National Space Science Data Center/
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DOCUMENTATION FOR THE

MACHINE-READABLE

AGK3-BD AND BD-AGK3

CROSS-INDEX CATALOGUES

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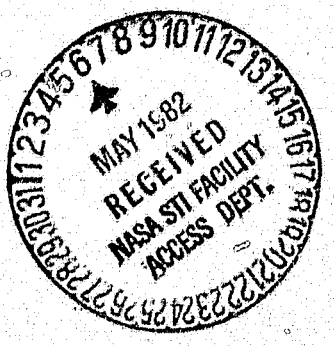

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DOCUMENTATION FOR THE MACHINE-READABLE AGK3-BD AND BD-AGK3 CROSS-INDEX CATALOGUES

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TABLE OF CONTENTS

LIST OF TABLES

Table

SECTION 1 - INTRODUCTION

The machine-readable cross identification catalogues (Warren 1978) have been prepared by extracting AGK3 and BD numbers from the magnetic tape version of the AGK3 Catalogue (Dieckvoss *et al.* 1975; see also Fresneau 1981).

After preparation of the AGK3-BD file, which contains all stars in the AGK3 catalogue, the file was sorted according to BD number and rearranged so that the BD number occurs at the beginning of each record. During the sorting operation, all AGK3 stars having no BD numbers were omitted. The BD-AGK3 file is especially useful for finding BD stars in the AGK3 catalogue, since precession has moved stars across declination boundaries and it often has been necessary to examine more than one AGK3 zone to locate (or prove the non-occurrence of) a BD star in the catalogue.

This document is intended to describe fully the contents of the cross index files so that users can read and process the tape without problems, guesswork, or consulting the parent catalogue. It should be distributed with any machine-readable versions of the files.

SECTION 2 - TAPE CONTENTS

Byte-by-byte descriptions of the contents of the AGK3-BD and BD-AGK3 cross index files are given in Tables 1 and 2. The suggested format can be modified depending upon usage, but character (A) formats are recommended for BD designations because blank fields are present for them in some records of the AGK3-BD file. (Alternate specifications are given in parentheses).

Table 1. Tape Contents. AGK3-BD Cross Index

Byte(s)	Description	Suggested Format
1- 8	AGK3 number	
	1 sign	A1
	2- 3 zone	I2 (A2)
	4 blank	1X
	5- 8 number	I4 (A4)
9	Letter designation "a" or "b" when more than one AGK3 star has the same AGK3 number; otherwise blank	A1
10	Blank	1X
11-18	BD number	
	11 sign	A1
	12-13 zone	A2
	14 blank	1X
	15-18 number	A4
19-20	Component designations for multiple systems and BD supplemental stars: P, S, A, B, S1, S2, P1, P2, C.	A2

Note: Unfortunately, the BD supplemental stars, correctly identified by lower case letters, are not distinguished from the A and B designations for binary components. This is because no distinction is made in the AGK3 Catalogue itself, from which the cross index was prepared. Although it would not be difficult to identify BD supplemental stars and change the appropriate designations to lower case, the AGK3 itself would need to be redesigned, since the component designations are numerically coded on the AGK3 tape. The tape format only allows 1 byte for the code, and there are already 9 codes for components. If it is necessary to distinguish or identify supplemental stars, the *Catalog of BD Supplemental Stars* (Warren 1980; Warren and Kress 1980) should be consulted.

Table 2. Tape Contents. BD-AGK3 Cross Index

Byte(s)	Description	Suggested Format
1- 8	BD number	
	1 sign	A1
	2- 3 zone	A2
	4 blank	1X
	5- 8 number	A4
9-10	Component designations for multiple systems and BD supplementary stars: P, S, A, B, S1, S2, P1, P2, C.	
11-18	AGK3 number	
	11 sign	A1
	12-13 zone	I2 (A2)
	14 blank	1X
	15-18 number	I4 (A4)
19	Letter designation "a" or "b" when more than one AGK3 star has the same number; otherwise blank.	A1

The letter designations "a" and "b" for multiple AGK3 stars are coded on the tape as lower case letters so that they will print correctly on extended chain printers. When processed to upper case only printers, the letters should print as their equivalents in upper case.

SECTION 3 - TAPE CHARACTERISTICS

Table 3 contains sufficient information to enable a user to read the magnetic tape files of AGK3-BD and BD-AGK3 catalogues. Information for both files is given. Parameters which are easily varied from installation to installation, such as block size (physical record length), blocking factor (number of logical records per physical record), total number of blocks, tape density, and coding (EBCDIC, ASCII) are not included, but they should always be supplied with tape copies of the catalogues.

Table 3. Tape Characteristics. AGK3-BD, BD-AGK3 Cross Index Catalogues.

