

#458

Earth Sc

GEOS-C

C-BAND RADAR DATA

75-027A-03A

ESGP-00046

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 This inventory information is now no longer maintained in the DSCs, but is now managed in the inventory part of the NSSDC information system.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

GEOS 3

C-BAND RADAR DATA ON TAPE

75-027A-03A ESGP-00046

THIS DATA SET HAS BEEN RESTORED. ORIGINALLY IT CONTAINED 18 7-TRACK, 800 BPI TAPES WRITTEN IN BCD. THERE ARE SIX RESTORED TAPES WRITTEN IN ASCII. THE DR TAPES ARE 3480 CARTRIDGES AND THE DS TAPES ARE 9-TRACK, 6250 BPI. THE ORIGINAL TAPES WERE CREATED ON AN IBM 7094 COMPUTER AND THE RESTORED TAPES WERE CREATED ON AN IBM 9021 COMPUTER. THE DR AND DS NUMBERS ALONG WITH THE CORRESPONDING D NUMBERS AND THE TIME SPANS ARE AS FOLLOWS:

DR#	DS#	D#	FILES	TIME SPAN
DR004257	DS004257	D031843	1	08/01/75 - 08/15/75
		D031837	2	08/18/75 - 08/29/75
		D031846	3	01/02/76 - 01/14/76
DR004258	DS004258	D031845	1	01/15/76 - 01/21/76
		D031844	2	01/22/76 - 01/30/76
		D031840	3	02/04/76 - 02/15/76
DR004259	DS004259	D031839	1	02/16/76 - 02/22/76
		D031838	2	03/08/76 - 03/31/76
		D031847	3	04/01/76 - 04/30/76
DR004295	DS004295	D031841	1	05/03/76 - 05/28/76
		D031842	2	06/01/76 - 06/29/76
		D031941	3	07/01/76 - 07/17/76
DR004296	DS004296	D031942	1	07/18/76 - 07/30/76
		D032751	2	08/02/76 - 08/31/76
		D032753	3	09/01/76 - 09/15/76
DR004297	DS004297	D032752	1	09/16/76 - 09/30/76
		D034472	2	10/01/76 - 10/29/76
		D034473	3	11/01/67 - 11/30/76

GEOS-C

C-BAND RADAR DATA

75-027A-03A

This data set contains 18 tapes created on an IBM 7094. They are 7 track, 800 bpi, BCD with 1 file per tape. The D & C numbers and time spans follow below:

<u>D#</u>	<u>C#</u>	<u>TIME SPAN</u>
D-31837	C-20222	8/18/75 - 8/29/75
D-31838	C-20223	3/08/76 - 3/31/76
D-31839	C-20224	2/16/76 - 2/22/76
D-31840	C-20225	2/04/76 - 2/15/76
D-31841	C-20226	5/03/76 - 5/28/76
D-31842	C-20227	6/01/76 - 6/29/76
D-31843	C-20228	8/01/75 - 8/15/75
D-31844	C-20229	1/22/76 - 1/30/76
D-31845	C-20230	1/15/76 - 1/21/76
D-31846	C-20231	1/02/76 - 1/14/76
D-31847	C-20232	4/01/76 - 4/30/76
D-31941	C-20233	7/01/76 - 7/17/76
D-31942	C-20258	7/18/76 - 7/30/76
D-32751	C-20268	8/ 2/76 - 8/31/76
D-32752	C-20269	9/16/76 - 9/30/76
D-32753	C-20270	9/ 1/76 - 9/15/76
D-34472	C-20694	10/01/76 - 10/29/76
D-34473	C-20710	11/01/76 - 11/30/76

Descriptions of columns 1-32 for all measurement types.

