

VI.3.6F GRIB ENCODER PROGRAM (GRIBIT)

Purpose

Program GRIBIT is used to encode gridded data in GRIB format.

One or more input files can be packed into a single GRIB message using a single communications header. All input files must be in the xmrgr format. All parameters required for GRIB and the appropriate communications header (WMO id) are derived from parameters within the xmrgr files and built-in tables in the GRIBIT program.

A program function can be used to verify correct encoding of a GRIB file by invoking the decoder. Another program function converts a GRIB encoded file to an XMRG file. All three functions in the gribit program are available with or without use of the gribits script.

Script gribits

The script gribits is used to execute the GRIB encoder/decoder program. The command line format is:

```
gribits [-p pgm] [-b bin_dir]
        [-f file_set]
        [-i in_file] [-n in_dir]
        [-o out_file] [-t out_dir]
        [-c control] [-g geo_dir] [-h hrap_coord_file]
        [-d debug_level]
        [-l logfile]
        [-v verbose]
        [-s search_order]
```

Available options are:

<u>Option</u>	<u>Description</u>	<u>Default Value</u>
-p	Program name	gribit
-b	Use executable directory indicated as: a - \$grib_dir/bin/ARCHIVE token d - \$my_bin token (devl) m - \$mgr_dir/bin/RELEASE token ma - \$mgr_dir/bin/ARCHIVE token name - path and directory name	Use directory indicated by the \$grib_dir/bin/RELEASE token
-f	File set override for \$st3_rfc, \$ofs_level, \$ffg_level tokens	Sets indicated by \$st3_rfc, \$ofs_level, \$ffg_level tokens
-i	Input file name	None
-n	Input directory path or	Use input directory and

<u>Option</u>	<u>Description</u>	<u>Default Value</u>
	sat - \$rfcwide_satpre_dir token mpe - \$rfcwide_xmrg_dir token s3 - \$ofs_griddb_dir token ffg - \$ffg_gridff_dir token ro - \$ffg_gridro_dir token	and path indicated by the \$grib_in_dir token
-o	Output file name	None
-t	Output directory path	Use output directory and path indicated by the \$grib_out_dir token
-c	Control: g - encode XMRG into GRIB u - unpack GRIB, write to a log file x - decode GRIB to XMRG file	g - encode XMRG into GRIB
-g	Geo directory (HRAP coordinates)	Use directory indicated by the \$geo_st3_ascii token
-h	HRAP coordinates file	coordinate_xxrfc.dat where xx is the two character RFC identifier
-d	Debug level (d, d2 or d3)	Debug off (levl=0)
-l	Log file on	Log file off
-v	Verbose program prompts	Suppress program prompts
-s	Parameter table search sequence: user-defined table built-in Table 128 built-in Table 2 (NCEP)	Parameter table search sequence: built-in Table 2 (NCEP) built-in Table 128 user-defined table, if available

The following examples demonstrate the use of the gribits script:

Encode XMRG to GRIB: Examples 1-4

Decode GRIB to XMRG: Examples 5-6

1. Run program gribit and show prompts for options, functions and xmrg and GRIB file names. The xmrg (input) and GRIB (output) directories and the executable file are obtained from apps_defaults tokens.

gribits

2. Run program gribit from the archive directory:

```
gribits -b a
```

3. Encode an xmrgr file into GRIB with prompts suppressed. Specify xmrgr (input) and GRIB (output) file names in the command line.

```
gribits -i XMRG_file -o GRIB_file
```

4. Encode an xmrgr file into GRIB. Specify xmrgr and GRIB directories in the command line (over-ride apps_defaults tokens). Show prompts for options, functions and xmrgr and GRIB file names:

```
gribits -n XMRG_directory -t GRIB_directory
```

5. Decode a GRIB message and write an RFC subset of the national HRAP grid to an xmrgr file. Prompts are suppressed.

```
gribits -i GRIB_file -n GRIB_dir -o XMRG_file -t XMRG_dir  
-c x -f HRAP_office
```

where HRAP_office is used to create the file name as 'coord_HRAP_office.dat' in geo_directory and is of the form xxrfc where xx is the RFC (eg. abrffc)

The command line argument '-c x' internally flip-flops input and output directories and files so input becomes the GRIB file and output becomes the XMRG file.

