82-14

National Space Science Data Center/
World Data Center A For Rockets and Satellites

DOCUMENTATION FOR THE

MACHINE-READABLE VERSION

FAINT BLUE OBJECTS AT HIGH GALACT

MAY 1982

NSSDC/WDC-A-R&S 82-14

DOCUMENTATION FOR THE MACHINE-READABLE VERSION

OF

FAINT BLUE OBJECTS AT HIGH GALACTIC LATITUDE

Wayne H. Warren Jr.

May 1982

National Space Science Data Center (NSSDC)/
World Data Center A for Rockets and Satellites (WDC-A-R&S)
National Aeronautics and Space Administration
Goddard Space Flight Center
Greenbelt, Maryland 20771

TABLE OF CONTENTS

LIST OF TABLES

Table

SECTION 1 - INTRODUCTION

The data set *Faint Blue Objects at High Galactic Latitude* is a catalog of objects selected according to relative ultraviolet excess from *ubv* three-color 1.2-m Palomar Schmidt plates. Three selected area fields are included, centered on SA57 (Usher 1981), SA29 (Usher, Mattson and Warnock 1982) and SA28 (Usher and Mitchell 1982). The catalog contains color classifications, *B* magnitudes, 1950 coordinates, comments and field identifications for 2363 objects.

For a discussion of the methods employed in object selection, see Usher (1981) and Warnock and Usher (1982).

This document describes the machine-readable data file. (A description can also be found in the source reference.) It is intended to enable users to read and process the data without problems and guesswork, and a copy should be distributed with any machine-readable copy of the data file.

SOURCE REFERENCE

Warnock, A. III and Usher, P. D. 1982, *Astron. Data Center Bull.* 1, No. 3 (to be published).

SECTION 2 - TAPE CONTENTS

A byte-by-byte description of the contents of 1 logical records in the machine-readable *Faint Blue Objects at High Galactic Latitude* file is given in Table 1. The suggested format specifications are for FORTRAN formatted reads and can be modified depending upon usage, but care should be taken for fields which can contain blanks (as noted in the table) when data are missing. Alternate format specificiations are given in parentheses.

Table 1. Tape Contents. *Faint Blue Objects at High Galactic Latitude*

Byte(s)	Units	Suggested Format	Description
1- 4	---	I4	US (sequential) number; SA57 (1-634), SA29 (635-1184), SA28 (1185-2363).
5	---	1X	Blank
6- 9	---	A4 (4A1)	Color class based on the following criteria: For $U-V < 0$: 1A - Above the blackbody (BB) line by $\Delta(U-B) > 0.15$ mag; region populated mainly by quasars. 1 - Within $\Delta(U-B) \approx \pm 0.15$ mag of BB line. 1B - Below BB line by $\Delta(U-B) \approx 0.15$ mag (in general vicinity of white dwarf cooling curve). 1BS - Close to the luminosity class III-V line for blue halo stars. For $U-V > 0$: 1C - Above the BB line in the region where type N and continuous spectrum galaxies often located. 2 - Below the BB line, but not within the color class 3 region. 3 - Within the region of the subdwarfs and halo horizontal-branch stars. The class field can contain a colon (:) indicating uncertainty, an exclamation point (!) or a question mark (?).
10	---	1X	Blank

Table 1. (continued)

Byte(s)	Units	Suggested Format	Description
11- 14	mag	F4.1 (A4)	*B* magnitude as determined by iris photometry. Blank if no data present.
15	---	A1	Colon (:) for uncertain magnitude; otherwise blank.
16	---	1X	Blank
17- 18	hours	I2	Right ascension (α) for equinox 1950.
19	---	1X	Blank
20- 21	min	I2	α
22	---	1X	Blank
23- 26	sec	F4.1	α
27	---	1X	Blank
28	---	A1	Sign of declination (δ).
29- 30	°	I2	δ for equinox 1950.
31	---	1X	Blank
32- 33	'	I2	δ
34	---	1X	Blank
35- 36	"	I2	δ
37	---	1X	Blank
38- 52	---	15A1	or equivalent. Notes from original catalogs. The following abbreviations are employed: E: edge zone -- object within ~1° of plate edge G: galaxy, as determined from morphology plate CG: compact galaxy C: confused source Q: known quasar (from Veron and Veron 1974 and succeeding papers) ?: uncertainty R: remark in bytes 59 to 118

Table 1. (continued)

Byte(s)	Units	Suggested Format	Description
53	---	1X	Blank
54- 57	---	A4	Field identification (SA57, SA29, SA28).
58	---	1X	Blank
59-118	---	60A1	or equivalent. Additional remarks.

All alphabetic characters in the alphanumeric fields are upper case.

SECTION 3 - TAPE CHARACTERISTICS

The information contained in Table 2 is sufficient for a user to describe the indigenous characteristics of the data file to a computer. Not included is information 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, number of tracks, and internal coding (EBCDIC, ASCII, etc.). These parameters should always be transmitted if secondary copies of the catalogue are supplied to other users or installations.

