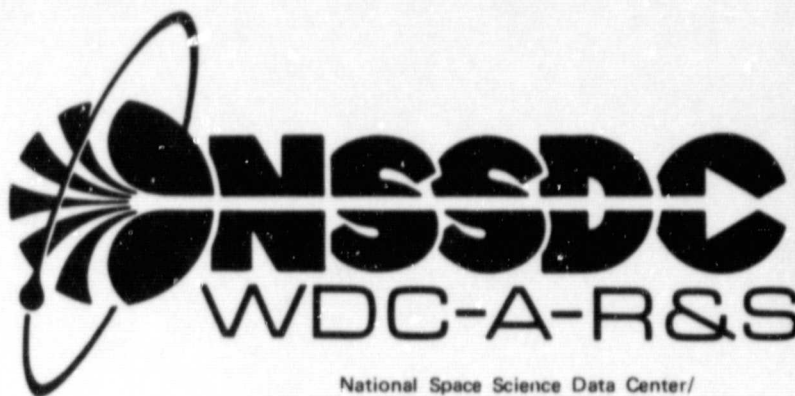


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National Space Science Data Center/  
World Data Center A For Rockets and Satellites

82-16

(NASA-TD-84771) DOCUMENTATION FOR THE  
MACHINE-READABLE VERSION OF THE CATALOGUE OF  
INDIVIDUAL UBV AND UVBY BETA OBSERVATIONS IN  
THE REGION OF THE ORION OB1 ASSOCIATION  
(NASA) 15 p HC A02/MF A01

N82-30197

Unclas

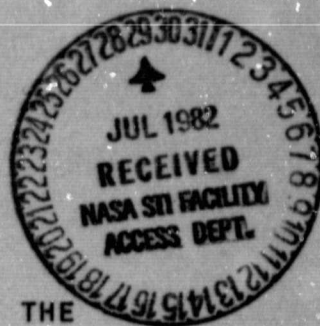
CSSL 03A G3/89 28466

DOCUMENTATION FOR THE

MACHINE-READABLE VERSION OF THE

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IN THE REGION OF THE ORION OB 1 ASSOCIATION



MAY 1982

DOCUMENTATION FOR THE MACHINE-READABLE VERSION  
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May 1982

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World Data Center A for Rockets and Satellites (WDC-A-R&S)  
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## SECTION 1 - INTRODUCTION

The Catalogue of Individual *UBV* and *uvby $\beta$*  Observations of Stars in the Region of the Orion OB 1 Association presents individual *UBV* observations of 106 stars in the vicinity of the Orion Nebula (the Sword region) and individual *uvby $\beta$*  observations of 508 stars in all regions of the Orion OB 1 association. For the *UBV* data the stars are identified by their Brun (1935) numbers, with cross identifications to the chart numbers used in Warren and Hesser (1977); the *uvby $\beta$*  stars are identified by the aforementioned chart numbers and HD, BD or P (=  $\pi$ ) (Parengo 1954) numbers in that order of preference. The catalogue contains the data of all observations and is intended to provide data for investigations of variability in the Orion region.

This document describes the machine-readable files of the above catalogue, in order that users may read and process the data without unnecessary problems or guesswork. The source publication should be consulted for additional details regarding the observations, instrumentation, and photometric reductions. A copy of this document should be supplied with any machine-readable version of the catalogue.

### SOURCE REFERENCE

Warren, W. H. Jr. and Hesser, J. E. 1977, *Astrophys. J. Suppl.* 34, 115.

## SECTION 2 - TAPE CONTENTS

Byte-by byte descriptions of the contents of the logical records in the *UBV* and *uvby $\beta$*  files are given in Tables 1 and 2, respectively. The suggested format specifications are for FORTRAN formatted read statements and can be modified depending upon individual programming and processing requirements; however, since certain data fields are blank for missing data, it is important to buffer the records in or read them in A (character) format and test for missing data if means are to be computed. This is an absolute necessity for color indices, which can legitimately have zero values. Alternate format specifications are given in parentheses.

Table 1. Tape Contents. *Catalogue of Individual UBV and uvby $\beta$  Observations in the Region of Orion OB 1 Association. UBV Data.*

Byte(s)	Units	Suggested Format	Description
1- 4	---	I4	Number in the catalogue of Brun (1935).
5	---	1X	Blank
6- 8	---	I3 (A3)	Number assigned by Warren and Hesser (1977); otherwise blank.
9	---	1X	Blank
10-15	mag	F6.3	V. Byte 15 is used only when a night's observations averaged to yield a 5 in the thousandths column.
16	---	A1	Colon (:) for certain nightly V; otherwise blank.
17	---	1X	Blank
18-23	mag	F6.3	B-V. Byte 23 is used only when a night's observations averaged to yield a 5 in the thousandths column.
24	---	A1	Colon (:) if uncertain nightly B-V; otherwise blank.
25	---	1X	Blank.
26-31	mag	F6.3	U-B. Byte 31 is used only when a night's observations averaged to yield a 5 in the thousandths column. Blank if no data.