<u>Columns</u>	<u>Type</u>	<u>Description</u>
1-7	I	Satellite - ID
8-9	I	Measurement Type
		10-14 Right Ascension and Declination
		10 = Optical
		11 = Laser Optical
		15-19 Hour Angle and Declination
		15 = DSN S-Band Radar
		20-29 Range or Range Difference
		20 = Laser
		21 = C-Band Radar
		22 = C-Band VLBI Range Difference Radars
		23 = DSN S-Band Radar
		24 = USB Radar
		25 = GRARR S-Band Radar
		26 = GRARR ATS-R C-Band Radar
		27 = GRARR VHF Radar
		30-39 Range Rate or Range Rate Difference
		30 = Combined DSN/USB Radars
		31 = C-Band Radar
		32 = C-Band VLBI Range Rate Difference Radars
		33 = DSN S-Band Radar
		34 = USB Radar
		35 = GRARR S-Band Radar
		36 = GRARR ATS-R C-Band Radar
		37 = GRARR VHF Radar
		38 = TRANET Doppler
		39 = Geociever Doppler
		40-44 Altimeter Height
		45-49 Available for additional measurement types such as Altimeter Height Rate.

<u>Columns</u>	<u>Subset</u>	<u>Description</u>
		50-54, l and m Direction Cosines
		51 = Minitrack Equatorial Mode
		52 = Minitrack Polar Mode
		55-59 Available for additional angles or cosines
		60-63 X-Y Angles (East-West)
		60 = USB Radar
		64-69 X-Y Angles (North-South)
		64 = USB Radar
		65 = GRARR S-Band Radar
		66 = GRARR ATS-R C-Band Radar
		67 = GRARR VHF Radar
		70-79 Azimuth and Elevation Angles
		70 = Laser
		71 = C-Band Radar
		73 = DSN S-Band Radar
		80-89 Available for additional Range type measurements.
		90-99 Available for additional Range Rate type measurements.
3	10-11	Time System Indicator
	10	0 = Ground Received Time
		1 = Satellite Transponder/Transmitter Time
		2 = Ground Transmitted Time
		3 = Satellite Receiver Time
	11	0 = UT-0
		1 = UT-1
		2 = UT-2
		3 = UT-C
		4 = A.1
		5 = A.3 (A.T. B.I.H.)
		6 = A-S (Smithsonian)

<u>Columns</u>	<u>Subset</u>	<u>Description</u>
12-16		Station ID
17-32		GMT of Observation
	5 17-18	year YY
	6 19-21	Day of Year DDD
	7 22-26	Time of Day (Seconds from midnight GMT)
	8 27-32	Fractional Part of Seconds (in microseconds)

Columns 33-80 for range and range difference* measurements
(Data Types 20-29)

<u>Columns</u>	<u>Subset</u>	<u>Description</u>
33-35		<u>Preprocessing Indicators</u>
	9 33	0 = Data has been corrected for ionospheric refraction effects. 1 = Data not corrected for ionospheric refraction.
	10 34	0 = Data has been corrected for tropospheric refraction effects. 1 = Data not corrected for tropospheric refraction. 2 = Data has been corrected for tropospheric refraction using the correction formulas for international laser data (see cols. 76-80). 3 = Data not corrected for tropospheric refraction. Columns 76-80 contain coefficient for use with international laser formulas.
		4 or 5 = Columns 57-66 will contain meteorological data (4 refers to 0, 5 refers to 1)
	11 35	0 = Data has been corrected for transponder delay effects. 1 = Data not corrected for transponder delay.
36-54		<u>Observation Data</u>
	36-45 12	Range or Range Difference (Km)
	46-54 13	Range or Range Difference XXX.XXXXXX Meters
55-56		<u>Preprocessing Indicators</u>
	55 14	Preprocessing Report 0 = Report not indicated 1 - 9, A - Z values to be assigned

*Range Difference - Time Delay VLBI

<u>Columns</u>	<u>Subset</u>	<u>Description</u>
56 / 5		Transponder Channel for GRARR
		1 = Channel A or 1st sidetone
		2 = Channel B or 2nd sidetone
		3 = Channel C or 3rd sidetone
		or
		Transponder type for other systems
		1 - coherent
		2 - non-coherent

16 {	57-61	Reference station number for range differencing or transmitting station number for station-to-satellite-to satellite-to station data.
17 {	62-68	Relay satellite-ID for satellite-to-satellite data.

