

DATA SET CATALOG # 73

MARINER 6, Celestial Mechanics  
69-014A-05A 2 tapes

MARINER 7, Celestial Mechanics  
69-030A-05A 2 tapes

---

## Table of Contents

1. Introduction
2. Errata/Change Log
3. LINKS TO RELEVANT INFORMATION IN THE ONLINE NSSDC INFORMATION SYSTEM
4. Catalog Materials
  - a. Associated Documents
  - b. Core Catalog Materials

---

## **1. INTRODUCTION:**

The documentation for this data set was originally on paper, kept in NSSDC's Data Set Catalogs (DSCs). The paper documentation in the Data Set Catalogs have been made into digital images, and then collected into a single PDF file for each Data Set Catalog. The inventory information in these DSCs is current as of July 1, 2004. This inventory information is now no longer maintained in the DSCs, but is now managed in the inventory part of the NSSDC information system. The information existing in the DSCs is now not needed for locating the data files, but we did not remove that inventory information.

The offline tape datasets have now been migrated from the original magnetic tape to Archival Information Packages (AIP's).

A prior restoration may have been done on data sets, if a requestor of this data set has questions; they should send an inquiry to the request office to see if additional information exists.

## 2. ERRATA/CHANGE LOG:

NOTE: Changes are made in a text box, and will show up that way when displayed on screen with a PDF reader.

*When printing, special settings may be required to make the text box appear on the printed output.*

Version	Date	Person	Page	Description of Change
01				
02				

3 LINKS TO RELEVANT INFORMATION IN THE ONLINE NSSDC INFORMATION SYSTEM:

<http://nssdc.gsfc.nasa.gov/nmc/>

[NOTE: This link will take you to the main page of the NSSDC Master Catalog. There you will be able to perform searches to find additional information]

4. CATALOG MATERIALS:

- a. Associated Documents      To find associated documents you will need to know the document ID number and then click here.  
<http://nssdcftp.gsfc.nasa.gov/miscellaneous/documents/>

- b. Core Catalog Materials

MARINER 6

PSCM-00017

2 WAY DOPPLER RADIO TRACKING, TAPE

69-014A-05A

THIS DATA SET HAS BEEN RESTORED. THERE WERE ORIGINALLY TWO 7-TRACK, 556 BPI TAPES WRITTEN IN BINARY. THERE IS ONE RESTORED TAPE. THE DR TAPE IS A 3480 CARTRIDGE AND THE DS TAPE IS 9-TRACK, 6250 BPI. THE ORIGINAL TAPE WAS CREATED ON AN IBM 7094 COMPUTER AND WAS RESTORED ON AN IBM 9021 COMPUTER. THE DR AND DS NUMBER ALONG WITH THE CORRESPONDING D NUMBERS AND TIME SPAN IS AS FOLLOWS:

DR#	DS#	D#	FILES	TIME SPAN
DR005225	DS005225	D005407	1	03/05/69 - 09/02/69
		D005408	2	03/05/69 - 09/02/69 (a)

(a) D005408 - 1 ERROR, REC. 48, FILE 1

MARINER 7

PSCM-00014

2 WAY DOPPLER RADIO TRACKING ON TAPE

69-030A-05A

THIS DATA SET HAS BEEN RESTORED. THERE WERE ORIGINALLY TWO 7-TRACK, 556 BPI TAPES WRITTEN IN BINARY. THERE IS ONE RESTORED TAPE. THE DR TAPE IS A 3480 CARTRIDGE AND THE DS TAPE IS 9-TRACK, 6250 BPI. THE ORIGINAL TAPES WERE CREATED ON AN IBM 7094 COMPUTER AND WERE RESTORED ON AN IBM 9021 COMPUTER. THE DR AND DS NUMBER ALONG WITH THE CORRESPONDING D NUMBERS AND TIME SPANS ARE AS FOLLOWS:

DR#	DS#	D#	FILES	TIME SPAN
DR005265	DS005265	D005409	1	04/12/69 - 09/07/69
		D005410	2	04/12/69 - 09/07/69

69-014A-05A

MARINER 6  
CELESTIAL MECHANICS

556 BPI, BIN, 7 track, 1 file tapes.

<u>D#</u>	<u>C#</u>	<u>TIME SPAN</u>	<u>FORMAT TYPE</u>
D-05407	C-01226	3/5/69 - 9/2/69	Single Precision
D-05408	C-02766	3/5/69 - 9/2/69	Double Precision

69-030A-05A

MARINER 7  
CELESTIAL MECHANICS

556 BPI, BIN 7 track, 1 file tapes.

<u>D#</u>	<u>C#</u>	<u>TIME SPAN</u>	<u>FORMAT TYPE</u>
D-05409	C-03584	4/12/69- 9/7/69	Single Precision
D-05410	C-03585	4/12/69- 9/7/69	Double Precision

NOTE: In each data set, tapes have the same time-span, but 1 tape is in single precision and the other is in double precision.