Table 1. (continued).

Byte(s)	Units	Suggested Format	Description
32	---	A1	Colon (:) if uncertain nightly U-B; otherwise blank.
33	---	A1	Additional colon if nightly U-B mean very uncertain.
34-35	---	2X	Blank
36-42	---	F7.4	Date of observation in form MM.DDYR (12.0468 = 4 December 1968).

Table 1a. Notes to Table 1

---

1. The following stars each have a single discordant value which careful inspection of the original data fails to explain; while the existence of these discrepancies may be indicative of variability, it is more likely that they simply reflect an undetected error at the telescope; therefore, they should not be used in forming means; Brun 37 (12.0568) Brun 32 (12.0668) Brun 202 (12.0468) and Brun 244 (12.0468).
  2. Star Brun 490 appears variable in V, which Walker's (1969) data weakly suggest too.
-



Table 2. Tape Contents. Catalogue of Individual UVB and uvby $\beta$  Observations in the Region of the Orion OB 1 Association. uvby $\beta$  Data.

Byte(s)	Units	Suggested Format	Description
1- 5	---	I5	Number assigned by Warren and Hesser (1977) for purposes of chart identification.
6- 8	---	A3	Component identifications for multiple systems.
9	---	1X	Blank
10-11	---	A2	Catalogue identification for following number (HD - Henry Draper Catalogue; BD - Bonner Durchmusterung; P - Parenago [1954]).
12-18	---	I7	Catalogue number (right justified).
19	---	1X	Blank
20-25	mag	F6.3	V magnitude transformed from y. Blank when not present.
26	---	1X	Blank
27-32	mag	F6.3	b-y color index (blank if absent).
33	---	1X	Blank
34-39	mag	F6.3	m <sub>1</sub> color index (blank if absent).
40	---	1X	Blank
41-46	mag	F6.3	c <sub>1</sub> color index (blank if absent).
47	---	1X	Blank
48-54	mm.ddyr	F7.4	UT date of uvby observation in the units indicated (month. dayyear). Blank if absent.
55	---	1X	Blank
56-60	mag	F5.3	$\beta$ index (blank if absent).
61	---	1X	Blank
62-68	mm.ddyr	F7.4	UT date of $\beta$ observation (as in bytes 48-54). Blank if absent.

SECTION 3 - TAPE CHARACTERISTICS

The information contained in Table 3 is sufficient for a user to describe the indigenous characteristics of the two files of the Catalogue of Individual UVV and uvby $\beta$  Observations in the Region of the Orion OB 1 Association to a computer. 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, and internal coding (EBCDIC, ASCII, etc.) is not included. These parameters should always be supplied if secondary copies are transmitted to other installations. Parameters relating to the two files are separated by commas.

Table 3. Tape Characteristics. Catalogue of Individual UVV and uvby $\beta$  Observations in the Region of the Orion OB 1 Association.

---

NUMBER OF FILES .....	2
LOGICAL RECORD LENGTH (BYTES) .....	42, 68
RECORD FORMAT .....	FB*
TOTAL NUMBER OF LOGICAL RECORDS .....	357, 1595

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\* Fixed block length (last block may be short)

#### SECTION 4 - REMARKS AND REFERENCES

The magnetic tape version of the catalogue was prepared at the Astronomical Data Center, NASA Goddard Space Flight Center in 1977. Some minor editing was performed prior to the preparation of this document.

#### REFERENCES

Brun, A. 1935, *Publ. Obs. Lyon* 1, No. 12.

Paranago, P. P. 1954, *Trudy Sternberg Astron. Inst.*, No. 25.

Walker, M. F. 1969, *Astrophys. J.* 155, 447.

Warren, W. H. Jr. and Hesser, J. E. 1977, *Astrophys. J. Suppl.* 34, 115.

## SECTION 5 - SAMPLE LISTING

The sample listings given on the following pages contain logical records exactly as they are recorded on the magnetic tape. A sample listing is shown for each file; each listing contains groups of records from the beginning and end of the file. The beginning of each record and bytes within the record are indicated by the column heading index (digits read vertically).