6. Decode NESDIS GRIB encoded Satellite Precipitation Estimates (SPE) and output an RFC subset as an XMRG file.

1. check that gribit tokens have been defined
2. check that the gribits script directory is in your path
3. execute script gribits (see Example 5)

To include debug and log file output to check times, RFC domain and other parameters, append '-d d -l' to the command line.

Script To Transmit QPE GRIB-encoded Products Using distributeProduct

The following script combines the use of the script gribits to generate GRIB encoded files for QPE messages and the AWIPS message handling application distributeProduct to transmit the messages on AWIPS:

```
#!/bin/ksh  
APPS_DEFAULTS_SITE=/awips/hydroapps/.Apps_defaults_site;export APPS_DEFAULTS_SITE  
PBDIR=/awips/hydroapps/public/bin;export PBDIR  
GRIBDIR=$PBDIR/get_apps_defaults nmap_grib_dir';export GRIBDIR  
EXEDIR=$PBDIR/get_apps_defaults grib_rls';export EXEDIR  
DPBIN=/awips/fxa/bin;export DPBIN  
QPEA2AID='KXXXQPEBIN' (where XXX is the AFOS node, i.e., OKC)
```

```

HOURL='date -u +%H'
MONTH='date -u +%m'
DAY='date -u +%d'
YEAR='date -u +%Y'
RUNPERIOD='date -u +%m%d%Y'
echo $RUNPERIOD

RUNPERIOD2='TZ=GMT+24 date +%m%d%Y'
echo $RUNPERIOD2
#
#   GRIB encode data from xmrq files
${PBDIR}/gribits -b ${EXEDIR} -i xmrq${RUNPERIOD}07z -o xmrq${RUNPERIOD}07z.grb
${PBDIR}/gribits -b ${EXEDIR} -i xmrq${RUNPERIOD}08z -o xmrq${RUNPERIOD}08z.grb
${PBDIR}/gribits -b ${EXEDIR} -i xmrq${RUNPERIOD}09z -o xmrq${RUNPERIOD}09z.grb
${PBDIR}/gribits -b ${EXEDIR} -i xmrq${RUNPERIOD}10z -o xmrq${RUNPERIOD}10z.grb
${PBDIR}/gribits -b ${EXEDIR} -i xmrq${RUNPERIOD}11z -o xmrq${RUNPERIOD}11z.grb
${PBDIR}/gribits -b ${EXEDIR} -i xmrq${RUNPERIOD}12z -o xmrq${RUNPERIOD}12z.grb
${PBDIR}/gribits -b ${EXEDIR} -i xmrq${RUNPERIOD}13z -o xmrq${RUNPERIOD}13z.grb
${PBDIR}/gribits -b ${EXEDIR} -i xmrq${RUNPERIOD}14z -o xmrq${RUNPERIOD}14z.grb
${PBDIR}/gribits -b ${EXEDIR} -i xmrq${RUNPERIOD}15z -o xmrq${RUNPERIOD}15z.grb
${PBDIR}/gribits -b ${EXEDIR} -i xmrq${RUNPERIOD}16z -o xmrq${RUNPERIOD}16z.grb
${PBDIR}/gribits -b ${EXEDIR} -i xmrq${RUNPERIOD}17z -o xmrq${RUNPERIOD}17z.grb
${PBDIR}/gribits -b ${EXEDIR} -i xmrq${RUNPERIOD}18z -o xmrq${RUNPERIOD}18z.grb
#
#   transmit GRIB files
${DPBIN}/distributeProduct -a DEFAULTNCF -e ${GRIBDIR}/xmrq${RUNPERIOD}07z.grb
${DPBIN}/distributeProduct -a DEFAULTNCF -e ${GRIBDIR}/xmrq${RUNPERIOD}08z.grb
${DPBIN}/distributeProduct -a DEFAULTNCF -e ${GRIBDIR}/xmrq${RUNPERIOD}09z.grb
${DPBIN}/distributeProduct -a DEFAULTNCF -e ${GRIBDIR}/xmrq${RUNPERIOD}10z.grb
${DPBIN}/distributeProduct -a DEFAULTNCF -e ${GRIBDIR}/xmrq${RUNPERIOD}11z.grb
${DPBIN}/distributeProduct -a DEFAULTNCF -e ${GRIBDIR}/xmrq${RUNPERIOD}12z.grb
${DPBIN}/distributeProduct -a DEFAULTNCF -e ${GRIBDIR}/xmrq${RUNPERIOD}13z.grb
${DPBIN}/distributeProduct -a DEFAULTNCF -e ${GRIBDIR}/xmrq${RUNPERIOD}14z.grb
${DPBIN}/distributeProduct -a DEFAULTNCF -e ${GRIBDIR}/xmrq${RUNPERIOD}15z.grb
${DPBIN}/distributeProduct -a DEFAULTNCF -e ${GRIBDIR}/xmrq${RUNPERIOD}16z.grb
${DPBIN}/distributeProduct -a DEFAULTNCF -e ${GRIBDIR}/xmrq${RUNPERIOD}17z.grb
${DPBIN}/distributeProduct -a DEFAULTNCF -e ${GRIBDIR}/xmrq${RUNPERIOD}18z.grb