If col 34 contains a 4 or 5 meteorological data will be input in columns 57-66 as follows:

{	57-60	*Surface Pressure XXXX Millibars
	61-63	*Surface Temperature XXX° K
	64-66	*Relative Humidity at Surface XXX Percent

(Common for both after this point)

18 {	69-73	Measurement standard deviation XX.XXX Meters
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*Note: METEOROLOGICAL DATA INPUT FOR RANGE DATA IN GEOS-C CARD IMAGE FORMAT.

MODIFICATION

FOR
SEASAT 11/77AUGUST 1977
7612.0ColumnsSubsetDescription

19 74

Range ambiguity indicator

For DSN S-Band

- 1 - MARK 1A (824809582.0 m)
- 2 - TAU (151285510.38518 m)

For USB

- 1 - 824809582.0 m

For GRARR S-Band

- 1 - 18737031.3 m
- 2 - 4684257.8 m
- 3 - 936851.6 m

20 75

Not used

21 76-80

Tropospheric refraction correction

XX.XXX Meters

or,

Coefficient of Tropospheric Refraction
international lasers (see col. 34)

XX.XXX Meters

22

81

FLAG FOR SPEED OF LIGHT CONSTANT

0 - OLD VALUE - 299792.5 km/s

1 - NEW VALUE - 299792.458 km/s

23

82

FLAG FOR APPLICATION OF CENTER OF
MASS CORRECTION

0 - HAS BEEN APPLIED

1 - HAS NOT BEEN APPLIED

24

83-88

CENTER OF MASS CORRECTION (MILLIMETER)

25

89-90

LOG₁₀ OF THE STANDARD DEVIATION
OF THE TIME OF THE OBSERVATION
(MICROSECONDS)

26

27
28

FATS070 CONTROL CARD TABLE SIZE IS 4096 BYTES

FATAR CONTROL CARDS

1-- ANALYZE BLP,PRTLEN=84
2-- PRINT LF=3,B=1-5,CHAR

00000110 DUMP OF START TIME

D-034473
11/1/76 - 11/30/76

FATS071 TAPE BUFFER SIZE IS 65535 BYTES

FATS040 TAPEIN IS NOT LABELED - LABELS=NO ASSUMED

CHARACTERISTICS OF THE TAPE TO BE ANALYZED
UNIT SERIAL DEN TRTCH
499 LR1021 6250

FATAR DETAIL REPORT

BLOCK LNTH/ MESSAGE/
NUMBER DISPL BLOCK TYPE 1...5...10...15...20...25...30...35...40...45...50...55...60...65...70...75...80
(COLUMN GRID IS VALID ONLY FOR CHARACTER FORMATTED DATA)

***** START FILE 1
FATS038 DATA FILE IN ISCII/ASCII - TRANSLATED TO EBCDIC

***** END OF FILE 1 -- FILE CONTAINED 15258 BLOCKS

***** START FILE 2
FATS038 DATA FILE IN ISCII/ASCII - TRANSLATED TO EBCDIC

***** END OF FILE 2 -- FILE CONTAINED 25740 BLOCKS

***** START FILE 3
FATS038 DATA FILE IN ISCII/ASCII - TRANSLATED TO EBCDIC

1	84	PRINT REQUESTED	75027012113 47607630647096190314110{	2903581519312011010298 88	1000	0
+00080			YR DAY			
2	84	PRINT REQUESTED	75027017113 4760763064709619031411	615247303{ 5154111 1010298 88	0	0
+00080						
3	84	PRINT REQUESTED	75027012113 47607630647102190412110{	2873829586499011010298 88	1000	0
+00080						
4	84	PRINT REQUESTED	75027017113 4760763064710219041211	622914956{ 5342089 1010298 88	0	0
+00080						
5	84	PRINT REQUESTED	75027012113 47607630647108190511110{	2844352688062011010298 88	1000	0
+00080						

