User manual to getpar

Leonid Petrov

Abstract:

This document is a user manual for program getpar.

Table of contents:

1 Overview

```
Program getpar parses a spool file of the listing of Solve solution,
extracts information from there, formats it and writes down in the
set of output files.
```

2 Usage

```
  Usage: getpar <spool_file> <prefix>

where
  spool_file is the name of Solve spool file of global solution in
               either complete or back mode;
  prefix     is the main portion of the output filenames including path.
             The actual names of the output files are results of concatenation
             of prefix with extension.
```

3 Formats description

Each output file has first two lines comments. The comment lines contains character # as the first character in the line. The first comment line, and therefore the first line of the file always holds the name of the format, its version and date of format revision:

GETPAR_XXX format version 1.0 of 2001.05.25

where XXX is (in capital letter) extension of the file, for example,

GETPAR_STA format version 1.0 of 2001.05.25

The second line, so-called header comment, contains the full path name of the spool file. Since the format of getpar output files is the subject of changes it is a good practice to check the format version each time when you parse getpar output files.

3.1 .sta -file

.sta file contains estimates of positions of global stations and the formal uncertainties of these estimates. The list of station positions is sorted in alphabetic order of station names. Stations before and after episodic motions are treated as different stations. Correlations between station positions and velocities are also written.

File contains lines of four types:

1) Comment. The first character is #. Header comment contain the full name of the spool file.

2) Cartesian components of the vector of station position. The first 8 characters of this line are STA_GCX:

```
      Field    Format Units Meaning
      1-8      A8      --    record type identifier: STA_GCX:
      11-25    A15     --    station name. Station name consist of 8-letters station
                            acronym and 6-letter epoch in format yymmdd. Epoch
                            is attached to the name only if the station had episodic
                            motion. Fields between the last letter of the station
                            name and the first letter of epoch are filled by _.
                            If the station didn't have episodic name then the space
                            after the last letter of the station name is left blank.
      28-29    A2      --    component identifier. One of "X:", "Y:" or "Z:"
      31-45    F15.2   mm    value of X-component of station position.
      50-59    F10.3   mm    formal uncertainty of X-component of station position.
      65-79    F15.2   mm    value of Y-component of station position.
      84-93    F10.3   mm    formal uncertainty of Y-component of station position.
      99-113   F15.2   mm    value of Z-component of station position.
      118-127  F10.3   mm    formal uncertainty of Z-component of station position.
      139-145  I7      --    the number of observations of this station used in
                            solution.
      156-162  I7      --    total number of observations of this station.
      174-178  I5      --    the number of sessions with this station used in
                            solution.
      189-193  I5      --    total number of sessions of this station.
      205-214  A10     --    the date of the first session with this station used
                            in solution. format: yyyy.mm.dd (as integer numbers)
      226-235  A10     --    the date of the last session with this station used
                            in solution. format: yyyy.mm.dd (as integer numbers)
```

3) Local topocentric components of the vector of station position: Up, East,
   North. The first 8 characters of this line are STA_GCU:

```
      Field    Format Units Meaning
      1-8      A8      --    record type identifier: STA_GCU:
      11-25    A15     --    station name. Station name consist of 8-letters station
                            acronym and 6-letter epoch in format yymmdd. Epoch
                            is attached to the name only if the station had episodic
                            motion. Fields between the last letter of the station
                            name and the first letter of epoch are filled by _.
                            If the station didn't have episodic name then the space
                            after the last letter of the station name is left blank.
      28-29    A2      --    component identifier. One of "U:", "E:" or "N:"
      31-45    F15.2   mm    value of U-component of station position.
      50-59    F10.3   mm    formal uncertainty of U-component of station position.
      65-79    F15.2   mm    value of E-component of station position.
      84-93    F10.3   mm    formal uncertainty of E-component of station position.
      99-113   F15.2   mm    value of N-component of station position.
      118-127  F10.3   mm    formal uncertainty of N-component of station position.
```

