, M. B2.1
1969, *Lab. Naz. Radioastron. Inst. Fis. Univ. Studi Bologna*, contrib. n° 55, = B2
74 pp. = *Astron. Astrophys. Suppl.*, 1, 281-317
A catalogue of 3235 radio sources at 408 MHz
N = 3235
- 1970C1 B COLLA, G., FANTI, C., FANTI, R., FICARRA, A., FORMIGGINI, L., GANDOLFI, E.,
LARI, C., MARANO, B., PADRIELLI, L., TOMASI, P. B2.2
1972, *Astr. Astrophys. Suppl.*, 7, 1-34 = B2
The B2 catalogue of radio sources - second part.
N = 3013

- 1970C1 C COLLA, G., FANTI, C., FANTI, R., FICARRA, A., FORMIGGINI, L., GANDOLFI, E., GIOIA, I., LARI, C., MARANO, B., PADRIELLI, L., TOMASI, P. B2•3
1972, *Lab. Naz. Radioastron. CNR, Inst. Fis. Bologna*, separate print, 2 + 52 pp. = B2
Astr. Astrophys. Suppl., 11, 291-325
The B2 catalogue of radio sources - third part.
N = 3227
- 1970C1 D FANTI, C., FANTI, R., FICARRA, A., PADRIELLI, L. B2•4
1974, *Astr. Astrophys. Suppl.*, 18, 147-156 = B2
The B2 catalogue of radio sources - fourth part.
N = 448
- 1970F1 A FEHRENBACH, C., DUFLLOT, M.
1970, *Astr. Astrophys. Special Suppl.*, 1, 1-67
Grand Nuage de Magellan. Liste des étoiles membres du Grand Nuage de Magellan
et liste d'étoiles galactiques
Nos 1 - 495 : * grande vitesse G
Nos 1 - 1830 : * petite vitesse P
Nos 1 - 110 : Liste supplémentaire S
- 1970F1 B FEHRENBACH, C., DUFLLOT, M.
1973, *Astr. Astrophys. Suppl.*, 10, 231-265
Grand Nuage de Magellan. Seconde liste d'étoiles membres du Grand Nuage de
Magellan et liste d'étoiles galactiques
Nos 501 - 588 : * grande vitesse G
Nos 2001 - 2253 : * petite vitesse P
- 1970F1 C FEHRENBACH, C., DUFLLOT, M.
1981, *Astr. Astrophys. Suppl.*, 46, 13-19
Grand Nuage de Magellan. Troisième liste d'étoiles membres du Grand Nuage de
Magellan et liste d'étoiles galactiques
Nos 601 - 767 G
Nos 2501 - 2990 P
- 1970G1 A GREENSTEIN, J.L. GR
1970, *Ap. J. Lett.*, 162, L55-L59 = Gr
Some new white dwarfs with peculiar spectra. VI. = EGGR
N = 18 (Nos 267 - 284)
The first GR number is 267, because it follows on from the EG numbers.
- 1970G1 B GREENSTEIN, J.L. GR
1974, *Ap. J. Lett.*, 189, L131-L133
A new list of 52 degenerate stars. VII.
N = 52 (Nos 285 - 336)
- 1970G1 C GREENSTEIN, J.L. GR
1975, *Ap. J. Lett.*, 196, L117-L120
A further list of degenerate stars. VIII.
N = 44 (Nos 337 - 380)
- 1970G1 D GREENSTEIN, J.L. GR
1976, *Ap. J. Lett.*, 207, L119-L123
Some further degenerate stars. IX.
N = 25 (Nos 381 - 405)
- 1970G1 E GREENSTEIN, J.L., OKE, J.B., RICHSTONE, D., VAN ALTENA, W.F., STEPPE, H. GR
1977, *Ap. J. Lett.*, 218, L21-L25
Further degenerate stars. X.
N = 51 (Nos 406 - 456)
- 1970G1 F GREENSTEIN, J.L. GR
1979, *Ap. J.*, 227, 244-251
A further list and some properties of red degenerates. XI.
N = 51 (Nos 457 - 507)

3.52	A. Fernandez, M.-C. Lortet, F. Spite		N° 4
1970G1 G	GREENSTEIN, J.L. 1980, <i>Ap. J.</i> , <u>242</u> , 738-748 Degenerate stars. XII. Recognition of hot nondegenerates N = 51 (Nos 508 - 558)		GR
1970H1	HOSKINS, D.G., MURDOCH, H.S. 1970, <i>Austral. J. Phys. Suppl.</i> , n° 15, 1-16 Right ascensions for 389 southern radio sources from the Molonglo fan beam survey Table 2 : N = 181 Table 3 : N = 208		MLO = HM
1970K1	KAWAJIRI, N. 1970, <i>P.A.S.J.</i> , <u>22</u> , 165-175 Two continuum surveys along the galactic plane at 8000 MHz Table 2 : Nos 1 - 58 Table 3 : Nos 1 - 59		NK
1970L1	LUCKE, P.B., HODGE, P.W. 1970, <i>A.J.</i> , <u>75</u> , 171-175 A catalogue of stellar associations in the Large Magellanic Cloud Table I Nos 1 - 122, associated objects Identification charts		LH
1970M1	MENG, S.Y., KRAUS, J.D. 1970, <i>A.J.</i> , <u>75</u> , 535-562 Observations of high velocity hydrogen clouds at 21 cm Table I : N = 52		OBH to OZH, OBM to OZM
1970N1 A	NANDY, K., SMRIGLIO, F. 1971, <i>Publ. R. Obs. Edinburgh</i> , <u>7</u> , 1-18 Spectrophotometry of cool stars in the near infrared. I. Results for a region in Cygnus Table 4a : N = 410 (Nos 1 - 410) M stars Table 4b : N = 32 (Nos 411 - 442) Carbon stars and probable Carbon stars		Edinburgh = E
1970N1 B	NANDY, K., SMRIGLIO, F. 1971, <i>Publ. R. Obs. Edinburgh</i> , <u>7</u> , 73-84 Spectrophotometry of cool stars in the near infrared. II. Results for a region in the direction of the Galactic Anticenter Table 2 : N = 274 (Nos 1 - 274) M stars Table 3 : N = 5 (Nos 275 - 279) Carbon stars		Edinburgh
1970N1 C	NANDY, K., SMRIGLIO, F. 1976, <i>Publ. R. Obs. Edinburgh</i> , <u>9</u> , 4 Spectrophotometry of cool stars in the near infrared. III. Results for a region in the direction of ℓ II = 138 N = 284 (Nos 1 - 284) Identif. charts: M Stars (No list of Carbon stars)		Edinburgh
1970N1 D	NANDY, K., SMRIGLIO, F., BUONANNO, R. 1978, <i>Publ. R. Obs. Edinburgh</i> , <u>9</u> , n° 5, 125-134 Spectrophotometry of cool stars in the near infrared. IV. Results for a region in Cassiopeia Table 3a : N = 543 (Nos 1 - 543) M stars Table 3b : N = 20 (Nos 544 C to 563 C) Carbon stars Identif. charts but no coordinates 15 square degrees in the direction Cassiopeia (ℓ = 118°) centered on α = 23h58, δ = 60°09'		Edinburgh
1970S1	SANDULEAK, N. 1970, <i>Contr. Cerro-Tololo Inter-Am. Obs.</i> , n° 89, 67 pp. A deep objective-prism survey for Large Magellanic Cloud Members N = 1272 LMC members brighter than m_{pg} = 14 Identif. charts		Sk = NS = Sanduleak

N° 4	References	3.53
1970S2	SNOW, T.P. Jr. 1970, <i>A.J.</i> , <u>75</u> , 237-238 Groups and clusters of galaxies N = 34 34 possible groups and clusters of southern galaxies ; 1875 coordinates ; angular diameter.	SNOW
1970U1	UESUGI, A., FUKUDA, I. 1970, <i>Contr. Inst. Astrophys. Kwasan Obs., Kyoto</i> , n° 189 = <i>Mem. Fac. Sci. Kyoto Univ., Ser. Phys. Astrophys. Geophys. Chem.</i> , <u>33</u> , 205-250 A catalog of rotational velocities of the stars N = 3951 (Nos 1 - 3951) Compilation (partial)	Uesugi
1970WA A	WACKERLING, L.R. 1970, <i>Mem. R.A.S.</i> , <u>73</u> , 153-319 A catalogue of early-type stars whose spectra have shown emission lines N = 5326 (cross identified)	
1970WA B	STEPHENSON, C.B., SANDULEAK, N. 1977, <i>Publ. Warner Swasey Obs.</i> , <u>2</u> , 73-99 New position determinations and other data for 1280 known H α - emission stars in the Milky Way N = 1280	
1970W1	WILLSON, M.A.G. 1970, <i>M.N.R.A.S.</i> , <u>151</u> , 1-44 Radio observations of the cluster of galaxies in Coma Berenices. The 5C4 survey N = 189 ν = 408 MHz, HPBW = 80" $\times$ 170" ν = 1407 MHz, HPBW = 23" $\times$ 49"	5C4•
1970W2	WINNBERG, A. 1970, <i>Astr. Astrophys.</i> , <u>9</u> , 259-268 Further observations of some OH sources in Cygnus N = 4	ON
1970W3	WOOLLEY, R.v.d.R., EPPS, E.A., PENSTON, M.J., POCKOCK, S.B. 1970, <i>R. Obs. Ann.</i> , n° 5, 227 pp. Catalogue of stars within twenty-five parsecs of the Sun N = 1744	Woolley (= W)
1971A1	AGÜERO, E.L. 1971, <i>P.A.S.P.</i> , <u>83</u> , 310-312 A list of interesting southern galaxies N = 48	Agüero
1971B1	BECKER, W., FENKART, R. 1971, <i>Astr. Astrophys. Suppl.</i> , <u>4</u> , 241-252 A catalogue of galactic star clusters observed in three colours N = 12 The numbering has been continued up to 20	Basel = Ba
1971C1	CHINCARINI, G., ROOD, H.J. 1971, <i>Ap. J.</i> , <u>168</u> , 321-325 Dynamics of the Perseus cluster of galaxies N = 47	CR
1971C2	CUDWORTH, K.M. 1971, <i>A.J.</i> , <u>76</u> , 475-483 Relative proper motions in the region of the open cluster NGC 2168 (M35) N = 763	Cd

- 1971C3 A CAROZZI, N., PEYRIN, Y., ROBIN, A. OM
1971, *Astr. Astrophys. Suppl.*, 4, 231-240 (in French)
Large radial velocity stars in the wing of the Small Magellanic Cloud
N = 49 (Nos 1 - 49)
- 1971C3 B CAROZZI, N. OM
1974, *Astr. Astrophys. Suppl.* 16, 277-287 (in French)
Non-supergiant high-velocity stars near the Magellanic Clouds
N = 57, table 1 (Nos 50 - 106)
- 1971D1 A DAVIS, M.M. GC
1971, *A.J.*, 76, 980-992
The NRAO 5-GHz radio source survey. I. A survey of faint sources. Green Bank C list
N = 254
- 1971D1 B PAULINY-TOTH, I.I.K., KELLERMANN, K.I., DAVIS, M.M., FOMALONT, E.B., GC
SHAFFER, D.B.
1972, *A.J.*, 77, 265-284
The NRAO 5-GHz radio survey. II. The 140-ft "strong", "intermediate" and "deep" source surveys. The S2, I and D surveys
N = 245 (table II) + 72 (table III) + 19 (table IV)
- 1971D1 C PAULINY-TOTH, I.I.K., KELLERMANN, K.I. GC
1972, *A.J.*, 77, 797-809
The NRAO 5-GHz radio source survey. III. The 140-ft "strong" source survey. The S3 survey
N = 240
- 1971D2 DOTTORI, H., CARRANZA, G. (DC)
1971, *Astrophys. Space Sci.*, 13, 180-184
Interferometric study of the Milky Way between Carina and Aquila
N = 46
- 1971D3 DOWNES, D. DOW
1971, *A.J.*, 76, 305-316 = Downes
New radio results on supernova remnants
N = 117
Updated by Milne, Ref. 1979ML
- 1971F1 FEINSTEIN, A., MARRACO, H.G.
1971, *P.A.S.P.*, 83, 218-221
The open cluster NGC 4609 behind the Coalsack
N = 52 ; table I (beginning) FM
N = 17 ; table I (end) FMH
"H" refers to the Hogg 15 Cluster = FM H
- 1971G1 A GICLAS, H.L., BURNHAM, R. Jr., THOMAS, N.G. Giclas
1971, *Lowell Observatory, Flagstaff, Arizona, USA*, 175 pp. = G
Lowell proper motion survey, northern hemisphere ; the G numbered stars
N = 8991
Recapitulation of more detailed lists published in *Lowell Obs. Bull.* for the northern hemisphere
- 1971G1 B GICLAS, H.L., BURNHAM, R. Jr., THOMAS, N.G. Giclas
1978, *Lowell Obs. Bull.*, 164, vol. VIII, n° 4, 89-144 = G
Lowell proper motion survey. Southern hemisphere. Catalog 1978.
N = 2758
Recapitulation of more detailed lists for the Southern hemisphere.
Cross-identification with Wolf, Ross, BPM, LTT, LFT

N° 4	References	3.55
1971G1 C	GICLAS, H.L., BURNHAM, R. Jr., THOMAS, N.G. 1979, <i>Lowell Obs. Bull.</i> , 165, vol. VIII, n° 5, 145-154 N = 174 In Appendix, the <i>Lowell Obs. Bull.</i> , 120, 122, 124, 132, 136, 140, 152, 158, 160, 162, 163 (ranging from 1963 to 1980) define blue-red pairs, with the format GFFF - BNN A suffix A or B is added for the designation of the primary or secondary (ex. G216 - B14B)	Giclas = G G... - B
1971H1	HOFFMANN, W.F., FREDERICK, C.L., EMERY, R.J. 1971, <i>Ap. J. Lett.</i> , 170, L89-L97 100-micron survey of the galactic plane N = 72	HFE
1971L1	LARIONOV, M.G., GORSHKOV, A.G., POPOV, M.V., MOISEEV, I.G. 1971, <i>Astr. Cirk.</i> , n° 665, 1-6 (in Russian) The fast survey of the sky at frequency 8550 MHz in the range of declination +0° - +30° N = 121	Simeis = S = Simeiz
1971L2	LÜ, P.K. 1971, <i>A.J.</i> , 76, 775-776 and plates 947-949 Some unusual southern hemisphere objects (this reference also cites APM) N = 40 Peculiar galaxies and nebulosities. All with APM number	YC = Lü
1971M1 A	MASLOWSKI, J. 1971, <i>Astr. Astrophys.</i> , 14, 215-222 A Green Bank sky survey in search of radio sources at 1400 MHz. I. A spectral analysis of the 5C1 sources N = 32	GB
1971M1 B	MASLOWSKI, J. 1972, <i>Astr. Astrophys.</i> , 16, 197-203 A Green Bank sky survey in search of radio sources at 1400 MHz. II. Spectral properties of the 5C1 and 5C2 sources N = 40	GB
1971M1 C	MASLOWSKI, J. 1972, <i>Acta Astron.</i> , 22, 227-260 A Green Bank sky survey in search of radio sources at 1400 Mhz. III. Positions and flux densities of the GB radio sources N = 1086	GB
1971P1	PAVLOV, N.N., AFANAS'EVA, P.M., STARYTSIN, G.V. 1971, <i>Trudy Glav. Astron. Obs. Pulkovo</i> , Ser. 2, 78, 59-98 (in Russian) The general catalogue of the USSR Time Service N = 687 (Nos 1 - 687) + 120 additional stars (Nos 1001 - 1120)	KCB
1971R1	RICKARD, J.J. 1971, <i>Astr. Astrophys.</i> , 11, 270-278 A survey of high-velocity and intermediate-velocity clouds with 12.5' angular resolution N = 3	R
1971R2 A	RUBIN, V.C., LOSEE, J.M. 1971, <i>A.J.</i> , 76, 1099-1101, plates p. 1173-1176 A finding list of faint blue stars in the anticenter region of the Galaxy N = 63 (Nos 1 - 63)	RL
1971R2 B	RUBIN, V.C., WESTPFAHL, D., TUVE, M. 1974, <i>A.J.</i> , 79, 1406-1409 and finding charts p. 1501-1505 Second finding list of faint blue stars in the anticenter region of the Galaxy Nos 64 - 152 Continues RL designation	RWT

1971S1 A	SWARUP, G., KAPAH, V.K., SARMA, N.V.G., KRISHNA, G., JOSHI, M.N., RAO, A.P. 1971, <i>Astrophys. Lett.</i> , 9 , 53-59 Lunar occultations observations of 25 radio sources made with the Ooty radio telescope : list I N = 25	OTL
1971S1 B	KAPAH, V.K., JOSHI, M.N., KANDASWAMY, J. 1973, <i>Astrophys. Lett.</i> , 14 , 31-35 Occultation observations of six radio sources with flat spectra N = 6	OTL
1971S2	SANDULEAK, N. 1971, <i>P.A.S.P.</i> , 83 , 95-97 Detection of T Tauri-like spectra in six stars in Orion N = 6 Identification charts	Sanduleak
1971S3	SLETTEBAK, A., BRUNDAGE, R.K. 1971, <i>A.J.</i> , 76 , 338-362 A finding list of early-type stars near the south galactic pole N = 957	SB
1971S4	STEPHENSON, C.B., SANDULEAK, N. 1971, <i>Publ. Warner & Swasey Obs.</i> , 1 , 100 + 100 pp. Luminous stars in the southern Milky Way N = 5132	LSS = LS = LSSMW = (SLS) = (SS)
1971S5	SANDULEAK, N. 1971, <i>Ap. J. Lett.</i> , 164 , L71-L72 On stars having strong OVI emission Spectral type : WC (OVI) Nos 1 - 5 Sanduleak 1 = Sk 188 in SMC (WC4 star)(Ref. 1968S1) Sanduleak 2 = Sk - 68° 145 in LMC (WC4 star)(Ref. 1970S1) Sanduleak 3 = WR 72 Sanduleak 4 = WR 102 Sanduleak 5 = WR 142] in WR Nomenclature Ref. 1981VH	(Sanduleak) (= Sand)
1971T1	TERZAN, A. 1971, <i>Astr. Astrophys.</i> , 12 , 477-481 Quatre nouveaux amas stellaires dans la direction de la région centrale de la Galaxie N = 12 Nos 3 and 8 are OCL, possibly n° 10 ; other Terzan clusters are GCL	Terzan
1971W1	WEEDMAN, D.W. 1971, <i>Astrophys. Lett.</i> , 9 , 49-51 Very blue stellar objects appearing near galaxies N = 9	Weedman
1971Z1 A	ZWICKY, F., ZWICKY, M.A. 1971, <i>F. Zwicky, Guemligen, Switzerland</i> , 32 + 388 pp. Catalogue of selected compact galaxies and of post-eruptive galaxies N > 3700	IZw to VIIIZw
1971Z1 B	ZWICKY, F., SARGENT, W.L.W., KOWAL, C.T. 1975, <i>A.J.</i> , 80 , 545-558 Eighth list of compact galaxies	VIIIZw

- 1972AB A ABT, H.A., BIGGS, E.S.
1972, *Kitt Peak National Observatory*
Bibliography of stellar radial velocities.
Compilation. Includes data up to June 1970
N ~ 25000 (44000 references)
- 1972AB B BARBIER, M.
1975, *Bull. Inf. CDS*, 8, 12
Radial velocities.
Description of a punched card catalogue, which continues the Abt and Biggs
compilation. Description of a future mean radial velocities catalogue
- 1972AB C BARBIER, M., PETIT, M.
1977, Microfiche n° 3038 edited by CDS (*Centre de Données Stellaires*), Strasbourg,
France
Bibliographic catalogue of radial velocities
Continues the compilation of Abt and Biggs for the years 1970 - 1975
About 5500 references.
- 1972A2 ANTALOVA, A. Av
1972, *B.A.C.*, 23, 126-139
UBV photographic photometry of stars in the region AR (1950) : 17h03m - 17h41m,
decl. (1950) : -28.8° to -33.4°. III. The catalogue and identification maps
of the open star clusters : NGC 6405, NGC 6383, "NGC 6374", Av2, NGC 6416
and H α emission regions : Gum 67 (Av3), Gum 68 (Av2)
Av1 = C 1725 - 315 (em. region behind Gum 68)
Av2 = C 1726 - 324 OCL
Av3 (em. region behind Gum 67)
- 1972A3 A ARDEBERG, A., BRUNET, J.P., MAURICE, E., PREVOT, L. Ardeberg
= ARDB
1972, *Astr. Astrophys. Suppl.*, 6, 249-309
Spectrographic and photometric observations of supergiants and foreground stars,
in the direction of the Large Magellanic Cloud
N = 583
Part 1 (Nos 1 - 409) LMC *
Part 2 (Nos 501 - 542) Possible LMC *
Part 3 (Nos 601 - 732) Galactic *
N = 61 (Nos 1 - 61) C
(defined inside the 3 parts here above (1st column)). Identif. charts
- 1972A3 B BRUNET, J.P., PREVOT, L., MAURICE, E., MURATORIO, G. C
1973, *Astr. Astrophys. Suppl.*, 9, 447-458
Additional observations of supergiants and foreground stars in the direction of
the Large Magellanic Cloud
N = 11 (Nos 62 - 72) Identification charts
- 1972A4 ARP, H.C. HA
1972, *Ap. J. Lett.*, 174, L111-L114
A grouping of radio sources in the area of NGC 7331 and Stephan's Quintet
N = 7 (Nos 1 - 7)
- 1972B1 BARBIERI, C., ROSINO, L. A2 -
1972, *Astrophys. Space Sci.*, 16, 324-335
Studies of blue objects at high galactic latitudes. Faint blue objects in the
field of BD+29°2348 (the Galactic North Pole)
N = 487 Identification charts
- 1972D1 DICKENS, R.J. PE
1972, *M.N.R.A.S.*, 157, 299-307
The colour-magnitude diagram of the globular cluster NGC 7099
N = 142 (Nos 1 - 142)
- 1972F1 FURNISS, I., JENNINGS, R.E., MOORWOOD, A.F.M. FJM
1972, *Ap. J. Lett.*, 176, L105-L108
Detection of far-infrared astronomical sources
N = 6 (among which 4 have not been previously detected)

3.58	A. Fernandez, M.-C. Lortet, F. Spite		N° 4
1972HR	HERBIG, G.H., RAO, N.K. 1972, <i>Ap. J.</i> , <u>174</u> , 401-423 Second catalog of emission-line stars of the Orion population N = 323	HRC	
1972K1	KAP-HERR, A.v., WENDKER, H.J. 1972, <i>Astr. Astrophys.</i> , <u>20</u> , 313-315 The Cygnus X-region. VII. Radio continuum search for a ring of filament around the area N = 9	KW	
1972K2	KARACHENTSEV, I.D. 1972, <i>Soobshch. Spets. Astrofiz. Obs. AN SSSR, Zelenchukskaya</i> , <u>7</u> , 92 pp. Catalogue of isolated pairs of galaxies in the northern hemisphere N = 603 pairs. The galaxies are labeled a and b	Karachentsev = K = CPG	
1972M1 A	McGEE, R.X., BROOKS, J.W., BATCHELOR, R.A. 1972, <i>Austral. J. Phys.</i> , <u>25</u> , 581-597 The radio continuum of the Large Magellanic Cloud. I. The sources at 6 cm wavelength Maps and catalogue HPBW = 4' N = 95	MC	
1972M1 B	McGEE, R.X., BROOKS, J.W., BATCHELOR, R.A. 1972, <i>Austral. J. Phys.</i> , <u>25</u> , 613-617 The radio continuum of the Large Magellanic Cloud. III. The sources at 11 cm wavelength (Samenumbering as for 6 cm) ; 7 new sources (A to G) The papers II (p. 599-612) and IV (p. 619-635) present maps at 11 cm and a discussion of the spectra, respectively.	MC	
1972M2	MARTIN, A.H.M., DOWNES, D. 1972, <i>Astrophys. Lett.</i> , <u>11</u> , 219-224 Possible sites for star formations in Sgr B2 N = 7	MD	
1972P1	PECKHAM, R.J., PALMER, H.P. 1972, <i>Nature, Phys. Sci.</i> , <u>240</u> , 76-77 An interferometric survey of the areas surrounding four intense radio sources N = 8	PP	
1972P2	PHILIP, A.G.D., STOCK, J. 1972, <i>Bol. Obs. Tonantzintla y Tacubaya</i> , <u>6</u> , n° 38, 201-209 A finding list of stars of spectral type A7 and earlier in regions at high galactic latitudes. VI. Near south galactic pole N = 539 (Nos 1 - 539) A star of the list may be named PS 121 (say) or PS 121 VI or PS VI 121	PS = PSVI = PS...VI	
1972R1	ROSS, H.N. 1972, <i>Ph. D. Thesis, University of Toronto, Canada</i> Radio sources with low frequency cut offs N = 17 (2 sources with NRAO number and 15 with ARO number)	ARO, NRAO	
1972S1	SCOVILLE, N.Z., SOLOMON, P.M., THADDEUS, P. 1972, <i>Ap. J.</i> , <u>172</u> , 335-353 Survey of molecular lines near the galactic center. I. 6 centimeter formaldehyde absorption in Sagittarius A, Sagittarius B2 and the galactic plane from ℓ II = 359°.4 to ℓ II = 2°.2. N = 15 (Clouds with H ₂ CO absorption)	Cloud	

- 1972S2 STOCK, J., WROBLEWSKI, H. STO
 1972, *Publ. Dep. Astron. Univ. Chile, Obs. Astron. Nac.*, 2, 59-129
 A southern objective prism survey
 N ~ 3400 (30 tables, each numbered from n° 1). 1950 coordinates.
 Survey within the magnitude range from the 10th to 13th photographic magnitude.
 Areas I to IV, subdivided into a-g and Area V. Sometimes described by the number
 of the table (ex. IIa-6).
 Tables :
 p. 64 Ia Luminous stars, Nos 1 - 217
 p. 68 Ib Planetary Nebulae, Nos 1 - 6 StWr1 -
 p. 68 Ic Peculiar F-K stars, Nos 1 - 118
 p. 70 Id Me-stars, Nos 1 - 97
 p. 72 Ie Carbon stars, Nos 1 - 41
 p. 73 If Peculiar A-stars, Nos 1 - 23
 p. 75 IIa Luminous stars, Nos 1 - 322
 p. 81 IIb Planetary nebulae, Nos 1 - 48 StWr2 -
 p. 82 IIc Peculiar F-K stars, Nos 1 - 224
 p. 86 IId Me-stars, Nos 1 - 174
 p. 89 IIe Carbon stars, Nos 1 - 91
 p. 91 IIIf Peculiar A-stars, Nos 1 - 39
 p. 92 IIg Miscellaneous objects, Nos 1 - 20
 p. 93 IIa Luminous stars, Nos 1 - 264
 p. 98 IIb Planetary nebulae, Nos 1 - 8 StWr3 -
 p. 98 IIc Peculiar F-K stars, Nos 1 - 139
 p. 101 IId Me-stars, Nos 1 - 56
 p. 102 IIe Carbon stars, Nos 1 - 38
 p. 102 IIIf Peculiar B-A stars, Nos 1 - 99
 p. 104 IIg Miscellaneous objects, Nos 1 - 19
 p. 106 IVa Luminous stars, Nos 1 - 280
 p. 111 IVb Planetary nebulae, Nos 1 - 16 StWr4 -
 p. 111 IVc Peculiar F-K stars, Nos 1 - 388
 p. 119 IVd Me-stars, Nos 1 - 173
 p. 122 IVe Carbon stars, Nos 1 - 109
 p. 124 IVf Peculiar B-A stars, Nos 1 - 46
 p. 125 IVg Miscellaneous objects, Nos 1 - 61
 p. 127 V Nos 1 - 70
 p. 129 Addition to table II, Nos 1 - 9
 p. 129 Addition to table III, Nos 1 - 2
 Only a few StWr2 -, 3 -, 4 - are given PK numbers (Ref. 1967PK F or 1967PK C)
 Variable stars are cross identified with existing V* nomenclature in IBVS 2054
 (9 dec 1981) by Bidelman.
- 1972W1 WALKER, R.G., PRICE, S.D. AFCRL
 1972, *AFCRL-TR-0588*, and private communication
 Preliminary results. Obsolete. Only 27 sources cross-identified with UOA, see UOA.
 See AFCRL, format NNNN (Ref. 1975W1) later improved by the AFGL catalogue
 (Ref. 1976P1)
 N = 2363
- 1972W2 WILLSON, M.A.G. MW
 1972, *M.N.R.A.S.*, 156, 7-49
 Fan-beam surveys of radio sources near declinations +28° and +41°
 N = 320
 $\nu = 408$ MHz, HPBW = 160' $\times$ 1.8' and 155' $\times$ 2.6'
- 1972Z1 ZINN, R.J., NEWELL, E.B., GIBSON, J.B. ZNG
 1972, *Astr. Astrophys.*, 18, 390-402
 A search for UV-bright stars in 27 globular clusters
 N = 154

- 1973B1 BAHCALL, N.A., BAHCALL, J.N., SCHMIDT, M. NAB
1973, *Ap. J.*, 183, 777-782
Observations of QSOs in the direction of clusters of galaxies
N = 9
- 1973B2 A BERKHUIJSEN, E.M. Loop
1973, *Astr. Astrophys.*, 24, 143-147
Galactic continuum Loops and the diameter-surface brightness relation for supernova remnants
Table 1 : Loop I to IV and Origem Loop
Loop I contains the North Polar Spur (near $\ell = 30^\circ$)
Loop II : Cetus arc
- 1973B2 B FEJES, I., WESSELIUS, P.R. Loop
1973, *Astr. Astrophys.*, 24, 1-13
The large-scale distribution of low-velocity hydrogen gas at high galactic latitudes
Comparison with Loops I to IV.
- 1973B2 C NARANAN, S., SHULMAN, S., FRIEDMAN, H., FRITZ, G. Loop
1976, *Ap. J.*, 208, 718-726
Soft X-ray emission in Eridanus : an old supernova remnant ?
Loop V ($\ell = 210$ to 270°) is shown on fig. 2.
The nomenclature introduced in Elliot + Meaburn, 1973, *Astrophys. Space Sci.*, 20, 111-122 is somewhat confusing.
- 1973C1 CESCO, C.U., GIBSON, J. Y - C
1973, *Astr. Astrophys. Suppl.*, 11, 335-337 = CG
Very red stars and planetary nebulae
Table 1, N = 18 (Nos 2 - 19) Very red stars
Table 2, N = 33 (Nos 1 - 33) PN see Ref. 1967PK C
Both lists are named Y - C by the authors CeGi
- 1973D1 A DOUGLAS, J.N., BASH, F.N., GHIGO, F.D., MOSELEY, G.F., TORRENCE, G.W. UT
1973, *A.J.*, 78, 1-17 = UTRAO
First results from the Texas interferometer : positions of 605 discrete sources
N = 605
- 1973D1 B GHIGO, F.D., OWEN, F.N. UT
1973, *A.J.*, 78, 848-874
Second of arc positions and flux densities of 1583 radio sources at 365 MHz
N = 1583
- 1973D1 C SHARP, J.R., BASH, F.N. UT
1975, *A.J.*, 80, 335-352
Positions and flux densities of 1075 radio sources at 365 MHz
N = 1075
- 1973D2 DAVIES, I.M., LITTLE, A.G., MILLS, B.Y. MC1
1973, *Austral. J. Phys. Suppl.*, 28, 59 pp.
The Molonglo radio source catalogue 1
N = 1545
 $\nu = 408$ MHz
- 1973D3 DAVIS, R.J., DEUTCHMAN, W.A., HARAMUNDANIS, K.L. CEL
1973, *Smithsonian Inst., Washington, D.C.* (on magnetic tape) = UV
Celestec Catalog of ultraviolet stellar observations
N = 5068
- 1973E1 A EMERSON, J.P., JENNINGS, R.E., MOORWOOD, A.F.M. UCL
1973, *Ap. J.*, 184, 401-414
Far-infrared observations of H II regions from balloon altitudes
N = 15 (Nos 1 - 18) Nos 3, 5, 6 are missing.

N° 4	References	3.61
1973E1 B	FURNISS, I., JENNINGS, R.E., MOORWOOD, A.F.M. 1975, <i>Ap. J.</i> , <u>202</u> , 400-406 40-350 micron observations of galactic sources N = 31 (Nos 4 - 45) (missing numbers)	UCL
1973E2	EKERS, R.D. 1973, <i>Astr. Astrophys.</i> , <u>22</u> , 309-310 Upper limits to the 21 cm continuum radiation from two magnetic white dwarfs N = 12 (Nos 1 - 11)	RDE
1973F1	FINLAY, E.A., JONES, B.B. 1973, <i>Austral. J. Phys.</i> , <u>26</u> , 389-402 Measurements of source strengths at 29.9 MHz N = 175	FJ = FRO
1973G1 A	GATEWOOD, G., EICHHORN, H. 1973, <i>A.J.</i> , <u>78</u> , 769-776 An unsuccessful search for a planetary companion of Barnard's star (BD+ 4° 3561) N = 22 (Nos 1 - 22) Note that Barnard's star is : Gliese 699 and <u>not</u> BD +4°3561	GAT = AO
1973G1 B	GATEWOOD, G., RUSSELL, J. 1974, <i>A.J.</i> , <u>79</u> , 815-818 Astrometric determination of the gravitational redshift of Van Maanen 2 (EG5) N = 24 (Nos 121 - 144)	GAT
1973G1 C	RUSSELL, J., GATEWOOD, G., STEIN, J.W. 1976, <i>A.J.</i> , <u>81</u> , 545-547 Astrometric constants for Σ 282, BD+ 75° 325, BD+ 66° 550, Ross 142 and selected stars in those regions N = 62 (Nos 231 - 292)	GAT
1973G1 D	STEIN, J.W., DABROWSKI, J.P., GATEWOOD, G. 1977, <i>A.J.</i> , <u>82</u> , 364-367 Astrometric investigations of 91 and 92 Tauri, Lalande 20111, 18 Bootis, HD 187399 and selected field stars Nos 306 - 363	GAT
1973G1 E	GATEWOOD, G.D., GATEWOOD, C.V. 1978, <i>Ap. J.</i> , <u>225</u> , 191-197 A study of Sirius Nos 458 - 484	GAT
1973G1 F	RUSSELL, J.L., GATEWOOD, G.D., WAGMAN, N.E. 1978, <i>A.J.</i> , <u>83</u> , 1455-1458 Altair Nos 538 - 564	GAT
1973G1 G	RUSSELL, J., GATEWOOD, G.D. 1980, <i>A.J.</i> , <u>85</u> , 1270-1273 The triple system Gliese 815 (Furuhjelm 54) : an astrometric study Nos 565 - 597	GAT
1973H1	HÄGGKVIST, L., OJA, T. 1973, <i>Astr. Astrophys. Suppl.</i> , <u>12</u> , 381-405 Photoelectric photometry of stars near the North Galactic Pole N = 2544 UBV or BV photometry ; mainly late-type giants ; identification charts and 1855 coordinates.	H•O•

- 1973H2 HEILES, C. Cloud
 1973, *Ap. J.*, 183, 441-448
 Measurements of the H₂CO 6-centimeter excitation temperature. I. Dark dust clouds
 Positions Nos 1 - 14, in dark dust clouds
 (Numbering is different from Heiles, 1968)
 Position 8 is in L 134 (LDN)
 " 9 is near L 134 (LDN)
 " 10 is in cloud 4, Heiles 1968
 " 11 is near cloud 4, Heiles 1968
 " 12 is in cloud 5, Heiles 1968
 " 13 and 14 are in cloud 1, Heiles 1968
- 1973H3 HENIZE, K.G., MENDOZA, E.E. HM
 1973, *Ap. J.*, 180, 115-119
 Emission-line stars in the Chamaeleon T association
 N = 32
 1975 coordinates, V, description.
- 1973JU A JUNG, J., BISCHOFF, M., OCHSENBEIN, F.
 1973, *Bull. Inf. CDS*, 4, 27-34
 The Catalogue of Stellar Identifications (CSI). A progress report II
 Compilation updated by CDS, Data Center C16
- 1973JU B OCHSENBEIN, F., BISCHOFF, M., EGRET, D.
 1981, *Astr. Astrophys. Suppl.*, 43, 259-264
 Description of microfiche edition of CSI. See also IAU Colloquium 64 quoted in Ref. 1982 FM
- 1973K1 A KATGERT, P., KATGERT-MERKELIJN, J.K., LE POOLE, R.S. WSRT
 1973, *Astr. Astrophys. Suppl.*, 23, 171-194
 A first 1415 MHz survey with the Westerbork synthesis radio telescope :
 an attempt to detect radio emission from quasistellar objects
 N = 224
- 1973K1 B KATGERT, J.K., SPINRAD, H. WSRT
 1974, *Astr. Astrophys.*, 35, 393-406
 A second deep survey with the Westerbork telescope at 1415 and 610 MHz :
 an attempt to obtain deep identifications
 N = 58
- 1973K1 C KATGERT, P. WSRT
 1975, *Astr. Astrophys.*, 38, 87-104
 A third 1415 MHz survey with the Westerbork synthesis radio telescope :
 the 5C2 region (part I)
 N = 238
- 1973K1 D WILLIS, A.G., OOSTERBAAN, C.E., DE RUITER, H.R. WSRT
 1976, *Astr. Astrophys. Suppl.*, 25, 453-505
 A Westerbork 1415 MHz survey of background radio sources. I. The catalogue
 N = 1075 in 96 fields (Nos 1 - 96, table 3)
 v = 1415 MHz
- 1973K1 E KATGERT, J.K. WSRT
 1978, *Astr. Astrophys. Suppl.*, 31, 409-426
 A catalogue of sources found at 610 MHz with the Westerbork synthesis radio telescope : source parameters and identifications
 N = 347
- 1973K2 KEEN, N.J., WILSON, W.E., HASLAM, C.G.T., GRAHAM, D.A., THOMASSON, P. CL
 1973, *Astr. Astrophys.*, 28, 197-201
 Radio observations of the Cygnus Loop at 2.7 and 10.7 GHz
 N = 7
- 1973L1 LANNING, H.H. Lanning
 1973, *P.A.S.P.*, 85, 70-84
 A finding list of faint UV-bright stars in the galactic plane
 N = 82