***** END OF FILE 3 -- FILE CONTAINED 25296 BLOCKS

***** START FILE 4
FATS038 DATA FILE IN ISCII/ASCII - TRANSLATED TO EBCDIC

FATS070 CONTROL CARD TABLE SIZE IS 4096 BYTES

FATAR CONTROL CARDS

1-- ANALYZE BLP,PRTLEN=84
 2-- PRINT LF=3,B=25292-25296,CHAR

00000110

DUMP OF END TIME

FATS071 TAPE BUFFER SIZE IS 65535 BYTES

FATS040 TAPEIN IS NOT LABELED - LABELS=NO ASSUMED

CHARACTERISTICS OF THE TAPE TO BE ANALYZED

UNIT	SERIAL	DEN	TRTCH
493	LR1021	6250	

FATAR DETAIL REPORT

BLOCK NUMBER	LNTH/ DISPL	MESSAGE/ BLOCK TYPE
-----------------	----------------	------------------------

1...	5...	10...	15...	20...	25...	30...	35...	40...	45...	50...	55...	60...	65...	70...	75...	80
------	------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	----

(COLUMN GRID IS VALID ONLY FOR CHARACTER FORMATTED DATA)

***** START FILE 1

FATS038 DATA FILE IN ISCII/ASCII - TRANSLATED TO EBCDIC

***** END OF FILE 1 -- FILE CONTAINED 15258 BLOCKS

***** START FILE 2

FATS038 DATA FILE IN ISCII/ASCII - TRANSLATED TO EBCDIC

***** END OF FILE 2 -- FILE CONTAINED 25740 BLOCKS

***** START FILE 3

FATS038 DATA FILE IN ISCII/ASCII - TRANSLATED TO EBCDIC

25292	84	PRINT REQUESTED	75027017113	4150763358214251572811	2645259223{	6233361	876278	795441	1073
+00080									

25293	84	PRINT REQUESTED	75027012113	41507633582148515620110{	281180622544701	876278	7	1000	-7724
+00080									

25294	84	PRINT REQUESTED	75027017113	4150763358214851562011	26420 1684{	6 05405	876278	795441	1073
+00080									

25295	84	PRINT REQUESTED	75027012113	41507633582154515507110{	284499623377901	876278	7	1000	-7724
+00080									

25296	84	PRINT REQUESTED	75027017113	4150763358215451550711	2632742341{	5114751	876278	795441	1073
+00080									

***** END OF FILE 3 -- FILE CONTAINED 25296 BLOCKS

***** START FILE 4

FATS038 DATA FILE IN ISCII/ASCII - TRANSLATED TO EBCDIC

\$JOB 16:17:58
\$ASS IN MS6
\$NOP ***** LIST OF MOUT-1 *****
\$EXEC LIST BS

D-31837

INPUT PARAMETERS ARE: BC FL=5=5

TAPE NO. 1 FILE NO. 1
RECORD 1 LENGTH 84
75027012113 48607523041321776414110? 2858535815117011014296 98 1000 0

TAPE NO. 1 FILE NO. 1
RECORD 2 LENGTH 84
75027017113 4860752304132177641411 462149240? 5454932 1014296 98 0 0

TAPE NO. 1 FILE NO. 1
RECORD 3 LENGTH 84
75027013113 48607523041321779537113 1657- 625320498901014296 98 91 0 0

TAPE NO. 1 FILE NO. 1
RECORD 4 LENGTH 84
75027012113 48607523041327776538110? 2821118638555011014296 98 1000 0

TAPE NO. 1 FILE NO. 1
RECORD 5 LENGTH 84
75027017113 4860752304132777653811 464212842? 6101517 1014296 98 0 0

TAPE NO. 1 FILE NO. 1
RECORD 22023 LENGTH 84
75027017113 4840752418535579093511 31521 5624? 3495333 1019297 64 0 1022

TAPE NO. 1 FILE NO. 1
RECORD 22024 LENGTH 84
75027012113 48407524185361790808110? 3070345204128011019297 64 1000 0

TAPE NO. 1 FILE NO. 1