```

Apps Default Tokens

Paths and directories for the executable, output and input files are specified by Apps Default tokens. Another Apps Default token is used to specify the transmitting office:

```

grib_dir      : $(apps_dir)/rfc/grib
grib_rls     : $(grib_dir)/bin/RELEASE
grib_arc     : $(grib_dir)/bin/ARCHIVE
grib_in_dir  : $(grib_dir)/input      # also depends on data:
                                           # stage3 - $(ofs_griddb_dir)
                                           # mpe     - $(rfcwide_xmrq_dir)
grib_out_dir : $(grib_dir)/output
awips_rfc_id : XXX                  # XXX is 3-character AWIPS ID, e.g. TUA

```

Optional:

```

grib_tab_dir : $(grib_dir)/table # Over-ride built-in tables.
grib_verbose : on               # show program prompts for manual execution.
                                # Default is off.
grib_error_output : on         # print error messages, default is none
grib_debug_output : d          # debug output levels d, d2 or d3.
                                # Default is no debug output.
grib_log_output  : on          # write error and debug output to a file,

```

```
                                Default is no log file.
hrap_domain_dir   : $(geo_st3_ascii) # Directory containing HRAP
                                box for the RFC.
hrap_domain_id    : xxrfc # RFC identifier, i.e., abrfc
hrap_domain_file  : coord_xxrfc.dat # File containing HRAP box
```

All optional tokens except grib_tab_dir are generated as needed from command line entries in the script.

Directory Structure

The directory structure for the GRIB encoder application gribit is:

```
.../rfc/grib
    /bin
        /ARCHIVE      Archived executables
        /RELEASE      Current executable
    /doc              Documentation
    /input            XMRG files
    /output           GRIB encoded files
    /scripts          Script file
    /table            Optional user defined tables
```

Program Execution

```
Token: grib_in_dir = /awips/hydroapps/rfc/ffg/files/ofstest/grff
Token: grib_out_dir = /awips/hydroapps/rfc/ffg/output/ofstest/grib
```

G R I B I T

GRIB Encoder Program

Release x.xx - mm/dd/ccyy

OPTIONS:

- dn - debug level n = 1, 2, or 3
- e - error messages on
- l - log file on (name is grbitlog)
- v - show prompts

FUNCTION:

- g - encode XMRG to GRIB file (default)
- u - unpack GRIB to log file
- x - decode GRIB to XMRG