N° 4	References	3.63
1973L2	LOW, F.J. 1973, <i>U.S. Air Force Report</i> , n° AFCRL-TR-73-0371 Ground-based infrared measurements : final report N = 27 $\lambda = 5, 10 \mu$ Confirmation of some preliminary AFCRL sources from Walker and Price, 1972, with a 20" resolution.	UOA = AFCRL - UOA
1973M1	MORRISON, D., SIMON, T. 1973, <i>Ap. J.</i> , 186, 193-206 Broad-band 20-micron photometry of 76 stars N = 76	MS
1973N1	NILSON, P. 1973, <i>Nova Acta Tegiae Soc. Sci. Upsaliensis</i> , Ser. 5A, 1, 456 pp. and <i>Uppsala Astron. Obs. Ann.</i> , 6 Uppsala general catalogue of Galaxies, Data for 12921 galaxies north of $\delta = - 2^{\circ}30'$ N = 12921	UGC = UGCG = U
1973R1	ROBINSON, L.B., WAMPLER, E.J. 1973, <i>Ap. J. Lett.</i> , 179, L135-L139 Shakhbazian I : a distant cluster of compact galaxies N = 17	RW
1973R2	RIEKE, G.H., LOW, F.J., KLEINMANN, D.E. 1973, <i>Ap. J. Lett.</i> , 186, L7-L11 High-resolution maps of the Kleinmann-Low nebula in Orion $\lambda = 5, 10.5$ and 21μ Table 1 IRC Nos 1 - 5 (IRC 1 = BN) IRe Nos 1 - 2 (IRe 1 = KL)	IRc IRe
1973S1 A	SLEE, O.B., HIGGINS, C.S. 1973, <i>Austral. J. Phys. Suppl.</i> , 27, 43 pp. Culgoora-1 list of radio source measurements at 80 MHz N = 777 (table 5) + 222 undetected sources	CUL
1973S1 B	SLEE, O.B., HIGGINS, C.S. 1975, <i>Austral. J. Phys. Suppl.</i> , 36, 1-60 Culgoora-2 list of radio source measurements at 80 MHz N = 1291 (table 3) + 457 undetected sources	CUL
1973S1 C	SLEE, O.B. 1977, <i>Austral. J. Phys. Suppl.</i> , 43, 1-123 Culgoora-3 list of radio source measurements N = 99	CUL
1973S2	SANDULEAK, N., STEPHENSON, C.B. 1973, <i>Ap. J.</i> , 185, 899-913 Low-dispersion spectra and galactic distribution of various interesting strong-emission-line objects in the southern Milky Way N = 179	SS
1973S3	STEPHENSON, C.B. 1973, <i>Publ. Warner and Swasey Obs.</i> , 1, n° 4, 79 pp. A general catalogue of cool carbon stars N = 3219	CCS
1973S4 A	SHAKHBAZIAN, R.K. 1973, <i>Astrophysics</i> , 9, 296-304 Compact groups of compact galaxies (Nos 1 - 30) N° 1 is identical to Shakhbazian I = Shah1 = Sahbazian, mistaken as a stellar cluster in Ref. 1957S1 (and then 1970AR) and later studied in Ref. 1973R1.	Shakhbazian
1973S4 B	SHAKHBAZIAN, R.K., PETROSIAN, M.B. 1974, <i>Astrophysics</i> , 10, 6-21 Compact groups of compact galaxies. II. (Nos 31 - 84)	Shakhbazian

- 1973S4 C BAIER, F.W., PETROSIAN, M.B., TIERSCH, H., SHAKHBAZIAN, R.K. Shakhbazian
1974, *Astrophysics*, 10, 202-211
Compact groups of compact galaxies. III.
(Nos 85 - 138)
- 1973S4 D PETROSIAN, M.B. Shakhbazian
1974, *Astrophysics*, 10, 291-298 and plates
Compact groups of compact galaxies. IV.
(Nos 139 - 175)
- 1973S4 E BAIER, F.W., TIERSCH, H. Shakhbazian
1975, *Astrophysics*, 11, 146-155 and plates
Compact groups of compact galaxies. V.
(Nos 176 - 225)
- 1973S4 F BAIER, F.W., TIERSCH, H. Shakhbazian
1976, *Astrophysics*, 12, 1-9 and plates
Compact groups of compact galaxies. VI.
(Nos 226 - 260)
- 1973S4 G BAIER, F.W., TIERSCH, H. Shakhbazian
1976, *Astrophysics*, 12, 263-274 and plates
Compact groups of compact galaxies. VII.
(Nos 261 - 305)
- 1973S4 H BAIER, F.W., TIERSCH, H. Shakhbazian
1978, *Astrophysics*, 14, 157-162 and plates
Compact groups of compact galaxies. VIII.
(Nos 306 - 337)
- 1973S4 I PETROSIAN, M.B. Shakhbazian
1978, *Astrophysics*, 14, 356-361 and plates
Compact groups of compact galaxies. IX.
(Nos 338 - 362)
See also: Shakhbazian R.K., Amirkhanian, A.S., 1978, *Astrofiz.*, 14, 455-466
and plates. On the morphology of compact groups of compact galaxies.
- 1973S4 J BAIER, F.W., TIERSCH, H. Shakhbazian
1979, *Astrophysics*, 15, 24-27 and plates
Compact groups of compact galaxies. X.
(Nos 363 - 377)
- 1973T1 TIFFT, W.G., GREGORY, S.A. CT
1973, *Ap. J.*, 181, 15-17
Spectroscopy of outlying faint galaxies in the region of the Coma cluster
N = 27 (Nos 1 - 51)
Cross identifications Zwicky - Herzog, 1963
- 1973T2 TIFFT, W.G., JEWSBURY, C.P., SARGENT, T.A. T
1973, *Ap. J.*, 185, 115-119
Investigation of the Cancer cluster of galaxies
N = 8 (Nos 1 - 8)
- 1973VM A VAN DEN BERGH, S., MARSCHER, A.P., TERZIAN, Y.
1973, *Ap. J. Suppl.*, 26, 19-36
An optical atlas of galactic supernova remnants
N = 24
- 1973VM B VAN DEN BERGH, S.
1978, *Ap. J. Suppl.*, 38, 119-128, plates 10 to 16
A systematic search for galactic supernova remnants
Table 1 : 124 probable SNR with G designation

N° 4	References	3.65
1973W1 A	WEGNER, G. 1973, <i>M.N.R.A.S.</i> , <u>163</u> , 381-390 A spectroscopic survey of southern hemisphere white dwarfs. II. Spectroscopic data for 41 southern white dwarfs N = 41 (Nos 1 - 41)	Wg
1973W1 B	WEGNER, G. 1975, <i>M.N.R.A.S.</i> , <u>171</u> , 637-646 A spectroscopic survey of southern hemisphere white dwarfs. V. Data for fifteen additional stars and the nature of the W219 group N = 13 (Nos 42 - 54) Finding charts for Nos 46, 48, 52 ; all cross-identif. with L, BPM, LDS, LFT numbers.	Wg
1973W2	WELIN, G. 1973, <i>Astr. Astrophys. Suppl.</i> , <u>9</u> , 183-197 H α - emission stars in and near NGC 7000 (Erratum <i>Astr. Astrophys. Suppl.</i> , <u>28</u> , 469) N = 141	UH α
1974BF	BERTAUD, C., FLOQUET, M. 1974, <i>Astr. Astrophys. Suppl.</i> , <u>16</u> , 71-153 New catalogue of A stars with peculiar spectra (Ap) and with metallic lines (Am) <u>Supersedes 1959B2</u> (Bertaud) Erratum <i>Astr. Astrophys.</i> , <u>20</u> , 83 N = 1049 + 189 (no own numbering)	
1974B1	BOHANNAN, B., EPPS, H.W. 1974, <i>Astr. Astrophys. Suppl.</i> , <u>18</u> , 47-79 H α emission-line stars in the Large Magellanic Cloud. I. A new deep survey N = 625	BE -
1974B2	BRANDIE, G.W., BRIDLE, A.H. 1974, <i>A.J.</i> , <u>79</u> , 903-917 Optical identifications and radio spectra of sources found by the Michigan 8 GHz survey N = 55 ν = 8000 MHz, HPBW = 5.9'	MA
1974C1 A	COYNE, G.V., S.J., LEE, T.A., DE GRAEVE, E., S.J. 1974, <i>Vatican Obs. Publ.</i> , <u>1</u> , 181-196 A survey for H α emission objects in the Milky Way. I. Vulpecula-Cygnus N = 132 (Nos 1 - 132)	VES
1974C1 B	COYNE, G.V., S.J., WISNIEWSKI, W., CORBALLY, C., S.J. 1975, <i>Vatican Obs. Bull.</i> , <u>1</u> , 197-212 A survey for H α emission objects in the Milky Way. II. Cygnus N = 117 (Nos 133 - 249)	VES
1974C1 C	WISNIEWSKI, W., COYNE, G.V., S.J. 1976, <i>Vatican Obs. Publ.</i> , <u>1</u> , 225-235 A survey for H α emission objects in the Milky Way. III. Cygnus N = 75 (Nos 250 - 324)	VES
1974C1 D	WISNIEWSKI, W., COYNE, G.V., S.J. 1977, <i>Vatican Obs. Bull.</i> , <u>1</u> , 245-256 A survey for H α emission objects in the Milky Way. IV. Cygnus N = 95 (Nos 325 - 419)	VES
1974C1 E	COYNE, G.V., S.J., WISNIEWSKI, W., OTTEN, L.B., S.J. 1978, <i>Vatican Obs. Publ.</i> , <u>1</u> , 257-265 A survey for H α emission objects in the Milky Way. V. Perseus N = 85 (Nos 596 - 680)	VES

- 1974C2 CRUZ-GONZALEZ, C., RECILLAS-CRUZ, E., COSTERO, R., PEIMBERT, M., TORRES-PEIMBERT, S. CGO
1974, *Rev. Mex. Astron. y Astrofis.*, 1, 211-259
A catalogue of galactic O stars and the ionization of the low density interstellar medium by runaway stars
N = 664
- 1974EC EICHHORN, H.
1974, *New York*
Astronomy of Star Positions
Description of - and explanations about astrographic catalogues and catalogues of accurate positions of stars.
See also the catalogues of catalogues by Sevarlic et al. also quoted in the introduction.
- 1974F1 A FANTI, C., FELLI, M., FICARRA, A., SALTER, C.J., TOFANI, G., TOMASI, P. BG
1974, *Astr. Astrophys. Suppl.*, 16, 43-61
1408 MHz fan-beam survey at low galactic latitudes. I. The observations and a catalogue of small diameter sources
N = 586
- 1974F1 B FANTI, C., MANTOVANI, F., TOMASI, P. BG
1981, *Astr. Astrophys. Suppl.*, 43, 1-7
New galactic sources in the BG catalogue : search at 1.4 GHz with the Westerbork synthesis radiotelescope
Maps (HPBW from 18' to 72') of selected BG sources (the original BG survey had HPBW = $4' \times 1''.9$). In the format, the subdivision A indicates a source connected with the BG source, α small scale structures, NN sources probably unrelated to the BG source.
- 1974F2 FEINSTEIN, A., FORTE, J.C. FF
1974, *P.A.S.P.*, 86, 284-288
The open cluster NGC 6281
N = 73
- 1974F3 FITZGERALD, M.P. CDN
1974, *Astr. Astrophys.*, 32, 465-474
A remarkable "Bright Dark Nebula" in Chamaeleon
N = 1
- 1974F4 FRIEDLANDER, M.W., GOEBEL, J.H., JOSEPH, R.D. WU
1974, *Ap. J. Lett.*, 194, L5-L8
Detection of new celestial objects at far-infrared wavelengths
N = 12
- 1974G1 GILLESPIE, A.R. ARG
1974, *M.N.R.A.S.*, 166, 11P-15P
Initial results from a radio continuum survey of the area around NGC 7331 and Stephan's Quintet
N = 8
- 1974G2 GREENSTEIN, J.L., SARGENT, A.I. FB
1974, *Ap. J. Suppl.*, 28, 157-209
The nature of faint blue stars in the halo. II.
N = 189
This is the most extensive published reference, although not covering the 189 stars
- 1974G3 A GATLEY, I., BECKLIN, E.E., MATTHEWS, K., NEUGEBAUER, G., PENSTON, M.V., SCOVILLE, N. Ori MC
1974, *Ap. J. Lett.*, 191, L121-L125 = OMC
A new IR complex and molecular cloud in Orion = (OMC -)
Named OMC2 (CO and 2.2 μ map)
Ori MC1 (centered 1' NW of Trapezium) has a dense core containing Ori BN and Ori KL.
- 1974G3 B MORRIS, M., ZUCKERMANN, B., TURNER, B.E., PALMER, P. Ori MC
1974, *Ap. J. Lett.*, 192, L27-L30
The new molecular cloud in Orion

N° 4	References	3.67
1974G3 C	WERNER, M.W., ELIAS, J.H., GEZARIS, D.Y., WESTBROOK, W.E. 1974, <i>Ap. J. Lett.</i> , 192 , L31-L32 1-millimeter continuum radiation from Orion Molecular Cloud 2	Ori MC
1974H1 A	HOLMBERG, E.B., LAUBERTS, A., SCHUSTER, H.-E., WEST, R.M. 1974, <i>Astr. Astrophys. Suppl.</i> , 18 , 463-489 The ESO/Uppsala survey of the ESO(B) atlas of the southern sky. I. Quick blue survey In the format, the type may be T, TT, T ? Or TT ? N = 420, 20 fields Revised and superseded by Lauberts, Ref. 1982 LA	ESO
1974H1 B	HOLMBERG, E.B., LAUBERTS, A., SCHUSTER, H.-E., WEST, R.M. 1974, <i>Astr. Astrophys. Suppl.</i> , 18 , 491-509 The ESO/Uppsala survey of the ESO(B) atlas of the southern sky. II. N = 446, 16 fields Revised and superseded by Lauberts, Ref. 1982 LA	ESO
1974H1 C	HOLMBERG, E.B., LAUBERTS, A., SCHUSTER, H.-E., WEST, R.M. 1975, <i>Astr. Astrophys. Suppl.</i> , 22 , 327-402 The ESO/Uppsala survey of the ESO(B) atlas of the southern sky. III. N = 2280, 80 fields ; about 70% are new objects Revised and superseded by Lauberts, Ref. 1982 LA	ESO
1974H1 D	HOLMBERG, E.B., LAUBERTS, A., SCHUSTER, H.-E., WEST, R.M. 1977, <i>Astr. Astrophys. Suppl.</i> , 27 , 295-342 The ESO/Uppsala survey of the ESO(B) atlas of the southern sky. IV. N = 2920, 101 fields ; 70% are new objects Revised and superseded by Lauberts, Ref. 1982 LA	ESO
1974H1 E	HOLMBERG, E.B., LAUBERTS, A., SCHUSTER, H.-E., WEST, R.M. 1978, <i>Astr. Astrophys. Suppl.</i> , 31 , 15-54 The ESO/Uppsala survey of the ESO(B) atlas of the southern sky. V. N = 2395, 78 fields ; 75% are new objects Revised and superseded by Lauberts, Ref. 1982 LA	ESO
1974H1 F	HOLMBERG, E.B., LAUBERTS, A., SCHUSTER, H.-E., WEST, R.M. 1978, <i>Astr. Astrophys. Suppl.</i> , 34 , 285-340 The ESO/Uppsala survey of the ESO(B) atlas of the southern sky. VI. N = 3162, 98 fields ; 90% are new objects Revised and superseded by Lauberts, Ref. 1982 LA	ESO
1974H1 G	HOLMBERG, E.B., LAUBERTS, A., SCHUSTER, H.-E., WEST, R.M. 1980, <i>Astr. Astrophys. Suppl.</i> , 39 , 173-195 The ESO/Uppsala survey of the ESO(B) atlas of the southern sky. VII. N = 2395, 72 fields ; about 50% are new objects Revised and superseded by Lauberts, Ref. 1982 LA	ESO
1974H1 H	LAUBERTS, A., HOLMBERG, E.B., SCHUSTER, H.-E., WEST, R.M. 1981, <i>Astr. Astrophys. Suppl.</i> , 43 , 307-329 The ESO/Uppsala survey of the ESO(B) atlas of the southern sky. VIII. N = 2597, 78 fields ; ~ 50% are new objects Revised and superseded by Lauberts, Ref. 1982 LA	ESO
1974H1 I	LAUBERTS, A., HOLMBERG, E.B., SCHUSTER, H.-E., WEST, R.M. 1981, <i>Astr. Astrophys. Suppl.</i> , 46 , 311-346 The ESO/Uppsala survey of the ESO(B) atlas of the southern sky. IX. N = 1881, 64 fields ; 50% are new objects Revised and superseded by Lauberts, Ref. 1982 LA	ESO
1974H2 A	HERBIG, G.H. 1974, <i>Lick Obs. Bull.</i> , n° 658, 11+10 pp. Draft catalog of Herbig-Haro objects Table 1 : N = 41 Also defines LkH 321 and 324 to 350.	HH - = H-H = HH
1974H2 B	STROM, S.E., GRASDALEN, G.L., STROM, K.M. 1974, <i>Ap. J.</i> , 191 , 111-142 Infrared and optical observations of Herbig-Haro objects N = 4 (H-H 100 to H-H 103 and H-HA to H-HE)	HH -

3.68	A. Fernandez, M.-C. Lortet, F. Spite	Nº 4
1974H2 C	SCHWARTZ, R.D. 1977, <i>Ap. J. Suppl.</i> , 35, 161-170 A survey of southern dark clouds for Herbig-Haro objects and H α emission stars Table 2 (Nos 41 - 57) Tables 3 to 9, N = 140	HH - Sz
1974H2 D	DOPITA, M.A. 1978, <i>Ap. J. Suppl.</i> , 37, 117-144 Optical emission from Shocks. IV. The Herbig-Haro objects Subdivision explained p. 127 ; C may mean central.	HH -
1974H3	HODGE, P.W., WRIGHT, F.W. 1974, <i>A.J.</i> , 79, 858-859 Catalog of 86 new star clusters in the Small Magellanic Cloud N = 86	HW
1974H4	HOLDEN, F. 1974, <i>P.A.S.P.</i> , 86, 907-911 Measures of southern visual double stars N = 17 (Nos 1 - 17) ; addendum to the table p. 911.	H&n
1974K1	KOCH, R.H., PERRY, P.M. 1974, <i>A.J.</i> , 79, 379-386 Photographic photometry in the field of NGC 2264 N = 300 (Nos 240 - 539) Continues W = WALK, Ref. 1956W1, Nos 1 - 239.	Koch = Penna = P
1974L1	LOYOLA, P.R., SHISHKINA, V.N. 1974, <i>Publ. Dep. Astron. Univ. Chile, Obs. Astron. Nac.</i> , 2, 159-180 Third Santiago-Pulkovo fundamental star catalogue (SPF3). A catalogue in R.A. of 671 fundamental bright stars of the zone +40° to -90° N = 671	SPF3
1974MA	MARŠÁLKOVÁ, P. 1974, <i>Astrophys. Space Sci.</i> , 27, 3-110 A comparison catalogue of HII-regions N = 698 - From 13 catalogues or lists.	Marsalkova
1974SS	SARGENT, W.L.W., SEARLE, L., KOWAL, C.T. 1974, Communication : the Palomar supernova search, in Supernovae and Supernovae remnants, <i>Proc. Int. Conf. on Supernovae</i> , held in Lecce, ed. by C.B. Cosmovici, Dordrecht : Reidel, p. 33-49 N ~ 380 Table VIII p. 41-47 : supernovae discovered since 1885 Updated by Kowal.	SN
1974S1	SERSIC, J.L. 1974, <i>Astrophys. Space Sci.</i> , 28, 365-373 A list of peculiar galaxies, interacting pairs, groups and clusters south of declination -43° N = 186 Apparent photographic magnitude (estimate), apparent diameter.	SER = Sersic = CALAN
1974S2	SISTLA, G., KAFTAN-KASSIM, M.A. 1974, <i>M.N.R.A.S.</i> , 166, 17P-19P A confusing radio source near the planetary nebula IC 2149 N = 1 (α = 05h52m29s.5) (δ = +48° 11' 08".0)	SKK
1974S3	SIVAN, J.P. 1974, <i>Astr. Astrophys. Suppl.</i> , 16, 163-172 A new look at the interstellar hydrogen through a very-wide-field photographic H α survey of the whole Milky Way N = 11 (Nos 1 - 11)	Siv
1974S4	SUTTON, J.M., DAVIES, I.M., LITTLE, A.G., MURDOCH, H.S. 1974, <i>Austral. J. Phys. Suppl.</i> , 33, 1-44 The Molonglo radio source catalogues 2 and 3 Table 2, N = 609 Table 3, N = 657	MC2 MC3

- 1975A1 A AZZOPARDI, M., VIGNEAU, J., MACQUET, M. AzV
 1975, *Astr. Astrophys. Suppl.*, 22, 285-321 = AZVI
 List of 506 stars, probable SMC members
 Nos 1 - 506
 UVB photoelectric photometry, finding charts ; epoch 1975 coordinates ;
 193 of these stars have been previously confirmed as SMC members.
- 1975A1 B AZZOPARDI, M., VIGNEAU, J. AzV
 1979, *Astr. Astrophys. Suppl.*, 35, 353-369
 Small Magellanic Cloud, additional list of probable members and foreground
 stars (among which 4 WR stars)
 Table 1 : N = 18 new stars
 The letter in the format means inclusion between two consecutive
 stars of the previous lists ordered in right ascension.
 Thus NNN $\leq$ 506
 Table 2 : Nos 1 - 124. Foreground stars F
 Other maps and cross-identif. can be found in Ref. 1982AV
- 1975A2 ARAKELJAN, M.A. Arakeljan
 1975, *Soobsh. Byurak. Obs.*, 47, 3-40 = Arakelian
 The galaxies of high surface brightness = Arakelyan
 = Akn
 Table 2 : N = 591, identification charts
- 1975A3 ARP, H., O'CONNELL, R.W. CG
 1975, *Ap. J.*, 197, 291-296
 Properties of two blue compact galaxies
 (Systematic designation for a type of galaxy)
- 1975D1 DE VAUCOULEURS, G. DEV G
 1975, *Stars and stellar systems*, vol. 9: *Galaxies and the Universe*,
 chapter 14, p. 557-600 = DV
 (= G)
 Nearby groups of galaxies
 N = 54
- 1975D2 DURDIN, J.M., PLETICHA, D., CONDON, J.J., YERBURY, M.J., JAUNCEY, D.L., NAIC
 HAZARD, C.
 1975, *NAIC Report*, March 1975, *NAIC 45*, *Arecibo, Puerto Rico, Ithaca,*
New York
 The NAIC 611 MHz multibeam sky survey source list
 N = 3118 ($0h \leq \alpha \leq 12h$, $-2^\circ \leq \delta \leq +18^\circ$)
- 1975E1 ELVIUS, A. AE
 1975, *Astr. Astrophys.*, 44, 117-121
 Variable blue object with a peculiar spectrum
 N = 1
 See also V * Nomenclature.
- 1975G1 Patricia Guida (unpublished) PG
 Star discovered in 1975 in Cygnus (provisional unpublished designation used
 at the Maria Mitchell Obs.)
 Ex. : PG 7, quoted by :
 HARNS, G.L.
 1978, *J. Amer. Ass. Var. Stars Observers*, 6, 62
 N = 1 : 19h28 + 38°45 (W UMa type).
- 1975H1 A HULSBOSCH, A.N.M. HVC,
 1975, *Astr. Astrophys.*, 40, 1-25 IVC
 Studies on high-velocity clouds of neutral hydrogen
 Table 4 : N = 90 (HVC + IVC)
 Table 2 : other objects already studies
- | |
|--------------|
| A, AC, B |
| C I to C III |
| M I, M II |
| OMM360 |

- 1975H1 B GIOVANELLI, R. HVC,
1980, *A.J.*, 85, 1155-1181 IVC
Studies of high-velocity clouds. I. A high-sensitivity survey
Nos 1 - 799
- $900 \text{ km s}^{-1} < V_{\text{LSR}} < +900 \text{ km s}^{-1}$; - $15^\circ < \delta < +60^\circ$
and "Expanded Sample" defined p. 1168 a). Giovanelli
- 1975H1 C MIRABEL, I.F. HVC
1981, *Ap. J.*, 247, 97-103
A complex of high-velocity clouds in Sagittarius
Table 1 and maps : 6 clouds

The systematic nomenclature HVC is being used for further lists, for instance
objects detected near galaxies of the Local Group.
See also other HVC in the complexes A, AC, B, M (Ref. 1968H1) and MS (Ref. 1977M2)
- 1975H2 HECKMANN, O., DIECKVOSS, W., KOX, H., GUNTHER, A., BROSTERHUS, E. AGK3 = AGK/3
1975, *Hamburger Sternwarte, Hamburg-Bergedorf*, vol. 1 to 8, on magnetic tape
(Katalog der Astronomischen Gesellschaft). The first (AGK) and second (AGK2)
editions are superseded by : AGK3, Star Catalogue of positions and proper motions
north of $-2^\circ 5$ declination
N = 180000
See also the magnetic tape edited by CDS (*Data Center C16, Strasbourg*).
- 1975M1 A MOFFAT, A.F.J., VOGT, N. Bochum
1975, *Astr. Astrophys. Suppl.*, 20, 85-124 = Bo
Southern open star clusters. IV. UBV - H β photometry of 26 clusters from Monoceros
to Vela
N = 7
- 1975M1 B MOFFAT, A.F.J., VOGT, N. Bochum
1975, *Astr. Astrophys. Suppl.*, 20, 125-153
Southern open star clusters. V. UBV - H β photometry of 20 clusters in Carina
N = 5 (Nos 8 - 12)
Bochum 8 (Anon near HR 4009), $\alpha = 10^{\text{h}}10.0$, $\delta = -57^\circ 45'$ (1950) is Van den Bergh -
Hagen 90 = C 1010 - 578
- 1975M1 C MOFFAT, A.F.J., VOGT, N. Bochum
1975, *Astr. Astrophys. Suppl.*, 20, 155-182
Southern open star clusters. VI. UBV - H β photometry of 18 clusters from
Centaurus to Sagittarius
(Bo 13 and 14)
- 1975M1 D FITZGERALD, M.P., HURKENS, R., MOFFAT, A.F.J. Bochum
1976, *Astr. Astrophys.*, 46, 287-291
Bochum 15, a new young stellar aggregate in Puppis
N = 1
- 1975M2 MELNICK, J., QUINTANA, H. CA
1975, *Ap. J. Lett.*, 198, L97-L99
Southern galaxy clusters identified with 3U X-ray sources
N = 6
- 1975M3 MAFFEI, P. M
1975, *Inf. Bull. Variable Stars*, n° 985, 6 pp.
New variable stars in the field of M16-M17
N = 198 new objects (Nos 1 - 208)
- 1975M4 MORGAN, W.W., KAYSER, S., WHITE, R.A. MKW
1975, *Ap. J.*, 199, 545-548
cD galaxies in poor clusters
N = 16 (Nos 1 - 12 and 1s - 4s)
- 1975N1 NORDSTRÖM, B. Ns
1975, *Astr. Astrophys. Suppl.*, 21, 193-239
A spectral survey of the southern Milky Way. II. O-B5 stars : $\ell = 237^\circ$ to 281°
Table 3 (Nos 1 - 568). Finding charts (6 missing numbers)
No. 238 = PK 254 + $0^\circ 1$

N° 4.	References	3.71
1975P1	PEARSON, T.J. 1975, <i>M.N.R.A.S.</i>, <u>171</u>, 475-505 The 5C5 survey of radio sources N = 250 $\nu = 408$ MHz $\nu = 1407$ MHz HPBW = $80'' \times 109''$ HPBW = $23'' \times 31''$	5C5
1975R1	ROSS, H.N. 1975, <i>Ap. J.</i>, <u>200</u>, 790-802 Variable radio source structure on a scale of several minutes of arc Table 6 : N = 19	G
1975S1	STENHOLM, B. 1975, <i>Astr. Astrophys.</i>, <u>39</u>, 307-318 Wolf-Rayet stars and galactic structure Table I : N = 6 (Nos 1 - 6) WR Nos 2, 5, 6 are rejected from WR Nomenclature (Ref. 1981VH) Table II : N = 4 (Nos 1 - 4) PN See PK Nomenclature	SB Ste -
1975V1 A	VAN DEN BERGH, S., HERBST, W. 1975, <i>A.J.</i>, <u>80</u>, 208-211 and plates p. 255-262 Catalogue of southern stars embedded in nebulosity N = 136 stars (format NNa) The NN number refers to the corresponding reflexion nebula (Nos 1 - 93) Identification charts	VdBH = VBH = VBH
1975V1 B	HERBST, W. 1975, <i>A.J.</i>, <u>80</u>, 212-226 R Associations. I. UBV photometry and MK spectroscopy of stars in southern reflection nebulae Table II 156 stars in 93 RFN Table III 47 stars near RFN (format NNa for both tables) Table VI Southern R Associations (N = 20)	VdBH
1975V1 C	GAHM, G.F., MALMORT, A.M. 1980, <i>Astr. Astrophys.</i>, <u>82</u>, 295-304 A study of stars in Southern Dust Clouds with bright nebulosities Table 1 : new stars in RFN, N = 9 Identif. charts	VdBH
1975V2	VAN DEN BERGH, S., HAGEN, G.L. 1975, <i>A.J.</i>, <u>80</u>, 11-16 Uniform survey of clusters in the Southern Milky Way N = 1 to 262 (several cross-identified) ; 63 new objects Curtis-Schmidt Tel. of Cerro Tololo Obs. ; $\lambda = 250^\circ$ to 360°	Van den Bergh - Hagen
1975V3	VINER, M.R., ERICKSON, W.C. 1975, <i>A.J.</i>, <u>80</u>, 931-954 26.3 MHz radio source survey. II. Radio source positions and fluxes N = 590	CL
1975V4	VRBA, F.J., STROM, K.M., STROM, S.E., GRASDALEN, G.L. 1975, <i>Ap. J.</i>, <u>197</u>, 77-84 Further study of the stellar cluster embedded in the Ophiuchus dark cloud complex N = 1 OCL (C 11622 - 243) Table 1, N = 31 (Nos 1 - 31) : 2μ sources in the cluster C 1622 - 243 discovered by Grasdalen +, <i>Ap. J. Lett.</i>, <u>184</u>, L53. Identif. chart	Grasdalen VS

- 1975W1 WALKER, R.G., PRICE, S.D. AFCRL
1975, *U.S. Air Force Report* n° AFCRL-TR-0373 = AF
(Followed and improved by the catalog AFGL) = CRL
Air Force Cambridge Research Laboratory Infrared Sky Survey, vol. I : Catalog
of observations at 4,11 and 20 microns
Most of the sources have been later confirmed in the AFGL catalogue (Ref. 1976P1)
with the same number
N ~ 3100
- 1976CC CLARK, D.H., CASWELL, J.L.
1976, *M.N.R.A.S.*, 174, 267-305
A study of galactic supernova remnants, based on Molonglo - Parkes observational
data
(Superseded by Milne, Ref. 1979ML)
- 1976C1 CLARKE, J.N., LITTLE, A.G., MILLS, B.V. MC4
1976, *Austral. J. Phys. Suppl.*, n° 40, 1-71
The Molonglo radio source catalogue 4 : the Magellanic Cloud region
N = 1349, ν = 408 MHz
- 1976C2 COHEN, M., KUHI, L.V. MC
1976, *Ap. J.*, 210, 365-376
Spectrophotometric studies of young stars. I. The Cepheus IV association
N = 4, identif. charts
- 1976D1 DAVIES, R.D., ELLIOT, K.H., MEABURN, J.
1976, *Mem. R.A.S.*, 81, 89-128
The nebular complexes of the Large and Small Magellanic Clouds
Table II (Nos 1 - 329) H II in LMC DEM L
Table III (Nos 1 - 167) H II in SMC DEM S
Should be DEM LMC and DEM SMC
- 1976D2 DUBOUT-CRILLON, R. DU
1976, *Astr. Astrophys. Suppl.*, 25, 25-54 = DUB
H II regions of the northern Milky Way : medium-large-field photographic = DUBOUT
atlas and catalogue
N = 527
- 1976D3 DE VAUCOULEURS, G., DE VAUCOULEURS, A., CORWIN, H.G. Jr.
1976, *Austin : University of Texas Press*, 396 p.
Second reference catalogue of bright galaxies
N = 4364
(The BG2 catalogue) sources are named NGC, IC or A (anonym)
- 1976E1 EGGEN, O.J. EGM
1976, *Ap. J. Suppl.*, 30, 351-396
Stellar population samples at the galactic poles. III. UBVRI observations
of proper motion stars near the south pole and the luminosity laws for the
halo and old disk populations
N > 823 (Nos 1 - 823)
13 stars (Table 2 : supplementary list) have format NNNb.
- 1976F1 FEHRENBACH, Ch., DUFLLOT, M., ACKER, A. FD
1976, *Astr. Astrophys. Suppl.*, 24, 379-388
Wolf-Rayet stars in the Large Magellanic Cloud
N = 80 (among which 6 are new)
See Ref. 1981BR
- 1976G1 GOMEZ, T., MENDOZA, E.E. GM
1976, *Rev. Mex. Astron. Astrofis.*, 1, 381-384 and plates 13-75
A finding list of H α -emission objects in the Coalsack region
N = 275, area 25 square degrees
Identif. charts, cross-identif. with Wray 1966,
Ref. 1966 W1 (Tables XV, XVI, XVII).