NUMBER OF FILES	2
LOGICAL RECORD LENGTH	20, 20
RECORD FORMAT	FB
NUMBER OF LOGICAL RECORDS	183145, 179438

Numbers separated by commas refer to the AGK3-BD and BD-AGK3 catalogues, respectively. Logical record lengths are given in bytes (characters).

SECTION 4 - REMARKS AND REFERENCES

As mentioned following Table 2, the letter designations for multiple AGK3 stars (>1 star with the same AGK3 number) have been coded on the tape as lower case characters (a = punch code 12-0-1, b = 12-0-2) to conform to the published catalogue. It may be necessary to convert these characters at installations not supporting lower case. Many printers will print the lower case characters as their upper case equivalents.

REFERENCES

Dieckvoss, W., Kox, H., Günther, A. and Brosterhus, E. 1975, *AGK3 Star catalogue of positions and proper motions north of -2°5 declination, derived from plates taken at Bergedorf and Bonn in the years 1928-1932 and 1956-1963*, Hamburger Sternwarte, Hamburg-Bergedorf.

Fresneau, A. 1981, AGK3 story experienced by the CDS, *Inform. Bull. CDS*, No. 20, p. 10.

Warren, W. H. Jr. 1978, New AGK3 tape, *Inform. Bull. CDS*, No. 15, p. 116.

Warren, W. H. Jr. 1980, *Bull. Amer. Astron. Soc.* 12, 835.

Warren, W. H. Jr. and Kress, K. 1980, *ADC Bull.* 1, 19.

SECTION 5 - SAMPLE LISTING

The sample listing presented on the following pages contains logical data records exactly as they are recorded on the tape files. The beginning of each record and the bytes within that record are indicated by the column heading index across the top of each page (digits read vertically).

```
L I S T I N G   O F   R E C O R D S   F R O M   T A P E   F I L E

          TAPE FILE NAME: AGK3-BD CROSS INDEX
                 RECORDS        1 TO      30
               TAPE FILE        5
           RECORD LENGTH       20 BYTES
            INPUT VOLSER     WTS010

C O L U M N                                                                                                     1111111111111111
H E A D I N G          11111111112222222222333333333344444444445555555555666666666677777777778888888888999999999900000000001111111
I N D E X     1234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345

RECORD     1  +89 0001  +88 0001
RECORD     2  +89 0002  +88 0002
RECORD     3  +89 0003  +88 0003
RECORD     4  +89 0005  +89 0002
RECORD     5  +89 0006  +88 0010
RECORD     6  +89 0007  +88 0015
RECORD     7  +89 0008  +89 0006
RECORD     8  +89 0009  +89 0005
RECORD     9  +89 0010
RECORD    10  +89 0011  +89 0007
RECORD    11  +89 0012  +88 0020
RECORD    12  +89 0013  +89 0004
RECORD    13  +89 0014  +89 0008
RECORD    14  +89 0015  +89 0003
RECORD    15  +89 0016  +89 0009
RECORD    16  +89 0017  +89 0012
RECORD    17  +89 0018
RECORD    18  +89 0019  +89 0016
RECORD    19  +89 0020  +89 0017
RECORD    20  +89 0021  +89 0001
RECORD    21  +89 0022  +89 0018
RECORD    22  +89 0023  +89 0026
RECORD    23  +89 0024
RECORD    24  +89 0025
RECORD    25  +89 0026  +89 0023
RECORD    26  +89 0027
RECORD    27  +89 0028
RECORD    28  +89 0029  +89 0037
RECORD    29  +89 0030
RECORD    30  +89 0031  +89 0025
```

ORIGINAL PAGE IS
OF POOR QUALITY

LISTING OF RECORDS FROM TAPE FILE

TAPE FILE NAME: AGK3-BD CROSS INDEX
RECORDS 183116 TO 183145
TAPE FILE 5
RECORD LENGTH 20 BYTES
INPUT VOLSER WTS010

```
COLUMN              11111111112222222222333333333344444444445555555555666666666677777777778888888888999999999900000000001111111
HEADING                                                                                                          11111111111111111
INDEX      12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345

RECORD 183116  -02 1217  -02 5595
RECORD 183117  -02 1218  -02 5597
RECORD 183118  -02 1219  -02 5603
RECORD 183119  -02 1220  -02 5615
RECORD 183120  -02 1221  -02 5635
RECORD 183121  -02 1222  -02 5668
RECORD 183122  -02 1223  -02 5686
RECORD 183123  -02 1224  -02 5733
RECORD 183124  -02 1225  -02 5744
RECORD 183125  -02 1226  -02 5763P
RECORD 183126  -02 1227  -02 5763S
RECORD 183127  -02 1228  -02 5780
RECORD 183128  -02 1229  -02 5800
RECORD 183129  -02 1230  -02 5804
RECORD 183130  -02 1231  -02 5813
RECORD 183131  -02 1232  -02 5826
RECORD 183132  -02 1233  -02 5840
RECORD 183133  -02 1234
RECORD 183134  -02 1235  -02 5856
RECORD 183135  -02 1236  -02 5870
RECORD 183136  -02 1237  -02 5918
RECORD 183137  -02 1238  -02 5923
RECORD 183138  -02 1239  -02 5943
RECORD 183139  -02 1240  -02 5951
RECORD 183140  -02 1241  -02 5962
RECORD 183141  -02 1242  -02 5973
RECORD 183142  -02 1243  -02 5993
RECORD 183143  -02 1244  -02 6013
RECORD 183144  -02 1245
RECORD 183145  -02 1246  -02 6071
```

