

VI.5.5-FFG-GRIBIT XMRG FILE TO GRIB FILE ENCODER PROGRAM (GRIBIT)

Purpose

Program GRIBIT is used to encode XMRG files into GRIB files.

XMRG files contain data for a subset of the Hydrologic Rainfall Analysis Project (HRAP) grid which is used for precipitation estimations from the WSR-88D radars.

GRIB files contain data in the World Meteorological Organization data representation form for General Regularly-distributed Information in Binary.

Program gribit can be used to:

- o encode one or more XMRG files into a GRIB file
- o decode a GRIB file to a log file
- o convert a GRIB file to a XMRG file

Script gribits

The script gribits can be used to execute program GRIBIT.

The command 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]
```

All parameters are optional and will be provided values if not supplied on the command line. 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 (dev1) m = \$mgr_dir/bin/RELEASE token ma = \$mgr_dir/bin/ARCHIVE token [pathname] = path name	Use directory indicated by the \$grib_dir/bin/RELEASE token

<u>Option</u>	<u>Description</u>	<u>Default Value</u>
-f	File set override for \$st3_rfc, \$ofs_level and \$ffg_level tokens	File sets indicated by the \$st3_rfc, \$ofs_level and \$ffg_level tokens
-i	Input file name	None
-n	Input directory path or 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	Use input directory 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_DATA directory (HRAP coordinates)	Use directory indicated by the \$geo_st3_ascii token
-h	HRAP coordinates file	coord_[user].dat where user is the user identifier
-d	Debug level (d, d2 or d3)	Debug off (level=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 with the XMRG (input) and GRIB (output) directories obtained from apps_defaults tokens:

```
gribits
```

2. Run program gribit from the archive directory:

```
gribits -b a
```

3. Run program gribit from the path name /home/bin:

```
gribits -b /home/bin
```

4. Run program gribit to encode an XMRG file into GRIB specifying the XMRG (input) and GRIB (output) file names on the command line:

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

5. Run program gribit to encode an XMRG file into GRIB specifying the XMRG and GRIB directories on the command line:

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

6. Run program gribit to decode a GRIB message and write the user subset of the national HRAP grid to an XMRG file:

```
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 HRAP coordinate file name to be read as coord_[HRAP_office].dat

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.

7. Decode NESDIS GRIB encoded Satellite Precipitation Estimates (SPE) and output a 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, user 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/fixa/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 xmrg files
${PBDIR}/gribits -b ${EXEDIR} -i xmrg${RUNPERIOD}07z -o xmrg${RUNPERIOD}07z.grb
${PBDIR}/gribits -b ${EXEDIR} -i xmrg${RUNPERIOD}08z -o xmrg${RUNPERIOD}08z.grb
${PBDIR}/gribits -b ${EXEDIR} -i xmrg${RUNPERIOD}09z -o xmrg${RUNPERIOD}09z.grb
${PBDIR}/gribits -b ${EXEDIR} -i xmrg${RUNPERIOD}10z -o xmrg${RUNPERIOD}10z.grb
${PBDIR}/gribits -b ${EXEDIR} -i xmrg${RUNPERIOD}11z -o xmrg${RUNPERIOD}11z.grb
${PBDIR}/gribits -b ${EXEDIR} -i xmrg${RUNPERIOD}12z -o xmrg${RUNPERIOD}12z.grb
${PBDIR}/gribits -b ${EXEDIR} -i xmrg${RUNPERIOD}13z -o xmrg${RUNPERIOD}13z.grb
${PBDIR}/gribits -b ${EXEDIR} -i xmrg${RUNPERIOD}14z -o xmrg${RUNPERIOD}14z.grb
${PBDIR}/gribits -b ${EXEDIR} -i xmrg${RUNPERIOD}15z -o xmrg${RUNPERIOD}15z.grb
${PBDIR}/gribits -b ${EXEDIR} -i xmrg${RUNPERIOD}16z -o xmrg${RUNPERIOD}16z.grb
${PBDIR}/gribits -b ${EXEDIR} -i xmrg${RUNPERIOD}17z -o xmrg${RUNPERIOD}17z.grb
${PBDIR}/gribits -b ${EXEDIR} -i xmrg${RUNPERIOD}18z -o xmrg${RUNPERIOD}18z.grb
#
# transmit GRIB files
${DPBIN}/distributeProduct -a DEFAULTNCF -e ${GRIBDIR}/xmrg${RUNPERIOD}07z.grb
${DPBIN}/distributeProduct -a DEFAULTNCF -e ${GRIBDIR}/xmrg${RUNPERIOD}08z.grb
${DPBIN}/distributeProduct -a DEFAULTNCF -e ${GRIBDIR}/xmrg${RUNPERIOD}09z.grb
${DPBIN}/distributeProduct -a DEFAULTNCF -e ${GRIBDIR}/xmrg${RUNPERIOD}10z.grb
${DPBIN}/distributeProduct -a DEFAULTNCF -e ${GRIBDIR}/xmrg${RUNPERIOD}11z.grb
${DPBIN}/distributeProduct -a DEFAULTNCF -e ${GRIBDIR}/xmrg${RUNPERIOD}12z.grb
${DPBIN}/distributeProduct -a DEFAULTNCF -e ${GRIBDIR}/xmrg${RUNPERIOD}13z.grb
${DPBIN}/distributeProduct -a DEFAULTNCF -e ${GRIBDIR}/xmrg${RUNPERIOD}14z.grb
${DPBIN}/distributeProduct -a DEFAULTNCF -e ${GRIBDIR}/xmrg${RUNPERIOD}15z.grb
${DPBIN}/distributeProduct -a DEFAULTNCF -e ${GRIBDIR}/xmrg${RUNPERIOD}16z.grb
${DPBIN}/distributeProduct -a DEFAULTNCF -e ${GRIBDIR}/xmrg${RUNPERIOD}17z.grb
${DPBIN}/distributeProduct -a DEFAULTNCF -e ${GRIBDIR}/xmrg${RUNPERIOD}18z.grb
```

Apps Default Tokens

The following Apps Default tokens are used to set path and directory names for the executable, output and input files:

```
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_xmrg_dir)

grib_out_dir : $(grib_dir)/output
```

The following Apps Default token is used to specify the transmitting office:

```
awips_rfc_id : XXX # XXX is 3-character AWIPS
                  ID (eg. TUA)
```

The following Apps Default token are 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 user
hrap_domain_id    : xxrfc            # user identifier (eg.
                                      abrfc)
hrap_domain_file  : coord_xxrfc.dat  # file containing HRAP box
```

All optional tokens except grib_tab_dir are generated as needed by the scripts gribits from command line entries.

Program Execution

The execution menu prompts the user for input.

An example is:

```
PROGRAM GRIBIT (VERSION: 5.2.1r21 - 03/26/02)

    GRIB Encoder/Decoder Program

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

OPTIONS:
  dn - debug level n = 1, 2 or 3
  e  - error messages on
  l  - log file on (file name = gribit_log)
  v  - show prompts
FUNCTIONS:
  [g] - encode XMRG to GRIB file [default]
  u  - unpack GRIB to log file
  x  - decode GRIB to XMRG file

Enter option, function, GRIB output file name or <return> to quit: grib_out_file

Enter XMRG input file name: grib_in_file

Wrote GRIB file /fs/awips/rfc/ffg/output/ofstest/grib/grib_out_file
from XMRG file /fs/awips/rfc/ffg/files/ofstest/grff/grib_in_file
with COMMS HEADER of ZETA98 KTUA 271853 and length of 7438 bytes

Enter input filename: <return>
```

Input file (XMRG format)

The Process field and the Valid Time field in an XMRG 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 as follows:

<u>Record</u>	<u>Starting Position</u>	<u>Dimension</u>	<u>Type</u>	<u>Description</u>
Header records:				
1	1	1	I*4	Western most x coordinate (XOR)
	2	1	I*4	Southern most y coordinate (YOR)
	3	1	I*4	Number of grids along the x axis (NUMX)
	4	1	I*4	Number of grids along the y axis (NUMY)
2	1	1	C*10	User that saved the file (USER)
	2	1	C*20	Saved date and Z time in the form ccyy-mm-dd hh:mm:ss (SDATIM)
	3	1	C*8	Process generating the data and duration or accumulation time (PROCES) <u>1</u> /
	4	1	C*20	Valid date and Z time (VDATIM) <u>2</u> /
	5	1	I*4	Maximum data value (MXVAL)
	6	1	R*4	Version number of file format (VERS)

Data records:

4-MAXY	1	MAXX	I*2	Gridded data values (IVAL)
--------	---	------	-----	----------------------------

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 XMRG 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>Data 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>Data 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>Data 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
$xmrg_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 `gribtab` 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

The output from the unpack option is as follows:

```
PROGRAM GRIBIT (VERSION: 5.1.2r20 - 02/15/02)
RUN DATE: 02/15/2002 - 14:25:16

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

File /fs/awips/rfc/ffg/output/ofstest/grib/qpe06_040106z.grb opened.
Decoding 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
```



```

.
.
Row 4: 111111111111111111111111111111111111111111111111111111111111111111111111111111111111111
Row 3: 111111111111111111111111111111111111111111111111111111111111111111111111111111111111111
Row 2: 111111111111111111111111111111111111111111111111111111111111111111111111111111111111111
Row 1: 111111111111111111111111111111111111111111111111111111111111111111111111111111111111111

```

SECTION 4 - BINARY DATA SECTION (BDS)

4897 Elements north row first

Process> 171:XNAV Aggregate Precipitation Estimation

Table Num> 128

Parameter> 239:QPE06 6-hour Quantitative Precip Estimate [kg/m2]

Row	83:	0.00	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	0.00
	21	0.00	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	0.00
	41	0.00	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	0.00
Row	82:	0.00	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	0.00
	21	0.00	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	0.00
	41	0.00	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	0.00
											
Row	4:	0.00	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	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	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	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	