N° 4	References	3.73
1976G2 A	GREEN, R.F., GREENSTEIN, J.L. 1976, <i>P.A.S.P.</i> , 88, 598-602 A blue variable at high latitude N = 1: PG 2337+12	PG
1976G2 B	GREEN, R.F. 1976, <i>P.A.S.P.</i> , 88, 665-668 A discovery program for bright quasars : preliminary results N = 4	PG
1976G2 C	GREEN, R.F., FERGUSON, D., LIEBERT, J., SCHMIDT, M. 1982, <i>P.A.S.P.</i> , 94, 560-564 Cataclysmic variable candidates from the Palomar Green Survey Table I, N = 22 ; Identif. charts	PG
1976G2 D	GREEN, R.F., SCHMIDT, M. 1982, in preparation A list of QSO	PG
1976G2 E	GREEN, R.F., SCHMIDT, M., LIEBERT, J., GREEN, J.A. 1982, <i>Ap. J. Suppl.</i> , in preparation N ~ 2000	PG
1976H1 A	HAWARDEN, T.G., BRAND, P.W.J.L. 1976, <i>M.N.R.A.S.</i> , 175, 19P-22P "Cometary" globules and the structure of the Gum Nebula N = 12 ; plates	CG
1976H1 B	SANDQVIST, Aa. 1976, <i>M.N.R.A.S.</i> , 177, 69P-71P Four more cometary globules in the Gum Nebula N = 4 (Nos 13 - 16)	CG
1976H2	HENIZE, K.G. 1976, <i>Ap. J. Suppl.</i> , 30, 491-550 Observations of southern emission-line stars Table 1, N = 1929 (Nos 1 - 1929) He 3-1312 and 1333 are PN	He3 - = He 3 - = HE = HEN
1976H3	HØG, E., VON DER HEIDE, J. 1976, <i>Abh. Hamburger Sternwarte</i> , IX, 1-334 PERTH 70, a catalogue of positions of 24900 stars N = 24900, $\delta < +5^\circ$, Nos 1 - 45115 with missing intervals between 20495 and 45115 The suffix S after the number indicates a FK4 suppl. star.	SRS
1976L1	LAUBERTS, A. 1976, <i>Astr. Astrophys.</i> , 52, 309-311 Three distant stellar clusters found on ESO blue survey plates E1 = ESO 201-SC10 = C 0353-497 E2 = ESO 120-SC08 = C 0535-618 E3 = ESO 037-SC01 = C 0921-770 N = 3 (probable GCL)	E
1976M1	MCCARTHY, M.F., S.J. 1976, <i>Vatican Obs. Publ.</i> , 1, n° 7 Emission stars in a field in Cygnus N = 81	CgHa
1976M2	MOFFAT, A.F.J. 1976, <i>Astr. Astrophys.</i> , 50, 429-434 Mass loss from the M3 supergiant HD 143183 in a young compact star cluster in Norma (Young compact star cluster around the M3 Ia star HD 143183) N = 1 (C 1557 - 540)	Moffat

1976P1 A	PRICE, S.D., WALKER, R.G. 1976, <i>AFGL-TR-0208 Environmental Research Papers</i> , n° 576 The AFGL Four Color Infrared Sky Survey Contains most of the AFCRL (1975) catalogue with the same number (acronym AFGL = GL identical to CRL) and 306 new sources of the southern hemisphere, numbered 4001 to 4306 N ~ 3400 $\lambda = 4.2, 11.0, 19.8 \mu$ (Northern hemisphere) with $3.4' \times 10.5'$ beam $\lambda = 11.1, 19.6, 17.4 \mu$ (Southern hemisphere) with $5.1' \times 10.5'$ beam	AFGL = GL, CRL
1976P1 B	PRICE, S.D. 1977, <i>Air Force Geophysics Laboratory</i> , AFGL-TR-77-0160 The AFGL four color infrared sky survey : supplemental catalog N = 2477 (S stands for supplement)	AFGL
1976R1	RICHTER, N., SCHNELL, A. 1976, <i>A.N.</i> , <u>297</u> , 275-278 Three new remarkable pairs of spherical compact galaxies N = 3	DC
1976R2	ROSE, J.A. 1976, <i>Astr. Astrophys. Suppl.</i> , <u>23</u> , 109-114 A catalogue of southern clusters of galaxies N = 124 124 probable clusters of galaxies in selected areas around the South Galactic Pole ; 1975 coordinates, population, angular diameter.	ROSE
1976S1 A	SANDQVIST, Aa., LINDROOS, K.P. 1976, <i>Astr. Astrophys.</i> , <u>53</u> , 179-189 Interstellar formaldehyde in southern dark dust clouds N = 42 (Nos 1 - 42)	SL
1976S1 B	SANDQVIST, Aa. 1977, <i>Astr. Astrophys.</i> , <u>57</u> , 467-470 More southern dark dust clouds N = 95 (Nos 101 - 195)	SL
1976S2	SANDULEAK, N. 1976, <i>A.J.</i> , <u>81</u> , 350-363 Catalog of probable dwarf stars of type M3 and later in the direction of the North Galactic Pole N = 274	Sand = SAND = Sanduleak
1976S3	STEPHENSON, C.B. 1976, <i>Publ. Warner and Swasey Obs.</i> , <u>2</u> , 21-53 A general catalogue of S-type stars N = 741	Stephenson
1976S4	SMITH, M.G., AGUIRRE, C., ZEMELMAN, M. 1976, <i>Ap. J. Suppl.</i> , <u>32</u> , 217-231 and plates 1-10 Emission-line galaxies and quasars. II. The classification systems and list N 1, declination $\leq -27^\circ.5$, galactic latitude $\geq +20^\circ$ N = 116 (Nos 1 - 116) Cross identified with Parkes name ; identif. charts	To2 = TOL
1976S5	STROM, K.M., STROM, S.E., VRBA, F.J. 1976, <i>A.J.</i> , <u>81</u> , 308-313 and plate p. 385 Infrared surveys of dark-cloud complexes. I. The Lynds 1930 dark cloud N = 70 (Nos 1 - 70) See also Ref. 1976S6, 1976S8, 1976V1.	SSV
1976S6	STROM, S.E., VRBA, F.J., STROM, K.M. 1976, <i>A.J.</i> , <u>81</u> , 314-316 and plate p. 387 Infrared surveys of dark-cloud complexes. II. The NGC 1333 region N = 25 (Nos 1 - 25) Similar studies in other clouds, see Ref. 1976S5, 1976S8, 1976V1.	STVS

N° 4	References	3.75
1976S7	STOCK, J., OSBORN, W., IBANEZ, M. 1976, <i>Astr. Astrophys. Suppl.</i> , 24 , 35-52 A catalogue of A and F type supergiants in the Large Magellanic Cloud Nos 1 - 890	STO
1976S8	STROM, K.M., STROM, S.E., VRBA, F.J. 1976, <i>A.J.</i> , 81 , 320-322 and plates p. 391-392 Infrared surveys of dark-cloud complexes. IV. The Lynds 1517 and Lynds 1551 clouds Table 1 Nos 1 - 6 2 μ sources in L 1551 dark cloud Table 2 Nos 1 - 13 2 μ sources in L 1517 dark cloud Similar studies in other clouds, see Ref. 1976S5, 1976S6, 1976V1	STSV
1976TD A	TERZIAN, Y., DAVIDSON, K. 1976, <i>Astrophys. Space Sci.</i> , 44 , 479-500 Pulsars : observational parameters and a discussion on dispersion measures <u>Catalogue updated by the authors.</u> Same designation but with P N = 147	PSR = (P)
1976TD B	MANCHESTER, R.N., TAYLOR, J.H. 1981, <i>A.J.</i> , 86 , 1953-1973 Observed and derived parameters for 330 pulsars N = 330	PSR
1976TD C	DAMASHEK, M., BACKUS, P.R., TAYLOR, J.H., BURKHARDT, R.K. 1982, <i>Ap. J. Lett.</i> , 253 , L57-L60 Northern hemisphere pulsar survey : a third radio pulsar in a binary system 23 new PSR north of $\delta = +20^\circ$ PSR 0655+ 64 Table 1 : 6 recently discovered pulsars	PSR
1976T1	TURNER, E.L., GOTT, J.R. III 1976, <i>Ap. J. Suppl.</i> , 32 , 409-427 Groups of galaxies. I. A catalogue 737 galaxies assigned to 103 separate groups, from a sample of 1087 galaxies Table 1, col. 4 (Nos 1 - 103) Group of galaxies Table 1, col. 1, format FFFNNN Galaxy	TG Z
1976V1	VRBA, F.J., STROM, S.E., STROM, K.M. 1976, <i>A.J.</i> , 81 , 317-319 and plate p. 389 Infrared surveys of dark-cloud complexes. III. The R Corona Austrina dark cloud N = 18 (Nos 1 - 18) Similar studies in other clouds; see Ref. 1976S5, 1976S6, 1976S8	VSST
1976V2	VRBA, F.J., STROM, S.E., STROM, K.M. 1976, <i>A.J.</i> , 81 , 958-969 and plates p. 1021-1029 Magnetic field structure in the vicinity of five dark-cloud complexes Table II : stars in Oph Cloud (Nos 1 - 124) Table VI : stars in Lynds 1630 (M78) (Nos 1 - 37) Table VIII : stars in CrA (Nos 1 - 76) Table IX : stars in L 1450 (NGC 1333) (Nos 1 - 59) Table XI : stars in L 1551 (Nos 1 - 21)	VSS
1976W1	WEINBERGER, R., ELSASSER, E., BEETZ, M., BIRKLE, K. 1976, <i>Astr. Astrophys.</i> , 48 , 327-329 Another possible nearby galaxy N = 2	Calar Alto = CA

- 1977A1 A ALKSNIS, A., ALKSNE, Z., PLATAIS, I. BC
1977, *Investigation of the Sun and red stars*, 7, 11-16 (in Russian)
Carbon stars near open clusters at galactic latitude $4.5^\circ < |b| < 9.5^\circ$ between
longitudes 68° and 184°
- 1977A1 B ALKSNIS, A., ALKSNE, Z., OZOLINA, V., PLATAIS, I. BC
1978
New carbon stars in the zone centered at galactic latitude $b = +7^\circ$
- 1977A2 ALBERT, C.E., WHITE, R.A., MORGAN, W.W. AWM
1977, *Ap. J.*, 211, 309-310
cD galaxies in poor clusters. II.
N = 7
- 1977A3 ARDEBERG, A., MAURICE, E. ARMA
1977, *Astr. Astrophys. Suppl.*, 28, 153-168
A spectrographic and photometric study of stars and interstellar medium
surrounding HD 101205
(Nos 1 - 125)
- 1977BF A BERGER, J., FRINGANT, A.-M. PB
1977, *Astr. Astrophys. Suppl.*, 28, 123-152
A search for faint blue stars in high galactic latitudes. I. Nine PSS fields
near the North Galactic Pole
N = 4431 stars and 84 compact obj. (Nos 1 - 4515)
- 1977BF B BERGER, J., FRINGANT, A.-M. PB
1980, *Astr. Astrophys. Suppl.*, 39, 39-52
A search for faint blue stars in high galactic latitudes. II. Fourteen PSS
fields at declinations $+6^\circ$ and 0° near the South Galactic Pole
N = 2011 (Nos 5001 - 7011)
Cross identif. with 9 catalogues
- 1977BF C BERGER, J., FRINGANT, A.-M. PB
1983, *Astr. Astrophys. Suppl.* (submitted)
A search for faint blue stars at high galactic latitudes. III. Twelve PSS
fields at declinations -6° and -12° near the South Galactic Pole
N = 2484 (Nos 7012 - 9495)
Cross identifications
- 1977B1 BERNES, C. Bernes
1977, *Astr. Astrophys. Suppl.*, 29, 65-70 = Be
A catalogue of bright nebulosities in opaque dust clouds = Ber = Bs
N = 160 (Nos 1 - 160)
- 1977D1 DUUS, A., NEWELL, B. STR
1977, *Ap. J. Suppl.*, 35, 209-219
A catalog of southern groups and clusters of galaxies
N = 957
1950 coordinates, population, type and distance class.
- 1977D2 DRILLING, J.S. DRIL
1977, *A.J.*, 82, 714-717
UBV photometry of stars in a region near the South Galactic Pole
(Nos 1 - 51)
A few stars are cross-identified with PS NN II
- 1977F1 A FAIRALL, A.P. Fairall
1977, *M.N.R.A.S.*, 180, 391-400 = F = F -
150 southern compact and bright-nucleus galaxies
N = 150 (F - is used in the table)
- 1977F1 B FAIRALL, A.P. Fairall
1979, *M.N.R.A.S.*, 188, 349-356
Spectroscopic survey of southern compact and bright-nucleus galaxies. II.
N = 60 (Nos 151 - 210)
Identification charts for most objects

N° 4	References	3.77
1977F1 C	FAIRALL, A.P. 1980, <i>M.N.R.A.S.</i> , <u>192</u> , 389-397 Spectroscopic survey of southern compact and bright-nucleus galaxies. III. N = 80 (Nos 211 - 290) Cross-identification given when available ; photographs of a few objects	Fairall
1977F1 D	FAIRALL, A.P. 1981, <i>M.N.R.A.S.</i> , <u>196</u> , 417-424 Spectroscopic survey of southern compact and bright-nucleus galaxies. IV. N = 70 (Nos 291 - 360) Cross-identification given when available.	Fairall
1977F2	FELLI, M., TOFANI, G., FANTI, C., TOMASI, P. 1977, <i>Astr. Astrophys. Suppl.</i> , <u>27</u> , 181-204 A 408 MHz fan-beam survey at low galactic latitudes. III. The catalogue of extended sources N = 77 $15^\circ < \ell < 245^\circ$; $ b \leq 3.5^\circ$; resol. $4.2' \times 1.9'$	BGE
1977F3	FROLOV, V.N. 1977, <i>Izv. Glav. Astron. Obs. Pulkovo</i> , n° 195, <i>Astrofiz. Astrometr.</i> , p. 80-97 Photometry and proper motions of stars of four galactic clusters in Cassiopeia N = 1 (C 2354 + 613) 1950 { $\alpha = 23^h54.2$ $\delta = +60^\circ57'$	Frolov
1977G1	GARRISON, R.F., HILTNER, W.A., SCHILD, R.E. 1977, <i>Ap. J. Suppl.</i> , <u>35</u> , 111-126 MK spectral classifications for southern OB stars 1113 stars out of 1660 from reference 1966K3	KS = Hbg
1977H1	HAVLEN, R.J., MOFFAT, A.F.J. 1977, <i>Astr. Astrophys.</i> , <u>58</u> , 351-356 A new cluster containing 2 Wolf-Rayet stars and 2 Of-stars N = 1 (C 1715 - 387) $\ell = 348.7$, $b = - 0.8$	Havlen - Moffat
1977H2	HOAG, A.A., SMITH, M.G. 1977, <i>Ap. J.</i> , <u>217</u> , 362-381 Faint emission-line quasi-stellar object candidates N = 75, identification charts and table only give coordinates ; the number (1 to 76) has been given by : Osmer, Ref. 198001 B	HS
1977L1	LAUSTSEN, S., RICHTER, W., VAN DER LANS, J., WEST, R.M., WILSON, R.N. 1977, <i>Astr. Astrophys.</i> , <u>54</u> , 639-640 A new dwarf irregular galaxy photographed with the ESO 3.6m telescope N = 1 = Sculptor Dwarf Irregular Galaxy = SDIG 1950 { $\alpha = 00^h05^m.6$ { $\ell = 352^\circ$ $\delta = - 34^\circ51'$ { $b = - 79^\circ$ Photograph	LRLWW
1977L2	LILLER, W. 1977, <i>Ap. J. Lett.</i> , <u>213</u> , L21-L23 and plate L1 Searches for the optical counterparts of the X-ray burst sources MXB 1728-34 and MXB 1730-33 N = 1 : a globular cluster as counterpart of MXB 1730-33 ("The Rapid Burster")	Liller
1977L3	LODÉN, L.O. 1977, <i>Astr. Astrophys. Suppl.</i> , <u>29</u> , 31-50 and plates 1 to 9 A study of some loose clustering in the southern Milky Way Stars in 19 loose clusterings which are given a field number	Lodén
1977MS A	MCCOOK, G.P., SION, E.M. 1977, <i>Villanova Univ. Obs. Contr.</i> , N° 2 A catalogue of spectroscopically identified white dwarfs N = 528	WD

- 1977MS B LIEBERT, J., STOCKMAN, H.S. WD
1980, *P.A.S.P.*, 92, 657-680
Circular polarization measurements of selected white dwarfs
N = 32
- 1977M1 A MacALPINE, G.M., SMITH, S.B., LEWIS, D.W. UM
1977, *Ap. J. Suppl.*, 34, 95-100 and plates 1 to 7 = MCS
Curtis Schmidt-thin prism survey for extragalactic emission-line objects :
University of Michigan, List I
N = 100 (Nos 1 - 100)
Cross-identified with "Tololo Designation" with Parkes format (8 digits)
- 1977M1 B MacALPINE, G.M., SMITH, S.B., LEWIS, D.W. UM
1977, *Ap. J. Suppl.*, 35, 197-201 and plates 15 to 21
Curtis Schmidt-thin prism survey for extragalactic emission-line objects :
University of Michigan, List II
N = 100 (Nos 101 - 200)
- 1977M1 C MacALPINE, G.M., LEWIS, D.W., SMITH, S.B. UM
1977, *Ap. J. Suppl.*, 35, 203-207 and plates 22 to 28
Curtis Schmidt-thin prism survey for extragalactic emission-line objects :
University of Michigan, List III
N = 100 (Nos 201 - 300)
- 1977M1 D MacALPINE, G.M., LEWIS, D.W. UM
1978, *Ap. J. Suppl.*, 36, 587-593 and plates 7 to 14
Curtis Schmidt-thin prism survey for extragalactic emission-line objects :
University of Michigan, List IV
N = 120 (Nos 301 - 420)
- 1977M1 E MacALPINE, G.M., WILLIAMS, G.A. UM
1981, *Ap. J. Suppl.*, 45, 113-120
Curtis Schmidt-thin prism survey for extragalactic emission-line objects :
University of Michigan, List V
N = 235 (Nos 421 - 655)
104 apparent emission-line galaxies, 131 quasar candidates, 225 square degrees :
 $11.3h < \alpha < 14.3h$ (1950) - $2^{\circ}.5 \leq \delta \leq + 2^{\circ}.5$
Accurate optical positions to $\sim 1''.5$ are given for Nos 1 - 420 in Kojoian +,
1982, *Ap. J. Suppl.*, 50, 161-168
- 1977M2 MATHEWSON, D.S., SCHWARZ, M.P., MURRAY, J.D. MS
1977, *Ap. J. Lett.*, 217, L5-L8
The Magellanic Stream: the turbulent wake of the Magellanic Clouds in the Halo
of the Galaxy
MSI to VI (fig. 1 and 2)
Later nomenclature (regions 1 to 5) and observations are described in Mirabel +,
1979, *M.N.R.A.S.*, 186, 433-451, fig. 1 p. 434 and table 1 p. 435.
- 1977P2 PHILIP, A.G. Bok
1977, *P.A.S.P.*, 89, 554-556 = An(Bok)
A comparison of observations with main-sequence evolutionary models
N = 1 (C 1108 - 231)
- 1977R1 ROSE, J.A. RCG
1977, *Ap. J.*, 211, 311-318
A survey of compact groups of galaxies
N = 38
- 1977S1 SMITH-HAENNI, A.L. SHB -
1977, *Astr. Astrophys. Suppl.*, 27, 205-214
A comprehensive catalogue of quasi-stellar objects
N = 403 (compiles 23 acronyms) (not quoted in the revised Catalogue 1980HB)

N° 4	References	3.79
1977S2	STEPHENSON, C.B., SANDULEAK, N. 1977, <i>Ap. J. Suppl.</i> , <u>33</u> , 459-469 New H α emission stars in the Milky Way N = 455 The famous object SS 433 is from this catalogue.	SS
1977T1	THOMSON, L.A. 1977, <i>Ap. J.</i> , <u>211</u> , 684-692 Possible ring galaxies near rich clusters. Systematic survey in 70 rich clusters N = 40 (Nos 1 - 40) Photographs given for Nos 6, 13, 15, 19, 22, 36. The number of the Abell cluster is given.	LT
1977T2	THONNARD, N., RUBIN, V.C. 1977, <i>B.A.A.S.</i> , <u>9</u> , 619 The dwarf galaxy 1346-35 : optical and neutral hydrogen properties N = 1	TR
1977W1	WAGGETT, P.C. 1977, <i>M.N.R.A.S.</i> , <u>181</u> , 547-561 The 5C9 survey of radio sources ν = 408 and 1407 MHz ; Near NGP N = 214	5C9•
1977W3	WEINBERGER, R., POULAKOS, C. 1977, <i>Astr. Astrophys. Suppl.</i> , <u>27</u> , 249-253 Extraordinarily red stars on the Palomar Observatory Sky Survey Nos 1 - 15 Identification charts ; B - V $\geq$ 4.0.	WP
1978BF	BATTEN, A.H., FLETCHER, J.M., MANN, P.J. 1978, <i>Publ. Dom. Astrophys. Obs. Victoria</i> , <u>15</u> , n° 5, 121 7th catalogue of the orbital elements of spectroscopic binary systems Supersedes the 6th catalogue, 1967 (Ref. 1967B6, acronym SB) N = 978	Batten = B
1978B1 A	BRAUDE, S.Ya., MEGN, A.V., RASHOKOVSKI, S.L., RYABOV, B.P., SHARYKIN, N.K., SOKOLOV, K.P., TKATCHENKO, A.P., ZHOUCK, I.N. 1978, <i>Astrophys. Space Sci.</i> , <u>54</u> , 37-128 Decametric survey of discrete sources in the northern sky. II. Source Catalogue in the range of declinations + 10° to + 20° <u>UTR-2 decametric radio telescope</u> Each source has a number (Nos 1 - 329) and a GR name (Parkes format). Cross-identified with 3C or 4C. Ten new sources. ν = 10 to 25 MHz, beam 68' $\times$ 68' sec z to 33' $\times$ 33' sec z.	GR
1978B1 B	BRAUDE, S.Ya., MEGN, A.V., SOKOLOV, K.P., TKATCHENKO, A.P., SHARYKIN, N.K. 1979, <i>Astrophys. Space Sci.</i> , <u>64</u> , 73-126 Decametric survey of discrete sources in the Northern Sky. V. Source Catalogue in the range of declinations 0° to + 10°. In table I, each source has a number (Nos 1 - 364) and a GR name (Parkes format). Cross-identified with previous surveys. Sixteen new sources (Nos 1 - 16) in Table III, this numbering is different from table I !	GR
1978B1 C	BRAUDE, S.Ya., MIROSHNITCHENKO, A.P., SOKOLOV, K.P., SHARYKIN, N.K. 1981, <i>Astrophys. Space Sci.</i> , <u>74</u> , 409-451 Decametric survey of discrete sources. VII. Source Catalogue in the range of declinations -2° to -13° In table I, each source has a number (Nos 1 - 316 ; different from the number in Table III) and a GR name (Parkes format). Four newly discovered sources (Nos 1 - 4) in table III.	GR
1978B2	BRAID, M.K., MCGILLIVRAY, H.T. 1978, <i>M.N.R.A.S.</i> , <u>182</u> , 241-248 A finding list of southern clusters of galaxies. I. N = 474	BRAID

- 1978CC CALVET, N., COHEN, M.
1978, *M.N.R.A.S.*, 182, 687-704
Studies of bipolar nebulae. V. The general phenomenon
(13 objects).
- 1978C1 A CHURCHWELL, E., WINNEWISSER, G., WALMSLEY, C.M. Tau MC
(= TMC)
(= TMC -)
1978, *Astr. Astrophys.*, 67, 139-147
Molecular observations of a possible proto-solar nebula in a dark cloud in Taurus
TMC1 $\alpha = 04^{\text{h}}38^{\text{m}}38^{\text{s}}$
 $\delta = +25^{\circ}36'00''$ } 1950
located near the south-eastern edge of Heiles' cloud 2
TMC2 $\alpha = 04^{\text{h}}29^{\text{m}}42^{\text{s}}$
 $\delta = +24^{\circ}16'43''$ } 1950 (quoted p. 144, §IVf)
Maps are given p. 112 and 113 in Guélin, M., Langer, W.D., Wilson, R.W., 1982,
Astr. Astrophys., 107, 107-127
- 1978C1 B WALMSLEY, C.M., CHURCHWELL, E., NASH, A., FITZPATRICK, E. Tau MC
1982, *Ap. J. Lett.*, 258, L75-L78
Hyperfine anomalies of HCN in cold dark clouds
- 1978E1 ELIAS, J.H. Elias
1978, *Ap. J.*, 224, 857-872
A study of the Taurus dark Cloud Complex
Infrared survey (1.6 and 2.2 μ)
Table 1, N = 30
- 1978G1 GRAYZECK, E.J. VSF
1978, *A.J.*, 83, 1390-1396
New Cepheid variables in the Crux-Centaurus region (table III)
N = 2 (Nos 165 and 171)
- 1978G2 GYULBUDAGHIAN, A.L., GLUSHKOV, Yu. I., DENISYUK, E.K. GGD
1978, *Ap. J. Lett.*, 224, L137-L138
New Herbig-Haro objects
N = 37
The clustering of sources 12 to 15 is often quoted as GGD 12-15.
- 1978L1 LUGGER, P.M. SC
1978, *Ap. J.*, 221, 745-755
High-galactic latitude X-ray sources and southern clusters of galaxies
N = 10
- 1978M1 MACHALSKI, J. GB2
1978, *Acta Astron.*, 28, 367-440
The Green Bank second survey of extragalactic radio sources at 1400 MHz.
The catalogue of sources
N = 2022, $\nu = 1400$ MHz, HPBW = 10.3' ; S > 0.09 Jy
- 1978P1 PESCH, P., SANDULEAK, N. PS
1978, *A.J.*, 83, 1090-1094
A catalogue of probable dwarf stars of type M3 and later in the direction of
the south galactic pole
N = 282 (Nos 1 - 282)
- 1978P2 PEARSON, T.J., KUS, A.J. 5C6•, 5C7•
1978, *M.N.R.A.S.*, 182, 273-274
The 5C6 and 5C7 surveys of radio sources
535 sources detected at 408 MHz and 121 at 1407 MHz
- 1978P3 PFLEIDERER, J., WEINBERGER, R., MROSS, R. AnC2
= An
1978, *Proceed. of the "Star Cluster Symposium"*, Budapest, edit. B.A. Balazs,
p. 39-45
Some new possible very red and faint star clusters
N = 4

N° 4	References	3.81
1978R1	RICKER, G.R., CLARK, G.W., DOXSEY, R.E., DOWER, R.G., JERNIGAN, J.G., DELVAILLE, J.P., MacALPINE, G.M., HJELLMING, R.M. 1978, <i>Nature</i> , 271, 35-36 Discovery of an X-ray QSO Optical object MR 2251 - 178, included in 1980HB	MR
1978R2	RODGERS, A.W., PETERSON, B.A., HARDING, P. 1978, <i>Ap. J.</i> , 225, 768-775 A spectroscopic survey of some Zwicky compact galaxies 348 + 76 objects identified as compact galaxies candidates by Zwicky in POSS E fields 1030 (12h04 - 18°31') and 1061 (13h12 - 18°) Table 1 lists 25 among 348 objects of POSS E field 1030 Table 2 lists 33 among 76 objects of POSS E field 1061 I and II in the acronym are numerals.	I SZ = ISZ II SZ = IISZ
1978S1	SWEENEY, L.H., HEINSHEIMER, T.F., YATES, F.F., MARAN, S.P., LESH, J.R., NAGY, T.A. 1978, <i>Aerospace Corporation</i> TR-0078(3409-20)-1 Interim equatorial infrared catalogue, number 1 Nos 1 - 896, sources detected at 2.7μ ; $ b \leq 10^\circ$ Cross-identified with AGK3, SAO, TMSS, AFGL	EIC
1978W1	WESTERLUND, B.E., OLANDER, N., RICHER, H.B., CRABTREE, D.R. 1978, <i>Astr. Astrophys. Suppl.</i> , 31, 61-82 A catalogue of carbon stars in the Large Magellanic Cloud Nos 1 - 302	WORC
1979A1	ARP, H., SULENTIC, J.W. 1979, <i>Ap. J.</i> , 229, 496-502 and plates 14 and 15 Three quasars near the spiral arms of NGC 1073 Nos 1 and 2 Object No 3 on plate 15 Objects 0240-002, 0241-002 in Ref. 1980HB, table 4	BSO RSO
1979A2	ARP, H., SULENTIC, J.W., DI TULLIO, G. 1979, <i>Ap. J.</i> , 229, 489-495 and plate 13 Quasars aligned across NGC 3384 N = 16 Ultraviolet-excess objects in the vicinity of the triple system of galaxies NGC 3379/84/89, among which 8 quasars. Identif. charts 8 objects are included in Ref. 1980HB, table 4 all labelled 1045 + 128	UB
1979B1	BOLTON, J.G., SAVAGE, A., WRIGHT, A.E. 1979, <i>Austral. J. Phys. Suppl.</i> , 46, 1-27 The Parkes 2700 MHz survey (14th part) : catalogue and new optical identifications Table 1, p. 2 summarizes the data for the 14 parts of the Parkes 2700 MHz survey (for extragalactic sources with the Parkes 64m telescope, from 1971 to 1979) : areas, number of sources, references. Fig. 1, p. 3 shows the areas surveyed, and the completeness limits in Jy. Sources with six digits appear in the original Parkes 408 MHz survey, sources with seven digits have been found at 2700 MHz.	PKS
1979C1	CRAINE, E.R., DUERR, R.E., HORNER, V.M., IMHOFF, C.L., ROUTSIS, D.E., SWIHART, D.L., TURNSHEK, D.A. 1979, <i>Steward Obs. Contr. Series A</i> , n° 3 Near infrared photographic sky survey. Catalog of red stellar objects. I. 23 fields 4°.5 diameter (table 1) at rather high latitudes. 1183 objects (table 2 and identif. charts). Survey of each field is not exhaustive (see text). Red stellar object is defined by $V-I > 2.5$ N = 1183 from 23 fields The fields are taken among Nos 1 - 1900 defined in the Field Index of Rossano + Craine, 1980, <i>Pachart Publishing House, Tucson, Arizona</i> .	NIPSS

- 1979EN ENGELS, D.
1979, *Astr. Astrophys. Suppl.*, 36, 337-345
Catalogue of late type stars with OH, H₂O or SiO maser emission
Literature searched through 1978 . 351 Objects, classified according to types : M supergiant stars (Nos 1 - 7), type I OH/IR stars (Nos 8 - 51), type II OH/IR stars (Nos 52 - 129), H₂O/IR stars without detected OH emission (Nos 130 - 150), SiO/IR stars (Nos 151 - 206), objects undetected in the optical or infrared (Nos 207 - 351).
- 1979H1 HEILES, C. GS
1979, *Ap. J.*, 229, 533-544
H I shells and supershells
N = 63
- 1979K1 A KAZARIAN, M.A. Kazarian
1979, *Astrophysics*, 15, 1-15 = Ka
New galaxies with ultraviolet excess. I.
N = 136. Identif. charts
- 1979K1 B KAZARIAN, M.A. Kazarian
1979, *Astrophysics*, 15, 117-129
New galaxies with ultraviolet excess. II.
Nos 137 - 241
- 1979K1 C KAZARIAN, M.A., KAZARIAN, E.S. Kazarian
1980, *Astrophysics*, 16, 7-20
New galaxies with ultraviolet excess. III.
Nos 242 - 352
- 1979K1 D KAZARIAN, M.A., KAZARIAN, E.S. Kazarian
1982, *Astrofizika*, 18, 512-522 and plates
New galaxies with ultraviolet excess. IV.
Nos 353 - 466
- 1979LU LUYTEN, W.J. LP
NLTT Catalogue
1979, *Univ. Minnesota, Minneapolis*, 1, 1-283 (declin. 90° to 30°) N ~ 15000
1979 2, 1-286 (30° to 0°) id
1979 3, 1-283 (0° to -30°) id
1980 4, 1-151 (-30° to -90°) id
1980 first supplement to the NLTT catalogue (and errata and addenda to NLTT) :
Proper Motion Survey with the 48-inch Telescope. LV.
(New Luyten Two Tenths)
This catalogue compiles stars (essentially stars with LP numbers) which have proper motions larger than 0.2" annually.
- 1979LY A LYNGÅ, G. C
1979, Catalogue of open cluster data.
A computer readable catalogue available through the CDS in Strasbourg
Astrophysical data for clusters.
Denotation according to IAU resolution
(*Inform. Bull. of the I.A.U.*, jan. 1980, p. 22)
- 1979LY B LYNGÅ, G. C
1982, *Bull. Inf. CDS*, 23, 89
IAU numbers for some recently discovered clusters
N = 13
- 1979L1 LUYTEN, W.J. LHS
1979, *Univ. Minnesota, Minneapolis, Minnesota*
A catalogue of stars with proper motions exceeding 0".5 annually (2nd edition)
(LFT complement)
LUYTEN, W.J., ALBERS, H.
1979, *Univ. Minnesota, Minneapolis, Minnesota*
An atlas of identification chart for LHS stars
N = 3996 (Nos 1 - 73, Nos 101 - 552, Nos 1001 - 4058 - Appendix Nos 5001 - 5413)

N° 4	References	3.83
1979ML	MILNE, D.K. 1979, <i>Austral. J. Phys.</i> , <u>32</u> , 83-92 A new catalogue of galactic SNRs corrected for distance from the galactic plane (supersedes Clark et al., Ref. 1976CC) N = 125	
1979M1 A	MADORE, B.F., ARP, H.C. 1979, <i>Ap. J. Lett.</i> , <u>227</u> , L103-L104 Three new faint star clusters N = 3 AM-3 probably belongs to SMC AM-1 is intergalactic = ESO 201-SC 10 AM-2 = ESO 368-SC 07 (ESO numbers discovered prior to Arp and Madore 1979).	AM -
1979M1 B	MADORE, B.F., ARP, H.C. 1982, <i>P.A.S.P.</i> , <u>94</u> , 40-42 A distant star cluster in Hydra, AM-4 Identification chart AM-4 = C 1353 - 269 Probably intergalactic.	AM -
1979M2 A	MOFFAT, A.F.J., FITZGERALD, M.P., JACKSON, P.D. 1979, <i>Astr. Astrophys. Suppl.</i> , <u>38</u> , 197-225 The rotation and structure of the Galaxy beyond the solar circle. I. Photometry and spectroscopy of 276 stars in 45 H II regions and other young stellar groups toward the galactic anticenter N = 1 (Nos 1 - 3). Chart	Wat
1979M2 B	FITZGERALD, M.P., BOUDREAU, R., FICH, M., LUIKEN, M. 1979, <i>Astr. Astrophys. Suppl.</i> , <u>37</u> , 351-360 The open clusters Pismis 6 and 8, and Wat 6 N = 3 (Nos 4 - 6) Wat 4 = Pismis 6 Wat 5 = Pismis 8	Wat
1979M2 C	FITZGERALD, M.P., MOFFAT, A.F.J. 1980, <i>M.N.R.A.S.</i> , <u>193</u> , 761-774 Luminous stars beyond the solar circle : investigation of a galactic field at $l = 231^\circ$ N = 1 (No. 7)	Wat
1979PS	PARSAMIAN, E.S., PETROSIAN, V.M. 1979, <i>Soobsheniya Biur. Obs.</i> , <u>LI</u> , 3-15 Catalogue of cometary nebulae and related objects ($-42^\circ < \delta < +66^\circ$) Nos 1 - 106, identification charts ; numerous cross-identifications	PP
1979S1	SCHNEIDER, S., ELMEGREEN, B.G. 1979, <i>Ap. J. Suppl.</i> , <u>41</u> , 87-95 A catalog of dark globular filaments N = 23 Several cross-identifications - identification charts	GF
1979T1	THUAN, T.X., MARTIN, G.E. 1979, <i>Ap. J. Lett.</i> , <u>232</u> , L11-L16 A new dwarf galaxy in the local group Nos 1 - 5	LGS

- 1980A1 ARP, H. U
 1980, *Ap. J.*, 236, 63-69
 Ultraviolet excess objects in the region of a companion galaxy to NGC 2639
 N = 19 ultraviolet blue excess objects (UB).
 10 are quasars (Nos 1 - 5, 7, 8, 10, 14, 15)
 Identification chart.
- 1980B1 BLANCO, V.M., McCARTHY, M.F., S.J., BLANCO, B.M.
 1980, *Ap. J.*, 242, 938-964
 Carbon and late M-type stars in the Magellanic Clouds
 Table 2

Part A	Nos 1 - 83	(Bar)	SMC - B
Part B	Nos 1 - 56	(Wing)	SMC - W
Part C	Nos 1 - 111	(Bar West)	LMC - BW
Part D	Nos 1 - 61	(Radio-center)	LMC - R
Part E	Nos 1 - 116	(Optical center)	LMC - O
- 1980C1 COHEN, M. RNO
 1980, *A.J.*, 85, 29-35
 Red and nebulous objects in dark clouds : a survey
 Nos 1 - 150 ; no identification charts
 Northern POSS.
- 1980C2 COHEN, M., SCHWARTZ, R.D. C - S
 1980, *M.N.R.A.S.*, 191, 165-168
 A search for the exciting stars of Herbig-Haro objects
 Table 1 : 21 sources
- 1980E1 ELMGREEN, D.M. BIRS
 1980, *Ap. J.*, 240, 846-852
 Star formation in W3 and W4 : discovery of 135 possibly embedded near-infrared stars
 N = 137
 2° × 3° surveyed near W3, W4.
- 1980GY GOY, G. Goy
 1980, *Astr. Astrophys. Suppl.*, 42, 91-102
 Catalogue général d'étoiles de type O. Données spectroscopiques et photométriques.
 Bande magnétique et listing
 Nos 1 - 971
 Contains a few stellar cross-identifications and the name of the associated H II region.
- 1980G1 GICLAS, H.L., BURNHAM, R. Jr., THOMAS, N.G.
 1980, *Lowell Obs. Bull.*, 8, 157-206
 Lowell Proper Motion Survey. Summary Catalog of GD and GR stars
 N = 504 GR -
 N = 1712 GD -
- 1980HB HEWITT, A., BURBIDGE, G. QSO
 1980, *Ap. J. Suppl.*, 43, 57-158
 A revised optical catalogue of quasi-stellar objects
 Erratum : *Ap. J. Suppl.*, 46, 113-115
 N = 1491 (QSO) and N = 58 (BL objects)
 Compiles 46 acronyms (p. 59-60). Cross-identified with Parkes format name.
- 1980M1 MARKARIAN, B.E., STEPANIAN, J.A., LIPOVETSKIJ, V.A. BSS
 1980, *Astr. Cirk.*, n° 1141, 1-3, 28 Nov. 1980
 New quasi-stellar objects
 Parkes format, also numbered Nos 1 - 7
- 1980M2 MEABURN, J.
 1980, *M.N.R.A.S.*, 192, 365-375
 The giant and supergiant shells of the Magellanic Clouds
 N = 1 SMC
 N = 1 - 9 LMC
 (Table 1 and fig. 2 for identif. chart).