JET PROPULSION LABORATORY California Institute of Technology • 4800 Oak Grove Drive, Pasadena, California 91103

69-014A-05A

69-030A-05A

14 May 1970

Mr. Kenneth Michlovitz  
National Space Science Data Center  
Code 601  
Goddard Space Flight Center  
Greenbelt, Maryland 20771

Dear Mr. Michlovitz:

Under separate cover I am returning four magnetic tapes for deposit in the NSSDC. These tapes have been used to record the range and two way Doppler radio tracking data from Mariners 6 and 7. Two tapes have been used for each spacecraft, one containing portions of each data record in single precision and the second in which all station frequencies and observables are in double precision. The formats of the single precision (SP) and double precision (DP) data tapes is described in the attachment to this letter. All tapes are written with a density of 556 bpi, unblocked. Tape identification is as follows:

Tape No.	Spacecraft	Format
A 98947	MA 6	DP
A 98948	MA 6	SP
A 98950	MA 7	DP
A 98952	MA 7	SP

Each of the tapes covers the period from the Midcourse maneuver, (M/C), through 30 days beyond encounter, (E), with Mars. The count time for the Doppler tracking data is 600 seconds, except near encounter where it is as summarized below.

Interval	Count Time
M/C to E-4hrs	600 sec
E-4hrs to E-1hr	60 sec
E-1hr to E+1hr	10 sec
E+1hr to E+4hrs	60 sec
E+4hr to E+30days	600 sec

JET PROPULSION LABORATORY California Institute of Technology • 4800 Oak Grove Drive, Pasadena, California 91107

Mr. Kenneth Michlovitz

2

14 May 1970

I will retain the two NSSCD provided blank tapes still in my possession for use in transmitting the Mariner 6 and 7 radio tracking data from encounter plus 30 days through the end of the extended mission.

Very truly yours,



Leonard Efron  
Member of Technical Staff  
Systems Analysis Research Section

cc: J. D. Anderson  
J. R. Casani  
J. A. Stallkamp  
X. W. Cunningham, NASA

LE:eh

MAY 25 1970

69-014A-05A  
D-φ5407

SINGLE PRECISION DATA TAPE FORMAT

HEADER RECORDS

RECORD 1

WORD	CONTENTS	FORM
0-8	FILE LABEL	BCD
9	CHECKSUM WORD	

RECORD 2

WORD	CONTENTS	FORM
0	MISSION NUMBER	BI
1-3	MISSION IDENTIFICATION	
4-8	DISCS FILE CONTROL BLOCK INFORMATION	
9	NOT USED	
10-39	EACH OF THESE 15 DOUBLE WORDS CONTAINS THE TIME OF THE LAST OBSERVATION (EXPRESSED IN SECONDS ELAPSED SINCE INJECTION) FOR EACH OF THE 15 STATIONS IN DESCENDING ORDER	DPPP
40-54	EACH OF THESE 15 WORDS CONTAINS THE TOTAL NUMBER OF EACH OF THE 15 DATA TYPES (IN ASCENDING SEQUENCE) OBSERVED AT STATION 15	BI
55-56	START TIME OF STATION 15 (EXPRESSED IN SECONDS ELAPSED SINCE INJECTION)	DPPP
295-17N to 309-17N	EACH OF THESE 15 WORDS CONTAINS THE TOTAL NUMBER OF EACH OF THE 15 DATA TYPES (IN ASCENDING SEQUENCE) OBSERVED AT STATION N WHERE $7 \leq N \leq 15$	BI
310-17N to 311-17N	START TIME OF STATION N (EXPRESSED IN SECONDS ELAPSED SINCE INJECTION)	DPPP
193-199	EACH OF THESE 7 WORDS CONTAINS THE TOTAL NUMBER OF EACH OF THE FIRST SEVEN DATA TYPES OBSERVED AT STATION 6	BI
200	CHECKSUM WORD	