4) Correlations between station positions and velocities. Correlation matrix
   is defined as the matrix of 6x6 in the upper triangle representation without
   the main diagonal which. Elements in the columns or rows of the matrix are
   in the order: X-position, Y-position, Z-position, X-velocity, Y-velocity,
   Z-velocity.

```
      1-8      A8      --    record type identifier: STA_CRL:
```

```
11-25   A15    --     station name. Station name consist of 8-letters station
                      acronym and 6-letter epoch in format yymmdd. Epoch
                      is attached to the name only if the station had episodic
                      motion. Fields between the last letter of the station
                      name and the first letter of epoch are filled by _.
                      If the station didn't have episodic name then the space
                      after the last letter of the station name is left blank.
31-36   F6.3   d/l    Correlation between X-position and Y-position
38-43   F6.3   d/l    Correlation between X-position and Z-position
45-50   F6.3   d/l    Correlation between Y-position and Z-position
52-57   F6.3   d/l    Correlation between X-position and X-velocity
59-64   F6.3   d/l    Correlation between Y-position and X-velocity
66-71   F6.3   d/l    Correlation between Z-position and X-velocity
73-78   F6.3   d/l    Correlation between X-position and Y-velocity
80-85   F6.3   d/l    Correlation between Y-position and Y-velocity
87-92   F6.3   d/l    Correlation between Z-position and Y-velocity
94-99   F6.3   d/l    Correlation between X-velocity and Y-velocity
101-106 F6.3   d/l    Correlation between X-position and Z-velocity
108-113 F6.3   d/l    Correlation between Y-position and Z-velocity
115-120 F6.3   d/l    Correlation between Z-position and Z-velocity
122-127 F6.3   d/l    Correlation between X-velocity and Z-velocity
129-134 F6.3   d/l    Correlation between Y-velocity and Z-velocity
```

3.2   .vel -file

.vel file contains values estimates of velocities of global stations and the
formal uncertainties of these estimates. The list of the estimates is sorted in
alphabetic order of station names. Stations before and after episodic motions
are treated as different stations. Correlations between station positions and
velocities are also written.

File contains lines of three types:

1) Comment. The first character is #. Header comment contain the full name of
   the spool file.

2) Cartesian components of the vector of station velocity. The first
   8 characters of this line are STA_GVX:

```
Field    Format Units Meaning
1-8      A8     --    record type identifier: STA_GVX:
11-18    A8     --    station name.
24-32    F9.2   mm/yr value of X-component of station velocity.
37-44    F8.3   mm/yr formal uncertainty of X-component of station velocity.
50-58    F9.2   mm/yr value of Y-component of station velocity.
63-70    F8.3   mm/yr formal uncertainty of Y-component of station velocity.
76-84    F9.2   mm/yr value of Z-component of station velocity.
89-96    F8.3   mm/yr formal uncertainty of Z-component of station velocity.
```

3) Local topocentric components of the vector of station velocity: Up, East,
   North. The first 8 characters of this line are STA_GVU:

```
Field    Format Units Meaning
1-8      A8     --    record type identifier: STA_GVU:
11-18    A8     --    station name.
24-32    F9.2   mm/yr value of U-component of station velocity.
37-44    F8.3   mm/yr formal uncertainty of U-component of station velocity.
50-58    F9.2   mm/yr value of E-component of station velocity.
63-70    F8.3   mm/yr formal uncertainty of E-component of station velocity.
76-84    F9.2   mm/yr value of N-component of station velocity.
89-96    F8.3   mm/yr formal uncertainty of N-component of station velocity.
```

3.3 .sou -file

.sou file contains estimates of right ascension and declination of
global sources, as well as formal their uncertainties and correlations between
right ascension and declination of the same source.

File contains lines of two types:
1) Comment. The first character is #. Header comment contain the full name of
   the spool file.

2) Estimates.

```
Field    Format Units  Meaning
1-8      A8     --      record type identifier: SOU_GCO:
11-18    A8     --      IVS source name.
25-26    I2     hours  right ascension. hours part
27-27    A1     --      separator "_"
28-29    I2     min.   right ascension. minutes part
30-30    A1     --      separator "_"
31-41    F11.8  sec.   right ascension. seconds part
46-55    F10.4  mas    formal error of right ascension
62-64    I3     deg.   declination. degrees part.
65-65    A1     --      separator "_"
66-67    I2     arcmin declination. arcminutes part.
68-68    A1     --      separator "_"
69-78    F10.7  arcsec declination. arcseconds part.
83-92    F10.4  mas    formal uncertainty of declination
99-104   F6.4   d/l    correlation between the estimates of right ascension
                       and declination.
116-122  I7     --      the number of observations of this source used in
                       solution.
133-139  I7     --      total number of observations of this source.
151-155  I5     --      the number of sessions of this source used in
                       solution.
166-170  I5     --      total number of sessions with this source.
182-191  A10    --      the date of the first session with this source used
                       in solution. format: yyyy.mm.dd (as integer numbers)
203-212  A10    --      the date of the last session with this source used
                       in solution. format: yyyy.mm.dd (as integer numbers)
```