N° 4	References	3.85
1980N1 A	NOGUCHI, T., MAEHARA, H., KONDO, M. 1980, <i>Ann. Tokyo Astron. Obs.</i> , <u>18</u> , 55-70 A search for ultraviolet-excess objects N = 588 715 square degrees distributed in ($\lambda = 90^\circ - 180^\circ$, $ b = 6^\circ$ to 86°).	KUV
1980N1 B	NOGUCHI, T., YUTANI, M., MAEHARA, H. 1982, <i>P.A.S.J.</i> , <u>34</u> , 407-415 Proper motions of ultraviolet-excess objects N = 81	KUV
198001 A	OSMER, P.S., SMITH, M.G. 1980, <i>Ap. J. Suppl.</i> , <u>42</u> , 332-349 Discovery and spectrophotometry of the quasars in the -40° zone of the CTIO Curtis Schmidt Survey N = 125 (Numbered 1 - 125 with cross-identif. to Parkes format).	Q
198001 B	OSMER, P.S. 1980, <i>Ap. J. Suppl.</i> , <u>42</u> , 523-540 Spectrophotometry of the quasars in the CTIO 4 meter survey Gives Nos 1 - 76 to the list of Hoag+Smith, 1977 (classified by increasing α) and cross identifies with Q acronym with format HHMMSS - DDMM).	Q
1980V1	VEGA, E.I., RABOLLI, M., MUZZIO, J.C., FEINSTEIN, A. 1980, <i>A.J.</i> , <u>85</u> , 1207-1217 A search for $\text{H}\alpha$ emission objects in a region in Ara N = 124 (Nos 1 - 124) - Identif. charts.	VRMF
1980WP	WEILER, K.W., PANAGIA, N. 1980, <i>Astr. Astrophys.</i> , <u>90</u> , 269-282 Vela X and the Evolution of Plerions Table 3 lists 13 probable, possible or doubtful plerions	
1980W1 A	WEINBERGER, R. 1980, <i>Astr. Astrophys. Suppl.</i> , <u>40</u> , 123-127 Galaxies near the northern galactic plane Nos 1 - 207 (200 are new) Galaxies detected from POSS near the galactic plane ($\lambda = 33$ to 213° , $ b < 2^\circ$).	Weinberger
1980W1 B	WEINBERGER, R., 1980, <i>unpublished detection</i> Galaxies in the Galactic Plane Quoted by Pfleiderer+, 1981, <i>Astr. Astrophys.</i> , <u>102</u> , L21-L22 H I observations of galaxies in the galactic plane. Nota : letter I is not used.	Weinberger
1980W3	WAMSTEKER, W. 1981, <i>Astr. Astrophys. Suppl.</i> , <u>43</u> , 127-140 Five-colour photometry of blue stars in the Magellanic Cloud region N = 550 (Nos 1 - 550). Identif. Charts.	WAMS
1981A1	AMIRKHANDYAN, V.R., GORSHKOV, A.G., KAPUSTKIN, A.A., KONNIKOVA, V.K., LAZUTKIN, A.N., LARIONOV, M.G., NIKANOROV, A.S., SIDORENKOV, V.N., UGOLKOVA, L.S., KHROMOV, O.I. 1981, <i>Astr. Zh.</i> , <u>58</u> , 717-724 (<i>Sov. Astr.</i> , <u>25</u> , 412-415) A sky survey at 8.7 and 14.4 GHz : the zone $\delta = 0^\circ - 4^\circ$ - Tel. RATAN 600 ν : 8.7, 14.4 GHz Table 6 (Nos 1 - 82) $\nu = 8.7$ GHz Table 7 (Nos 1 - 24) $\nu = 14.4$ GHz Cross-identified with PKS or Z number (Parkes format).	Z

3.86	A. Fernandez, M.-C. Lortet, F. Spite	N° 4
1981A2	AVEDISOVA, V. 1981, <i>Supplement to the collection "Nauchnye Informacii"</i>, iss. 47. Riga : Zinatne, 139 p. Catalogue of star formation regions in Galaxy : Part 1. Observational data N = 160 complexes of 330 sources	RSF
1981BR	BREYSACHER, J. 1981, <i>Astr. Astrophys. Suppl.</i>, 43, 203-207 Spectral classification of Wolf-Rayet stars in the Large Magellanic Cloud N = 100 Cross-identification with 12 previous lists.	Breysacher = Breys = JB
1981G1	GREGORY, P.C., TAYLOR, A.R. 1981, <i>Ap. J.</i>, 248, 596-605 Radio patrol of the northern Milky Way : a survey for variable sources $\lambda = 6$ cm, resol. 2.7' Table 3 : VLA results for 5 variable sources	GT
1981K1	KUNTH, D., SARGENT, W.L.W., KOWAL, C. 1981, <i>Astr. Astrophys. Suppl.</i>, 44, 229-239 A spectroscopic survey of emission-line objects 23 emission-line galaxies and 22 QSO discovered spectroscopically, from a selection of objects on two UKS plates. Identification charts. (Selection of numbers between 4 and 188).	POX
1981R1 A	REID, I.N., GILMORE, G. 1981, <i>M.N.R.A.S.</i>, 196, 15P-18P Photometric survey of faint red stars (B, V, R, I to $m \sim 20$) in the South Galactic Pole region, using UKS Schmidt Telescope plates N = 1	RG
1981R1 B	GILMORE, G., REID, I.N. 1981, <i>Nature</i>, 291, 208-210 RG 0044-2958 : a peculiar M supergiant at a distance of 2.5 Mpc N = 1	RG
1981S1	SCHUCH, N.J. 1981, <i>M.N.R.A.S.</i>, 196, 695-704 The Ursa Major supercluster. I. The optical field and the 5C10 radio survey 265 sources detected at 408 MHz and 48 at 1407 MHz.	5C10•
1981U1 A	USHER, P.D. 1981, <i>Ap. J. Suppl.</i>, 46, 117-139 Faint blue objects at high galactic latitude. I. Palomar Schmidt field centered on Selected Area 57 N = 634 (13 known quasars) Nos 1 - 634 Identif. charts (fig. 2) Contains primarily quasars and white dwarfs B < 20 mag, complete to B = 18.5 mag 4 new quasars detected (Nos 72, 272, 329, 519)	US
1981U1 B	USHER, P.D., MATTSON, D., WARNOCK, A. III. 1982, <i>Ap. J. Suppl.</i>, 48, 51-71 Faint blue objects at high galactic latitude. II. Palomar Schmidt field centered on Selected Area 29 Nos 635 - 1184 Identif. charts.	US
1981U1 C	USHER, P.D., MITCHELL, K.J. 1982, <i>Ap. J. Suppl.</i>, 49, 27-52 Faint blue objects at high galactic latitude. III. Palomar Schmidt field centered on Selected Area 28 N = 1179 (Nos 1185 - 2363) Identif. charts. Consists primarily of quasars and white dwarfs, statistically complete to at least B = 18.5 mag.	US

- 1981VH VAN DER HUCHT, K.A., CONTI, P.S., LUNDSTRÖM, I., STENHOLM, B. WR
 1981, *Space Sci. Rev.*, 28, 227-306
 The sixth catalogue of galactic Wolf-Rayet stars, their past and present
 Critical compilation of the existing literature, with inclusion of new data.
 Cross-identification between numerous lists.
 Identif. charts.
 Table VIII : Nos 1 - 158 and No 29a
 Table IX : Nos 1 - 45, central stars of planetary nebulae of type (WR)....,
 (O VI)...., (WC 10) (WC 11)
 Table X : Nos 1 and 2, WR related symbiotic stars
 Table XI : Nos 1 and 2, low mass WR-like stars (binaries)
 Table XII : Nos 1 - 10, possible pre-WR stars
 Appendix : a bibliography (1867-1980), *ibid.* p. 307-382
- 1981WG Working group of Comm. 37 on the nomenclature of stars in clusters
Circular, 1981
- 1982AC ACKER, A., GLEIZES, F., CHOPINET, M., MARCOUT, J.
 With the collaboration of OCHSENBEIN, F., ROQUES, J.M. and of the OHP
 1982, *Special Publ. of the CDS*, No 3, *Strasbourg*
 Catalogue of the central stars of Planetary Nebulae
- 1982AM AMMUEL, P.R., GUSEINOV, O.H., RAKHAMIMOV, Sh.Yu. 2XRS
 1982, *Astrophys. Space Sci.*, 82, 3-103 = An 2 XRS
 Second catalogue of X-ray sources
- 1982AZ AZZOPARDI, M., VIGNEAU, J. AzV =
 1982, *Astr. Astrophys. Suppl.*, 50, 291-376 AZO = AZVI
 Catalogue of the Small Magellanic Cloud star members
 N = 524 ($\alpha = 0^h41 - 1^h22$, 1975) Nos 1 - 506 (a few A and B components)
 16 maps ($34' \times 34'$)
 The AZO number is identical to AzV = AZVI, Ref. 1975A1
- 1982B1 BLITZ, L., FICH, M., STARK, A.A. BFS
 1982, *Ap. J. Suppl.*, 49, 183-206
 Catalogue of CO radial velocities toward galactic H II regions
 Catalogue p. 200-201, Nos 1 - 65. Additional H II regions (not in Sharpless
 1959 catalogue).
- 1982B2 BENN, C.R., GRUEFF, G., VIGOTTI, M., WALL, J.V. 5C12.
 1982, *M.N.R.A.S.*, 200, 747-766
 A deep radio/optical survey near the North Galactic Pole. The 5C12 catalogue
 299 sources detected at 408 MHz and 65 detected at 1407 MHz
 Table 1, p. 749
 Recapitulation of data on the 17 5C surveys from 1966 to 1982 (in preparation) 5C1. to 5C17.
 See Ref. 1966K2, 1968P2, 1969P1, 1970W2, 1975P1, 1978P2, 1977W1, 1981S1, 1982B2.
- 1982FM FERNANDEZ, A., MATHEZ, G., MAZURE, A., NOTTALE, L., ROTHENFLUG, R.
 1982, *IAU Coll. 64, Strasbourg 1981 "Automated Data Retrieval in Astronomy"*,
 C. Jaschek and W. Heintz, eds, Reidel, Dordrecht, p. 265-271
 Le centre de données des Amas de Galaxies (CEDAG)
- 1982GE A GEZARI, D.Y., SCHMITZ, M., MEAD, J.M.
 1982, *NASA TM* 83-819
 Catalogue of Infrared Observations
 About 56000 individual observations of about 10000 infrared sources. Ordering
 by α (1950). Alphabetical index of names : part V (orange pages).
- 1982GE B GEZARI, D.Y., SCHMITZ, M., MEAD, J.M.
 1982, *NASA TM* 84-001
 Far infrared supplement : Catalog of Infrared Observations
 (Selection of sources emitting at $\lambda > 5\mu$ among 1982GE).
- 1982GF GERBALDI, M., FLOQUET, M., RENSON, P., CATALANO, F.
 1982, in preparation
 Catalogue of Ap and Am stars

- 1982G1 GYUL'BUDAGYAN, A.L.
1982, *Pis'ma Astron. Zh.*, 8, 222-223
New cometary nebulae
Nos 1 - 13 (No 10 = VdBH 87)
1950 coordinates, no identification charts. Gyul'budagyan
- 1982HJ HOFFLEIT, D., JASCHEK, C.
1982, *Yale Univ. Obs., New Haven, Connecticut*
The bright star catalogue. 4th revised edition
Supersedes the previous edition (acronym BS = HR Ref. 1964HF).
Nos 1 - 9110
BS
= (BSC)
= HR
- 1982H1 HUCHRA, J.P., GELLER, M.J.
1982, *Ap. J.*, 257, 423-437
Groups of Galaxies. I. Nearby groups
Tables 3 and 5 : 92 groups
Cross-identified with DV (de Vaucouleurs, 1975) in table 4. GNO
= HG
- 1982KH KHOLOPOV, P.N.
1982, *Publ. Office "Nauka", Moscow*
New catalogue of suspected variable stars
Nos 1 - 14811
Updates and supersedes CSV, Ref. 1951KP NSV
- 1982LA LAUBERTS, A.
1982, *The ESO/Uppsala Survey of the ESO(B) Atlas, ESO, Garching*, 503 pp.
Revision and compilation of 9 previous lists. Supersedes these lists
Introduces Format HHMMSS = DDMM.m
1950 coordinates (1st column), old ESO designation (2d column), galactic coordinates. Cross identifications with about 50 other catalogues
N = 18438 ESO
- 1982NE NECKEL, Th.
in preparation
Nebulae (galactic)
- 1982SN SNYDER, L.E. + coworkers
in preparation
Molecular clouds
- 1982S1 SHORE, S.N.
1982, *P.A.S.P.*, 94, 682-689
CW 1103 + 254 : a new cataclysmic at high galactic latitude
from the Case Western Reserve University 61/91 cm Burrell Schmidt Telescope
(at Kitt Peak Station of Warner and Swasey Observatory)
Survey of the north galactic pole region, in a search for emission-line galaxies,
in preparation.
N = 1 CW
- 1982VA VAN ALTENA, W.F.
A revised general catalogue of trigonometric parallaxes, in preparation
Extension of Jenkin's catalogue, Ref. 1952J1 A and 1952J1 B
- 1982VB VOGT, N., BATESON, F.M.
1982, *Astr. Astrophys. Suppl.*, 48, 383
An atlas of southern and equatorial dwarfs novae
Finding charts or references to finding charts
All stars have V* designations
N = 117 (Nos 006-12 to 2320-08)
- 1982WG Working Group of I.A.U. Comm. 28
(P. Hodge + S. Simkin) : establishment of an internal coordinate system for use within galaxies
- 1982W1 WATANABE, T.
1982, *Astr. Astrophys.*, 111, 333-338
Anticenter high-velocity H I stream (Weaver Jet) and colliding H I shells
Table 1 and Fig. 2, Nos 1 and 2. GS

- 1983BE BRAZ, M.A., EPCHEIN, N.
1983, *Astr. Astrophys. Suppl.* (to be submitted)
A catalogue of non stellar molecular sources and their probable infrared counterparts in the galactic plane
271 sources, $|b| < 2^\circ$
Updated by the authors.
- 1983B1 BYSTEDT, J., BRINKS, E., de BRUYN, A.G., ISRAËL, F.P., SCHWERING, P., SHANE, W.W. 36W
1982, in preparation
Quoted in Berkhuijsen +, 1983, *Astr. Astrophys.*, 117, 141-144
 $\nu = 610$ MHz
- 1983C1 CARNOCHAN, D.J., WILSON, R. UV
1983, *M.N.R.A.S.*, 202, 317-345
A survey of ultraviolet objects
Sky survey telescope S2/68
(Most of the objects of this survey have HD or DM number).

PART IV

X- AND γ -RAY SOURCES

The prefixes usually refer to a given satellite. The format HHMM ± DD (with an increasing number of digits) is systematically used for X-ray sources (except old detections like GX and KGX), while galactic coordinates are used for γ -ray sources, except Transient γ sources which are given a peculiar format.

The designation from constellations (Sco X-1 = Sco XR-1, Aql MXB, Lib γ -1, Sgr γ -1) are still in use, as well as LMC X-1,2 ..., SMC X-1, ... for sources in the Magellanic Clouds.

TABLE IV.1 - γ -RAY SOURCES

DESIGNATION	SATELLITE	TYPE OF OBJECT	REF.	REMARK
CG	SAS-2		1	> 100 MeV
CG = 1CG	COS B			C stands for COS B
2CG	COS B		2	
Cowan	Balloon		6	Very high energy (2×10^{12} eV) $\alpha = 11^h$, $\delta = +20^\circ$
Event Number	Vela		3	Peculiar format based on the date
Gamma-ray burst	Venera 11, 12 Konus experiment	Transient	5	May 1979 to Feb. 1980
GB	Vela	Gamma-ray burst	7	
Geminga = γ 195+5 = 2CG 195+4	SAS-2		4	γ -ray source in Gem (see Baker+, 1983, Astr. Astrophys. <u>117</u> , 38-40)
G γ	} Balloon			Obsolete
γ				
Cornell	} Balloon looking towards Galactic Center			Obsolete
CWRU				
Rochester				

NOTES TO TABLE IV.1

- Pinkau, K., 1979, Nature 277, 17-21 (January 4)
Table 1 (24 point sources), incomplete in complex regions.
- Swanenburg, B.N., Bennett, K., Bignami, G.F., Buccheri, R., Caraveo, P., Hermsen, W., Kanbach, G., Lichti, G.G., Masnou, J.L., Mayer-Hasselwander, H.A., Paul, J.A., Sacco, B., Scarsi, L., Wills, R.D., 1981, Ap. J. Lett. 243, L69-L73.
Second COS B catalog of high-energy γ -ray sources.
N = 25 sources, E > 100 MeV ; typical spatial resolution 1° or $\approx 0.5^\circ$ for pulsed signal.
- Strong, I.B., Klebesadel, R.W., Olson, R.A., 1974, Ap. J. Lett. 188, L1-L3.
A preliminary Catalog of transient cosmic gamma-ray sources observed by the Vela satellites.
- Thompson, D.J., Fichtel, C.E., Hartman, R.C., Kniffen, D.A., Lamb, R.C., 1977, Ap. J. 213, 252-262.
Final SAS-2 γ -ray results on sources in the galactic anticenter region.
- Mazets, E.P., Golenetskii, S.V., Il'inskii, V.N., Panov, V.N., Aptekar, R.L., Gur'yan, Yu.A., Proskura, M.P., Sokolov, I.A., Sokolova, Z.Ya., Kharitonova, T.V., Dyatchkov, A.V., Khavenson, N.G., 1981, Astrophys. Space Sci. 80, 3-143.
Catalog of Cosmic Gamma-ray bursts from the Konus experiment data, Parts I to IV
Identified by the day for instance : 14.09.78 a.
Equatorial coordinates are given in degrees and fractions of degrees.
- Fazio, G.G., Helmken, H.F., Rieke, G.H., Weekes, T.C., 1968, Ap. J. Lett. 154, L83-L89
A search for discrete sources of cosmic γ -rays of energies near 2×10^{12} eV
- Terrell, J., Fenimore, E.E., Klebesadel, R.W., 1982, Ap. J. 254, 279-286.
Format with year, month, day.

TABLE IV.2 - X-RAY SOURCES

DESIGNATION	SATELLITE	GROUP	TYPE OF OBJECT	REFERENCE ERROR BOX (SQUARE DEGREE)	REMARKS
A	Ariel	Leicester			
2A	Ariel V	"		(1) 0.1 to 0.5	N = 105
3A	Ariel	Leicester		(3)	
An 1 or 2 XRS					See 1XRS, 2XRS
ANS	ANS	Leiden+Harvard		$\sim 0.2 \times 3$	Astronomical Netherlands Satellite.
1 ASE	UHURU(=SAS-3)	ASE (American Science and Engineering)		(4)	Old, N = 16
2 ASE	UHURU			(5)	Old, N = 116
1E	Einstein (HEAO-2)	CFA, MIT, CAL, GSFC		(6) (7)	Selected fields IPC : format HHMM.m+DDMM (Imaging proportional counter) HRI : format HHMMSS+DDMM.m (High Resolution Imager, positional accur. 1")
FXP			Flaring X-ray pulsar	(19) (20)	
GCX	UHURU		Sources near the Galactic Centre		Not a catalogue Format LLL ± BB
GX	Rocket	MIT			Old Format LLL ± BB or LLL.2 for instance GX 3 + 1 or GX 2.7 + 1
H	HEAO-A1				No published catalogue
H	HEAO-A2	GSFC, CIT JPL, MIT		(8)	N = 60, energy 3-17 keV all sky
H	HEAO-A2	GSFC, CIT JPL, MIT		(8a)	N = 114, energy 0.18 - 2.8 keV, all sky
HXP				(9)	Hard X-ray (15-150 keV) (few sources emit in this wavelength)
KGX	Russian Satellites				Less than 10 Sources
1M	OSO-7	MIT		(10)	M stands for Massachusetts
MX	OSO-7	MIT			
MXB	SAS-3	MIT	X-ray burster	(11)	
OA0	Copernicus MSSL				Orbiting Astr. Observatory
OS	OSO-8	GSFC (Goddard)		(12)	Selected area of the sky, N = 1, Orbiting Solar Obs.
ROX	Einstein			(13)	Rho Oph X-ray Sources, from Einstein observations
1S	SAS-3 RMC	MIT		(14)	
2S	SAS-3 RMC	MIT		(15)	Rotation modulation collimator ; spatial resolution = 20". Not collected in a Catalogue.
1U	UHURU	ASE			
2U	"	"		(16)	N = 125, all sky
3U	"	"		(17)	N = 161, all sky
4U	"	"		(18)	N = 339, all sky
XB			X-ray burster		Denomination for a type of object

COMPILATION CATALOGUES

1XRS or An 1 XRS	}	see below p. 4.4
2XRS or An 2 XRS		

Notes to Table IV.2

- | | | |
|------|------|--|
| 2A | (1) | Cooke, B.A., Ricketts, M.J., Maccacaro, T., Pye, J.P., Elvis, M., Watson, M.G., Griffiths, R.E., Pounds, K.A., McHardy, I., Maccagni, D., Seward, F.D., Page, C.G., Turner, M.J.L., 1978, M.N.R.A.S. <u>182</u> , 489-515 (High Galactic Latitude Survey). |
| 3A | (2) | Warwick, R.S., Marshall, N., Fraser, G.W., Watson, M.G., Lawrence, A., Page, C.G., Pounds, K.A., Ricketts, M.J., Sims, M.R., Smith, A., 1981, M.N.R.A.S. <u>197</u> , 865-891 (low latitude) $ b < 10^\circ$). |
| 3A | (3) | McHardy, I.M., Lawrence, A., Pye, J.P., Pounds, K.A., 1981, M.N.R.A.S. <u>197</u> , 893-919 (High latitude). |
| 1ASE | (4) | Giacconi +, 1971 ASE-2792, August 4. |
| 2ASE | (5) | Giacconi +, 1971 ASE-2855, November 29. |
| 1E | (6) | Giacconi, R., Bechtold, J., Branduardi, G., Forman, W., Henry, J.P., Jones, C., Kellogg, E., Van der Laan, H., Liller, W., Marshall, H., Murray, S.S., Pye, J., Schreier, E., Sargent, W.L.W., Seward, F., Tananbaum, H., 1979, Ap.J. Lett. <u>234</u> , L1-L7 and plates L1-L4 (all sky). |
| 1E | (7) | Vaiana, G.S., Cassinelli, J.P., Fabbiano, G., Giacconi, R., Golub, L., Gorenstein, P., Haisch, B.M., Harnden, F.R. Jr., Johnson, H.M., Linsky, J.L., Maxson, C.W., Mewe, R., Rosner, R., Seward, F., Topka, K., Zwaan, C., 1981, Ap.J. <u>245</u> , 163-182, Results from an extensive stellar survey. |
| 1E | (7a) | Numerous other lists: see for instance Ap.J. Lett. L1-105, 15 Nov. 1979 ; Pravdo +, 1981, Ap.J. <u>248</u> , 591-595, a region in Orion, 25 sources numbered 1-25 ; see also ROX. |
| H | (8) | Marshall, F.E., Boldt, E.A., Holt, S.S., Musthotzky, R.F., Pravdo, S.H., Rothschild, R.E., Serlemitsos, P.J., 1979, Ap.J. Suppl. <u>40</u> , 657-665, 60 sources among which 47 new. |
| H | (8a) | Nugent, J.J., Jensen, K.A., Nousek, J.A., Garmire, G.P., Mason, K.O., Walter, F.M., Bowyer, C.S., Stern, R.A., Riegler, G.R., 1983, Ap.J. Suppl. <u>51</u> , 1-28, HEAO A-2 Soft X-ray Source Catalog. |
| HXR | (9) | Ubertini, P., Bazzano, A., La Padula, C.D., Polcaro, V.F., 1982, Astron. Astrophys. <u>106</u> , 174-175. |
| 1M | (10) | Markert, T.H., Winkler, P.F., Laird, F.N., Clark, G.W., Hearn, D.R., Sprott, G.F., Li, F.K., Bradt, H.V., Lewin, W.H.G., Schnopper, H.W., 1979, Ap.J. Suppl. <u>39</u> , 573-632. |
| MXB | (11) | Lewin, W.H.G., Joss, P.C., 1981, Space Sci. Rev. <u>28</u> , 3-87, 31 Sources. |
| OS | (12) | Pravdo, S.H., Becker, R.H., Boldt, E.A., Holt, S.S., Serlemitsos, P.J., Swank, J.H., 1978, Ap.J. <u>223</u> , 537-543. |
| ROX | (13) | Montmerle, T., Koch-Miramond, L., Falgarone, E., Grindlay, J.E., 1983, Ap.J. <u>269</u> , 182-201, 1E observations ; 47 sources numbered 1-47 and complementary list C1-C20. |
| 1S | (14) | Bradt, H.V., Apparao, K.M.V., Clark, G.W., Dower, R., Doxsey, R., Hearn, D.R., Jernigan, J.G., Joss, P.C., Mayer, W., McClintock, J., Walter, F., 1977, Nature <u>269</u> , 21-25 (no complete catalogue, superseded by 2S). |
| 2S | (15) | Several publications and identifications.
See 2XRS (sources measured by SAS 3). |
| 2U | (16) | Giacconi, R., Murray, S., Gursky, H., Kellogg, E., Schreier, E., Tananbaum, H., 1972, Ap.J. <u>178</u> , 281-308 (49.004 in Collins, 1977). |
| 3U | (17) | Giacconi, R., Murray, S., Gursky, H., Kellogg, E., Schreier, E., Matilsky, T., Koch, D., Tananbaum, H., 1974, Ap.J. Suppl. <u>27</u> , 37-64 (49.005 in Collins, 1977). |
| 4U | (18) | Forman, W., Jones, C., Cominsky, L., Julien, P., Murray, S., Peters, G., Tananbaum, H., Giacconi, R., 1978, Ap.J. Suppl. <u>38</u> , 357-412.
Supersedes the 2U and 3U catalogues. |
| FXP | (19) | Kumkova, I.I., Mitrofanov, I.G., 1980, Sov. Astr. Lett. <u>6</u> , 117-119. |
| FXP | (20) | Mazets, E.P., Golenetskii, S.V., Guryan, Yu.A., Ilynskii, V.N., 1982, Astrophys. Space Sci. <u>84</u> , 173-189. |

COMPILATION CATALOGUES

- Without new Hayakawa, S., 1981, Space Sci. Rev. 29, 221-290.
acronym Galactic X-rays observed with X-ray astronomy satellite "Hakucho"
(review paper).
- Without new Amnuel, P.R., Guseinov, O.H., 1979, Astrophys. Space Sci. 63, 131-154, X-ray transient sources.
acronym
- 1XRS Amnuel, P.R., Guseinov, O.H., Rakhaminov, Sh.Yu., 1979, Ap.J. Suppl. 41, 327-367.
A Catalog of X-rays sources ; 517 sources (format HHMM ± DDd).
- 2XRS Amnuel, P.R., Guseinov, O.H., Rakhaminov, Sh.Yu., 1982, Astrophys. Space Sci. 82, 3-103
Second Catalogue of X-ray Sources ; 667 Sources.

PART V

NOMENCLATURE BASED ON CONSTELLATION NAMES

NOMENCLATURE BASED ON CONSTELLATION NAMES

1. The constellations

The notion of constellation can be traced back to the ancient times. However there are variations both with different civilizations (see the list of 28 chinese constellations, associated with a zodiacal region, General Catalogue of Variable Stars 1971, vol. III p. 24 and 25) and with time.

At present we use 88 constellations, which abbreviation in 3 letters has been recommended by IAU since 1922. The final list of abbreviations is given in Table V.1. Notice that Hys is given instead of Hyi in Becvar(1964).

The use of LMC and SMC (Large Magellanic Cloud and Small Magellanic Cloud) as constellation names, suggested in 1964 (Trans. IAU XII B p. 269), has not been retained in practice.

2. Nomenclature based on constellation names : a (very) confusing practice

A general practice has been to introduce the constellation name for a new object whenever the detector is still not efficient (in sensitivity or in spatial resolution) or (and) the newly discovered object is believed to be exceptional :

- Cyg, the third brightest star in Cyg
- Cas A the brightest radiosource in Cas
- Andromeda Nebula (a Galaxy)
- Norma cluster
- Coma cluster (see Table V.4)
- NML Tau and NML Cyg (discovered 4 years before the issue of the IRC Catalogue)
- Geminga (see Table IV.1)
- Draco dwarf spheroidal galaxy

Then the practice developed for specific cases, and definite rules were adopted for a restricted number of types of objects :

- | | |
|-----------------------------------|---|
| . bright stars | see ref. 1982 HF |
| . variable stars and Novae | see ref. 1969 KP and remark for V in Table II |
| . Stellar Associations | see V.3 and Table V.4 |
| . X-ray and γ -ray sources | see Part IV |
| (the first discovered) | |

However, astronomers in different fields go on giving names of their own, so that the confusion is still continuously increasing. Examples are given below (Table V.2) A collection of names based on constellations is given in Table V.4. The redshifts of cluster of galaxies are taken from Noonan, 1981, Ap. J. Suppl. 45, 613

3. Stellar Associations

The notion of Stellar Association has been introduced for OB stars by Ambarcumjan (1952) and Markarian (1952). The Associations were then numbered in each constellation following the order of discovery (col.1). Then Morgan (1953) and Schmidt (1958) extended this study and arranged the associations in order of increasing galactic longitude (col. 3 and 4).

The final nomenclature, which should now be the only one to be used, is given in column 2. It was first proposed by Ruprecht in 1966 (Trans. I.A.U. XII B p. 348-356, 1966), on invitation of I.A.U.; it was then used and extended in the subsequent editions of the Catalogue of Stellar Clusters and Associations (References 1970 AR). The numbering follows the order of discovery.

It is clear from tables V.2 and V.3 that the use of old designations (IV Cep or Cep IV instead of Cep OB4 or Cep OB5) is a source of confusion !

We emphasized the cases of discrepancy with the final nomenclature of col. 2 as follows :

col. 1	one asterisk : change in the constellation, or no numbering : ex. Ara-Nor
	2 asterisks : numbering is different
	3 asterisks : not an association

col. 3 and 4 the discrepant numberings are underlined (Schmidt used the same numbering as Morgan).

We refer to table V.2 to remind that Cyg X is not an Association (X is a letter) nor Vel X, Y, Z ; nor And I, Leo II, Sgr I, Peg II... etc ...

The other types of stellar associations were named from the beginning (as they were discovered later) along the presently adopted scheme and numbered in order of discovery :

R Associations	Van den Bergh, 1966	} northern hemisphere
(reflection nebulae)	Racine, 1968	
	(Table IV and Part VI, membership in 15 Associations	
	Herbst, 1975 (Table VI)	} southern hemisphere
T Associations	Kholopov, 1959	
(T Tau stars)	ex : Cha T1	
C Associations	Efremov, 1978	
(Cepheids)		

References for Part V

- Alter, G., Ruprecht, J., Vanysek, J., 1970 and 1981 : references 1970AR A and 1970AR B.
- Ambarcumjan, V.A., 1952, Voprosy Kosmogonii, Moscou 1, 198.
- Efremov, Yu.N., 1978, Sov. Astr. Lett. 4, 66-69 (defines 35 Associations).
- Herbst, W., 1975, A.J. 80, 212-226 (ref. 1975V1 B).
- Humphreys, R.M., 1978, Ap. J. Suppl. 38, 309-350.
- Kholopov, P.N., 1959, Sov. Astr. 3, 291-300.
- Markarian, B.E., 1952, Doklad. Akad. Nauk Aronjanskoj SSR, 15, 11.
- Morgan, W.W., Whitford, A.E., Code, A.D., 1953, Ap. J. 118, 318-322.
- Racine, R., 1968, A.J. 73, 233-245 (ref. 1966V1 B).
- Schmidt, K.H., 1958, A.N. 284, 73-75.
- Van den Bergh, S., 1966, A.J. 71, 990-998 (ref. 1966V1 A).

TABLE V.1

THREE LETTERS ABBREVIATIONS RECOMMENDED FOR CONSTELLATION NAMES

Andromeda	And	Cygnus	Cyg	Pavo	Pav
Antlia	Ant	Delphinus	Del	Pegasus	Peg
Apus	Aps	Dorado	Dor	Perseus	Per
Aquarius	Aqr	Draco	Dra	Phoenix	Phe
Aquila	Aql	Equuleus	Equ	Pictor	Pic
Ara	Ara	Eridanus	Eri	Pisces	Psc
Aries	Ari	Fornax	For	Piscis Austrinus	PsA
Auriga	Aur	Gemini	Gem	Puppis	Pup
Bootes	Boo	Grus	Gru	Pyxis	Pyx
Caelum	Cae	Hercules	Her	Reticulum	Ret
Camelopardalis	Cam	Horologium	Hor	Sagitta	Sge
Cancer	Cnc	Hydra	Hya	Sagittarius	Sgr
Canes Venatici	CVn	Hydrus	Hyi	Scorpius	Sco
Canis Major	CMa	Indus	Ind	Sculptor	Scl
Canis Minor	CMi	Lacerta	Lac	Scutum	Sct
Capricornus	Cap	Leo	Leo	Serpens Caput	Ser
Carina	Car	Leo Minor	LMi	Serpens Cauda	Ser
Cassiopeia	Cas	Lepus	Lep	Sextans	Sex
Centaurus	Cen	Libra	Lib	Taurus	Tau
Cepheus	Cep	Lupus	Lup	Telescopium	Tel
Cetus	Cet	Lynx	Lyn	Triangulum	Tri
Chamaeleon	Cha	Lyra	Lyr	Triangulum Australe	TrA
Circinus	Cir	Mensa	Men	Tucana	Tuc
Columba	Col	Microscopium	Mic	Ursa Major	UMa
Coma Berenices	Com	Monoceros	Mon	Ursa Minor	UMi
Corona Australis	CrA	Musca	Mus	Vela	Vel
Corona Borealis	CrB	Norma	Nor	Virgo	Vir
Corvus	Crv	Octans	Oct	Volans	Vol
Crater	Crt	Ophiuchus	Oph	Vulpecula	Vul
Crux	Cru	Orion	Ori		

Note : Hys is used instead of Hyi for Hydrus in Becvar, 1964
 Cor is used instead of Crv for Corvus in Hoffleit, 1982, ref. 1982HF

TABLE V.2 - DISCORDANT USES IN NOMENCLATURES BASED ON CONSTELLATION NAMES

<u>CAPITAL LETTER</u>		<u>Remarks or Reference</u>
Cyg A	Brightest radio source in Cyg : this is a galaxy	
Cyg X-1 = Cyg XR-1	First X-ray source discovered in Cyg	May be confused with roman figure
Cyg X	A region rich in young associations	Contains Cyg OB1, OB2, OB7, OB8
Vel X, Y, Z	plerions	
Cep A to F	Brightest fragments of the CO cloud associated with the stellar association Cep OB3	Sargent, 1977, Ap. J. <u>218</u> , 736
X Com	From Variable Star Nomenclature (may be extragalactic)	
Coma C	Part of Coma cluster of Galaxies	
<u>ROMAN FIGURE</u>	May be confused with capital letters	
XI Cyg	} Stellar associations (see Table V.3)	However for Cyg X, X is a letter
Cyg XI		
II Cam = Cam III = Cam OB3		
X Cas = Cas OB6		Not to be confused with X Cas (X is a letter) which is a variable star. This stellar OB Association includes Cas VI, Cas XI, Cas XII, Cas XIII
I Mon = Mon I = Mon OB2 etc...		
I Per, II Per	Open clusters	
Car I	Part of the Carina Nebula	
Nor III	Field in Norma for the detection of OB stars (Muzzio.....)	
Sgr I, II	Baade windows (see Table VI.1)	
And I to V Leo I, III	} Dwarf galaxies	
Peg I, II	Cluster of galaxies	
<u>Notice that</u>		
IV Cep	(i v capital letters) is a Nova (Nova Cep 1971)	
<u>ARABIC FIGURE</u>		
31 Cyg	Flamsteed's Nomenclature for bright stars	(Some stellar objects are indeed clusters)
Cyg 11	Bode constellation number for bright stars, obsolete (Cyg 11 ≠ 11 Cyg)	
Cyg 20	Galactic H II region, obsolete	Courtès, 1969, Astron. Astrophys. <u>3</u> , 222
Cyg 1 to 5	Loop Structure (also for Ara, Cep, CMA, Lup, Mon, Ori, Per, Sco, Scu, Vul)	Brand + Zealey, 1975, Astron. Astrophys. <u>38</u> , 363
<u>GREEK LETTER</u>		
γ Cyg	The third brightest star in Cyg	Bayer's Nomenclature
Lib γ-1	A γ-ray source	

TABLE V.3 - OB ASSOCIATIONS

(1) Designation in the 1st ed. of CSCA (1958)	(2) Final Designation	(3) Morgan	(4) Schmidt	(5) Other	(1) Designation in the 1st ed. of CSCA (1958)	(2) Final Designation	(3) Morgan	(4) Schmidt	(5) Other
Aql I	Aql OB1				IC 2944	Cen OB2			
Ara-Nor *	Ara OB1		I Ara			Cen OB3 (?)			
	Ara OB2					Cen OB4 (An Lyngå 10)			
Aur I	Aur OB1	I Aur	I Aur			Cen OB5 (?)			
Aur II	Aur OB2		II Aur		Cep I	Cep OB1	II Cep	II Cep	
Cam I		{	I Cam		Cep II	Cep OB2	I Cep	I Cep	
(Cam II)	Cam OB1		XI Cas		Cep III	Cep OB3	III Cep	III Cep	
Cam II ***					Cep IV	Cep OB4			
Cam III	Cam OB3		II Cam		(Cep I)**	Cep OB5		IV Cep	
Car I	Car OB1		I Car		Cep-Lac	Cep-Lac OB1			
Car II	Car OB2 (?)				Cir OB1				
	Car OB3				Cir-Nor OB1 (?)				
	Car OB4				CMa I	CMa OB1		I CMa	
Cas I	Cas OB1		VII Cas			CMa OB2			
Cas II	Cas OB2		V Cas		Cru I	Cru OB1			
Cas III ***	-				Cyg I	Cyg OB1	II Cyg	II Cyg	
Cas IV	Cas OB4	II Cas	II Cas			"	III Cyg	III Cyg	
Cas V.	Cas OB5	I Cas	I Cas			Cyg OB2		VI Cyg	
Cas VI						Cyg OB3	I Cyg	I Cyg	
Cas XI **			X Cas			Cyg OB4	IV Cyg	IV Cyg	
Cas XII **	Cas OB6		XII Cas			Cyg OB5		VII Cyg	
Cas XIII **					Vul III*				
				Cas V		Cyg OB6		X Cyg	
Cas VII	Cas OB7	III Cas	III Cas			Cyg OB7		XI Cyg	
Cas VIII	Cas OB8		VIII Cas			Cyg OB8		VIII Cyg	
Cas IX	Cas OB9		IV Cas		(Cyg I)**	Cyg OB9		IX Cyg	
Cas X	Cas OB10		IX Cas		(Cyg II)**				
(Cas IV)	Cas OB14		VI Cas		Gem I	Gem OB1	I Gem	I Gem	
Cas-Tau	Cas-Tau OB1				Lac I	Lac OB1	I Lac	I Lac	
Cen I	Cen OB1		I Cru		Mon I	Mon OB1			

TABLE V.3 (continued)