Enter (options, functions, or GRIB output filename):

qpe06_040106z.grb

Enter XMRG (input) filename: **qpe06_040106z.xmrq**

Wrote GRIB Bulletin: ZETA98 KTUA ddhhmm of nnnnnn bytes

To file: /awips/hydroapps/rfc/ffg/output/grib/qpe06_040106z.grb

For File:

/awips/hydroapps/rfc/ffg/files/ofstest/grff/qpe06_040106z.xmrq

Enter input filename: <return>

Responses and sequence of responses to 'Enter (options ... GRIB output filename)':

- d - debug on (also d2 or d3)
- l - logfile on
- u - unpack on (decode a GRIB encoded file, includes d2 and l)
- name - name of file to encode in GRIB (normal response)

Input file (xmrq format)

The Process field and the Valid Time field in an xmrq file must contain specific information to support the GRIB encoder. The Process field translates to (1) a GRIB Generating Process or Model and (2) accumulation time or duration of the data. The Valid Time field has two formats depending on observed data or forecast data.

Each file contains grid and data definition parameters (header portion) and gridded data (data portion). The file format is described as follows:

<u>Record</u>	<u>Starting Position</u>	<u>Dim.</u>	<u>Type</u>	<u>Input/ Gen.</u>	<u>Description</u>
Header portion:					
1	1	1	I*4	I	XOR, western most x coordinate
	2	1	I*4	I	YOR, southern most y coordinate
	3	1	I*4	I	MAXX, number of grids along the x axis
	4	1	I*4	I	MAXY, number of grids along the y axis
2	1	1	C*10	I	USER, user that saved the file
	2	1	C*20	I	SDATIM, saved date and time (Z), ccyy-mm-dd hh:mm:ss
	3	1	C*8	I	PROCES, process generating the data and duration or accumulation time <u>1/</u>
	4	1	C*20	I	VDATIM, valid date and time (Z), IVALHR <u>2/</u>
	5	1	I*4	I	MXVAL, maximum value of data
	6	1	R*4	I	VERS, version number of file format, 2.1

Data portion:

4-MAXY	1	MAXX	I*2	I	IVAL, gridded data
--------	---	------	-----	---	--------------------

Notes:

1/ PROCES is a combination of the process identifier and accumulation or duration time of the data. See NCEP Office Note 388 GRIB, Table A for Originating Center 9 and Xmrq Parameter to GRIB Parameter Translation section below.

2/ The Valid Time field (VDATIM) is coded as:

Accumulated > 1 hour and forecast : ccyy-mm-dd hhfvvv

Accumulated = 1 hour : ccyy-mm-dd hh:mm:ss

where ccyy-mm-dd hh is the reference hour
vvv is the valid number of hours (IVALHR) after the reference hour ref_hr such that ref_hr plus valid hour is the ending time and

ref_hr plus valid hour minus accumulation hours is the beginning time of the accumulation period - typical values for vvv are 006, 012, 018, 024, 030, 036, 042, 048, 054, 060, 066 and 072

For observed data VDATIM is the end of the accumulation period. VDATIM minus accumulation hours is the start of the accumulation period.

Some Valid Time field examples:

Accumulated/observed = 1 hour

<u>Precip Period</u>	<u>VDATIM</u>
09/14/2000 22Z to 23Z	2000-09-14 23:00:00
09/14/2000 23Z to 00Z	2000-09-15 00:00:00
09/15/2000 00Z to 01Z	2000-09-15 01:00:00
09/15/2000 12Z to 13Z	2000-09-15 13:00:00

For accumulated hours of observed data IVALHR is the elapsed number of hours after reference time VDATIM to the end of the accumulation period. IVALHR is the three-number field following 'f'.