3.4   .eop -file

   .eop file contains estimates of X pole coordinate, Y pole coordinate, UT1-TAI
angle, UT1 rate and UT1 acceleration as well as their formal uncertainties.
Estimates are obtained using all observations of the specific session.
.eop file contains also database names and time-tags.

   File contains lines of two types:
1) Comment. The first character is #. Header comment contain the full name of
   the spool file.

2) Estimates.

```
   Field   Format Units       Meaning
   1-8     A8     --          record type identifier: EOP_LOC:
   11-20   A10    --          database name with leading dollar sign
   23-25   I3     --          database version number
   34-49   A16    calend      EOP time tag in Solve format: YYYY.MM.DD-hh:mm
                              Time scale is not defined. Adjustments are at TDB
                              time scale, a priori EOP are at unknown time scale.
   58-63   I6     --          number of observation used for getting these EOP
                              estimates.
   69-79   F11.4  mas         estimate of X-pole coordinate
   84-93   F10.2  muas        formal uncertainty of X-pole coordinate
   99-109  F11.4  mas         estimate of Y-pole coordinate
   114-123 F10.2  muas        formal uncertainty of Y-pole coordinate
   129-139 F11.4  msec        estimates of UT1-TAI
   144-153 F10.2  musec       formal uncertainty of UT1-TAI
   159-169 F11.4  mas/day     estimates of X pole rate
   174-183 F10.2  muas/day    formal uncertainties of X pole rate
   189-199 F11.4  msec/day    estimates of Y pole rate
   204-213 F10.2  msec/day    formal uncertainties of Y pole rate
   219-229 F11.4  msec/day    estimates of UT1-TAI rate
   234-243 F10.2  musec/day   formal uncertainties of UT1-TAI rate
   249-259 F11.4  ms/day**2   estimates of UT1-TAI acceleration
   264-273 F10.2  ms/day**2   formal uncertainties of UT1-TAI acceleration
```

   If the specific parameter was not estimated in this experiment, the field
for its value and formal uncertainty is replaced by filler: $$$$$. The filler
takes entire field.

3.5   .nut -file

   .nut file contains estimates of daily offset of nutation in longitude and
nutation in obliquity as well as their formal uncertainties. .nut file contains
also database names and time-tags.

```
   File contains lines of two types:
1) Comment. The first character is #. Header comment contain the full name of
   the spool file.

2) Estimates.

   Field    Format Units      Meaning
   1-8      A8     --          record type identifier:  NUT_LOC:
   11-20    A10    --          database name with leading dollar sign
   23-25    I3     --          database version number
   37-46    F10.5  years       time tag
   53-59    I6     --          the number of used observations
   64-74    F11.3  mas         estimate of nutation in longitude
   79-88    F10.1  muas        formal uncertainty of nutation in longitude
   94-104   F11.3  mas         estimate of nutation in obliquity
   109-118  F10.1  muas        formal uncertainty of nutation in obliquity
```