(1) Designation in the 1st ed. of CSCA (1958)	(2) Final Designation	(3) Morgan	(4) Schmidt	(5) Other	(1) Designation in the 1st ed. of CSCA (1958)	(2) Final Designation	(3) Morgan	(4) Schmidt	(5) Other
Mon II	Mon OB2	<u>I Mon</u>	<u>I Mon</u>		(Sct I)**	Sct OB2		<u>II Sct</u>	
	Mon OB3				(Sgr II)**	Sct OB3		<u>I Sct</u>	
Nor I	Nor OB1				Sgr II**				
	Nor OB2(?)				Ser I	Ser OB1	I Ser	I Ser	
	Nor OB3(?)				Ser II	Ser OB2	II Ser	II Ser	
	Nor OB4				Ser-Sct II*	"			
	Nor OB5				Sgr III*	"		<u>III Ser</u>	
Ori I	Ori OB1	I Ori	I Ori		Ser-Sct I***	-			
Ori II	Ori OB2		II Ori						
Per I	Per OB1	I Per	I Per		Sgr I	Sgr OB1	I Sgr	I Sgr	Not to be confused with Baade's windows
Per II	Per OB2	II Per	II Per		"	"	II Sgr	II Sgr	
Per III	Per OB3		III Per	I Per (α Per)	Sgr IV	Sgr OB4	III Sgr	III Sgr	
Pup I	Pup OB1		II Pup		Sgr V	Sgr OB5	V Sgr	V Sgr	
Pup II	Pup OB2		<u>I Pup</u>		(Sgr II)**	Sgr OB6	IV Sgr	IV Sgr	
Pup III	Pup OB3		<u>I Pup</u>		Sgr VI*	Sgr OB7(?)	IV Sgr	VII Sgr	
Sco I	Sco OB1	I Sco	I Sco		-	-		VI Sgr	
Sco II	Sco OB2	II Sco	II Sco		Vel I	Vel OB1	I Vel	I Vel	
Sco III***	-				Vel OB2	Vel OB2			
Sco IV	Sco OB4				Vel OB3	Vel OB3			
	Sco OB5(?)				Vul I	Vul OB1		I Vul	
	Sco OB6(Antolová 3)				Vul II	Vul OB2		III Vul	
	Sco OB7(?)				(Vul I)	Vul OB4		II Vul	
					Vul III*				See Cyg OB5

TABLE V.4

NOMENCLATURE BASED ON CONSTELLATION NAMES

NAME <i>Here the * stands for "old designation"</i>	TYPE OF OBJECT	OTHER DESIGNATION 1950 COORDINATES OR GALACTIC COORD.	REMARK OR REFERENCE
And I to V	Dw. G		
* And A	G	M31 0040+409	
Antlia Cluster	Cluster of G	1028 - 3535	
Ant Nebula	Ref1. N	PK 331 - 1°1 = Mz-3	Bipolar Nebula Cohen +, 1978 Ap.J. <u>221</u> , 151-162 Photograph p. 153
Aql Ridge	HI Ridge		Fejes +, 1973 Astr. Astrophys. <u>24</u> , 1-13
Aqr Ridge	HI Ridge		Ref : see Aql Ridge
Ara Cluster	Reddened OCL	$\alpha=16$ 43.2, $\delta=+45$ 45.2 Diameter 2'	Koornneef, 1977 Astr. Astrophys. <u>55</u> , 469-471
* Aur A		0457 + 464 CTA 33, DA 156, DGVW 20	
Bootes Cluster	Cluster of G	1431 + 3146	
Cam Bulge	HI Complex		Ref : See Aql Ridge
Cancer Cluster	Cluster of G	0818+2106	
Car I, II	H II Complex		
Carina Dwarf Galaxy	Dw. G	$l = 260$, $b = -22$	
Cas A	SNR	2321 + 585 3CR 461 G111.7-2.1	
* Cas B	SNR	Tycho's SN 0022 + 638 3C 10	
Cen A	G	NGC 5128 1322-428	
Cent Cluster	Cluster of G	1247-4102	
Cep A to F	MCLD	Associated with Cep OB3	Sargent, 1977, Ap.J. <u>218</u> , 736-748
Cet Arc	Rad. Cont Ridge	Loop II	Ref : see Aql Ridge
Cetus Cluster	Cluster of G	0206 + 0110	
Cetus Eridanus Ridge	HI Ridge		Bystrova, 1979, Astrof. Issled. Izv. Special Astrof. Obs. Lenin- grad <u>11</u> , 224-247
Cha T = ChaT I		$l = 297$, $b = -14.4$	Schwartz 1978, P.A.S.P. <u>90</u> , 393-395
Circinus Galaxy	G	A1409 - 65	Freeman, 1977, Astr. Astrophys. <u>55</u> , 445-458
Coma	Cluster of G	1257 + 2814	Redshift $z = 0.0235$
Coma I	Cloud of G	DEV G 13 $l = 198$, $b = +86$	$V_0 = 944 \text{ km s}^{-1}$
* Coma A	G	3CR 277.3 1251 + 279	

NAME	TYPE OF OBJECT	OTHER DESIGNATION 1950 COORDINATES OR GALACTIC COORD.	REMARK OR REFERENCE
Coma A,B,C,D K1, K2	Knots in G	Knots in Coma A = 3CR 177.3	Bridle + , 1981, Ap. J. <u>248</u> , 499-503 (VLA observations)
Coma A	Cluster of G		
Coma B	Cluster of G	1304 + 3110	Redshift $z = 0.1832$
Coma Berenices	OCL	Me ℓ 111 = Oc1 - 558 = C 1222 + 263	
Coma C	G		
Coma C	Cluster of G		Centre of Coma Cluster, Jaffe +, 1976, Astr. Astrophys. <u>49</u> , 179-192.
Cor Bor	Cluster of G	1520 + 2754	
R Cr A dark cloud	T ASS	$\alpha = 19^{\text{h}} 00^{\text{m}}, \delta = -37^{\circ}$	
* Crt A		1136 - 135 OM - 161	
CVn I	Group of G	DEV G 3 $\ell = 162, b = + 80$	Inside the Local Super- cluster.
CVn II	Group of G	DEV G 10 $\ell = 138, b = + 75$	Inside the Local Super- cluster.
Cyg A	G	3CR 405	In a group of galaxies, Spinrad +, 1982, M.N.R.A.S. <u>200</u> , 153-158.
Cyg Cloud	DCLD		
Cyg Cluster	Cluster of G	1950 + 5001	
Cyg hot spot : Cyg Superbubble	X-ray emitting ring SNR ?	Around Cyg OB2	Cash +, 1980, Ap.J. Lett. <u>238</u> L71-L76.
Cyg Loop	SNR	G 74.0 - 8.5 Diameter 3°	See also CL in Table II, ref. 1973K2
Cyg X	HII/molecular complex	$\ell = 75$ to 85 $b = -4$ to $+4$	Cong H + - i 1978, NASA TM-79590, A survey of carbon monoxide in Cyg X.
* Cyg Y,Z	HII/molecular complex		
γ Cyg Neb			May refer to a thermal source or to γ Cyg SNR
γ Cyg Supernova Remnant	SNR	Centered $\ell = 78.2$ $b = +2.1$. Diameter $62'$, contains DR 3 and DR4	No relationship with the foreground star γ Cyg Higgs+, 1977, A.J. <u>82</u> , 718-724 plate p. 772
Dorado Cluster	Cluster of G	0416 - 5615	
Draco dwarf Galaxy	Dw.G	$\ell = 86, b = + 35$	
Eri Cluster	Cluster of G	For II 0326-2055	
Eridanus filaments	Part of a Supershell	$\ell = 185$ to 215 $b = -12$ to -50	Reynolds +, 1979 Ap.J. <u>229</u> , 942-953
Eridanus hot spot	X-ray emitting ring old SNR ?	includes 3U 0431-10 radiopulsar MP 0450	Centered $\ell = 205, b = -40$, diameter 15° , distance 100-300 pc. Naranan +, 1976, Ap. J. <u>208</u> , 718-726.
Eri Shell	HI Shell		Heiles, 1976, Ap.J. Lett. <u>208</u> , L 137.
For I	Cluster of G	0333-3530	Redshift $z = 0.0046$
For II	Cluster of G	Eri cluster 0326-2055	Redshift $z = 0.0054$
Fornax A	G	NGC 1316 0320-374	Robinson, 1980 Sk.And Tel. <u>61</u> , 108-109.
Fornax dwarf Galaxy	Dw.G	$\ell = 237, b = -66$	

NAME	TYPE OF OBJECT	OTHER DESIGNATION 1950 COORDINATES OR GALACTIC COORD.	REMARK OR REFERENCE
Gem Cluster	Cluster of G	0705 + 3506	
* Gem A	SNR	IC 443 Sh2 - 248 0614 + 225	
Geminga	(γ)	γ 195 + 5 = 2CG195 + 4	Thompson+, 1977, Ap.J. <u>213</u> 252-262; Sieber +, 1982, Astr. Astrophys. <u>113</u> , 314-323 (radio continuum sources)
Grus Cluster	Cluster of G	2302-4047	
Grus Quartet	Group of G	NGC 7552, 7582 7590 and 7599	Maccacaro+, 1981 Ap.J. Lett. <u>246</u> , L11-L14 NGC7582 is 2A 2315-428
Her	Cluster of G	1603 + 1755	
Her A	G	3C 348 1648 + 050	
* Her B	QSO	1641 + 399 3CR 345	
Her Ridge	HI Ridge		Ref : see Aql Ridge
Hya A	G	0915-118 3C 218	
Hydra I	Cluster of G	1034-2716	Redshift $z = 0.0114$
Hydra II	Cluster of G	0855 + 0321	Redshift $z = 0.2030$
Hydra Ridge	HI ridge		Ref : see Aql Ridge
Leo I	Dw.G	$\ell = 226$, $b = +49$	
Leo II	Dw.G	$\ell = 219$, $b = +67$	
Leo A	Dw. Irr.G	DDO 69 0956 + 30.9	
Leo A	Cluster of G	1107 + 2846	Redshift $z = 0.0349$
Leo B	Cluster of G	1114 + 2949	Redshift $z = 0.0469$
Leo Cluster	Cluster of G	1024 + 1039	Redshift $z = 0.0650$
Leo Group	Cluster of G	1102 + 1419	Redshift $z = 0.0026$ closer than Leo cluster
Lup Loop	SNR	G330.0 + 15.0 Diameter 6°	Colomb +, 1982, Astr. Astrophys. <u>112</u> , 141-148
Lupus 2 dark cloud	DCLD	$\alpha = 15\ 52$, $\delta = -37\ 55$ $\ell = 338$, $b = 12$	Schwartz, 1978 P.A.S.P. <u>90</u> , 393-395
* Lyn A		3CR 196 0809 + 483	
* Lyn B		3CR 219 0917 + 458	
Monoceros Loop	SNR	G 205.5 + 0.2 Diameter 3°	Between NGC 2264 and Rosette Nebula : Kirshner +, 1978, Astr. Astrophys. Suppl. <u>31</u> , 261-270 ; Davies +, ibid. 271-284
Monoceros hot spot = Monogem ring	X-ray emitting ring SNR ?	around PSR 0656 + 14 centered $\ell=204$, $b=+12$	Nousek +, 1981, Ap.J. <u>248</u> , 152- 160. Diameter 20° . Differs from Mon Loop.
Rho Oph Cloud	DCLD		
OMC = Ori Molecular Cloud	MCLD		See Table II, ref. 1974G3 B and C

NAME	TYPE OF OBJECT	OTHER DESIGNATION 1950 COORDINATES OR GALACTIC COORD.	REMARK OR REFERENCE
Oph Ridge	HI Ridge		Ref : see Aql Ridge
Ori A	HII (radiosource)		See Orion Nebula
Ori B	HII + Refl.N	NGC 2024, IC 434 Sh2-277	
Origem = Origem Loop	SNR ?	G 194.7 + 0.4	Stands for Ori-Gem Diameter 6° Berkhuijsen, 1974, Astr. Astrophys. <u>35</u> , 429-440.
Ori Molecular Cloud	MCLD		see Table II, ref. 1974G3 B and C
Orion Belt		OC1 503=Cr 70 C 0533 011	
Orion Cluster	OCL	OC1 479 = Cr 69 C 0532.3 + 0954	
Orion Loop	SNR		
Orion Nebula = Ori A	HII	M 42, cluster NGC 1976 0532 - 054	Excited by Trapezium
Orion Sword			
Ori-Tau-Per complex	HI complex		Ref : see Aql Ridge
Peg I	Cluster of G	2320 + 0845	Redshift z = 0.0134
Peg II	Cluster of G	2308 + 0720	Redshift z : 0.0424
Pegasus Dwarf Irregular	Irr. G	A 2326 + 14 DDO 216	Hoessel +, 1982 Ap.J. <u>254</u> , 38-49 and Plate 1.
Peg Ridge	HI Ridge		Ref : see Aql Ridge
I Per			
II Per			
h Per	OCL	OCL 350 = NGC 869 C 0215 + 569	
X Per	OCL	OCL 353 = NGC 884 C 0218 + 568	
Per A	G	NGC 1275 0316 + 413 3CR 84	Dominant member of Abell Cluster A 246
* Per B	G	0433 + 295 3CR 123	
Perseus	Cluster of G	0312 + 4122	
Phoenix compact group	Cluster of G		Rose, 1979. Ap.J. <u>231</u> , 10-22 Fig 5 and Plate 2.
Pic A	G	0518 - 458	
Pisces	Cluster of G	0104 + 3211	
Pis Ridge	HI Ridge		Ref : see Aql Ridge
Proxima Centauri	dM5e	V645 Cen $\alpha = 14\ 26\ 03$, $\delta = 62\ 27\ 42$	
I Pup		NGC 2467	
Pup A	SNR	0821-428 G 260.4 - 3.4	
Pup-Can Association or Pup-Can Complex	Old OB ASS	Might contain the Clusters : Collinder 140, 135, 173, NGC 2451	Williams, 1967, M.N.R.A.S. South Afr. <u>26</u> , 139.

NAME	TYPE OF OBJECT	OTHER DESIGNATION 1950 COORDINATES OR GALACTIC COORD.	REMARK OR REFERENCE.
Pup Cluster	Not a real OCL	NGC 2483 $\ell = 244.7, b = 00.1$	Havlen, 1976 Astr. Astrophys. <u>50.</u> , 227-230.
Reticulum System	Dw.G or intergal, GCL	$\ell = 269, b = -4.0$	Belongs to the local Group Demers + 1976, Ap.J. <u>208</u> , 932-943 ; Kunkel, 1979, Ap.J. <u>228</u> , 718-733.
Sco- Oph Complex	HI Complex		Ref : See Aql Ridge
Sculptor Dwarf Irregular Galaxy = SDIG	Dw.G	$\ell = 287, b = -83$	
Serpens dark Cloud	DCLD	$\alpha \sim 18^h 27^m, \delta \sim 1^\circ 10'$, N and W of VV Ser.	Strom +, 1976, A.J. <u>81</u> , 638-640 and Plate p. 680 Distance ~ 500 pc.
Sextans A,B	G		
Sextans Ridge	HI Ridge		Ref : see Aql Ridge
Sextans System			
Sgr I	Galactic centre Window fields	$\alpha = 17 53, \delta = -29 02$ (1900) $\ell = 1.4, b = -2.6$	Evans, 1976, M.N.R.A.S. <u>174</u> , 169 and Plates I and II (not OB Associations !) See Table VI.1 Baade window.
Sgr II		$\alpha = 18 09, \delta = -27 55$ (1900) $\ell = 4.2, b = -5.1$	
Sgr A	Galactic Centre	1742-289	
Sgr B2		1743-284	
Tau 1 = Tau A	PLE SNR	Crab Nebula NGC 1952 = Sh2-244 Gl84.6 - 5.8	
Tau Molecular Cloud	MCLD	TMC or Tau MC	See Table II, ref. 1978C1
Tau Ridge	HI Ridge		Ref : see Aql Ridge
Telescopium	Cluster of G	2012-4644	
Triangulum Nebula	G	M33	
UMa I	Cluster of G	1145 + 5559	Redshift $z = 0.0509$
UMa II	Cluster of G	1055 + 5702	Redshift $z = 0.1363$
* UMa A	G	M82 0951 + 699 3CR 231	
* UMa B		1030 + 584 3CR 244.1	
UMi Dwarf Galaxy	Dw. G	$\ell = 105.1, b = 44.8$	Member of Magellanic Stream.
Vela I	Field for blue stars search	1975 { ^{09 26} -53 16 $\ell = 257.3, b = -1.9$	Miller, 1972 A.J. <u>77</u> , 216-229.
Vel A	SNR	1018-425	
Vela A (old)	ASS.OB	$\ell = 265, b = -5.0$	Stothers +, 1974, A.J. <u>79</u> , 456-471. Distance 500 pc
Vela SNR	PLE SNR	Identical to the radio sources Vela X,Y,Z, contains PSR 0833-45	Jenkins +, 1976, Ap.J. Suppl. <u>32</u> , 621-714 and Plate 2
Vela X,Y,Z	PLE SNR	G 263.9 - 3.3	Diameter 256'
Velorum	OCL	OCL767=IC2391=CO838.8-5253	Weiler + Panagia, 1980 Astr. Astrophys. <u>90</u> , 269-282.
Vir III	Cluster of G	1228 + 1050	Redshift $z = 0.1652$
Vir A	G	M87 1228 + 126 3CR 274	

PART VI
INDIVIDUAL NAMES

The index of names in Table VI.1 includes designations of specific objects which are not identified by catalog numbers. They are descriptive names e.g. the "Egg Nebula", arabic names, e.g. Altaïr , objects named after individual people, e.g. Merrill's star. The list contains :

. 52 names from the Bright Star Catalogue (Hoffleit, 1964). Becvar, 1964 (p. 347 to 352) gives 254 names, Hoffleit 1982 (ref. 1982 HF) gives about 455 names.

. descriptive designations for clusters, nebulae or galaxies from Becvar (1964), Bastos (1974) and several recent papers. See also ref. 1970 AR B Table 10 p. 109 in Part A.

. a few "unique designations" which were not included in the comprehensive Table (for instance : NPS, for North Polar Spur).

The table is self-explanatory. The Type of object (col.2) is defined in Table I.2. References (especially for a map or a photograph) are given for a few objects.

General references

Arp, H. : 1966, Ap. J. Suppl. 14, 1-20 and plates

Bastos, A. : 1974, ESR0 SP-89, Celestial Objects and Satellite Astronomy

Becvar, A. : 1964, Atlas of the Heavens. II. Catalogue 1950.0, Sky Publ. Corp., Cambridge, USA

Hoffleit, D. : 1982, Catalogue of Bright Stars, Yale Univ. Observ., New Haven, USA

Kesteven M.J.L. Bridle, A.H., 1977 J. Roy. Astron. Soc. Canada 71, 21-39 Table IV

Mitton, S. : 1977, The Cambridge Encyclopaedia of Astronomy - Edit. Jonathan Cape, London

Pasachoff, J.M. : 1977, Contemporary Astronomy. Saunders Golden Sunburst Series.

Edit. Saunders Company

Sandage, A. : 1961, Hubble Atlas of Galaxies

TABLE VI - INDIVIDUAL NAMES

NAME	TYPE OF OBJECT	OTHER DESIGNATION 1950 COORDINATES OR GALACTIC COORD.	REMARK OR REFERENCE
Abt's star	SB, magnetic *	HD 98088, ADS 8115	
Achernar	B5 *	α Eri	
AD 1006	SNR	MSH 14-415	Milne, 1971, Austral. J. Phys. <u>24</u> , 157
Alcor	A5 *	80 UMa	
Alcyone	B5 *	η Tau	
Aldebaran	K5 *	α Tau	
Alderamin	A5 *	α Cep	
Alfard	K2 *	α Hyd	
Algenib	B2 *	γ Peg	
Algol	V* B8	β Per	
Alioth	A0 *	ϵ UMa	
Alkaid	B3 *	η UMa	
Almach	K0 *	γ And	
Alphecca	A0 *	α CrB	
Alpheratz	A0 *	α And	
Alruccabah	V* F8	α UMi	
Altair	A5 *	α Aql	
America	H II	NGC 7000	Part of Sh2-117, see also Gulf of Mexico
Andromède	GG	M31	
Antarès	Ma *	α Sco	
The Antennae	IG	NGC 4038 and 4039	Pasachoff p.515
Arcturus	K0 *	α Boo	
Arp Galaxy	Compact DW.G	1965 $\left\{ \begin{array}{l} \alpha = 11 \ 17 \ 35 \\ \delta = + 51 \ 41 \ 10 \end{array} \right.$	Arp, 1965, Ap.J. <u>142</u> , 402-406
Baade's Windows		Sgr I,II and direction to NGC 6522	Windows of low galactic absorption in the direction of the Galactic Centre. Baade, 1963. See Evans, 1976, M.N.R.A.S. <u>174</u> , 169 Plates I to III.
Babcock's magnetic star		HD 215441	
Barnard's Loop	SNR	Sh2-276	Schema : see Kutner+, 1977, Ap.J. <u>215</u> , 522 Photograph : Isobe, I.A.U. Sympos. <u>52</u> , 434
Barnard's star	PM * M5 red DW.	Gliese 699	O'Leary, 1980, Sky and Tel. <u>60</u> , 111-113 has the largest proper motion known, 10"yr ⁻¹
Bear Claw Nebula	G	NGC 2537	
Becklin's object=	(IR)	BN Object in Orion	
Becklin's star		IRC-10093	
Beehive	OCL	Identical to Praesepe	
Bellatrix	B2 *	γ Ori	
Betelgeuse	V* Ma	α Ori	
Bidelman's He variable star	V*	HD 125823	
Bidelman's peculiar star		HD 30353	
Bidelman's star		HD 127617	
Binary Pulsar	Binary PSR	PSR 1913+16	See Hulse Taylor binary pulsar.
Black eye	G	NGC 4826 (M64)	Object 172 in Bastos (8'x4'). Sandage, Atlas p. 13
Blinking Planetary	PN	NGC 6826 = PK83 + 12°1	
BN = Becklin Neugebauer's object	(IR)	in Orion	see ref. 1967B5
BNKL			consists of BN (point source) and KL extended source)

NAME	TYPE OF OBJECT	OTHER DESIGNATION 1950 COORDINATES OR GALACTIC COORD.	REMARK OR REFERENCE
Bond's flare star	V *	$\alpha = 23 \ 29 \ 09$ $\delta = -03 \ 01.7$	Greenstein, 1977, P.A.S.P., <u>89</u> , 304-308
Boomerang Nebula	RFN bipolar N	ESO-172?07 $\alpha = 12 \ 41 \ 55$, $\delta = -54 \ 14.9$	Taylor +, 1980, M.N.R.A.S. <u>193</u> , 321-327. voir p. 6.9
Brewer's star	magnetic *	HD 50169	
Bubble Nebula	H II	NGC 7635 in SH2-162	
Bug Nebula	H II	NGC 6302	
Burbidge Chain	Multiple IG	North of NGC 247	Arp, 1973, Ap.J. <u>185</u> , 797-808, fig.3
Burnham's Nebula	RFN	SH2-238	near T Tau, as well as NGC 1554 and the Hind's Nebula NGC 1555 Bertout, 1980, Sterne und Weltraum, <u>19</u> , 205-209
Butler's star	Flare *	in SMC	
Butterfly Nebula	RFN	IC 2220, around V341 Car = HD65750 = BS 3126 (MOIII)	Dachs +, 1978, Astr. Astrophys. <u>63</u> , 353 fig. 4
California Nebula	H II	Sh2-220 = IC 1499	Bohnenstengel +, 1976 Astr. Astrophys. <u>52</u> , 23-30, fig.1
Campbell's star	WC9 *	BD+ 30° 3639, HD 184738	Nucleus of the PN PK 64 + 5° 1
Canopus	F0 *	α Car	
Capella	G0 *	α Aur	
Caph	F5 *	β Cas	
Carafe	G	no $\alpha = 04 \ 26 \ 34$ $\delta = -48 \ 01 \ 23$	peculiar ringed Seyfert Galaxy, near NGC 1598 and 1595. Hawarden+, 1979, M.N.R.A.S. <u>186</u> , 495-500
Carafe Group			Carafe, NGC 1598 and NGC 1595
Carina Nebula	H II	RCW 53	contains η Car. Pasachoff, facing p. 528
Cartwheel Galaxy	G	A0034-35	Mitton p. 377 Davies +, 1982, M.N.R.A.S. <u>201</u> , 69P-72P.
Castor	A0 *	α Gem	
CDG	G	1965 $\alpha = 11 \ 17 \ 35$ $\delta = 51 \ 41 \ 10$	Compact dwarf galaxy, Arp, 1965, Ap. J. <u>142</u> , 402-406.
Chavira's Supernova	SN	SN 1965 h in NGC 4666	type II
Checkmark Nebula	H II	M 17	more often : Omega
Chu's object	B * + neb.	$\alpha = 03 \ 53 \ 02.2$, $\delta = +51 \ 17 \ 15.6$	Kodaira+, 1979, P.A.S. J. <u>31</u> , 417-421
Chuadze's Supernova	SN	SN 1967c in the Sc galaxy NGC 3389	Borsov+, 1969, Sov. Astron. <u>13</u> , 423-426 fig. 1a. Type I
Cirrus	SNR	NGC 6960, 6992, 6995	See Cyg Loop
Coal Sack	DCLD	$l = 302^\circ$ to 306° , $ b < 2^\circ$	
Cocon	H II + OCL	IC 5146 in Sh2-125 C 2151+470	
Coddington's Nebula	G	IC 2574	Sandage, Atlas p. 39
Coma Berenices	OCL	C 1222+263	
Coffe Nebula = Conus	H II	OCL 558 = Mel 111 NGC 2264=Sh2-273	
Crab Nebula	PLE SNR	NGC 1952 = Sh2-244; TauA, TAU 1	
Cynosura	V * F8	α UMi = Polaris	
Dahlgren	N	Nova Herculis 1963, V 533 Her	
Dark Rift Cloud	DCLD	$l = 20^\circ$ to 83° , mainly $l = 55^\circ$	
Dark S Nebula	DCLD	Barnard 72	See Snake, in Ophiucus
Deneb	A2 *	α Cyg	
Deneb Kaitos	K0 *	β Cet	
Denebola	A2 *	β Leo	
Diabolo Nebula	PN	NGC 6853 = PK 60-3*1	More often : Dumbbell, see Dumbbell
Dragon	DCLD	In M8 = Sh2-25	Brand+, 1978, Astr. Astrophys. <u>63</u> , 345-352 (fig. 1)

NAME	TYPE OF OBJECT	OTHER DESIGNATION 1950 COORDINATES OR GALACTIC COORD.	REMARK OR REFERENCE
Dubhe	KO *	α UMa	
Dumbbell	PN	M27, NGC 6853 = PK 60-3 ¹	Mitton P.293
Eagle Nebula	H II	M16, excited by NGC 6611	Pasachoff, facing p. 465
Egg Nebula	RFN	CRL 2688 AF803-2935 α = 21 00 20 δ = +36 29 45	Ney+, 1975, Ap.J.Lett. <u>198</u> , L129-L134
Eggen's nearby star		CoD-31° 622	
Eskimo Nebula	PN	NGC 2392=PK 197+17 ¹	
Exclamation Mark Galaxy	G	Companion of 003655-43 22	Arp, 1980, Messenger <u>21</u> , 25
Fehrenbach's star		HD 116745 in the GCL ω Cen	
F-F	G	A1332-45	Identical to Fourcade-Figueroa object
Fish on the Platter	DCLD	Barnard 144 α = 19 59 04, δ = +34 39 l = 71, b = +3	Size 55' Franklin, 1955, A.J. <u>60</u> , 351 Photograph Poss 20h04 + 36° (x = 27mm, y = 95 mm)
Fomalhaut	A3 *	α PsA	
Footprint	RFN = HII	M1-92, LF2+29° No. 230 = VES 20	Herbig 1975, Ap. J. <u>200</u> , 1-5
Fourcade-Figueroa object	G	A1332-45 near NGC 5128 (Cen A)	Graham, 1978, P.A.S.P. <u>90</u> , 237-240
Gemina	(γ)	2CG 195+4	see Table V
Ghost of Jupiter	PN	NGC 3242=PK 261 + 32°1	
Gould's Belt		System of OB stars	Stothers+, 1974, A.J. <u>79</u> , 456
Graham	GCL	α = 13 23 09.3 δ = -42 41 02 8' from nucleus of NGC 5128	Graham+ Philipps, 1980, Ap.J. Lett. <u>239</u> L97-99 and Plate L5
Graham's object = Niebelungen Ring = das Rheingold	Ring G		Dennefeld, 1980, Messenger <u>21</u> , 29-32 fig.1
Gulf of Mexico	CLD	in NGC 7000 (=America)	Robinson, 1980, Sky and Tel. <u>59</u> , 280
Gum Nebula	SNR	α = 7 ^h to 9 ^h , δ = -20° to -50° l = 240° to 270°	Brandt+, 1976, Ap.J. <u>208</u> , 109-112 and plates; schema p. 111
Hauf A	Cluster of G	0106-1536, Abell 151	Redshift $z=0.0526$, Noonan, 1981, Ap.J. Suppl. <u>45</u> , 613-620
Hazard = H		1130 + 106	
Helix	PN	NGC 7293 = PK 36-57°1	Mitton p. 293
Hind's Nebula	RFN	NGC 1555 in Sh2-238	Variable Nebula, associated with T Tau Bertout, 1980, see Burnham's Nebula
Hoffmeister's cloud	intergal? DCLD	Centre $\alpha=20^h44$, $\delta=-42$ (l = 0, b = -39)	Hoffmeister, 1962, Z. für Astro- phys. <u>55</u> , 46-58, fig.6. About 20 square degrees.
Homunculus Nebula	Compact HII + star		Compact envelope around η Car
Honda-Kuwano 1979 object			
Honda's Variable	Not a Nova: Long-Period M4e *		Honda, 1980, IAU Circ. 3546, Prabhu, 1981, IBVS 1918
Horsehead Nebula	DCLD		associated with IC 434, Pasachoff p. 449 and after p.464
Horseshoe	H II	M17, see Omega	
Horseshoe.	part of G	Red filamentary structure NW of the centre of the So galaxy NGC 4696	Jorgensen +, 1982, the Messenger (ESO) <u>30</u> , 3-4

NAME	TYPE OF OBJECT	OTHER DESIGNATION 1950 COORDINATES OR GALACTIC COORD.	REMARK OR REFERENCE
Horseshoe Nebula	G		
Hourglass	H II	in M8 = Sh2-25 (Lagoon Nebula)	bright H α -knot near the star Herschel 36 = COD-24°13806 (see ref. 1957H1 D fig. 2, near LkH α 105 and 106 near R Mon, Pasachoff p. 493
Hubble's Nebula or Hubble's variable nebula	H II + RFN	NGC 2261	
Hulse Taylor binary pulsar	binary PSR	PSR 1913 +16	IAU Circ. 2704 (1974) • Hulse+, 1975 Ap.J. (Lett.) 195, L51-L53 Taylor, J.H., Weisberg, J.M., 1982 Ap. J. 253, 908-920.
Hyades	OCL	C 0424+1545= OCL 456=Mel 25	
Hydra	PN	NGC 3242 = PK 261+32°1	
Innes's star		Proxima Centauri=V 645 Cen	
Integral Sign Galaxy	G	MCG 12-7-28	
Jewel Box (John Herschel's designation)	OCL	NGC 4755	Arp+, 1958, A.J. 63, 341-346 contains several blue and one red supergiants
Kapteyn's star	*	HD 33793	
Keenan's system (or pair)	IG	NGC 5216, 5218	Keenan, 1935
Kepler's Supernova	SNR	G 4.5+6.8=SN 1604	
Keyhole Nebula	DCLD	in Carina Nebula = RCW 53	Pasachoff, facing p. 528
KL		extended Source in Orion	see Ref. 1967 K2
Klemola's star		BD + 10° 2179	
Kachab	K5 *	β UMi	
Krzeminsky's star		Optical component of the pulsating binary X-ray source Cen X-3	Krzeminsky, 1974 Ap.J. 192 L135-L138
Kurtz's light variable	V * metal rich	HD 188136	V =8.01 mag, Wegner, 1981, Ap.J. 247, 969-974
Kutner's Cloud	DCLD	LDN 1524, 1529, 1531, 1533 and 1535; l = 174, b = -15.7	Batrla+, 1981, Astr. Astrophys. 96, 202-206
Kuwano's object	Nova-like *	PU Vul=Nova Vul 1979	IBVS 1835 (1979), 2097 (1982)
=Object Kuwano 1979	Symbiotic?	α = 20 19 01.1 δ = +21 24 43.1	Beliakina+, 1982, Astr. Zh. 59, 302-306
L 134N	HI CLD	Core of L 183 (L=LDN, ref. 1962L1)	Caldwell, 1979, Astr. Astro- phys. 71, 255
Lace Nebula	SNR		part of Cyg Loop
Lagoon Nebula	H II	M8=Sh2-25	Contains OCL NGC 6523 and 6530
Liller's Star	V * A	α = 11 18 59 δ = -60 19 38; m =14.5	Liller 1973, IAU Circ. 2518 Is <u>not</u> Cen X-3 optical count- entpart, see Krzeminski's star
LMC	Im G		Large Magellanic Cloud
Loop I		North Polar Spur	Davelaar+, 1980, Astr. Astro- phys. 92, 231-237
Lovas SN	SN	SN 1964e in MCG 9-20-51	
Luyten's star		BD+ 5° 1668	
Magellanic Clouds	Irr. G		LMC and SMC
Magellanic Stream =MS		see MSI to MSVI, ref. 1977M2	Mathewson+, 1974 Ap.J. 190, 291-296
Maia	*	20 Tau, in Pleiades OCL	
Markab	AO *	α Peg	
Markarian's chain	IG		

NAME	TYPE OF OBJECT	OTHER DESIGNATION 1950 COORDINATES OR GALACTIC COORD.	REMARK OR REFERENCE
Mayall's object	G	VV 32, Arp N°148	Cigar-shaped Galaxy, Burbidge, 1964 Ap. J. <u>140</u> , 1617 (fig.1)
Medusa Nebula	PN	Abell 21 = YM 29	
Megrez	A2 *	δ UMa	
Menkar	Ma *	α Cet	
Merak	AO *	δ UMa	
Merope	RFN + B2*	21 and 23 Tau, IC 349 = NGC 1435 in Pleiades OCL	
Merrill's star	WN8 * + compact companion	WR124=209BAC	Moffat +, Astr. Astrophys. <u>114</u> , 135-146. Associated with the HII region Sh2-80=Min 1 -67=PK 50+3°1 see Chu, 1981, Ap. J. <u>249</u> , 586-591
Mice	IG	NGC 4676 A,B	
Miniature Spiral	Spiral G	NGC 3928 = Markarian 190	Van den Bergh, 1980, P.A.S.P. <u>92</u> , 409-410 (photograph) see Footprint
Minkowski's footprint			
Mira	V * Md	$\circ$ Cet	
Mirach	Ma *	β And	
Mirfak	F5 *	α Per	
Mizar	A2 *	ζ UMa	
Moving Nebula	Jet	gas associated with Markarian 335, a Seyfert galaxy	Heckman+, 1981 A.p.J. <u>247</u> , 32-41 Magellanic Stream
MS			
Network Nebula	SNR	Cyg Loop	
Niebelungen Ring	Ring G	Identical to "Graham's object"	
North America Nebula (or America)	H II	NGC 7000	Part of Sh2-117
North Polar Spur or NPS	Rad. Cont. Ridge	Part of Loop I, linked with Sco. Cen OB Association	See Table III.1 and Heiles 1980, Ap.J. <u>242</u> , 533-540
Omega	H II	M17= Sh2-45 excited by NGC 6618 Also: Checkmark Neb., Horse shoe, Swan Nebula	Pasachoff, facing p.465
Osawa's star	Ap *	HD 221568	
Owl Nebula	PN	NGC 3587=M97=PK148+57°1	
Pancake	G	NGC 2685 Arp No. 336, Spindle	See Spindle Schechter +, 1978, A.J. <u>83</u> , 1360-1362.
Papillon	G	IC 708 in the cluster of G Abell 1314	Vallée+, 1979, Astr. Astro- phys. <u>77</u> , 183-188
Pelican	H II	IC 5067 and IC 5070	Part of Sh2-117
Phecda	AO *	γ UMa	
Pinwheel	G	NGC 5457 (M101)	Arp N°26; object 187 in Bastos; Sandage, Atlas p.27
Plaskett's Star	Binary *	HD 47129 = V729 Cyg	Large mass binary
Pleiades	OCL	OCL 421 = M45 = C 0344+2358	
Pleione	V * B1	28 Tau = BU Tau	
Polaris	V * F8	α UMi = Cynosura	
Polar Ridge	HI Ridge		Ref: see Aql Ridge
Pollux	KO *	β Gem	
Popper's star	H deficient *	HD 124448	
Praesepe	OCL	C 0837.2+2010 = Beehive = OCL 507 = NGC 2632 = M 44	
Procyon	F5 *	α CMi	
Proxima Centauri		V 645 Cen	Innes' star
Przybylski's star	Ap pulsating *	HD 101065 CD-46 7232	Przybylski, 1961, Nature <u>189</u> , 739; Kurtz, 1981 M.N.R.A.S. <u>196</u> , 61-65