Accumulated/observed = 6 hours

<u>Precip Period</u>	<u>VDATIM</u>
03/31/1993 12Z to 18Z	1993-03-31 12f006
03/31/1993 18Z to 00Z	1993-03-31 12f012
04/01/1993 00Z to 06Z	1993-03-31 12f018
04/01/1993 06Z to 12Z	1993-03-31 12f024

For forecast data VDATIM is the end of the computation period (observed data) and the start of the forecast period. IVALHR is the elapsed number of hours after VDATIM to the end of the forecast period. VDATIM plus IVALHR is the valid time of the forecast.

Forecast - 6 hour

<u>Precip Period</u>	<u>VDATIM</u>
04/01/1993 12Z to 18Z	1993-04-01 12f006
04/01/1993 18Z to 00Z	1993-04-01 12f012
04/02/1993 00Z to 06Z	1993-04-01 12f018
04/02/1993 06Z to 12Z	1993-04-01 12f024
04/02/1993 12Z to 18Z	1993-04-01 12f030
04/02/1993 18Z to 00Z	1993-04-01 12f036

Xmrg Parameter to GRIB Parameter Translation

The built-in xmrg and qpfwmo translation table:

```
$          11/09/2000
$
-1:9:-1:xmrg          xmrg to GRIB library
$xmlrg_process        wmoid          ngrid nturf  itrang ibinf ipkflg
```



```

$      GRIB_parm      modlid  itunit  ntufc  iwidth  idec
$
S2A01  APCP    ZETA98  152  240  1  0  1  4  4  3  0  0
S3A01  APCP    ZETA98  154  240  1  0  1  4  4  3  0  0
S3M01  APCP    ZETA98  155  240  1  0  1  4  4  3  0  0
P1A01  APCP    ZETA98  156  240  1  0  1  4  4  3  0  0
P1M01  APCP    ZETA98  157  240  1  0  1  4  4  3  0  0
P2A01  APCP    ZETA98  158  240  1  0  1  4  4  3  0  0
P2M01  APCP    ZETA98  159  240  1  0  1  4  4  3  0  0
MPA01  APCP    ZETA98  160  240  1  0  1  4  4  3  0  0
MPM01  APCP    ZETA98  161  240  1  0  1  4  4  3  0  0
PA*    APCP    ZETA98  170  240  1  -1  -1  4  0  3  4  0
XN*    APCP    ZETA98  171  240  1  -1  -1  4  0  3  4  0
MM*    APCP    ZETA98  172  240  1  -1  -1  4  4  3  0  0
$
SATA*  APCP    ZETA98  190  240  1  -1  -1  4  4  3  0  0
SATM*  APCP    ZETA98  191  240  1  -1  -1  4  4  3  0  0
$
QPA*   APCP    YEIG98  180  218  1  -1  -1  4  4  3  0  0
QPM*   APCP    YEIG98  180  218  1  -1  -1  4  4  3  0  0
$
FFG**  FFG**  ZEGZ98  151  218  1  0  24  2  4  0  0  0
FFR**  FFR**  ZEGZ98  151  218  1  0  24  2  4  0  0  0
gridff** FFG**  ZEGZ98  151  240  1  0  24  2  4  0  0  0
gridro** FFR**  ZEGZ98  151  240  1  0  24  2  4  0  0  0
$
stage2  APCP    ZETA98  152  240  1  0  1  4  4  3  0  0
autoS3  APCP    ZETA98  154  240  1  0  1  4  4  3  0  0
manualS3 APCP    ZETA98  155  240  1  0  1  4  4  3  0  0
P1      APCP    ZETA98  156  240  1  0  1  4  4  3  0  0
rfcwide APCP    ZETA98  160  240  1  0  1  4  4  3  0  0
$

```

```

-1:-1:-1:qpfwmo      QPF WMO Identifiers (TTAA00 portion only)
001:YEIG98
002:YEIM98
003:YEIN98
004:YEIO98
005:YEIP98
006:YEIQ98
007:YEIR98
008:YEIS98
009:YEIS88
010:YEIT98
011:YEIT88
012:YEIU98
$ end

```

* hh (06, 24) hours of accumulation
** hh (01, 03, 06, 12, 24) hours of duration

User-Defined Tables

A parameter specified in a built-in table can be over-ridden by providing a user-defined table in file griptab and directory ../grib/table. The file may contain more than one table. The format of the file for a single table follows:

First record: -1:sending_center:subcenter:table id

Subsequent records: Depends on table. Can use blanks for delimiters if no embedded spaces. Otherwise, use colons.