RECORD 22025 LENGTH 84
75027017113 4840752418536179080811 3153913271? 3293714 1019297 64 0 1022

TAPE NO. 1 FILE NO. 1
RECORD 22026 LENGTH 84
75027012113 48407524185367790681110? 3108501758816011019297 64 1000 0

TAPE NO. 1 FILE NO. 1
RECORD 22027 LENGTH 84
75027017113 4840752418536779068111 3155641366? 3 62298 1019297 64 0 1022

***** JOB DONE.
\$NOTE EOJ 16:28:02
\$ASS IN MS5 OUT MS6
\$EXEC DUPCOM BS

\$JOB 11:24:52
\$ASS IN MS6
\$EXEC TPLIST BS

GEOS-C

C-BAND RADAR DATA

D-34473

C-20710

INPUT PARAMETERS ARE: BC FL=10=10 1

TAPE NO. 1 FILE NO. 1
RECORD 1 LENGTH 84
75027012113 47607630647096190314110? 2903581519312011010298 88 1000 0

11/1/76-11/30/76

TAPE NO. 1 FILE NO. 1
RECORD 2 LENGTH 84
75027017113 4760763064709619031411 615247303? 5154111 1010298 88 0 0

TAPE NO. 1 FILE NO. 1
RECORD 3 LENGTH 84
75027012113 47607630647102190412110? 2873829586499011010298 88 1000 0

TAPE NO. 1 FILE NO. 1
RECORD 4 LENGTH 84
75027017113 4760763064710219041211 622914956? 5342089 1010298 88 0 0

TAPE NO. 1 FILE NO. 1
RECORD 5 LENGTH 84
75027012113 47607630647108190511110? 2844352688062011010298 88 1000 0

TAPE NO. 1 FILE NO. 1
RECORD 6 LENGTH 84
75027017113 4760763064710819051111 63 656766? 5522607 1010298 88 0 0

TAPE NO. 1 FILE NO. 1
RECORD 7 LENGTH 84
75027012113 47607630647114190608110? 2815161539624011010298 88 1000 0

TAPE NO. 1 FILE NO. 1
RECORD 8 LENGTH 84
75027017113 4760763064711419060811 6347 1948? 6121135 1010298 88 0 0

TAPE NO. 1 FILE NO. 1
RECORD 9 LENGTH 84
75027012113 47607630647120190705110? 2786259713062011010298 88 1000 0

TAPE NO. 1 FILE NO. 1
RECORD 10 LENGTH 84
75027017113 4760763064712019070511 642557916? 6291226 1010298 88 0 0

TAPE NO. 1 FILE NO. 1
RECORD 25287 LENGTH 84
75027012113 41507633582130515947110? 271375079309301 876278 7 1000 -7724

TAPE NO. 1 FILE NO. 1
RECORD 25288 LENGTH 84
75027017113 4150763358213051594711 266 038122? 7 84778 876278 795441 1073

TAPE NO. 1 FILE NO. 1
RECORD 25289 LENGTH 84
75027012113 41507633582136515837110? 274618546006301 876278 7 1000 -7724

TAPE NO. 1 FILE NO. 1
RECORD 25290 LENGTH 84
75027017113 4150763358213651583711 2652611594? 6451384 876278 795441 1073

TAPE NO. 1 FILE NO. 1

TAPE NO. 1 FILE NO. 1
RECORD 25292 LENGTH 84
75027017113 4150763358214251572811 2645259223? 6233361 876278 795441 1073

TAPE NO. 1 FILE NO. 1
RECORD 25293 LENGTH 84
75027012113 41507633582148515620110? 281180622544701 876278 7 1000 -7724

TAPE NO. 1 FILE NO. 1
RECORD 25294 LENGTH 84
75027017113 4150763358214851562011 26420 1684? 6 05405 876278 795441 1073

TAPE NO. 1 FILE NO. 1
RECORD 25295 LENGTH 84
75027012113 41507633582154515507110? 284499623377901 876278 7 1000 -7724

TAPE NO. 1 FILE NO. 1
RECORD 25296 LENGTH 84
75027017113 4150763358215451550711 2632742341? 5114751 876278 795441 1073

***** JOB DONE.