NAME	TYPE OF OBJECT	OTHER DESIGNATION 1950 COORDINATES OR GALACTIC COORD.	REMARK OR REFERENCE
Rapid Burster	XB	MXB 1730-333 in GCL Liller I	see ref. 1977L2
Rasalgethi	V * Mb	α Her	
Rasalhague	A5 *	α Oph	
Red Rectangle	RFN	around HD 44179 = BD-10° 1476 AFCLRL 618-1343	Cohen+ 15 authors, 1975, Ap.J. <u>196</u> , 179-189 and Plate 3
Regulus	B8 *	α Leo	
Das Rheingold	Ring G	identical to the ring G "Graham's object"	
Rigel	B8 *	β Ori	
Ring Nebula	PN	NGC 6720 = M57=PK 63+13° 1	Mitton p.286
Roberts- Altizer variable	U Gem type V *	galactic, near the galaxy NGC 3147	Kholopov, 1972, Astr. Tsirk. <u>700</u> , 1
Rosette Nebula	H II	Sh2-275, excited by NGC 2244	
Rosino's object or Rosino-Zwicky object	V *	near M88 (NGC 4501) $\alpha = 12\ 29.9$, $\delta = +14\ 36$	
Rosino's Supernova	SN		Galactic, U Gem Type?
Sanduleak's Star	EM. * in LMC	$\alpha = 05\ 46\ 02.7$ $\delta = -71\ 17\ 13$	Allen, 1980, Ap. Lett. <u>20</u> , 131-133
Saturn	PN	NGC 7009 = PK37 -34° 1	
Scheat	Mb *	β Peg	
Schedar	V * KO	α Cas	
Scheve-Schijf	H I Complex		Ref: see Aql Ridge
Schwaizer-Middleditch- Star = SM star	hot *	near center of SN 1006, <u>not</u> the remnant of SN 1006	Schweizer+, 1980, Ap.J. <u>241</u> , 1039. Savedoff+, 1982, Astr. Astrophys. <u>107</u> , L3
SDIG = Sculptor Dwarf Irregular Galaxy	G	$\alpha = 00\ 05.6$, $\delta = -34\ 51$ $l = 352$, $b = -79$	Lautsen +, ref.1977L1
Seashell	G	Companion of NGC 291	Longmore+ 6 authors, 1979 M.N.R.A.S. <u>188</u> , 285-296 and plates 1 to 3
Sextans System	IG		Sandage, Atlas p. 39
Seyfert quintet = Seyfert Sextet	IG	NGC 6027, a,b,c,d,e,	One member has a discrepant redshift. Seyfert, 1951 P.A.S.P. <u>63</u> , 72; Martins+, 1976, Ap. J. <u>209</u> , 372
Shane cloud	"Cloud" of G (=Cluster of G)		
Sirius	A0 *	α CMa	
SM Star			see Schweizer-Middleditch star
Snake (S-Shaped)	DCLD	Barnard 72 $\alpha = 17\ 22.1$, $\delta = -23\ 29$	in Ophiucus, Mittor. p. 280
Sombrero	G	NGC 4594 = M104	has a companion, NGC 4595. Appenzeller, 1967, P.A.S.P. <u>79</u> , 600, plate III. Photo- graph in UV light, Baade, 1951, P.A.S.P. <u>63</u> , 133
Spica	B2 *	α Vir	double-line spectrosc. Binary
The Spider	Pec. G	VV 794 = MCG 6 -24-6	Vorontsov-Vel'yaminov+ 1980, Sov. Astron. Lett. <u>6</u> , 109-110 (photograph)
Spindle	G	NGC 2685 Arp No. 336 = Pancake	Sandage, Atlas p.7 Rotation about the major axis. See also Pancake
Spiral Arms (α to ϵ and outer)	HI Spiral Arm		Verschuur, 1973, Astron. Astrophys. <u>27</u> , 139

NAME	TYPE OF OBJECT	OTHER DESIGNATION 1950 COORDINATES OR GALACTIC COORD.	REMARK OR REFERENCE
Stepanian's star	Nova like*	$\alpha = 15\ 35\ 44, \delta = +19\ 01\ 30$ LX Ser $m_v = 14$ to 18	Discovery: IBVS, 1630 (1979), Eclipsing binary possibly U Gem type : Horne, 1980, Ap. J. Lett. 242, L167-L171
Stephan's Quintet	IG	NGC 7317, 7318 A, B 7319, 7320, Arp N°319	(or Stephan's quartet if NGC 7320 is left out) Arp+ Kormendy 1973, Ap.J. 183, 411
Swan Nebula	H II	M 17	more often: Omega
Tarantula Nebula	H II	NGC 2070 = 30 Dor Nebula	in LMC H α + [NII] photograph : Davies+, Mem. Roy. Astr. Soc. 81, 89-128, plate XIV
Thuban	AO *	α Dra	
Thumbprint Nebula or TPN or BDN	Bright dark N	$\alpha = 12\ 41.3, \delta = 78\ 32$ l = 302.64, b.=615.94	"Bright dark Nebula" in Chamaeleon. Position from Fitzgerald + Stephens+ Witt, 1976, Ap.J. 208 709-717 and Plate 1 Discovery by Fitzgerald, 1974, Astron. Astrophys. 32, 465-468 (photographs)
Toby Jug Nebula	Bipolar N	IC 2220 around V 341 Car (Red giant)	Perkins+, 1981 M.N.R.A.S 196, 403
Trapezium	Multiple star	θ^1 Ori (A,B,C,D)	Core of the Orion Nebula
Trapezium Nebula	(IR)	following θ^1 C	Ney+, 1969, Ap.J. Lett. 155, L193-L196 and Plate L3; without central point source
Trifid Nebula	H II	M20 = Sh2-30	NGC 6514, Pasachoff after p. 464, color Plate 42
Triple Quasar		PG1115 + 080 = Q1115 + 080	In fact, 5 images have been found : Young, 1981, Ap. J. 244 723-735
Twin Quasar or "quasar double"		0957 + 561	In fact, three images have been found Discovery: Walsh+, 1979, Nature 279, 381
Tycho's Supernova	SNR	SN 1572=3C 10 = 2U 0022+63	
Van Biesbroeck's star	*	BD+4° 4048B	faintest star known, $M_v=18.6$
Van Maanen's star	WD	Van Maanen 2= Gliese 35= Wolf 28 = Gliese 1-27	Gliese 1969, Veröff. Astron. Rechen-Inst. No. 22 ; see remark for vMa, at the end of Table II
Vega	AO*	α Lyr	
Veil Nebula	SNR	NGC 6960	Part of Cyg Loop
Wachmann's flare star	Flare*	V371 Ori	
Walborn's star	WR in LMC	Sk-67°18 = Breysacher 5	O6-7n nn + WN5-6A. var.
Warren and Penfold's star = WP star	B3*+ black hole ?	Counterpart of LMC X-3	Warren +, 1975, M.N.R.A.S. 172, 41P. Second black hole candidate : Cowley +, 1983, DAO preprint No. 230.
Whirlpool	G	NGC 5194 (M51) = Arp No.85	Sandage, Atlas p. 26 and 31 Object 182 in Bastos Pasachoff p. 334
Wild Duck Nebula	HII	M16	NGC 6611 is the exciting cluster

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Wild Supernova	SN	SN 1966 j in the Galaxy NGC 3198	Borsov +, 1969, Sov. Astron. <u>13</u> , 423-426, Fig. 1b. Type I ?
Wischnjewsky SN	SN	in Fornax A = IC 1316, Type I	Blades, 1981, M.N.R.A.S. <u>196</u> , 65P-71P plate facing p. 66P
WLM Galaxy = Wolf-Lundmark -Melotte System	Im G	A2359 $\alpha = 23\ 59\ 24$, $\delta = -15\ 44$	Ables +, 1977, Ap.J.Suppl. <u>34</u> , 245-258. Photo p. 247
Zealey-Lee	SN in IG	$\alpha = 23\ 03\ 47$ $\delta = -44\ 43.4$	IAU Circ. 3282 (1978)
Zwicky Triplet	IG	IC 3481, IC 3481a 3483 Arp No.175	

PART VII

AUTHOR INDEX

(For Introduction and Part I to IV)

AUTHOR INDEX

(For Introduction and Part I to IV)

The Author Index gives for each author the corresponding reference and acronym (if any).

. The Author names are arranged alphabetically. The ordering is :

+ Sanduleak (one of two or several authors, not the first)

Sanduleak (one author)

Sanduleak + (first author)

Within these three groupings, the references are ordered by year.

(Notice that van der Hucht, ... de Vaucouleurs ..., are classified with V, ... D ... letters).

. The reference is given by its code number (as explicited in Table III) or refers to the end of the introduction or the bottom of Tables IV.1 and IV.2.

. The acronym given here is the one selected for full information in Table II (no synonyms are given here) ; it is schematized by capital letters.

ABELL G.O.	1955A1	A	+BASH F.N.	1973D1	A	UT
ABELL G.O.	1958A1	A	+BASH F.N.	1973D1	C	UT
ABT H.A. +	1972AB	A	BASINSKI J.M. +	1967B1	B	
+ACKER A.	1976F1	FD	+BATCHELOR R.A.	1972M1	A	MC
ACKER A. +	1967PK	B	+BATCHELOR R.A.	1972M1	B	MC
ACKER A. +	1967PK	D	+BATESON F.M.	1982VB		
ACKER A. +	1967PK	F	BATTEN A.H.	1967B6	SB	
ACKER A. +	1982AC	FC	BATTEN A.H. +	1978BF	BATTEN	
+AFANAS'EVA P.M.	1971P1	KCB	+BAUM W.A.	1967R1	RB	
AGUERO E.L.	1971A1	AGUERO	+BAZZANO A.	IV.2	HXR	
+AGUIRRE C.	1976S4	TOL	+BECHTOLD J.	IV.2	1E	
AITKEN R.G.	1932A1	ADS	BECKER F.	1929B1	A	PSD
+ALBERS H.	1979L1	LHS	BECKER F.	1929B1	B	PSD
ALBERT C.E. +	1977A2	AWM	BECKER F.	1929B1	C	PSD
+ALKSNE Z.	1977A1	A	BECKER F.	1929B1	E	PSD
+ALKSNE Z.	1977A1	B	+BECKER R.H.	IV.2	OS	
ALKSNIS A. +	1977A1	A	BECKER W. +	1971B1	BASEL	
ALKSNIS A. +	1977A1	B	+BECKLIN E.	1966U1	CIT	
ALTER G. +	1970AR	A	+BECKLIN E.E.	1974G3	A	ORI MC
AMBARTSUMIAN V.A. +	1958A2	ASH	BECKLIN E.E. +	1967B5	BN	
AMIRKHANYAN V.R. +	1981A1	Z	+BEETZ M.	1976W1	CALAR ALTO	
AMNUEL P.R. +	IV.2	AN 1 XRS	BENN C.R. +	1982B2	5C1 TO 5C17	
AMNUEL P.R. +	IV.2	AN 1 XRS	BENN C.R. +	1982B2	5C12.	
AMNUEL P.R. +	1982AM	2XRS	BENNETT A.S.	1962B1	3C	
+ANDERSON J.H.	1957L1	B	BENNETT A.S.	1963B1	BEN	
+ANDREW B.H.	1967S1	OB TO OZ	BENNETT A.S.	1964B2	ASB	
ANDREWS A.D. +	1964A1	AL-	+BENNETT K.	IV.1	2CG	
ANDRIEVSKI A.E. +	1969A1	CRI	BERGER J. +	1977BF	A	PB
ANTALOVA A.	1972A2	AV	BERGER J. +	1977BF	B	PB
+APPARAO K.M.V.	IV.2	IS	BERGER J. +	1977BF	C	PB
APRIAMASVILI S.P.	1964A2	APRIAMASVILI	BERKHUIJSEN E.M.	1973B2	A	LOOP
+APTEKAR R.L.	IV.1	GAMMA-RAY BURST	BERNACCA P.L. +	1970B1	A	BERNACCA
ARAKELJAN M.A.	1975A2	ARAKELJAN	BERNACCA P.L. +	1970B1	B	BERNACCA
+ARAKELIAN M.A.	1959D1	DO-AR	BERNACCA P.L. +	1970B1	C	BERNACCA
+ARCHER S.	1959E1	3C	BERNES C.	1977B1	BERNES	
ARDEBERG A. +	1972A3	A	+BEROLINI	1899H1	ASV	
ARDEBERG A. +	1977A3	ARMA	BERTAUD C.	1959B2	CB	
ARGELANDER F.	1886A1	BD	BERTAUD C. +	1974BF		
+ARKHIPOVA V.P.	1962V1	B	+BERTIAU F.C.	1967R2	RMB	
+ARKHIPOVA V.P.	1962V1	C	+BESTER M.J.	1955B2	BBW	
+ARKHIPOVA V.P.	1962V1	D	BIDELMAN W.P.	1954B3	BI	
+ARKHIPOVA V.P.	1962V1	E	+BIERITZ J.H.	1969D1	DWB	
ARP G.C.	1966A1	ARP	+BIGGS E.S.	1972AB	A	ABT
ARP H.	1980A1	U	+BIGNAMI G.F.	IV.1	2CG	
ARP H. +	1960A1	ARP	+BIRKLE K.	1976W1	CALAR ALTO	
ARP H. +	1975A3	CG	+BISCHOFF M.	1973JU	A	
ARP H. +	1979A1	BSO, RSO	+BISCHOFF M.	1973JU	B	
ARP H. +	1979A2	UB	BLAAUW A. +	1959B1	BEJ	
ARP H.C.	1972A4	HA	+BLANCO B.M.	1980B1	LMC-BW, LMC-R	
+ARP H.C.	1979M1	A	+BLANCO B.M.	1980B1	LMC-O	
+ARP H.C.	1979M1	B	+BLANCO B.M.	1980B1	SMC-B, SMC-W	
AVEDISOVA V.	1981A2	RSF	BLANCO V.M.	1949B1	BLANCO	
AZZOPARDI M.	1982AZ	AZV	BLANCO V.M.	1961B2	BL	
AZZOPARDI M. +	1975A1	A	BLANCO V.M.	1962B2	BLANCO	
AZZOPARDI M. +	1975A1	B	+BLANCO V.M.	1954N1	A	CASE
BAADE W. +	1961B1	BAADE SWOPE	+BLANCO V.M.	1954N1	B	CASE
+BACKUS P.R.	1976TD	C	BLANCO V.M. +	1955B1	BM	
+BAHCALL J.N.	1973B1	NAB	BLANCO V.M. +	1964B1	BL FG	
BAHCALL J.N. +	1970B2	B & B	BLANCO V.M. +	1968B3	USN	
+BAHCALL N.	1970B2	B & B	BLANCO V.M. +	1980B1	LMC-BW, LMC-R	
BAHCALL N.A. +	1973B1	NAB	BLANCO V.M. +	1980B1	LMC-O	
+BAHNER K.	1961S1	SBS	BLANCO V.M. +	1980B1	SMC-B, SMC-W	
BAIER F.W. +	1973S4	C	BLITZ L. +	1982B1	BFS	
BAIER F.W. +	1973S4	E	BLUM E.J. +	1968B4	BDA, BDB	
BAIER F.W. +	1973S4	F	BOHANNAN B. +	1974B1	BE -	
BAIER F.W. +	1973S4	G	BOHM-VITENSE E.	1956B1	BV	
BAIER F.W. +	1973S4	H	+BOK B.J.	1967B1	B	
BAIER F.W. +	1973S4	J	BOK B.J. +	1955B2	BBW	
BAILEY F.A. +	1968B2	BP	+BOK P.F.	1967B1	B	
BAILLY F.	1847B1	LALANDE	+BOLDT E.A.	IV.2	H	
+BALAZS B.	1970AR	B	+BOLDT E.A.	IV.2	OS	
+BALDWIN J.E.	1955S1	2C	+BOLTON J.G.	1960W1	CTB	
+BALDWIN J.E.	1959E1	3C	BOLTON J.G. +	1954B1	B1	
+BALDWIN J.E.	1966W1	WKB	BOLTON J.G. +	1954B2	B2	
+BALDWIN R.B.	1940L1	A	BOLTON J.G. +	1979B1	PKS	
+BALDWIN R.J.	1947L1	A	BOSS B.	1937B1	GC	
BARBIER M.	1972AB	B	+BOUDREAU R.	1979M2	B	WAT
BARBIER M.	1972AB	C	+BOWYER C.S.	IV.2	H	
BARBIERI C. +	1968B1	A	BRACCESI A. +	1965B1	B1, B1S	
BARBIERI C. +	1972B1	A2-	BRACCESI A. +	1970B3	AB, B	
BARKHATOVA K.A.	1958B1	BARKHATOVA	+BRADT H.V.	IV.2	1M	
BARNARD E.E.	1927B1	BARNARD	BRADT H.V. +	IV.2	IS	
BARNEY I.	1934S1	E	BRAES L.L.E.	1967B3	BRAES	
BARNEY I.	1934S1	F	BRAID M.K. +	1978B2	BRAID	
BARNEY I.	1934S1	G	+BRAND P.W.J.L.	1976H1	A	CG
BARNEY I.	1934S1	H	BRANDIE C.W. +	1974B2	MA	
BARNEY I.	1934S1	I	+BRANDUARDI G.	IV.2	1E	
BARNEY I.	1934S1	J	BRANSON N.J.B.A.	1967B2	NB	
BARNEY I.	1934S1	K	BRAUDE S.YA. +	1978B1	A	CR
BARNEY I.	1934S1	L	BRAUDE S.YA. +	1978B1	B	CR
+BARNEY I.	1934S1	A	BRAUDE S.YA. +	1978B1	C	CR
+BARNEY I.	1934S1	B	+BRAY A.D.	1967H1	A	AO
+BARNEY I.	1934S1	C	BRAZ M.A. +	1983BE		
+BARNEY I.	1934S1	D	+BREAKIRON L.A.	1968C1	M	VVO
+BARTLETT T.J.	1940L1	B	BREAKIRON L.A. +	1968C1	N	VVO
+BARTLETT T.J.	1940L1	C	BREYSACHER J.	1981BR	BREYSACHER	
+BARTLETT T.J.	1947L1	B	+BRIDLE A.H.	INTRODUCT.		
+BARTLETT T.J.	1947L1	C	+BRIDLE A.H.			

BRIDLE A.H. +	1968B5	DB	COYNE G.V.,S.J. +	1974C1	B	VES
+BRINKS E.	1983B1	36W	COYNE G.V.,S.J. +	1974C1	E	VES
BRODSKAJA E.H.S.	1953B1	BRODSKAJA	+CRABTREE D.R.	1978W1		WORC
BRODSKAJA E.H.S.	1955B3	BRODSKAJA	CRAINE E.R. +	1979C1		RSO1
+BROOKS J.W.	1972M1 A	MC	+CRAM T.R.	1968H1	B	A,AC,C,M
+BROOKS J.W.	1972M1 B	MC	CROWTHER J.H.	1966C2		CR
+BROSTERHUS E.	1975H2	ACK3	+CROWTHER J.H.	1969C1		4CT
+BROTEN N.W.	1964H1	HBMR	CRUZ-GONZALEZ C. +	1974C2		CGO
+BROTEN N.W.	1965R1	NRC	CUDWORTH K.M.	1971C2		CD
BRUCK H.	1929B1 D	PSD	CUDWORTH K.M. +	1954H1	Q	LKH
BRUGGEMANN H.	1935B1	BRUGGEMANN	CZERNIK M.	1966C3		CZERNIC
BRUN A.	1957B1	BRUN	+DABROWSKI J.P.	1973G1	D	GAT
+BRUNDAGE R.K.	1971S3	SB	DAMASHEK M. +	1976TD	C	PSR
BRUNDAGE R.K. +	1967S1	OB TO OZ	+DAVIDSON K.	1976TD	A	PSR
+BRUNET J.-P.	1972A3 A	ARDEBERG,C	+DAVIES I.M.	1974S4		MC2,MC3
BRUNET J.-P. +	1972A3 B	C	DAVIES I.M. +	1973D2		MC1
+BUCCHERI R.	IV.1	2CC	DAVIES R.D. +	1976D1		DEM L,DEM S
+BUONANNO R.	1970N1 D	EDINBURGH	DAVIS M.M.	1967D1		DW
BURBIDGE E.M. +	1967B4	GB	DAVIS M.M.	1971D1	A	CC
+BURBIDGE G.	1980HB	QSO	+DAVIS M.M.	1968B4		BDA,BDB
+BURBIDGE G.R.	1967B4	GB	+DAVIS M.M.	1971D1	B	CC
+BURKHARDT R.K.	1976TD	C	DAVIS M.M. +	1965D1		DCVW
+BURNHAM R.JR	1962G1	HC	DAVIS R.J. +	1973D3		CEL
+BURNHAM R.JR	1971G1 A	CICLAS	+DAY C.A.	1969E1	B	PKS
+BURNHAM R.JR	1971G1 B	CICLAS=G	+DE BRUYN A.G.	1983B1		36W
+BURNHAM R.JR	1971G1 C	CICLAS=G	+DE GRAEVE E.,S.J.	1974C1	A	VES
+BURNHAM R.JR	1980G1	GD,GR-	+DE RUITER H.R.	1973K1	D	WSRT
BURNHAM S.W.	1906B1	BDS	+DE VAUCOULEURS A.	1976D3		
+BURT S.E.	1968G1 I	VVO	DE VAUCOULEURS G.	1975D1		DEV G
BURT S.E. +	1968G1 K	VVO	DE VAUCOULEURS G. +	1976D3		
+BURWELL C.G.	1925M1 A	MW	+DEJAIFFE R.	1969M1		ILS
+BURWELL C.G.	1925M1 B	MW	DEJC A.N. = DEUTSCH A.N.	1963D1		DEJC
+BURWELL C.G.	1925M1 C	MW	+DELVAILLE J.P.	1978R1		MR
+BURWELL C.G.	1933M1 A	MSB	+DEMERS S.	1968B3		USN
+BURWELL C.G.	1933M1 B	MSB	+DENISYUK E.K.	1978C2		CGD
+BURWELL C.G.	1933M2 A	MWC	+DEUTCHMAN W.A.	1973D3		CEL
+BURWELL C.G.	1933M2 B	MWC	+DI TULLIO G.	1979A2		UB
+BURWELL C.G.	1933M2 C	MWC	DICKEL H.R. +	1969D1		DWB
+BURWELL C.G.	1950M1 A	AS	+DICKEL J.R.	1965M1 A	VRO	
BYSTEDT J. +	1983B1	36W	+DICKEL J.R.	1965M1 C	VRO	
CALVET N. +	1978CC		+DICKEL J.R.	1965M1 E	VRO	
+CAMPBELL C.T.	1960R2	RCW	DICKEL J.R. +	1965M1 B	VRO	
CANNON A.J.	1925C1 A	HDE	DICKEL J.R. +	1965M1 D	VRO	
CANNON A.J. +	1918C1	HD	DICKENS R.J.	1972D1		PE
CANNON A.J. +	1925C1 B	HDE	+DIECKVOSS W.	1975H2		ACK3
+CAPRIOLI G.	1964N1	NA,NSC	DIXON R.S.			INTRODUCT.
+CARAVEO P.	IV.1	2CC	+DIXON R.S.	1964K1	D	OA
CARNOCHAN D.J.	1983C1	UV	DIXON R.S. +	1964K1	B	OA
CAROZZI N.	1971C3 B	OM	DIXON R.S. +	1967S1		OB TO OZ
CAROZZI N. +	1971C3 A	OM	DOLIDZE M.V.	1961D1		DOLIDZE
+CARRANZA C.	1971D2	DC	DOLIDZE M.V. +	1959D1		DO-AR
+CASSINELLI J.P.	IV.2	1E	DOLIDZE M.V. +	1966D1		DOLIDZE-DZIMSELEJSVILI
CASWELL J.L.	1966C1	4CP	DOPITA M.A.	1974H2	D	HH-
+CASWELL J.L.	1969H1	HC	DOTTORI H. +	1971D2		DC
+CASWELL J.L.	1976CC		DOUGLAS J.N. +	1973D1	A	UT
CASWELL J.L. +	1969C1	4CT	+DOUGLASS G.G.	1968B3		USN
+CATALANO F.	1982CF		+DOWER R.	IV.2		IS
+CECCARELLI M.	1965B1	B1,B1S	+DOWER R.G.	1978R1		MR
CEDERBLAD S.	1946C1	CED	DOWNES D.	1971D3		DOW
CESCO C.U. +	1973C1	Y-C	+DOWNES D.	1972M2		MD
CHAGNARD-CARPUAT C.	INTRODUCT.		DOWNES D. +	1966D2		DR
CHAVIRA E.	195711 B	TON	+DOXSEY R.	IV.2		IS
CHAVIRA E.	1958C1	TONS	+DOXSEY R.E.	1978R1		MR
+CHAVIRA E.	1953H4	H3-,HARO 6-	DRAKE F.D.	1959D2		D
+CHAVIRA E.	195611	IR-CH	+DRAKE F.D.	1964P1		PD
+CHAVIRA E.	195711 A	TON	DREYER J.L.E.	1888D1		NGC
+CHINCARINI G. +	1971C1	CR	DREYER J.L.E.	1895D1	A	IC
+CHOPINET M.	1982AC	FC	DREYER J.L.E.	1895D1	B	IC
+CHRISTIE W.H.M.	1905D1	GROOMBRIDGE	BRILLING J.S.	1977D2		DRIL
+CHURCHWELL E.	1978C1 B	TAU MC	DUBOUT-CRILLON R.	1976D2		DU
CHURCHWELL E. +	1978C1 A	TAU MC	+DUERR R.E.	1979C1		RSO1
CLARK D.H. +	1976CC		+DUFLLOT M.	1970F1	A	G,P,S
+CLARKE G.W.	IV.2	1M	+DUFLLOT M.	1970F1	B	G,P
+CLARKE G.W.	IV.2	1S	+DUFLLOT M.	1976F1		FD
+CLARKE G.W.	1978R1	MR	DURDIN J.M. +	1975D2		NAIC
CLARKE J.N. +	1976C1	MC4	DUUS A. +	1977D1		STR
COHEN M.	1980C1	RNO	+DYATCHKOV A.V.	IV.1		GAMMA-RAY BURST
+COHEN M.	1978CC		DYSON F.W. +	1905D1		GROOMBRIDGE
COHEN M. +	1976C2	MC	+DZIMSELEJSVILI G.N.	1966D1		DOLIDZE-DZIMSELEJSVILI
COHEN M. +	1980C2	C-S	EDGE D.O. +	1959E1		3C
COLLA G. +	1970C1 A	B2.1	+EFREMOV YU.N.	1951KP	A	CSV
COLLA G. +	1970C1 B	B2.2	+EFREMOV YU.N.	1951KP	B	CSV
COLLA G. +	1970C1 C	B2.3	+EFREMOV YU.N.	1969KP	A	V
COLLINDER P.	1931C1	COLLINDER	+EFREMOV YU.N.	1969KP	B	V
COLLINS M.	INTRODUCT.		+EFREMOV YU.N.	1969KP	C	V
+COMINSKY L.	IV.2	4U	EGGEN O.J.	1976E1		EGM
+CONDON J.J.	1975D2	NAIC	EGGEN O.J. +	1961E1		ES
+CONTI P.S.	1981VH	WR	EGGEN O.J. +	1965E1	A	EG
COOKE B.A. +	IV.2	2A	EGGEN O.J. +	1965E1	B	EG
+CORBALLY C.,S.J.	1974C1 B	VES	EGGEN O.J. +	1965E1	C	EG
+CORWIN H.G.JR	1976D3		+EGRET D.	1973JU	B	
+COSTERO R.	1974C2	CGO	EHMAN J.R. +	1967S1		OB TO OZ
COURTES G.	1951C1	COU	EICHHORN H.	1974EC		
COUSINS A.W.J. +	1962C1	E	+EICHHORN H.	1969S1		SEG
COX A.N.	1955C1	COX	+EICHHORN H.	1973C1	A	GAT
+COYNE G.V.,S.J.	1974C1 C	VES	EKERS J.A.	1969E1	A	PKS
+COYNE G.V.,S.J.	1974C1 D	VES	EKERS R.D.	1973E2		RDE
COYNE G.V.,S.J. +	1974C1 A	VES	ELIAS J.H.	1978E1		ELIAS

+ELIAS J.H.	1974G3 C	ORI MC	+FRINGANT A.-M.	1977BF A	PB
+ELLIOTT K.H.	1976D1	DEM L,DEM S	+FRINGANT A.-M.	1977BF B	PB
+ELMEGREEN B.G.	1979S1	GF	+FRINGANT A.-M.	1977BF C	PB
+ELMEGREEN D.M.	1980E1	BIRS	+FRITZ G.	1973B2 C	LOOP
+ELSASSER E.	1976W1	CALAR ALTO	+FROLOV M.S.	1969KP A	V
+ELSMORE B.	1950R1	1C	+FROLOV M.S.	1969KP B	V
+ELSMORE B.	1955S1	2C	+FROLOV M.S.	1969KP C	V
+ELSMORE B.	1963L2	LHE	FROLOV V.N.	1977F3	FROLOV
+ELVEY C.T.	1939S1 A	MCD	+FUKUDA I.	1970U1	UESUGI
+ELVEY C.T.	1939S1 B	MCD	FURNISS I. +	1972F1	FJM
+ELVEY C.T.	1939S1 C	MCD	FURNISS I. +	1973E1 B	UCL
+ELVIS M.	IV.2	2A	GAHM G.F. +	1975V1 B	VDBH
ELVIUS A.	1975E1	AE	GAHM G.F. +	1975V1 C	VDBH
ELVIUS T.	1951E1	SSC	GALT J.A. +	1968C2	DA
EMERSON J.P. +	1973E1 A	UCL	+GANDOLFI E.	1970B3	AB,B
+EMERY R.J.	1971H1	HFE	+GANDOLFI E.	1970C1 A	B2.1
ENGELS D.	1979EN		+GANDOLFI E.	1970C1 B	B2.2
+EPCHEIN N.	1983BE		+GANDOLFI E.	1970C1 C	B2.3
+EPPS E.A.	1970W3	WOOLLEY	+CARMIRE G.P.	IV.2	H
+EPPS H.W.	1974B1	BE -	GARRISON R.F. +	1977C1	KS
ERCOLIANI ABATI L.	1968B1 B	A1	+GATEWOOD C.V.	1973C1 E	GAT
+ERCOLIANI L.	1968B1 A	A1	+GATEWOOD G.	1969S1	SEG
+ERICKSON W.C.	1975V3	CL	+GATEWOOD G.	1973C1 C	GAT
+FABBIANO G.	IV.2	1E	+GATEWOOD G.	1973G1 D	GAT
FAIRALL A.P.	1977F1 A	FAIRALL	+GATEWOOD G.	1973C1 C	GAT
FAIRALL A.P.	1977F1 B	FAIRALL	GATEWOOD G. +	1973C1 A	GAT
FAIRALL A.P.	1977F1 C	FAIRALL	GATEWOOD G. +	1973C1 B	GAT
FAIRALL A.P.	1977F1 D	FAIRALL	+GATEWOOD G.D.	1973C1 F	GAT
+FALGARONE E.	IV.2	ROX	GATEWOOD G.D. +	1973C1 E	GAT
+FANTI C.	1970C1 A	B2.1	GATLEY I. +	1974G3 A	ORI MC
+FANTI C.	1970C1 B	B2.2	+GAZE V.F.	1950S1 A	SIMEIS
+FANTI C.	1970C1 C	B2.3	GAZE V.F. +	1950S1 B	SIMEIS
+FANTI C.	1977F2	BGE	GAZE V.F. +	1950S1 C	SIMEIS
FANTI C. +	1970C1 D	B2.4	GAZE V.F. +	1950S1 D	SIMEIS
FANTI C. +	1974F1 A	BC	GAZE V.F. +	1950S1 E	SIMEIS
FANTI C. +	1974F1 B	BC	GAZE V.F. +	1955C1	CS,SIMEIS
+FANTI R.	1965B1	B1,B1S	+GEARHART M.R.	1967S1	OB TO OZ
+FANTI R.	1970C1 A	B2.1	+GELATO G.	1965B1	B1,B1S
+FANTI R.	1970C1 B	B2.2	+GELATO-VOLDERS L.	1965D1	DCVW
+FANTI R.	1970C1 C	B2.3	+GELLER M.J.	1982H1	CNO
+FANTI R.	1970C1 D	B2.4	GERBALDI M. +	1982CF	
FAZIO G.G. +	IV.1	COWAN	+GESLER C.	1934S1 A	YZ
FEAST M.W. +	1960F1	R	GEZARI D. +	1982CE A	
+FEDOROVICH V.P.	1969KP A	V	+GEZARI D.Y.	1974C3 C	ORI MC
+FEDOROVICH V.P.	1969KP B	V	GEZARI D.Y. +	1982CE B	
+FEDOROVICH V.P.	1969KP C	V	+GHIGO F.D.	1973D1 A	UT
FEHRENBACH C. +	1970F1 A	G,P,S	GHIGO F.D. +	1973D1 B	UT
FEHRENBACH C. +	1970F1 B	G,P	+GIACCONI R.	IV.2	1E
FEHRENBACH CH. +	1976F1	FD	+GIACCONI R.	IV.2	4U
FEICE J.	1958F1	FEICE	GIACCONI R. +	IV.2	1 ASE
FEINSTEIN A.	1964F1	FEINSTEIN	GIACCONI R. +	IV.2	1E
+FEINSTEIN A.	1980V1	VRMF	GIACCONI R. +	IV.2	2 ASE
FEINSTEIN A. +	1971F1	FM,FMH	GIACCONI R. +	IV.2	2U
FEINSTEIN A. +	1974F2	FF	GIACCONI R. +	IV.2	3U
FEJES I. +	1973B2 B	LOOP	+GIBSON J.	1973C1	Y-C
+FELLI M.	1974F1 A	BC	+GIBSON J.B.	1972Z1	ZNG
FELLI M. +	1977F2	BCE	GICLAS H.L. +	1962C1	HC
+FENIMORE E.E.	IV.1	CB	GICLAS H.L. +	1971C1 A	GICLAS
+FENKART R.	1971B1	BASEL	GICLAS H.L. +	1971C1 B	GICLAS=C
+FERGUSON D.	1976G2 C		GICLAS H.L. +	1971C1 C	GICLAS=C
FERNANDEZ A. +	1982FM		GICLAS H.L. +	1980C1	GD,GR-
+FICARRA A.	1970C1 A	B2.1	GILL D.	1896C1 D	CPD
+FICARRA A.	1970C1 B	B2.2	GILL D. +	1896C1 A	CPD
+FICARRA A.	1970C1 C	B2.3	GILL D. +	1896C1 B	CPD
+FICARRA A.	1970C1 D	B2.4	GILL D. +	1896C1 C	CPD
+FICARRA A.	1974F1 A	BC	GILLESPIE A.R.	1974C1	ARG
+FICH M.	1979M2 B	WAT	+GILMORE G.	1981R1 A	RC
+FICH M.	1982B1	BFS	GILMORE G. +	1981R1 B	RC
+FICHEL C.E.	IV.1	GEMINCA	+GINDILIS L.M.	1969A1	CRI
FINLAY E.A. +	1973F1	FJ	GINGRICH C.H.	1922C1	GINGRICH
+FISHER R.O.	1964K1 D	OA	+GIOIA I.	1970C1 C	B2.3
FITCH L.T. +	1967S1	OB TO OZ	GIOVANELLI R.	1975H1 B	GIOVANELLI,BVC
FITZGERALD M.P.	1974F3	CDN	GIOVANELLI R. +	1968H1 B	A,AC,C,M
+FITZGERALD M.P.	1964B1	BL FC	+GIOVANNINI C.	1965B1	B1,B1S
+FITZGERALD M.P.	1968B3	USN	+GLEIZES F.	1982AC	FC
+FITZGERALD M.P.	1979M2 A	WAT	GLIESE W.	1969C1 A	GLIESE
FITZGERALD M.P. +	1975M1 D	BOCHUM	+GLIESE W.	1963F1	FK4
FITZGERALD M.P. +	1979M2 B	WAT	GLIESE W. +	1969C1 B	GJ
FITZGERALD M.P. +	1979M2 C	WAT	+GLUSHKOV YU.I.	1978G2	GCD
+FITZPATRICK E.	1978C1 B	TAU MC	+GOEBEL J.H.	1974F4	WU
+FLETCHER J.M.	1978BF	BATTEN	+GOLENETSKII S.V.	IV.1	GAMMA-RAY BURST
+FLOQUET M.	1974BF		+GOLENETSKII S.V.	IV.2	FXP
+FLOQUET M.	1982GF		+GOLUB L.	IV.2	1E
+FOMALONT E.B.	1971D1 B	GC	GOMEZ T. +	1976C1	GM
FOMALONT E.B. +	1966F1	FR	+CONDOLATSCH F.	1963F1	FK4
+FORMAN W.	IV.2	1E	GONZALEZ GR. +	1954C1 A	G-C
FORMAN W. +	IV.2	4U	GONZALEZ GR. +	1954C1 B	G-C
+FORMIGGINI L.	1970B3	AB,B	GONZALEZ GR. +	1956C1	G-C
+FORMIGGINI L.	1970C1 A	B2.1	+GONZALEZ GU.	1954C1 A	G-C
+FORMIGGINI L.	1970C1 B	B2.2	+GONZALEZ GU.	1954C1 B	G-C
+FORMIGGINI L.	1970C1 C	B2.3	+GONZALEZ GU.	1956G1	G-C
+FORTE J.C.	1974F2	FF	+CORE G.D.	1947L1 C	DO
FOSTER P.R.R.	1961F1	PRF	+GORENSTEIN P.	IV.2	1E
+FRASER G.W.	IV.2	3A	+GORSHKOV A.G.	1969A1	CRI
+FREDERICK C.L.	1971H1	HFE	+GORSHKOV A.G.	1971L1	SIMEIS
FRICKE W. +	1963F1	FK4	+GORSHKOV A.G.	1981A1	Z
FRIEDLANDER M.W. +	1974F4	WU	+GOTT J.R. III	1976T1	TG,Z
+FRIEDMAN H.	1973B2 C	LOOP	GOWER J.F.R. +	1967G1	4C2