Table 2. Tape Characteristics. *Faint Blue Objects at High Galactic Latitude.*

NUMBER OF FILES	1
LOGICAL RECORD LENGTH	118
RECORD FORMAT	FB*
TOTAL NUMBER OF LOGICAL RECORDS	2363

* Fixed block length (last block may be short)

SECTION 4 - REMARKS, MODIFICATIONS, ACKNOWLEDGMENTS AND REFERENCES

The *Faint Blue Objects at High Galactic Latitude* data file was received on magnetic tape from A. Warnock III on 2 April 1982. The only modifications made to the file were that the *B* magnitude field was converted to a blank field when no value is given (it was 0.0 when received) and the logical record length was changed from 132 bytes to 118 bytes, since bytes 119 to 132 were never used.

ACKNOWLEDGMENT

Appreciation is expressed to A. Warnock III for providing the data file on magnetic tape and for supplying an excellent description of the tape characteristics.

REFERENCES

Usher, P. D. 1981, *Astrophys. J. Suppl.* 46, 117.

Usher, P. D., Mattson, D. and Warnock III, A. 1982, *Astrophys. J. Suppl.* 48, 51.

Usher, P. D. and Mitchell, K. J. 1982, *Astrophys. J. Suppl.* 49 (in press).

Veron, M. P. and Veron, P. 1974, *Astron. Astrophys. Suppl.* 18, 309.

Warnock III, A. and Usher, P. D. 1982, *Astron. Data Center Bull.* 1, No. 3 (to be published).

SECTION 5 - SAMPLE LISTING

The sample listing given on the following pages contains logical data records exactly as they are recorded on the tape. Sample records for stars at the beginning and end of the data file are listed. The beginning of each record and bytes within that record are indicated by the column heading index across the top of each page (digits read vertically). Since each logical record is longer than 115 bytes, the remainder (bytes 116-118) is printed in the following row.

LISTING OF RECORDS FROM TAPE FILE

TAPE FILE NAME: PAINT BLUE HIGH GAL LAT
RECORDS 1 TO 16
TAPE FILE 18
RECORD LENGTH 118 BYTES
INPUT VOLSER ADC015

COLUMN HEADING INDEX											
		1	2	3	4	5	6	7	8	9	10
		12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345									
RECORD	1	1 3	16.7	12 52 15.9	+28 22 26	E			SA57		
RECORD	2	2 3	19.9	12 52 38.4	+31 46 58	E			SA57		
RECORD	3	3 3	19.6	12 52 41.9	+32 13 27	E			SA57		
RECORD	4	4	20.2	12 52 42.2	+31 46 22	E;CG?			SA57		
RECORD	5	5 1	18.3	12 52 54.2	+27 41 35	E			SA57		
RECORD	6	6 1C	15.6	12 52 57.3	+29 36 53	E			SA57		
RECORD	7	7 3	18.6	12 53 4.0	+29 4 13	E			SA57		
RECORD	8	8 3	19.2	12 53 4.5	+29 15 59	E			SA57		
RECORD	9	9 3	18.2	12 53 6.2	+29 13 40	E			SA57		
RECORD	10	10 3	18.8	12 53 6.4	+30 17 55	E			SA57		
RECORD	11	11 3	19.4	12 53 14.2	+29 39 45	E			SA57		
RECORD	12	12 3	17.9	12 53 16.8	+28 23 8	E			SA57		
RECORD	13	13 1C	19.6	12 53 18.4	+31 27 1	E			SA57		
RECORD	14	14 3	17.7	12 53 18.8	+30 54 30	E			SA57		
RECORD	15	15 2	18.9	12 53 20.1	+32 7 39	E			SA57		
RECORD	16	16 3	18.8	12 53 21.9	+31 56 52	E			SA57		

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: FAINT BLUE HIGH GAL LAT
                     RECORDS  2348 TO  2363
                   TAPE FILE    18
               RECORD LENGTH   118 BYTES
                INPUT VOLSER  ADC015

C O L U M N                                                                                                       1111111111111111
H E A D I N G S           111111111122222222223333333333444444444455555555556666666666777777777788888888889999999999000000000011111
I N D E X        1234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345

RECORD   2348   2348       17.4   9  3 53.7 +43 12  6 E          SA28

RECORD   2349   2349 2:    19.4   9  3 53.9 +46 33 49 E          SA28

RECORD   2350   2350 1B:   18.0   9  3 54.8 +45 19 54 E          SA28

RECORD   2351   2351       19.0   9  3 54.9 +47 11 41 E          SA28

RECORD   2352   2352 1:    19.2   9  4  1.9 +45 31  4 E          SA28

RECORD   2353   2353       18.6   9  4  8.1 +45  3 53 E          SA28

RECORD   2354   2354       18.6   9  4  8.3 +45 30 46 E          SA28

RECORD   2355   2355       17.3   9  4 15.5 +45  8 51 E          SA28

RECORD   2356   2356       19.7   9  4 20.3 +47  9 12 E          SA28

RECORD   2357   2357       18.7   9  4 21.6 +45 24 59 E          SA28

RECORD   2358   2358       17.6   9  4 23.3 +44 48 43 E          SA28

RECORD   2359   2359       16.9   9  4 25.3 +47  3 31 E          SA28

RECORD   2360   2360       17.8   9  4 31.4 +45 49  5 E          SA28

RECORD   2361   2361       18.7   9  4 36.2 +46 49 43 E          SA28

RECORD   2362   2362       21.0   9  4 44.5 +47 34 37 E          SA28

RECORD   2363   2363       17.0   9  4 49.6 +46 59 49 E          SA28
```