Xmrg and GRIB parameters may be in a user_defined table in a single

file. The format of the built-in table shown above should be used for any user_defined table.

Example output for unpack option

In the output directory file grbitlog contains the debug output as follows:

PROGRAM GRIBIT (VERSION: xxx.xx - mm/dd/ccyy)

RUN DATE: 11/ 9/2000 - 10:15:12

Token: grib_in_dir = /fs/awips/rfc/ffg/files/ofstest/grff
Token: grib_out_dir = /fs/awips/rfc/ffg/output/ofstest/grib

opened file: /fs/awips/rfc/ffg/output/ofstest/grib/qpe06_040106z.grb
Using GRIB file: /fs/awips/rfc/ffg/output/ofstest/grib/qpe06_040106z.grb

COMMS HEADER: ZETA98 KTUA 251552

UNPACKER ERROR RETURN FLAG = 0

SECTION 1 - PRODUCT DEFINITION SECTION (PDS)

9	171	255	192	239
1	0	93	3	31
12	0	1	12	18
4	0	1	128	0
20	0	150	0	32

id(3) originating center: 9
id(4) model id (table A): 171
id(5) grid identification (table B): 255
id(6) GDS/BMS flag: 192
id(8) parameter & units: 239
id(9) type of level (table 3): 1
id(10) value of level: 0
id(12) computation time, year: 93
id(13) comp time, month: 3
id(14) comp time, day: 31
id(15) comp time, hour: 12
id(16) comp time, minutes: 0
id(17) forecast time unit (table 4): 1
id(18) p1 period of time: 12
id(19) p2 period of time: 18
id(20) time range indicator (table 5): 4
id(21) number included in average: 0
edition no. of grib spec: 1
id(2) version no. of parameter table: 128
id(22) no. missing from avg/accum: 0
id(23) century: 20
id(25) decimal scale factor: 0
id(24) sub-center (table C): 150
reserved for future use: 0
reserved for future use: 32

SECTION 2 - GRID DESCRIPTION SECTION (GDS)

5	59	83	38861	-109321
8	-105000	4762	4762	0
64	0	0	0	0
0	0	0	0	255

igds(3) projection grid (table 6): 5

	41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Row	82:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	.										
	.										
	.										
Row	4:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	11	0.00	0.00	0.00	0.00	0.00	6.00	12.00	12.00	17.00	20.00
	21	24.00	26.00	27.00	27.00	27.00	26.00	25.00	25.00	25.00	25.00
	31	26.00	28.00	30.00	32.00	32.00	31.00	28.00	24.00	16.00	0.00
	41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Row	3:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	11	0.00	0.00	0.00	0.00	0.00	2.00	7.00	7.00	12.00	17.00
	21	21.00	23.00	24.00	25.00	24.00	24.00	24.00	24.00	24.00	24.00
	31	25.00	26.00	27.00	28.00	28.00	27.00	24.00	19.00	11.00	0.00
	41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Row	2:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	11	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00	9.00	14.00
	21	18.00	20.00	22.00	22.00	22.00	22.00	22.00	22.00	22.00	23.00
	31	23.00	24.00	25.00	25.00	25.00	23.00	20.00	16.00	0.00	0.00
	41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Row	1:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	11	0.00	0.00	0.00	0.00	0.00	0.00	3.00	3.00	7.00	11.00
	21	14.00	15.00	17.00	18.00	18.00	19.00	20.00	20.00	21.00	21.00
	31	22.00	22.00	22.00	22.00	19.00	16.00	15.00	6.00	0.00	0.00
	41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00