GOY C.	1980CY	GOY	HEILES C.	1968H2	CLOUD
+GRAHAM D.A.	1973K2	CL	HEILES C.	1973H2	CLOUD
+GRASDALEN G.L.	1974H2 B	HH-	HEILES C.	1979H1	GS
+GRASDALEN G.L.	1975V4	GRASDALEN, VS	+HEINSHEIMER T.F.	1978S1	EIC
GRAYZEK E.J.	1978G1	VSF	+HELMKEN H.F.	IV.1	COWAN
+GREEBY F.M.	1963JV	IDS	HENIZE K.G.	1956H2	LH(ALP) 115-N AND S
+GREEN J.A.	1976G2 E		HENIZE K.G.	1956H2	LH(ALP) 115-N AND S
GREEN R.F.	1976G2 B	PG	HENIZE K.G.	1976H2	HE3
GREEN R.F. +	1976G2 A	PG	HENIZE K.G. +	1973H3	HM
GREEN R.F. +	1976G2 C		+HENRY J.P.	IV.2	1E
GREEN R.F. +	1976G2 D		HERBIG C.H.	1954H1 A	LKH
GREEN R.F. +	1976G2 E		HERBIG C.H.	1954H1 B	LKH
GREENSTEIN J.L.	1965E1 D	EG	HERBIG C.H.	1954H1 C	LKH
GREENSTEIN J.L.	1970G1 A	GR	HERBIG C.H.	1954H1 D	LKH
GREENSTEIN J.L.	1970G1 B	GR	HERBIG C.H.	1954H1 E	LKH
GREENSTEIN J.L.	1970G1 C	GR	HERBIG C.H.	1954H1 F	HERBIG, LKH
GREENSTEIN J.L.	1970G1 D	GR	HERBIG C.H.	1954H1 G	LKH
GREENSTEIN J.L.	1970G1 F	GR	HERBIG C.H.	1954H1 H	LKH
GREENSTEIN J.L.	1970G1 G	GR	HERBIG C.H.	1954H1 K	LKH
+GREENSTEIN J.L.	1965E1 A	EG	HERBIG C.H.	1954H1 P	LKH
+GREENSTEIN J.L.	1965E1 B	EG	HERBIG C.H.	1974H2 A	HH-
+GREENSTEIN J.L.	1965E1 C	EG	+HERBIG C.H.	1954H1 Q	LKH
+GREENSTEIN J.L.	1976G2 A	PG	HERBIG C.H. +	1954H1 M	LKH
GREENSTEIN J.L. +	1970G1 E	GR	HERBIG C.H. +	1954H1 O	LKH, HRC
GREENSTEIN J.L. +	1974G2	FB	HERBIG C.H. +	1972HR	LKH, HRC
GREGORY P.C. +	1981G1	CT	+HERBST W.	1975V1 A	VDBH
+GREGORY S.A.	1973T1	CT	+HERMSEN W.	IV.1	2CC
+GRIESS T.D.	1968G1 C	VVO	+HERZOG E.	1960Z1 A	ZW, Z
+GRIFFITHS R.E.	IV.2	2A	+HERZOG E.	1960Z1 B	ZW, Z
+GRINDLAY J.E.	IV.2	ROX	+HERZOG E.	1960Z1 C	ZW, Z
+GROSSENACHER R.	1968G1 B	VVO	+HERZOG E.	1960Z1 D	ZW, Z
+GROSSENACHER R.	1968G1 C	VVO	HEWITT A. +	1980HB	QSO
+GROSSENACHER R.	1968G1 D	VVO	+HIGGINS C.S.	1973S1 A	CUL
GROSSENACHER R. +	1968G1 A	VVO	+HIGGINS C.S.	1973S1 B	CUL
+GRUEFF G.	1970C1 A	B2.1	HIGGS L.A.	1966H1	HIC
+GRUEFF G.	1982B2	5C1 TO 5C17	+HIGGS L.A.	1965R1	NRC
+GRUEFF G.	1982B2	5C12.	HIGGS L.A. +	1964H1	HBMR
GRUEFF G. +	1968G3	CV	+HILL E.R.	1958M1 A	MSH
GUIDA P.	1975G1	PG	+HILL E.R.	1958M1 B	MSH
+GULKIS S.	1967H1 A	AO	+HILL E.R.	1958M1 C	MSH
+GULKIS S.	1967H1 B	AO	HILTNER W.A.	1956H3	HILTNER
+GULKIS S.	1967H1 D	AO	+HILTNER W.A.	1959B1	BHJ
GULKIS S. +	1967H1 C	AO	+HILTNER W.A.	1977C1	KS
GUM C.S.	1955G2	GUM	+HJELLMING R.M.	1978R1	MR
+GUNTHER A.	1975H2	ACK3	HOAG A.A. +	1977H2	HS
+GURSKY H.	IV.2	2U	HODGE P. +	1982WC	
+GURSKY H.	IV.2	3U	+HODGE P.W.	1970L1	LH
+CURTLER J.	1963V1	DG-	HODGE P.W. +	1966H2	HS
+CURYAN YU.A.	IV.1	GAMMA-RAY BURST	HODGE P.W. +	1974H3	HW
+CURYAN YU.A.	IV.2	FXP	HOFFLEIT D.	1953H5	HF, HF2-, HOFFLEIT
+GUSEINOV O.H.	IV.2	AN 1 XRS	HOFFLEIT D.	1964HF A	BS
+GUSEINOV O.H.	IV.2	AN 1 XRS	HOFFLEIT D.	1964HF B	BS
+GUSEINOV O.H.	1982AM	2XRS	HOFFLEIT D. +	1982HJ	BS=HR
GYUL'BUDACYAN A.L.	1982G1	GYUL'BUDACYAN	HOFFMANN W.F. +	1971H1	HFE
GYULBUDACHIAN A.L. +	1978G2	CGD	HOC E. +	1976H3	SRS
HADDOCK F.T. +	1954H2	H	HOGG A.R.	1963H1	HOGG
HAFFNER H.	1957H1	HAFFNER	HOGUND B.	1967H2	NRAO
+HAGEN G.L.	1975V2	VAN DEN BERGH-HAGEN	HOLDEN D.J. +	1969H1	HC
HAGEN I.G. +	1899H1	ASV	HOLDEN F.	1974H4	HLN
HAGCKVIST L. +	1973H1	H.O.	HOLMBERG E.	1950H1	HOLMBERG
+HAISCH B.M.	IV.2	1E	+HOLMBERG E.B.	1974H1 H	ESO
+HAMLIN D.W.	1940L1 A	LEE	+HOLMBERG E.B.	1974H1 I	ESO
+HAMLIN D.W.	1947L1 A	DC, DO	HOLMBERG E.B. +	1974H1 A	ESO
HANBURY BROWN R. +	1953H1	HBH	HOLMBERG E.B. +	1974H1 B	ESO
+HARA H.	1958Y1	MZC 2(ALP)	HOLMBERG E.B. +	1974H1 C	ESO
+HARAMUNDANIS K.L.	1973D3	CEL	HOLMBERG E.B. +	1974H1 D	ESO
+HARDING P.	1978R	I SZ, II SZ	HOLMBERG E.B. +	1974H1 E	ESO
+HARDING P.	1978R2	I SZ, II SZ	HOLMBERG E.B. +	1974H1 F	ESO
HARDORP J. +	1959H1 A	LS	HOLMBERG E.B. +	1974H1 G	ESO
HARDORP J. +	1959H1 C	LS	+HOLT S.S.	IV.2	H
HARDORP J. +	1959H1 E	LS	+HOLT S.S.	IV.2	OS
+HARNDEN F.R. JR.	IV.2	1E	+HORN V.M.	1979C1	RSO1
HARO G.	1949H1	HARO 1-	HOSKINS D.C. +	1970H1	MLO
HARO G.	1953H2	HARO 4-	HOWARD W.E. III +	1965H2	HM
HARO G.	1956H4	HARO	HUCHRA J.P. +	1982H1	CNO
HARO G. +	1953H3	HARO 5-	HUGHES E.E.	1966U1	CIT
HARO G. +	1953H4	H3-, HARO 6-	HUGHES V.A. +	1969H2	HR
HARO G. +	1962H1	PHL	HULSBOSCH A.N.M.	1968H1 A	A, AC, B, M, SP
+HARRIS D.	1965B1	B1, B1S	HULSBOSCH A.N.M.	1975H1 A	HVC, IVC
HARRIS D.E. +	1960H1	CTA	+HUMASON M.L.	1925M1 A	MW
+HARTMAN R.C.	IV.1	GEMINGA	+HUMASON M.L.	1925M1 B	MW
+HASELER J.B.	1963L2	LHE	HUMASON M.L. +	1947H1	HZ
+HASLAM C.G.T.	1961L1	LMH	HUMASON M.L. +	1956H1 A	HMS
+HASLAM C.G.T.	1973K2	CL	+HURKENS R.	1975M1 D	BOCHUM
HAVLEN R.J. +	1977H1	HAVLEN-MOFFAT	+IBANEZ M.	1976S7	STO
HAWARDEN T.C. +	1976H1 A	CG	+ILYINSKII V.N.	IV.1	GAMMA-RAY BURST
HAYAKAWA S.	IV.2		+ILYINSKII V.N.	IV.2	FXP
+HAZARD C.	1953H1	HBH	+IMHOFF C.L.	1979C1	RSO1
+HAZARD C.	1967H1 C	AO	+IRIARTE B.	1953H4	H3-, HARO 6-
+HAZARD C.	1967H1 D	AO	IRIARTE B. +	1956H1	IR-CH
+HAZARD C.	1975D2	NAIC	IRIARTE B. +	1957H1 A	TON
HAZARD C. +	1967H1 A	AO	ISKUDARIAN S.G. +	1961H1	ISKUDARIAN
HAZARD C. +	1967H1 B	AO	+ISRAEL F.P.	1983B1	36W
+HEALEY J.R.	1962M1	MHR	ISSERSTEDT J.	1968H1 A	SR
+HEARN D.R.	IV.2	1M	+IVANOV V.N.	1969A1	CRI
+HEARN D.R.	IV.2	1S	+JACKSON J.	1939S2	CF
HECKMANN O. +	1975H2	ACK3	+JACKSON P.D.	1979M2 A	WAT
+HEESCHEN D.S.	1966P1	NRAO	+JAHREISS H.	1969C1 B	GJ

JAIDEE S. +	1969J1	JL	KOCH R.H. +	1974K1	KOCH
+JANSSEN E.M.	1943V1 B	MCC	+KOCH-MIRAMOND L.	IV.2	ROX
+JASCHEK C.	1982HJ	BS=HR	KOELBLOED D.	1959K1	KO
+JAUNCEY D.L.	1975D2	NAIC	KOHOUTEK L.	1967PK C	PK
JEFFERS H.M. +	1963JV	IDS	KOHOUTEK L.	1967PK H	PK
JENKINS L.F.	1952J1 A	JENKINS	KOHOUTEK L.	1969K1 A	K3-, K4-, KOHOUTEK
JENKINS L.F.	1952J1 B	JENKINS	KOHOUTEK L.	1969K1 B	K3-, K4-, KOHOUTEK
+JENNINGS R.E.	1972F1	FJM	+KOHOUTEK L.	1967PK A	PK
+JENNINGS R.E.	1973E1 A	UCL	KOMESAROFF M.M.	1966K1	KOM
+JENNINGS R.E.	1973E1 B	UCL	+KONDO M.	1980N1 A	KUV
+JENSEN K.A.	IV.2	H	+KONNIKOVA V.K.	1969A1	CRI
+JERNIGAN J.G.	IV.2	1S	+KONNIKOVA V.K.	1981A1	Z
+JERNIGAN J.G.	1978R1	MR	+KOPFF A.	1963F1	FK4
+JEWBURY C.P.	1973T2	T	+KOWAL C.	1981K1	POX
+JOHNSON H.L.	1959B1	BHJ	+KOWAL C.T.	1960Z1 E	ZW, Z
JOHNSON H.M.	1955J1 A	J1-, YM	+KOWAL C.T.	1960Z1 F	ZW, Z
JOHNSON H.M.	1955J1 B	J2-, YM	+KOWAL C.T.	1971Z1 B	VIII ZW
+JOHNSON H.M.	IV.2	1E	+KOWAL C.T.	1974SS	SN
+JONES B.B.	1973F1	FJ	+KOX H.	1975H2	AGK3
+JONES C.	IV.2	1E	+KRASNOCORSKAYA A.A.	1962V1 A	MCG
+JONES C.	IV.2	4U	KRAUS J.D.	1964K1 A	OA
+JOSEPH R.D.	1974F4	WU	+KRAUS J.D.	1964K1 B	OA
+JOSHI M.N.	1971S1 A	OTL	+KRAUS J.D.	1970M1	OBH TO OZH, OBM TO OZM
+JOSHI M.N.	1971S1 B	OTL	KRAUS J.D. +	1964K1 D	OA
+JOSS P.C.	IV.2	MXB	KRAUS J.D. +	1967S1	OB TO OZ
+JOSS P.C.	IV.2	1S	+KRISHNA G.	1971S1 A	OTL
+JULIEN P.	IV.2	4U	KRON G.E.	1956K1	KRON
JUNG J. +	1973JU		KRZEMINSKI W. +	1967K1	KS
+KAFTAN-KASSIM M.A.	1974S2	SKK	+KUHI L.V.	1954H1 M	LKH
+KANBACH G.	IV.1	2CG	+KUHI L.V.	1976C2	MC
+KANDASWAMY J.	1971S1 B	OTL	KUKARKIN B.V. +	1951KP A	CSV
KAP-HERR A.V. +	1972K1	KW	KUKARKIN B.V. +	1951KP B	CSV
+KAPAH1 V.K.	1971S1 A	OTL	KUKARKIN B.V. +	1969KP A	V
KAPAH1 V.K. +	1971S1 B	OTL	KUKARKIN B.V. +	1969KP B	V
+KAPTEYN J.C.	1896G1 A	CPD	KUKARKIN B.V. +	1969KP C	V
+KAPTEYN J.C.	1896G1 B	CPD	+KUKARKINA N.P.	1969KP A	V
+KAPTEYN J.C.	1896G1 C	CPD	+KUKARKINA N.P.	1969KP B	V
+KAPTEYN J.C.	1918P1 A	SA	+KUKARKINA N.P.	1969KP C	V
+KAPTEYN J.C.	1918P1 B	SA	KUMKOVA I.I. +	IV.2	FXP
+KAPTEYN J.C.	1918P1 C	SA	KUNTH D. +	1981K1	POX
+KAPTEYN J.C.	1930S1	MT. W.	+KURCHAKOV A.V.	1968R1	RK
+KAPUSTKIN A.A.	1981A1	Z	+KURILCHIK V.N.	1969A1	CRI
KARACHENTSEV I.D.	1972K2	KARACHENTSEV	+KUROCHKIN N.E.	1951KP B	CSV
+KARPOWICZ M.	1960Z1 E	ZW, Z	+KUROCHKIN N.E.	1969KP A	V
KATGERT J.K.	1973K1 E	WSRT	+KUROCHKIN N.E.	1969KP B	V
KATGERT J.K. +	1973K1 B	WSRT	+KUROCHKIN N.E.	1969KP C	V
KATGERT P.	1973K1 C	WSRT	+KUS A.J.	1978P2	5C6., 5C7.
KATGERT P. +	1973K1 A	WSRT	KUZ' MIN A.D. +	1960K2	KLNS
+KATGERT-MERKELIJN J.K.	1973K1 A	WSRT	+LA PADULA C.D.	IV.2	HXR
KAWAJIRI N.	1970K1	NK	LACORCE A.	INTRODUCT.	
+KAYSER S.	1975M4	MKW	+LAHMEK R.	INTRODUCT.	
+KAZARIAN E.S.	1979K1 C	KAZARIAN	+LAIRD F.N.	IV.2	1M
+KAZARIAN E.S.	1979K1 D	KAZARIAN	LALOE S.	INTRODUCT.	
KAZARIAN M.A.	1979K1 A	KAZARIAN	+LAMB R.C.	IV.1	GEMINGA
KAZARIAN M.A.	1979K1 B	KAZARIAN	LANC K.R. +	1967H1 D	AO
KAZARIAN M.A. +	1979K1 C	KAZARIAN	LANNING H.H.	1973L1	LANNING
KAZARIAN M.A. +	1979K1 D	KAZARIAN	+LARGE M.I.	1966Q1	QL
KEEN N.J. +	1973K2	CL	LARGE M.I. +	1961L1	LMH
+KELLERMANN K.I.	1971D1 B	GC	+LARI C.	1970C1 A	B2.1
+KELLERMANN K.I.	1971D1 C	GC	+LARI C.	1970C1 B	B2.2
KELLERMANN K.I. +	1965K1	CTD	+LARI C.	1970C1 C	B2.3
+KELLOGG E.	IV.2	1E	LARIONOV A.G. +	1971L1	SIMEIS
+KELLOGG E.	IV.2	2U	+LARIONOV B.C.	1969A1	CRI
+KELLOGG E.	IV.2	3U	+LARIONOV M.G.	1981A1	Z
+KENDERDINE S.	1966W1	WKB	LAUBERTS A.	1976L1	E
+KENDERDINE S.	1968P2	5C2.	LAUBERTS A.	1982LA	ESO
+KENDERDINE S.	1969W1	WK	+LAUBERTS A.	1974H1 A	ESO
KENDERDINE S. +	1966K2	5C1.	+LAUBERTS A.	1974H1 B	ESO
+KENNEDY J.E.D.	1968G2	DA	+LAUBERTS A.	1974H1 C	ESO
+KERRIDGE S.J.	1968G1 C	VVO	+LAUBERTS A.	1974H1 D	ESO
KERRIDGE S.J. +	1968G1 D	VVO	+LAUBERTS A.	1974H1 E	ESO
KESTEVEN M.J.L.	1968K1	KES	+LAUBERTS A.	1974H1 F	ESO
KESTEVEN M.J.L. +	INTRODUCT.		+LAUBERTS A.	1974H1 G	ESO
+KHARITONOVA T.V.	IV.1	GAMMA-RAY BURST	LAUBERTS A. +	1974H1 H	ESO
+KHAVENSON N.G.	IV.1	GAMMA-RAY BURST	LAUBERTS A. +	1974H1 I	ESO
KHAVTASI D. SH.	1955K1	KH	LAUSTSEN S. +	1977L1	LRLWW
KHAVTASI D. SH.	1960K1	KH	+LAWRENCE A.	IV.2	3A
KHOLOPOV P.N.	1982KH	NSV	+LAWRENCE A.	IV.2	3A
+KHOLOPOV P.N.	1951KP A	CSV	+LAWRENCE A.	IV.2	3A
+KHOLOPOV P.N.	1951KP B	CSV	+LAZUTKIN A.N.	1981A1	Z
+KHOLOPOV P.N.	1969KP A	V	+LE POOLE R.S.	1973K1 A	WSRT
+KHOLOPOV P.N.	1969KP B	V	+LEDERLE T.	1963F1	FK4
+KHOLOPOV P.N.	1969KP C	V	LEE O.J. +	1940L1 A	LEE
+KHROMOV O.I.	1981A1	Z	LEE O.J. +	1940L1 B	LEE
KING I.	1949K1	KING	LEE O.J. +	1940L1 C	LEE
+KINNAIRD R.F.	1940L1 A	LEE	LEE O.J. +	1947L1 A	DC, DO
+KIRCHNER S.	INTRODUCT.		LEE O.J. +	1947L1 B	DO
KLARE G. +	1965K2	H-K	LEE O.J. +	1947L1 C	DO
KLARE C. +	1966K3	KS	+LEE T.A.	1974C1 A	VES
+KLEBESADEL R.W.	IV.1	EVENT	+LEIGHTON R.B.	1965N1	NML
+KLEBESADEL R.W.	IV.1	GB	+LEIGHTON R.B.	1966U1	CIT
KLEIN-WASSINK W.J.	1927K1	KW	+LEIGHTON R.B.	1969N1	IRC
+KLEINMANN D.E.	1973R2	IRC, IRE	+LENHAM A.	1958S1	STRAND
KLEINMANN D.E. +	1967K2	KL	+LESH J.R.	1978S1	EIC
KLEMOLA A.R.	1962K1	KLEMOLA	+LEVCHENKO M.T.	1960K2	KLNS
KLEMOLA A.R.	1969K2	KLEM	+LEWIN W.H.G.	IV.2	1M
+KNIFFEN D.A.	IV.1	GEMINGA	LEWIN W.H.G. +	IV.2	MXB
+KOCH D.	IV.2	3U	+LEWIS D.W.	1977M1 A	UM

+LEWIS D.W.	1977M1 B	UM	MACLEOD J.M. +	1965M1 A	VRO
+LEWIS D.W.	1977M1 C	UM	+MACQUET M.	1975A1 A	AZV
+LEWIS D.W.	1977M1 D	UM	MACRAE D.A.	1952M1	MACRAE
+LI F.K.	IV.2	1M	MADORE B.F. +	1979M1 A	AM-
+LICHTI G.G.	IV.1	2CG	MADORE B.F. +	1979M1 B	AM-
+LIEBERT J.	1976G2 C		+MAEHARA H.	1980N1 A	KUV
+LIEBERT J.	1976G2 E		+MAEHARA H.	1980N1 B	KUV
LIEBERT J. +	1977MS B	WD	MAFFEI P.	1968M2	MAFFEI
LILLER W.	1977L2	LILLER	MAFFEI P.	1975M3	M
+LILLER W.	IV.2	1E	+MALMORT A.M.	1975V1 B	VDBH
+LIM H.-K.	1964T1	TH(ALP)23-	+MALMORT A.M.	1975V1 C	VDBH
+LINDROOS K.P.	1976S1 A	SL	MANCHESTER R.N. +	1976TD B	PSR
LINDSAY E.M.	1958L1	LINDSAY	+MANN P.J.	1978BF	BATTEN
LINDSAY E.M.	1961L2	LIN	MANOVA G.A.	1959M1	MANOVA
LINDSAY E.M.	1963L1	L-	+MANTOVANI F.	1974F1 B	BC
+LINDSAY E.M.	1963S1	SL	+MARAN S.P.	1965H2	HM
+LINDSAY E.M.	1964A1	AL-	+MARAN S.P.	1978S1	EIC
+LINKE W.	1939S1 C	MCD	+MARANO B.	1970C1 B	B2.2
+LINSKY J.L.	IV.2	1E	+MARANO B.	1970C1 C	B2.3
+LIPOVETSKIJ V.A.	1967M1 D	MARKARIAN	+MARCOUT J.	1967PK B	PK
+LIPOVETSKIJ V.A.	1967M1 E	MARKARIAN	+MARCOUT J.	1967PK D	PK
+LIPOVETSKIJ V.A.	1967M1 F	MARKARIAN	+MARCOUT J.	1967PK F	PK
+LIPOVETSKIJ V.A.	1967M1 G	MARKARIAN	+MARCOUT J.	1982AC	FC
+LIPOVETSKIJ V.A.	1967M1 H	MARKARIAN	MARKARIAN B.E.	1951M1	MARKARIAN
+LIPOVETSKIJ V.A.	1967M1 I	MARKARIAN	MARKARIAN B.E.	1967M1 A	MARKARIAN
+LIPOVETSKIJ V.A.	1967M1 J	MARKARIAN	MARKARIAN B.E.	1967M1 B	MARKARIAN
+LIPOVETSKIJ V.A.	1967M1 K	MARKARIAN	MARKARIAN B.E.	1967M1 C	MARKARIAN
+LIPOVETSKIJ V.A.	1967M1 L	MARKARIAN	MARKARIAN B.E. +	1961M2	M + O
+LIPOVETSKIJ V.A.	1967M1 M	MARKARIAN	MARKARIAN B.E. +	1967M1 D	MARKARIAN
+LIPOVETSKIJ V.A.	1967M1 N	MARKARIAN	MARKARIAN B.E. +	1967M1 E	MARKARIAN
+LIPOVETSKIJ V.A.	1967M1 O	MARKARIAN	MARKARIAN B.E. +	1967M1 F	MARKARIAN
+LIPOVETSKIJ V.A.	1980M1	BSS	MARKARIAN B.E. +	1967M1 G	MARKARIAN
+LITTLE A.G.	1973D2	MC1	MARKARIAN B.E. +	1967M1 H	MARKARIAN
+LITTLE A.G.	1974S4	MC2, MC3	MARKARIAN B.E. +	1967M1 I	MARKARIAN
+LITTLE A.G.	1976C1	MC4	MARKARIAN B.E. +	1967M1 J	MARKARIAN
LODEN R.O.	1977L3	LODEN	MARKARIAN B.E. +	1967M1 K	MARKARIAN
LONG R.J. +	1963L2	LHE	MARKARIAN B.E. +	1967M1 L	MARKARIAN
LORTET M.C.	INTRODUCT.		MARKARIAN B.E. +	1967M1 M	MARKARIAN
+LOSEE J.M.	1971R2 A	RL	MARKARIAN B.E. +	1967M1 N	MARKARIAN
LOW F.J.	1973L2	UOA	MARKARIAN B.E. +	1967M1 O	MARKARIAN
+LOW F.J.	1967K2	KL	MARKARIAN B.E. +	1980M1	BSS
+LOW F.J.	1973R2	IRC, IRE	MARKERT T.H. +	IV.2	1M
LOYOLA P.R. +	1974L1	SPF3	+MARRACO H.G.	1971F1	FM, FMH
LU P.K.	1971L2	LU	MARSALKOVA P.	1974MA	MARSALKOVA
LUCKE P.B. +	1970L1	LH	+MARSCHER A.P.	1973VM A	
LUGGER P.M.	1978L1	SC	MARSHALL F.E. +	IV.2	H
+LUIKEN M.	1979M2 B	WAT	+MARSHALL H.	IV.2	1E
+LUNDSTROM I.	1981VH	WR	+MARSHALL N.	IV.2	3A
LUYTEN W.J.	1941L1 A	LDS	MARTIN A.H.M. +	1972M2	MD
LUYTEN W.J.	1941L1 B	LDS	+MARTIN G.E.	1979T1	LGS
LUYTEN W.J.	1941L1 C	LDS	+MARTZ D.E.	1965N1	NML
LUYTEN W.J.	1941L1 D	LDS	MASLOWSKI J.	1971M1 A	GB
LUYTEN W.J.	1941L2	LPM	MASLOWSKI J.	1971M1 B	GB
LUYTEN W.J.	1942L1 A	L	MASLOWSKI J.	1971M1 C	GB
LUYTEN W.J.	1942L1 B	L	+MASNOU J.L.	IV.1	2CG
LUYTEN W.J.	1949L1	L	+MASON K.O.	IV.2	H
LUYTEN W.J.	1953L1	LB	+MATEER B.A.	1943V1 C	MCC
LUYTEN W.J.	1953L2	L-PR	+MATHEWSON D.S.	1961L1	LMH
LUYTEN W.J.	1955L1	LFT	MATHEWSON D.S. +	1962M1	MHR
LUYTEN W.J.	1956L1 A	PRR	MATHEWSON D.S. +	1977M2	MS
LUYTEN W.J.	1956L1 B	PRR	+MATHEZ C.	1982FM	
LUYTEN W.J.	1957L1 A	LTT	+MATILSKY T.	IV.2	3U
LUYTEN W.J.	1957L1 C	LTT	+MATTHEWS K.	1974C3 A	ORI MC
LUYTEN W.J.	1957L1 D	LTT	+MATTSON D.	1981U1 B	US
LUYTEN W.J.	1960L1	R	+MAURICE E.	1972A3 A	ARDEBERG, C
LUYTEN W.J.	1963L3	BPM	+MAURICE E.	1972A3 B	C
LUYTEN W.J.	1963L4	LP	+MAURICE E.	1977A3	ARMA
LUYTEN W.J.	1968L1 A	PSM	+MAXSON C.W.	IV.2	1E
LUYTEN W.J.	1968L1 B	PSM	+MAYALL N.U.	1956H1 A	HMS
LUYTEN W.J.	1969L1 A	LPD	+MAYER C.H.	1954H2	H
LUYTEN W.J.	1969L1 B	LPD	+MAYER W.	IV.2	1S
LUYTEN W.J.	1979LU	LP	+MAYER-HASSELWANDER H.A.	IV.1	2CG
LUYTEN W.J.	1979L1	LHS	MAZETS E.P. +	IV.1	GAMMA-RAY BURST
+LUYTEN W.J.	1962H1	PHL	MAZETS E.P. +	IV.2	FXP
+LUYTEN W.J.	1967Z1	ZL	+MAZURE A.	1982FM	
LUYTEN W.J. +	1956L2	LB, MR	+MCADAM W.B.	1959E1	3C
LUYTEN W.J. +	1957L1 B	LTT	+MCCAMMON D.	1966U1	CIT
LYNDS B.T.	1962L1	LDN	MCCARTHY M.F. +	1968M1	LLP
LYNDS B.T.	1965L1	LBN	MCCARTHY M.F., S.J.	1976M1	CCH(ALP)
LYNGA G.	1964L1	LYNGA	+MCCARTHY M.F., S.J.	1980B1	LMC-BW, LMC-R
LYNGA G.	1965L2	L	+MCCARTHY M.F., S.J.	1980B1	LMC-O
LYNGA G.	1968L2	LY	+MCCARTHY M.F., S.J.	1980B1	SMC-B, SMC-W
LYNGA G.	1979LY A	C	MCCOOK G.P. +	1977MS A	WD
LYNGA G.	1979LY B	C	MCCUSKEY S.W.	1961M1	EM
+LYNGA G.	1969J1	JL	MCCUSKEY S.W. +	1947M2 A	LF
LYNGA G. +	1963L5	LW	MCCEE R.X. +	1972M1 A	MC
+MACALPINE C.M.	1978R1	MR	MCCEE R.X. +	1972M1 B	MC
MACALPINE C.M. +	1977M1 A	UM	+MCHARDY I.M.	IV.2	2A
MACALPINE C.M. +	1977M1 B	UM	MCHARDY I.M. +	IV.2	3A
MACALPINE C.M. +	1977M1 C	UM	MCHARDY I.M. +	IV.2	3A
MACALPINE C.M. +	1977M1 D	UM	+MCVITTIE G.C.	1965M1 B	VRO
+MACCAGARO T.	IV.2	2A	MEABURN J.	1980M2	LMC, SMC
+MACCAGNI D.	IV.2	2A	+MEABURN J.	1976D1	DEM L, DEM S
+MACCLINTOCK J.	IV.2	1S	+MEAD J.	1982GE A	
MACCONNELL D.J.	1968M3	MACC H, MACC SH	+MEAD J.M.	1982GE B	
+MACCONNELL D.J.	1959H1 F	LS	+MEDD W.J.	1964H1	HBMR
+MACGILLIVRAY H.T.	1978B2	BRAID	+MEDD W.J.	1965R1	NRC
MACHALSKI J.	1978M1	GB2	+MEDVEDEVA G.I.	1969KP A	V

+MEDVEDEVA G. I.	1969KP B V	NASSAU J. J. +	1954N1 B CASE
+MEDVEDEVA G. I.	1969KP C V	NASSAU J. J. +	1959H1 D LS
+MEGN A. V.	1978B1 A GR	NASSAU J. J. +	1959H1 F LS
+MEGN A. V.	1978B1 B GR	NASSAU J. J. +	1964N1 NA, NSC
+MELCHIOR P. +	1969M1 ILS	NECKEL TH.	1982NE
+MELNICK J. +	1975M2 CA	+NELSON R. M.	1968C1 B VVO
+MELOTTE P. J.	1915M1 MELOTTE	+NELSON R. M.	1968C1 C VVO
+MENDOZA E. E.	1973H3 HM	+NEUGEBAUER G.	1966U1 CIT
+MENDOZA E. E.	1976G1 GM	+NEUGEBAUER G.	1967B5 BN
+MENG S. Y.	1964K1 B OA	+NEUGEBAUER G. +	1974G3 A ORI MC
+MENG S. Y. +	1970M1 OBH TO OZH, OBM TO OZM	NEUGEBAUER G. +	1965N1 NML
+MERRILL P. W.	1950M1 B AS	NEUGEBAUER G. +	1969N1 IRC
+MERRILL P. W. +	1925M1 A MW	+NEVILLE A. C.	1962R2 RN
+MERRILL P. W. +	1925M1 B MW	+NEWELL E. B.	1972Z1 ZNG
+MERRILL P. W. +	1925M1 C MW	+NEWELLS B.	1977D1 STR
+MERRILL P. W. +	1933M1 A MSB	NICOLSON G. D.	1965N2 GN
+MERRILL P. W. +	1933M1 B MSB	+NIKANOROV A. S.	1981A1 Z
+MERRILL P. W. +	1933M2 A MWC	+NIKITIN V. V.	1969A1 CRI
+MERRILL P. W. +	1933M2 B MWC	NILSON P.	1973N1 UCC
+MERRILL P. W. +	1933M2 C MWC	NOGUCHI T. +	1980N1 A KUV
+MERRILL P. W. +	1950M1 A AS	NOGUCHI T. +	1980N1 B KUV
+MESROBIAN W. S.	1968G1 A VVO	NOONAN T. W.	1956H1 B HMS
+MESROBIAN W. S.	1968G1 C VVO	NORDSTROM B.	1975N1 NS
+MESROBIAN W. S.	1968G1 E VVO	+NOSKOVA R. I.	1960K2 KLNS
+MESROBIAN W. S.	1968G1 H VVO	+NOTTALE L.	1982FM
+MESROBIAN W. S.	1968G1 I VVO	+NOUSEK J. A.	IV. 2 H
+MESROBIAN W. S. +	1968G1 B VVO	+NOWACKI H.	1963F1 FK4
+MESROBIAN W. S. +	1968G1 F VVO	NUGENT J. J. +	IV. 2 H
+MESROBIAN W. S. +	1968G1 G VVO	NUMEROVA A. B.	1958N1 NUMEROVA
+MESSIER C.	1784M1 M	+O'CONNELL R. W.	1975A3 CG
+MEWE R.	IV. 2 IE	+OCHSENBEIN F.	1967PK D PK
+MILLER F. D.	1956L2 LB, MR	+OCHSENBEIN F.	1973JU A FC
+MILLER W. C.	1925M1 C MW	+OCHSENBEIN F.	1982AC
+MILLER W. C. +	1950M1 B AS	OCHSENBEIN F. +	1973JU B
+MILLER W. J., S. J.	1943V1 B MCC	+OCANESIAN EH. YA.	1961M2 M + 0
+MILLS B. Y.	1952M3 MILLS	+OJA T.	1973H1 H. O.
+MILLS B. Y.	1973D2 MC1	+OKE J. B.	1970C1 E GR
+MILLS B. Y.	1976C1 MC4	+OLANDER N.	1978W1 WORC
+MILLS B. Y. +	1958M1 A MSH	+OLSON R. A.	IV. 1 EVENT
+MILLS B. Y. +	1958M1 B MSH	+OOSTERBAAN C. E.	1973K1 D WSRT
+MILLS B. Y. +	1958M1 C MSH	+OSBORN W.	1976S7 STO
+MILNE D. K.	1970M2 MILNE	+OSMER P. S.	1980U1 B Q
+MILNE D. K.	1979ML	+OSMER P. S. +	1980U1 A Q
+MINKOWSKI R.	1946M1 MIN 1-	+OTTEN L. B., S. J.	1974C1 E VES
+MINKOWSKI R.	1947M1 MIN 2-	+OWEN F. N.	1973D1 B UT
+MINKOWSKI R.	1948M1 MIN 3-	+OWEN T.	1958S1 STRAND
+MINKOWSKI R.	1961M3 M	+OZOLINA V.	1977A1 B BC
+MIRABEL I. F.	1975H1 C HVC	+PADRIELLI L.	1970C1 A B2.1
+MIROSHNITCHENKO A. P.	1978B1 C GR	+PADRIELLI L.	1970C1 B B2.2
+MITCHELL K. J.	1981U1 C US	+PADRIELLI L.	1970C1 C B2.3
+MITROFANOV I. G.	IV. 2 FXP	+PADRIELLI L.	1970C1 D B2.4
+MOFFAT A. F. J.	1976M2 MOFFAT	+PAGE C. G.	IV. 2 2A
+MOFFAT A. F. J.	1975M1 D BOCHUM	+PAGE C. G.	IV. 2 3A
+MOFFAT A. F. J.	1977H1 HAVLEN-MOFFAT	+PALMER H. P.	1972P1 PP
+MOFFAT A. F. J.	1979M2 C WAT	+PALMER P.	1974G3 B ORI MC
+MOFFAT A. F. J. +	1975M1 A BOCHUM	+PANAGIA N.	1980WP
+MOFFAT A. F. J. +	1975M1 B BOCHUM	+PANOV V. N.	IV. 1 GAMMA-RAY BURST
+MOFFAT A. F. J. +	1975M1 C BOCHUM	+PARENAGO P. P.	1954P1 P
+MOFFAT A. F. J. +	1979M2 A WAT	+PARENAGO P. P.	1951KP A CSV
+MOISEEV I. G.	1969A1 CRI	+PARSAMIAN E. S. +	1979PS PP
+MOISEEV I. G.	1971L1 SIMEIS	+PARSAMIAN EH. S.	1965P1 PARSAMIAN
+MONTMERLE T. +	IV. 2 ROX	+PAUL J. A.	IV. 1 2CC
+MOORE S.	1967R2 RMB	+PAULINY-TOTH I. I. K. +	1966P1 NRAO
+MOORWOOD A. F. M.	1972F1 FJM	+PAULINY-TOTH I. I. K. +	1971D1 B GC
+MOORWOOD A. F. M.	1973E1 A UCL	+PAULINY-TOTH I. I. K. +	1971D1 C GC
+MOORWOOD A. F. M.	1973E1 B UCL	+PAVLOV N. N. +	1971P1 KCB
+MORAN M.	1965M2 MM	+PAWSEY J. L.	1955P1 IAU
+MORENO A.	1953H3 HARO 5-	+PEARSON T. J.	1975P1 5C5.
+MORGAN H. R.	1952M2 N30	+PEARSON T. J. +	1978P2 5C6., 5C7.
+MORGAN W. W.	1977A2 AWM	+PECKHAM R. J. +	1972P1 PP
+MORGAN W. W. +	1975M4 MKW	+PEIMBERT M.	1974C2 CGO
+MORRIS M. +	1974G3 B ORI MC	+PENSTON M. J.	1970W3 WOOLLEY
+MORRISON D. +	1973M1 MS	+PEREK L. +	1967PK A PK
+MOSELEY G. F.	1973D1 A UT	+PERINOTTO M.	1970B1 ROT
+MROSS R.	1978P3 AN CL	+PERINOTTO M.	1970B1 A BERNACCA
+MULLER H. G.	1959M2 MUL	+PERINOTTO M.	1970B1 B BERNACCA
+MUNCH L.	1955M1 MU	+PERINOTTO M.	1970B1 C BERNACCA
+MUNCH L.	1955B1 BM	+PEROVA N. B.	1969KP A V
+MURATORIO G.	1972A3 B C	+PEROVA N. B.	1969KP B V
+MURDOCH H. S.	1970H1 MLO	+PEROVA N. B.	1969KP C V
+MURDOCH H. S.	1974S4 MC2, MC3	+PERRINE C. D.	1892T1 E CD
+MURRAY J. D.	1977M2 MS	+PERRY P. M.	1974K1 KOCH
+MURRAY S.	IV. 2 2U	+PESCH P. +	1978P1 PS
+MURRAY S.	IV. 2 3U	+PETERS G.	IV. 2 4U
+MURRAY S.	IV. 2 4U	+PETERSON B. A.	1978R I SZ, II SZ
+MURRAY S. S.	IV. 2 IE	+PETERSON B. A.	1978R2 I SZ, II SZ
+MUSHOTZKY R. F.	IV. 2 H	PETIT M.	1972AB C
+MUZZIO J. C.	1980V1 VRMF	+PETROSIAN M. B.	1973S4 D SHAKHBAZIAN
+NAGY T. A.	1978S1 EIC	+PETROSIAN M. B.	1973S4 I SHAKHBAZIAN
+NANDY K. +	1970N1 A EDINBURGH	+PETROSIAN M. B.	1973S4 B SHAKHBAZIAN
+NANDY K. +	1970N1 B EDINBURGH	+PETROSIAN M. B.	1973S4 C SHAKHBAZIAN
+NANDY K. +	1970N1 C EDINBURGH	+PETROSIAN V. M.	1979PS PP
+NANDY K. +	1970N1 D EDINBURGH	+PEYRIN Y.	1971C3 A OM
+NARANAN S. +	1973B2 C LOOP	+PFLEIDERER J. +	1978P3 AN CL
+NASH A.	1978C1 B TAU MC	+PHILIP A. G.	1977P2 BOK
+NASH R. T.	1964K1 C OA	+PHILIP A. G. D.	1966P2 HLF2, HLF
+NASSAU J. J.	1959H1 B LS	+PHILIP A. G. D. +	1968P1 PS
+NASSAU J. J. +	1954N1 A CASE	+PHILIP A. G. D. +	1972P2 PS