L I S T I N G O F R E C O R D S F R O M T A P E F I L E

TAPE FILE NAME: BD-AGK3 CROSS INDEX
RECORDS 1 TO 30
TAPE FILE 6
RECORD LENGTH 20 BYTES
INPUT VOLSER WTS010

```
COLUMN
HEADING      1111111111222222222233333333334444444444555555555566666666677777777778888888889999999999000000000011111111
INDEX    12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
```

RECORD	1	+89 0001	+89 0021
RECORD	2	+89 0002	+89 0005
RECORD	3	+89 0003	+89 0015
RECORD	4	+89 0004	+89 0013
RECORD	5	+89 0005	+89 0009
RECORD	6	+89 0006	+89 0008
RECORD	7	+89 0007	+89 0011
RECORD	8	+89 0008	+89 0014
RECORD	9	+89 0009	+89 0016
RECORD	10	+89 0010	+88 0044
RECORD	11	+89 0011	+88 0045
RECORD	12	+89 0012	+89 0017
RECORD	13	+89 0013	+88 0048
RECORD	14	+89 0014	+88 0051
RECORD	15	+89 0015	+88 0052
RECORD	16	+89 0016	+89 0019
RECORD	17	+89 0017	+89 0020
RECORD	18	+89 0018	+89 0022
RECORD	19	+89 0020	+88 0066
RECORD	20	+89 0021S	+88 0069
RECORD	21	+89 0022	+88 0071
RECORD	22	+89 0023	+89 0026
RECORD	23	+89 0025	+89 0031
RECORD	24	+89 0026	+89 0023
RECORD	25	+89 0027	+88 0080
RECORD	26	+89 0028	+89 0039
RECORD	27	+89 0029	+89 0035
RECORD	28	+89 0030	+89 0044
RECORD	29	+89 0031	+89 0078
RECORD	30	+89 0032	+89 0046

L I S T I N G   O F   R E C O R D S   F R O M   T A P E   F I L E

TAPE FILE NAME: BD-AGK3 CROSS INDEX

RECORDS 179409 TO 179438

TAPE FILE 6

RECORD LENGTH 20 BYTES

INPUT VOLSER WTS010

```
C O L U M N                                                                                                         1111111111111111
H E A D I N G           111111111122222222223333333333444444444455555555556666666666777777777788888888889999999999000000000011111
I N D E X      12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345

RECORD 179409  -02 5988  -01 2851
RECORD 179410  -02 5990  -01 2852
RECORD 179411  -02 5993  -02 1243
RECORD 179412  -02 5998  -01 2855
RECORD 179413  -02 5999  -01 2856
RECORD 179414  -02 6000  -01 2857
RECORD 179415  -02 6012  -01 2863
RECORD 179416  -02 6013  -02 1244
RECORD 179417  -02 6014  -01 2864
RECORD 179418  -02 6019  -01 2866
RECORD 179419  -02 6021  -01 2868
RECORD 179420  -02 6023  -01 2869
RECORD 179421  -02 6024  -01 2870
RECORD 179422  -02 6034  -01 2873
RECORD 179423  -02 6037  -01 2874
RECORD 179424  -02 6043  -01 2878
RECORD 179425  -02 6052  -01 2882
RECORD 179425  -02 6056  -01 2883
RECORD 179427  -02 6057  -01 2884
RECORD 179428  -02 6060  -01 2885
RECORD 179429  -02 6068  -01 2889
RECORD 179430  -02 6071  -02 1246
RECORD 179431  -02 6073  -01 2891
RECORD 179432  -02 6078  -01 2892
RECORD 179433  -02 6084  -01 0002
RECORD 179434  -02 6090  -02 0001
RECORD 179435  -02 6091  -02 0002
RECORD 179436  -02 6093  -01 0004
RECORD 179437  -02 6094  -02 0003
RECORD 179438  -02 6099  -01 0006
```