+PICKERING E.C.	1918C1	HD	ROSE J.A.	1976R2	ROSE
PICKERING E.C. +	1918P1 A	SA	ROSE J.A.	1977R1	RCG
PICKERING E.C. +	1918P1 B	SA	+ROSINO L.	1968B1 A	A1
PICKERING E.C. +	1918P1 C	SA	+ROSINO L.	1972B1	A2-
PIKE E.M. +	1964P1	PD	ROSINO L. +	1954H1 J	LKH
PILKINTON J.D.H. +	1965P2	4C1	ROSLUND C.	1960R3	ROSLUND
PINKAU K.	IV.1	CG	+ROSNER R.	IV.2	1E
PISMIS P.	1959P1	PISMIS	ROSS F.E.	1925R1	ROSS
+PLATAIS I.	1977A1 A	BC	ROSS H.N.	1972R1	ARO, NRAO
+PLATAIS I.	1977A1 B	BC	ROSS H.N.	1975R1	C
+PLAUT L.	1935S1	BSD	ROSSITER R.A.	1955R1	DON, JSP, RDS, RST
+PLETICHA D.	1975D2	NAIC	+ROTHENFLUG R.	1982FM	
+POCOCK S.B.	1970W3	WOOLLEY	+ROTHSCHILD R.E.	IV.2	H
+POLCARO V.F.	IV.2	HXR	+ROUTLEDGE D.	1969H2	HR
+POLOZHENTSEV D.D.	1958Z1	PFKSZ	+ROUTSIS D.E.	1979C1	RSO1
POOLEY G.C.	1969P1	5C3.	+RUBIN V.C.	1965U1	UPGREN
+POOLEY G.C.	1966K2	5C1.	+RUBIN V.C.	1977T2	TR
+POOLEY G.C.	1968B2	BP	RUBIN V.C. +	1967R2	RMB
POOLEY G.C. +	1968P2	5C2.	RUBIN V.C. +	1971R2 A	RL
+POPOV M.V.	1971L1	SIMEIS	RUBIN V.C. +	1971R2 B	RWT
PORTER J.G. +	1918P2	CI 18	+RUDKJOBING M.	1949S1	SR
PORTER J.G. +	1930P1	CI 20	RUPRECHT J.	1966R1	RUPRECHT
+PORTMAN V.I.	1969A1	CRI	+RUPRECHT J.	1970AR A	ASS-, GCL-, OCL-
+POULAKOS C.	1977W3	WP	RUPRECHT J. +	1970AR B	ASS-, GCL-, OCL-
+POUNDS K.A.	IV.2	2A	+RUSSELL J.	1973C1 B	GAT
+POUNDS K.A.	IV.2	3A	RUSSELL J. +	1973C1 C	GAT
+POUNDS K.A.	IV.2	3A	RUSSELL J. +	1973C1 G	GAT
+POUNDS K.A.	IV.2	3A	RUSSELL J.L. +	1973C1 F	GAT
+PRAVDO S.H.	IV.2	H	+RYABOV B.P.	1978B1 A	CR
PRAVDO S.H. +	IV.2	OS	+RYLE M.	1955S1	2C
+PREVOT L.	1972A3 A	ARDEBERG, C	+RYLE M.	1966K2	5C1.
+PREVOT L.	1972A3 B	C	RYLE M. +	1950R1	1C
PRICE S.D.	1976P1 B	AFGL	RYLE M. +	1962R2	RN
+PRICE S.D.	1972W1	AFGL	+SAAKIAN K. A.	1961I1	ISKUDARIAN
+PRICE S.D.	1975W1	AFGL	+SACCO B.	IV.1	2CC
PRICE S.D. +	1976P1 A	AFGL	+SAHAKJAN K.	1965R2	RS
+PROSKURA M.P.	IV.1	GAMMA-RAY BURST	+SALOMONOVICH A.E.	1960K2	KLNS
+PSKOVSKIJ YU.P.	1969KP A	V	+SALTER C.J.	1974F1 A	BC
+PSKOVSKIJ YU.P.	1969KP C	V	SANDAGE A. +	1965S1	BSO
+PURTON C.R.	1968B5	DB	+SANDAGE A.R.	1956H1 A	HMS
+PYE J.	IV.2	1E	SANDQVIST AA.	1976H1 B	CC
+PYE J.P.	IV.2	2A	SANDQVIST AA.	1976S1 B	SL
+PYE J.P.	IV.2	3A	SANDQVIST AA. +	1976S1 A	SL
+PYE J.P.	IV.2	3A	SANDULEAK N.	1967PK E	PK
QUICLEY M.J.S. +	1966Q1	QL	SANDULEAK N.	1968S1 A	SK
+QUINTANA H.	1975M2	CA	SANDULEAK N.	1968S1 B	SK
RAAB S.	1922R1	RAAB	SANDULEAK N.	1970S1	SK
+RABOLLI M.	1980V1	VRMF	SANDULEAK N.	1971S2	SANDULEAK
RACINE R.	1966V1 B	VDB	SANDULEAK N.	1971S5	SANDULEAK
+RACHAVARAO R.	1964F1	HBMR	SANDULEAK N.	1976S2	SAND
RACHAVARAO R. +	1965R1	NRC	+SANDULEAK N.	1968P1	PS
+RAKHAMINOV SH.YU.	1982AM	2XRS	+SANDULEAK N.	1970WA B	
+RAKHAMINOV SH.YU.	IV.2	AN 1 XRS	+SANDULEAK N.	1971S4	LSS
+RAKHAMINOV SH.YU.	IV.2	AN 1 XRS	+SANDULEAK N.	1977S2	SS
+RAMAKRISHNA C.M.	1967S1	OB TO OZ	+SANDULEAK N.	1978P1	PS
+RAO A.P.	1971S1 A	OTL	SANDULEAK N. +	1973S2	SS
+RAO N. K.	1954H1 O	LKH, HRC	+SANFORD R.F.	1933M1 A	MSB
+RAO N.K.	1972HR	LKH, HRC	+SANFORD R.F.	1933M1 B	MSB
+RASHOKOVSKI S.L.	1978B1 A	GR	+SARGENT A.I.	1974C2	FB
+READ R.B.	1965K1	CTD	+SARGENT T.A.	1973T2	T
REAVES G.	1956R1	GR	+SARGENT W.L.W.	IV.2	1E
+RECILLAS-CRUZ E.	1974C2	CGO	+SARGENT W.L.W.	1971Z1 B	VIII ZW
+REID I.N.	1981R1 B	RG	+SARGENT W.L.W.	1981K1	POX
REID I.N. +	1981R1 A	RG	SARGENT W.L.W. +	1974SS	SN
+RENSON P.	1982CF		+SARMA N.V.G.	1971S1 A	OTL
+RICHER H.B.	1978W1	WORC	+SAVAGE A.	1979B1	PKS
+RICHSTONE D.	1970C1 E	GR	+SCARSI L.	IV.1	2CC
RICHTER N. +	1965R2	RS	+SCHAIFERS K.	1965K2	H-K
RICHTER N. +	1976R1	DC	SCHER D.J. +	1967S1	OB TO OZ
+RICHTER W.	1977L1	LRLW	+SCHILD R.E.	1977C1	KS
RICKARD J.J.	1971R1	R	SCHLESINGER F. +	1934S1 A	YZ
RICKER G.R. +	1978R1	MR	SCHLESINGER F. +	1934S1 B	YZ
+RICKETTS M.J.	IV.2	2A	SCHLESINGER F. +	1934S1 C	YZ
+RICKETTS M.J.	IV.2	3A	SCHLESINGER F. +	1934S1 D	YZ
+RIEGLER G.R.	IV.2	H	+SCHMIDT M.	1973B1	NAB
+RIEKE G.H.	IV.1	COWAN	+SCHMIDT M.	1976C2 C	
RIEKE G.H. +	1973R2	IRC, IRE	+SCHMIDT M.	1976C2 D	
+RINEHART R.	1966D2	DR	+SCHMIDT M.	1976C2 E	
RINSLAND C.P. +	1967S1	OB TO OZ	+SCHMITZ M.	1982GE A	
RISHBETH H.	1958R1	R	+SCHMITZ M.	1982GE B	
+ROBERTS J.A.	1960H1	CTA	SCHNEIDER S. +	1979S1	GF
ROBERTS M.S.	1962R1	ROBERTS	+SCHNELL A.	1976R1	DC
+ROBIN A.	1971C3 A	OM	+SCHNOPPER H.W.	IV.2	1M
ROBINSON L.B. +	1973R1	RW	SCHONFELD E.	1886A1	BD
RODGERS A.W.	1960R1	R	+SCHREIER E.	IV.2	1E
RODGERS A.W. +	1960R2	RCW	+SCHREIER E.	IV.2	2U
RODGERS A.W. +	1978R	I SZ, II SZ	+SCHREIER E.	IV.2	3U
RODGERS A.W. +	1978R2	I SZ, II SZ	SCHUCH N.J.	1981S1	5C10.
+ROFFI G.	1970C1 A	B2.1	SCHULTE D.H.	1956S1	SCHULTE
+ROGSTAD D.H.	1966F1	FR	+SCHUSTER H.-E.	1974H1 A	ESO
+ROHLFS K.	1959H1 A	LS	+SCHUSTER H.-E.	1974H1 B	ESO
ROJKOVSKIJ D.A. +	1968R1	RK	+SCHUSTER H.-E.	1974H1 C	ESO
+ROMANO C.	1954H1 J	LKH	+SCHUSTER H.-E.	1974H1 D	ESO
+ROME J.M.	1962M1	MHR	+SCHUSTER H.-E.	1974H1 E	ESO
+ROOD H.J.	1971C1	CR	+SCHUSTER H.-E.	1974H1 F	ESO
ROOD H.J. +	1967R1	RB	+SCHUSTER H.-E.	1974H1 G	ESO
+ROQUES J.M.	1982AC	FC	+SCHUSTER H.-E.	1974H1 H	ESO
+ROSATELLI C.	1965B1	B1, B1S	+SCHUSTER H.-E.	1974H1 I	ESO

SCHWARTZ R.D. 1974H2 C HH-,SZ
 +SCHWARTZ R.D. 1980C2 C-S
 +SCHWARZ M.P. 1977M2 MS
 SCHWASSMANN A. + 1935S1 BSD
 +SCHWERING P. 1983B1 36W
 +SCOTT P.F. 1965P2 4C1
 +SCOTT P.F. 1967G1 4C2
 +SCOVILLE N. 1974G3 A ORI MC
 SCOVILLE N.Z. + 1972S1 CLOUD
 SEARES F.H. + 1930S1 MT.W.
 +SEARLE L. 1974SS SN
 +SERKOWSKI K. 1967K1 KS
 +SERLEMITSOS P.J. IV.2 H
 +SERLEMITSOS P.J. IV.2 OS
 SERSIC J.L. 1974S1 SER
 SEVARLIC B. INTRODUCT.
 SEVARLIC B.M. + INTRODUCT.
 +SEWARD F. IV.2 1E
 +SEWARD F. IV.2 1E
 +SEWARD F.D. IV.2 2A
 +SEXTON J.A. 1966H2 HS
 +SEYFERT C.K. 1947M2 A LF
 +SHAFFER D.B. 1971D1 B GC
 +SHAJN G.A. 1950S1 B SIMEIS
 +SHAJN G.A. 1950S1 C SIMEIS
 +SHAJN G.A. 1950S1 D SIMEIS
 +SHAJN G.A. 1950S1 E SIMEIS
 +SHAJN G.A. 1955G1 GS,SIMEIS
 SHAJN G.A. + 1950S1 A SIMEIS
 +SHAKESHAFT J.R. 1959E1 3C
 SHAKESHAFT J.R. + 1955S1 2C
 SHAKHBAZIAN R.K. 1957S1 SHAKHBAZIAN
 SHAKHBAZIAN R.K. 1973S4 A SHAKHBAZIAN
 +SHAKHBAZIAN R.K. 1958A2 ASH
 +SHAKHBAZIAN R.K. 1973S4 C SHAKHBAZIAN
 SHAKHBAZIAN R.K. + 1973S4 B SHAKHBAZIAN
 +SHANE W.W. 1983B1 36W
 SHAPLEY H. + 1963S1 SL
 SHARP J.R. + 1973D1 C UT
 SHARPLESS S. 1953S1 SH1-
 SHARPLESS S. 1959S3 SH2-
 +SHARYKIN N.K. 1978B1 A GR
 +SHARYKIN N.K. 1978B1 B GR
 +SHARYKIN N.K. 1978B1 C GR
 +SHELTON J.W. 1967B4 GB
 SHER D. 1964S1 SHER
 SHIMMINS A.J. + 1969E1 B PKS
 +SHISHKINA V.N. 1974L1 SPF3
 SHORE 1982S1 CW
 +SHULMAN S. 1973B2 C LOOP
 +SIDORENKOV V.N. 1981A1 Z
 +SIMKIN S. 1982WG
 +SIMON T. 1973M1 MS
 +SIMS M.R. IV.2 3A
 +SINIGAGLIA G. 1965B1 B1,B1S
 +SION E.M. 1977MS A WD
 SISTLA G. + 1974S2 SKK
 SIVAN J.P. 1974S3 SIV
 SLEE O.B. 1973S1 C CUL
 +SLEE O.B. 1954B1 B1
 +SLEE O.B. 1954B2 B2
 +SLEE O.B. 1958M1 A MSH
 +SLEE O.B. 1958M1 B MSH
 +SLEE O.B. 1958M1 C MSH
 SLEE O.B. + 1973S1 A CUL
 SLEE O.B. + 1973S1 B CUL
 +SLETTEBAK A. 1959H1 A LS
 SLETTEBAK A. + 1959S1 SSI,SSII
 SLETTEBAK A. + 1961S1 SBS
 SLETTEBAK A. + 1971S3 SB
 +SLOANAKER R.M. 1954H2 H
 +SMITH A. IV.2 3A
 +SMITH E.S. 1918P2 CI 18
 +SMITH E.S. 1930P1 CI 20
 +SMITH F.G. 1950R1 IC
 SMITH L.F. 1968S2 LSWR
 +SMITH M.G. 1977H2 HS
 +SMITH M.G. 198001 A Q
 SMITH M.G. + 1976S4 TOL
 +SMITH S.B. 1977M1 A UM
 +SMITH S.B. 1977M1 B UM
 +SMITH S.B. 1977M1 C UM
 SMITH-HAENNI A.L. 1977S1 SHB-
 +SMRICLIO F. 1970N1 A EDINBURGH
 +SMRICLIO F. 1970N1 B EDINBURGH
 +SMRICLIO F. 1970N1 C EDINBURGH
 +SMRICLIO F. 1970N1 D EDINBURGH
 SNOW T.P. JR 1970S2 SNOW
 SNYDER L.E. + 1982SN
 SOFIA S. + 1969S1 SEG
 +SOGLASNOV V.A. 1969A1 CRI
 +SOKOLOV I.A. IV.1 GAMMA-RAY BURST
 +SOKOLOV K.P. 1978B1 A GR
 +SOKOLOV K.P. 1978B1 B GR
 +SOKOLOV K.P. 1978B1 C GR
 +SOKOLOVA Z.YA. IV.1 GAMMA-RAY BURST
 +SOLOMON P.M. 1972S1 CLOUD
 +SPANGENBERG E.E. 1969A1 CRI

SPENCER J.H. + 1939S2 CF
 +SPINRAD H. 1973K1 B WSRT
 SPITE F. + INTRODUCT.
 +SPROTT G.F. IV.2 1M
 +STANLEY G.J. 1954B1 B1
 +STANLEY G.J. 1954B2 B2
 +STARK A.A. 1982B1 BFS
 +STARYTSIN G.V. 1971P1 KCB
 +STEIN J.W. 1973G1 C GAT
 STEIN J.W. + 1973G1 D GAT
 STENHOLM B. 1975S1 SB
 +STENHOLM B. 1981VH WR
 +STEPANIAN J.A. 1967M1 J MARKARIAN
 +STEPANIAN J.A. 1967M1 K MARKARIAN
 +STEPANIAN J.A. 1967M1 L MARKARIAN
 +STEPANIAN J.A. 1967M1 M MARKARIAN
 +STEPANIAN J.A. 1967M1 N MARKARIAN
 +STEPANIAN J.A. 1967M1 O MARKARIAN
 +STEPANIAN J.A. 1980M1 BSS
 STEPHENSON C.B. 1959S2 STEPHENSON
 STEPHENSON C.B. 1960S1 A C
 STEPHENSON C.B. 1960S1 B C
 STEPHENSON C.B. 1966S1 ST
 STEPHENSON C.B. 1973S3 CCS
 STEPHENSON C.B. 1976S3 STEPHENSON
 +STEPHENSON C.B. 1959H1 B LS
 +STEPHENSON C.B. 1959H1 D LS
 +STEPHENSON C.B. 1959H1 F LS
 +STEPHENSON C.B. 1964N1 NA,NSC
 +STEPHENSON C.B. 1973S2 SS
 STEPHENSON C.B. + 1970WA B LSS
 STEPHENSON C.B. + 1971S4 LSS
 STEPHENSON C.B. + 1977S2 SS
 STERN R.A. IV.2 H
 STOCK J. 1956S2 STOCK
 +STOCK J. 1959H1 A LS
 +STOCK J. 1959S1 SSI,SSII
 +STOCK J. 1961S1 SBS
 +STOCK J. 1972P2 PS
 STOCK J. + 1959H1 B LS
 STOCK J. + 1972S2 SKWL1-TO SKWL4-
 STOCK J. + 1972S2 STO,STWR
 STOCK J. + 1976S7 STO
 +STOCKMAN H.S. 1977MS B WD
 STOCKTON A. 1969S2 QS
 +STOY R.H. 1961E1 ES
 +STOY R.H. 1962C1 E
 +STRAKA W.C. 1962S1 S-S
 STRAND K.AA. + 1958S1 STRAND
 +STROBEL W. 1963F1 FK4
 STROHMEIER W. 1950S2 STR
 +STROM K.M. 1974H2 B HH-
 +STROM K.M. 1975V4 GRASDALEN, VS
 +STROM K.M. 1976S6 STVS
 +STROM K.M. 1976V1 VSST
 +STROM K.M. 1976V2 VSS
 STROM K.M. + 1976S5 SSV
 STROM K.M. + 1976S8 STSV
 +STROM S.E. 1975V4 GRASDALEN, VS
 +STROM S.E. 1976S5 SSV
 +STROM S.E. 1976S8 STSV
 +STROM S.E. 1976V1 VSST
 +STROM S.E. 1976V2 VSS
 STROM S.E. + 1974H2 B HH-
 STROM S.E. + 1976S6 STVS
 STRONG I.B. + IV.1 EVENT
 STRUVE O. + 1939S1 A MCD
 STRUVE O. + 1939S1 B MCD
 STRUVE O. + 1939S1 C MCD
 STRUVE O. + 1949S1 SR
 STRUVE O. + 1962S1 S-S
 +STUMPF P. 1963F1 FK4
 +SULENTIC J.W. 1979A1 BSO, RSO
 +SULENTIC J.W. 1979A2 UB
 SULENTIC J.W. + 1888D1 NGC
 +SUTTON J. 1967H1 B AO
 +SUTTON J. 1967H1 C AO
 +SUTTON J. 1967H1 D AO
 SUTTON J.M. + 1974S4 MC2, MC3
 SVOPOULOS S.N. 1969S3 SVOV
 SWANENBURG B.N. + IV.1 2CG
 +SWANK J.H. IV.2 OS
 SWARUP G. + 1971S1 A OTL
 SWEENEY L.H. + 1978S1 EIC
 +SWENSON C.W. JR. 1965M1 A VRO
 +SWENSON C.W. JR. 1965M1 B VRO
 +SWIHART D.L. 1979C1 RSO1
 +SWOPE H.H. 1961B1 BAADE SWOPE
 +SZARDECZKY-KARDOSS G. INTRODUCT.
 +SZEIDL B. 1966K3 KS
 +TANANBAUM H. IV.2 1E
 +TANANBAUM H. IV.2 2U
 +TANANBAUM H. IV.2 3U
 +TANANBAUM H. IV.2 4U
 +TAYLOR A.R. 1981G1 GT
 +TAYLOR J.H. 1976TD B PSR
 +TAYLOR J.H. 1976TD C PSR
 TELEKI G. INTRODUCT.

+TELEKI G.	INTRODUCT.	VAN DEN BERGH S.	1959V1 A	DDO
TERRELL J. +	IV. 1 CB	VAN DEN BERGH S.	1959V1 B	DDO
TERZAN A.	1971T1 TERZAN	VAN DEN BERGH S.	1966V1 A	VDB
+TERZIAN Y.	1973VM A	VAN DEN BERGH S.	1973VM B	
TERZIAN Y. +	1976TD A PSR	+VAN DEN BERGH S.	1960A1	ARP
THACKERAY A.D.	1962T5 T	VAN DEN BERGH S. +	1973VM A	
+THACKERAY A.D.	1960F1 R	VAN DEN BERGH S. +	1975V1 A	VDBH
+THACKERAY W.G.	1905D1 CROOMBRIDGE	VAN DEN BERGH S. +	1975V2	VAN DEN BERGH-HAGEN
+THADDEUS P.	1972S1 CLOUD	+VAN DEN BOS W.H.	1963JV	IDS
THE P.-S.	1961T1 TH(ALP) 10-	VAN DER HUUCHT K.A. +	1981VH	WR
THE P.-S.	1962T1 TH(ALP) 15-, L1, L2, L3	+VAN DER LAAN H.	IV. 2	1E
THE P.-S.	1962T3 TH2-, TH(ALP) 17-	+VAN DER LANS J.	1977L1	LRLWW
THE P.-S.	1962T4 TH1-, TH(ALP) 14-	VAN RHIJN P.J.	1952V1 A	SASPECIAL
THE P.-S.	1964T2 TH(ALP) 27-	VAN RHIJN P.J.	1952V1 B	SASPECIAL
THE P.-S.	1966T1 TH(ALP) 34-	+VAN RHIJN P.J.	1930S1	MT.W.
THE P.-S.	1966T2 TH(ALP) 35-	+VAN RHIJN P.J.	1935S1	BSD
THE P.-S. +	1964T1 TH(ALP) 23-	VAN WIJK U.	1952V3	VAN WIJK
+THEILE I.	1959H1 C LS	+VANYSEK J.	1970AR A	ASS-, GCL-, OCL-
+THEILE I.	1959H1 E LS	VEGA E. I. +	1980V1	VRMF
+THOMAS N.G.	1962G1 HC	VELGHE A.G.	1957V2	VE, VE1-TO VE7
+THOMAS N.G.	1971G1 A GICLAS	+VERON P.	1965S1	BSO
+THOMAS N.G.	1971G1 B GICLAS=C	VERSCHUUR G.L.	1969V1	CLOUD
+THOMAS N.G.	1971G1 C GICLAS=C	+VERSCHUUR G.L.	1968H1 B	A, AC, C, M
+THOMAS N.G.	1980C1 CD, GR-	+VICNEAU J.	1975A1 A	AZV
+THOMASSON P.	1973K2 CL	+VIGNEAU J.	1975A1 B	AZV
THOME J.M.	1892T1 B CD	+VIGOTTI M.	1968G3	GV
THOME J.M.	1892T1 C CD	+VIGOTTI M.	1970C1 A	B2.1
THOME J.M.	1892T1 D CD	+VIGOTTI M.	1982B2	5C1 TO 5C17
THOME J.M.,	1892T1 A CD	+VIGOTTI M.	1982B2	5C12.
THOMPSON D.J. +	IV. 1 GEMINGA	VINER M.R. +	1975V3	CL
+THOMSON J.H.	1955S1 2C	+VOGT N.	1975M1 A	BOCHUM
THOMSON L.A.	1977T1 LT	+VOGT N.	1975M1 B	BOCHUM
THONNARD N. +	1977T2 TR	+VOGT N.	1975M1 C	BOCHUM
THUAN T.X. +	1979T1 LGS	VOGT N. +	1982VB	
+TIERSCH H.	1973S4 C SHAKHBAZIAN	+VOICT H.H.	1959H1 C	LS
+TIERSCH H.	1973S4 E SHAKHBAZIAN	+VOICT H.H.	1959H1 E	LS
+TIERSCH H.	1973S4 F SHAKHBAZIAN	+VOLDERS L.	1965B1	B1, B1S
+TIERSCH H.	1973S4 G SHAKHBAZIAN	+VON DER HEIDE J.	1976H3	SRS
+TIERSCH H.	1973S4 H SHAKHBAZIAN	VON DORSCHNER J. +	1963V1	DC-
+TIERSCH H.	1973S4 J SHAKHBAZIAN	VON ZEIPPEL M.H.	1908V1	VON ZEIPPEL
+TIFFT W.G.	1888D1 NGC	VORONTSOV-VEL' JAMINOV	1961V2	V-V1-
TIFFT W.G. +	1973T1 CT	VORONTSOV-VEL' YAMINOV	1962V2	VV'
TIFFT W.G. +	1973T2 T	VORONTSOV-VEL' YAMINOV +	1962V1 A	MCC
+TITTER J.C.	1968G1 G VVO	VORONTSOV-VEL' YAMINOV +	1962V1 B	MCC
+TITTER J.C. +	1968G1 H VVO	VORONTSOV-VEL' YAMINOV +	1962V1 C	MCC
+TKATCHENKO A.P.	1978B1 A CR	VORONTSOV-VEL' YAMINOV +	1962V1 D	MCC
+TKATCHENKO A.P.	1978B1 B CR	VORONTSOV-VEL' YAMINOV +	1962V1 E	MCC
+TOFANI G.	1974F1 A BC	+VRBA F.J.	1976S5	SSV
+TOFANI G.	1977F2 BGE	+VRBA F.J.	1976S6	STVS
+TOMASI P.	1970C1 A B2.1	+VRBA F.J.	1976S8	STSV
+TOMASI P.	1970C1 B B2.2	VRBA F.J. +	1975V4	GRASDALEN, VS
+TOMASI P.	1970C1 C B2.3	VRBA F.J. +	1976V1	VSST
+TOMASI P.	1974F1 A BC	VRBA F.J. +	1976V2	VSS
+TOMASI P.	1974F1 B BC	VYSSOTSKY A.N.	1943V1 A	MCC
+TOMASI P.	1977F2 BGE	VYSSOTSKY A.N.	1943V1 D	MCC
TOMBAUGH C.W.	1938T1 TOMBAUGH	VYSSOTSKY A.N.	1943V1 E	
+TOPKA K.	IV. 2 1E	VYSSOTSKY A.N. +	1943V1 B	MCC
+TORRENCE C.W.	1973D1 A UT	VYSSOTSKY A.N. +	1943V1 C	MCC
+TORRES-PEIMBERT S.	1974C2 CGO	WACKERLING L.R.	1970WA A	
+TREATOR P.J.	1968M1 LLP	+WADE C.M.	1955B2	BBW
TRUMPLER R.J.	1930T1 TRUMPLER	+WADE C.M.	1966P1	NRAO
+TRUVE M.	1971R2 B RWT	WAGGETT P.C.	1977W1	5C9.
+TURNER B.E.	1974G3 B ORI MC	+WAGMAN N.E.	1973G1 F	CAT
TURNER E.L. +	1976T1 TG, Z	WALKER M.F.	1954H1 I	
+TURNER M.J.L.	IV. 2 2A	WALKER M.F.	1956W1	WALK
+TURNSHEK D.A.	1979C1 RS01	+WALKER R.G.	1976P1 A	AFGL
TUZI K.	1962T2 TME	WALKER R.G. +	1972W1	AFCRL
UBERTINI P. +	IV. 2 HXR	WALKER R.G. +	1975W1	AFCRL
UESUGI A. +	1970U1 UESUGI	+WALL J.V.	1982B2	5C1 TO 5C17
+UGOL'KOVA L.S.	1981A1 Z	+WALL J.V.	1982B2	5C12.
ULRICH B.T. +	1966U1 CIT	+WALMSLEY C.M.	1978C1 A	TAU MC
UPGREN A.R.	1963U1 UI	WALMSLEY C.M. +	1978C1 B	TAU MC
+UPGREN A.R.	1968C1 A VVO	+WALTER F.	IV. 2	1S
+UPGREN A.R.	1968C1 B VVO	+WALTER F.M.	IV. 2	H
+UPGREN A.R.	1968C1 D VVO	+WALTHER M.E.	1943V1 B	MCC
+UPGREN A.R.	1968C1 F VVO	+WALTON MAYALL M.	1925C1 B	HDE
+UPGREN A.R.	1968C1 H VVO	+WAMPLER E.J.	1973R1	RW
+UPGREN A.R.	1968C1 L VVO	WAMSTEKER W.	1980W3	WAMS
+UPGREN A.R.	1968C1 N VVO	+WARNOCK A. III	1981U1 B	US
UPGREN A.R. +	1965U1 UPGREN	WARWICK R.S. +	IV. 2	3A
UPGREN A.R. +	1968C1 C VVO	WATANABE T.	1982W1	GS
UPGREN A.R. +	1968C1 E VVO	+WATSON M.G.	IV. 2	2A
UPGREN A.R. +	1968C1 I VVO	+WATSON M.G.	IV. 2	3A
UPGREN A.R. +	1968C1 J VVO	WEBB H.D. +	1965M1 E	VRO
UPGREN A.R. +	1968C1 M VVO	+WEBBER J.C.	1965M1 D	VRO
UPGREN A.R. JR.	1962U1 NCP	WEEDMAN D.W.	1971W1	WEEDMAN
URANOVA T.A.	1968I1 B SR	+WEEKES T.C.	IV. 1	COWAN
URANOVA T.A.	1968I1 C SR	WEGNER G.	1973W1 A	WG
USHER P.D.	1981U1 A US	WEGNER G.	1973W1 B	WG
USHER P.D. +	1981U1 B US	WEILER K.W. +	1980WP	
USHER P.D. +	1981U1 C US	WEINBERGER R.	1967PK C	PK
VAIANA G.S. +	IV. 2 1E	WEINBERGER R.	1980W1 A	WEINBERGER
+VALTZ I.E.	1969A1 CRI	WEINBERGER R.	1980W1 B	WEINBERGER
VAN ALTENA W.F.	1969V2 VA	+WEINBERGER R.	1978P3	AN CL
VAN ALTENA W.F.	1982VA TRIGON. PARALLAXES	WEINBERGER R. +	1976W1	CALAR ALTO
VAN BIESBROECK G.	1961V1 VB	WEINBERGER R. +	1977W3	WP
VAN BUEREN H.C.	1952V2 VAN BUEREN	+WEIS E.W.	1968G1 J	VVO
VAN DEN BERGH S.	1957V1 VAN DEN BERGH	+WEIS E.W.	1968G1 K	VVO

+WEIS E.W.	1968G1 N	VVO	WINDRAM M.D. +	1969W1	WK
WEIS E.W. +	1968G1 L	VVO	+WINKLER P.F.	IV.2	1M
WELIN C.	1973W2	UH(ALP)	WINNBERG A.G.	1970W2	ON
+WENDKER H.J.	1969D1	DWB	+WINNEWISSER G.	1978C1 A	TAU MC
+WENDKER H.J.	1972K1	KW	+WISNIEWSKI W.	1974C1 B	VES
WENDKER H.J. +	1965M1 C	VRO	+WISNIEWSKI W.	1974C1 E	VES
WERNER M.W. +	1974G3 C	ORI MC	WISNIEWSKI W. +	1974C1 C	VES
+WESSELINK A.J.	1969F1	R	WISNIEWSKI W. +	1974C1 D	VES
+WESSELIUS P.R.	1973B2 B	LOOP	WOLF M.	1919W1	WOLF
+WEST L.A.	1964Y1	VRO	WOODEN W.H. III	1970W3	WOOLLEY
+WEST R.M.	1974H1 A	ESO	WOOLLEY R.V.D.R. +	1962W1	WOR
+WEST R.M.	1974H1 B	ESO	WORLEY C.E.	1966W2	WRAY, WR16-, WR17-
+WEST R.M.	1974H1 C	ESO	WRAY J.D.	1966W2	WR18-, WR19-
+WEST R.M.	1974H1 D	ESO	WRAY J.D.	1979B1	PKS
+WEST R.M.	1974H1 E	ESO	+WRIGHT A.E.	1974H3	HW
+WEST R.M.	1974H1 F	ESO	+WRIGHT F.W.	1972S2	SKWL1-TO SKWL4-
+WEST R.M.	1974H1 G	ESO	+WROBLEWSKI H.	1972S2	STO, STWR
+WEST R.M.	1974H1 H	ESO	+WROBLEWSKI H.	1965M1 A	VRO
+WEST R.M.	1974H1 I	ESO	+YANG K.S.	1965M1 B	VRO
+WEST R.M.	1977L1	LRLWW	+YANG K.S.	1965M1 C	VRO
+WESTBROOK W.E.	1974G3 C	ORI MC	+YANG K.S.	1965M1 D	VRO
WESTERHOUT G.	1958W1	W	+YANG K.S.	1964Y1	VRO
+WESTERHOUT G.	1965D1	DCVW	YANG K.S. +	1958Y1	MZC 2(ALP)
WESTERLUND B.E.	1968W1	WESTERLUND	YASUDA H. +	1978S1	EIC
+WESTERLUND B.E.	1963L5	LW	+YATES F.F.	1975D2	NAIC
WESTERLUND B.E. +	1978W1	WORC	+YERBURY M.J.	1918P2	CI 18
+WESTFOLD K.C.	1954B1	B1	+YOWELL E.J.	1930P1	CI 20
+WESTFAHL D.	1971R2 B	RWT	+YOWELL E.J.	1980N1 B	KUV
+WHITE R.A.	1975M4	MKW	+YUTANI M.	1976S4	TOL
+WHITE R.A.	1977A2	AWM	+ZEMELMAN M.	1978B1 A	GR
+WHITE R.E.	1970AR B	ASS-, GCL-, OCL-	+ZHOUCK I.N.	1972Z1	ZNC
+WHITEOAK J.B.	1960R2	RCW	ZINN R.J. +	1974G3 B	ORI MC
+WILD P.	1960Z1 A	ZW, Z	+ZUCKERMANN B.	1958Z1	PFKSZ
WILDEY R.L.	1961W1	WILDEY	ZVEREV M.S. +	IV.2	1E
+WILLIAMS G.A.	1977M1 E	UM	+ZWAAN C.	1947H1	HZ
WILLIAMS P.J.S. +	1966W1	WKB	+ZWICKY F.	1960Z1 A	ZW, Z
WILLIS A.C. +	1973K1 D	WSRT	ZWICKY F. +	1960Z1 B	ZW, Z
+WILLS D.	1967G1	4C2	ZWICKY F. +	1960Z1 C	ZW, Z
+WILLS R.D.	IV.1	2CC	ZWICKY F. +	1960Z1 D	ZW, Z
WILLSON M.A.G.	1970W1	5C4.	ZWICKY F. +	1960Z1 E	ZW, Z
WILLSON M.A.G.	1972W2	MW	ZWICKY F. +	1960Z1 F	ZW, Z
WILSON R.	1983C1	UV	ZWICKY F. +	1967Z1	ZL
WILSON R.E.	1953W1	WILSON	ZWICKY F. +	1971Z1 A	I ZW TO VII ZW
+WILSON R.N.	1977L1	LRLWW	ZWICKY F. +	1971Z1 B	VIII ZW
WILSON R.W. +	1960W1	CTB	ZWICKY F. +	1971Z1 A	I ZW TO VII ZW
+WILSON W.E.	1973K2	CL	+ZWICKY M.A.		