3.6   .crl -file

   .crl file contains off-diagonal coefficients of correlations between
the estimates of EOP at the same experiment. Correlations are ordered in
according the order of elements of a symmetric matrix in low-triangular
representation without the main diagonal. Order of rows/columns: X_pole,
X_pole rate, Y_pole, Y_pole rate, UT1, UT1 rate, Nutation in longitude,
Nutation in obliquity

```
   File contains lines of two types:
1) Comment. The first character is #. Header comment contain the full name of
   the spool file.

2) Correlations.

   Field    Format Units      Meaning
   1-8      A8     --          record type identifier:  CRL_LOC:
   11-20    A10    --          database name with leading dollar sign
   23-25    I3     --          database version number
   29-34    F6.4   d/l         correlation between X_pole rate and X_pole
   36-41    F6.4   d/l         correlation between Y_pole and X_pole
   43-48    F6.4   d/l         correlation between Y_pole and X_pole rate
   50-55    F6.4   d/l         correlation between Y_pole rate and X_pole
   57-62    F6.4   d/l         correlation between Y_pole rate and X_pole rate
   64-69    F6.4   d/l         correlation between Y_pole rate and Y_pole
   71-76    F6.4   d/l         correlation between UT1 and X_pole
   78-83    F6.4   d/l         correlation between UT1 and X_pole rate
   85-90    F6.4   d/l         correlation between UT1 and Y_pole
   92-97    F6.4   d/l         correlation between UT1 and Y_pole rate
   99-104   F6.4   d/l         correlation between UT1 rate and X-pole
   106-111  F6.4   d/l         correlation between UT1 rate and X-pole rate
   113-118  F6.4   d/l         correlation between UT1 rate and Y-pole
   120-125  F6.4   d/l         correlation between UT1 rate and Y-pole rate
   127-132  F6.4   d/l         correlation between UT1 rate and UT1
```

```
134-139 F6.4   d/l        correlation between Nutation Psi and X_pole
141-146 F6.4   d/l        correlation between Nutation Psi and X_pole rate
148-153 F6.4   d/l        correlation between Nutation Psi and Y_pole
155-160 F6.4   d/l        correlation between Nutation Psi and Y_pole rate
162-167 F6.4   d/l        correlation between Nutation Psi and UT1
169-174 F6.4   d/l        correlation between Nutation Psi and UT1 rate
176-181 F6.4   d/l        correlation between Nutation Eps and X_pole
183-188 F6.4   d/l        correlation between Nutation Eps and X_pole rate
190-195 F6.4   d/l        correlation between Nutation Eps and Y_pole
197-202 F6.4   d/l        correlation between Nutation Eps and Y_pole rate
204-209 F6.4   d/l        correlation between Nutation Eps and UT1
211-216 F6.4   d/l        correlation between Nutation Eps and UT1 rate
218-223 F6.4   d/l        correlation between Nutation Eps and Nutation Psi
```

3.7   .lso -file

    .lso file file contains estimates of right ascension and declination of
local sources, as well as formal their uncertainties and correlations between
right ascension and declination of the same source. It contains also the time
tag of the estimates of right ascension and declination. File is sorted in
order of sessions and in order of appearance of local sources in the session.

    File contains records of two types:
1) Comment. The first character is #. Header comment contain the full name of
   the spool file.

2) Estimates.

```
Field    Format Units  Meaning
1-8      A8     --      record type identifier: SOU_LSO:
11-18    A8     --      IVS source name.
21-30    A10    --      database name with leading dollar sign
33-35    I3     --      database version number
47-56    F10.5  years   time tag: time of the middle epoch of the observing
                        session in Julian years since 0000.01.01_00:00
63-64    I2     hours   right ascension. hours part
65-65    A1     --      separator "_"
66-67    I2     min.    right ascension. minutes part
68-68    A1     --      separator "_"
69-79    F11.8  sec.    right ascension. seconds part
84-93    F10.4  mas     formal error of right ascension
100-102  I3     deg.    declination. degrees part.
103-103  A1     --      separator "_"
104-105  I2     arcmin  declination. arcminutes part.
106-106  A1     --      separator "_"
107-116  F10.7  arcsec  declination. arcseconds part.
121-130  F10.4  mas     formal uncertainty of declination
138-144  F7.4   --      Correlation between right ascension and declination
151-154  I4     --      Number of used observations of this source
158-161  I4     --      Total number of observations of this source
```

3.8   .lst -file

    .lst file contains estimates of positions of local stations and the formal uncertainties of these estimates. The list of station positions is sorted in the order of sessions and then in the alphabetic order of station names. Total estimates of station positions in crust-fixed XYZ coordinates system and adjustments to the apriori positions in topocentric system are presented.

    File contains lines of three types:

1) Comment. The first character is #. Header comment contain the full name of the spool file.

2) Cartesian components of the vector of station position. The first 8 characters of this line are STA_LCX:

```
Field    Format Units Meaning
1-8      A8     --    record type identifier: STA_LCX:
21-30    A10    --    database name with leading dollar sign
33-35    I3     --    database version number
47-56    F10.5  years time tag
59-60    A2     --    component identifier: X:
62-76    F15.2  mm    value of X-component of station position.
81-90    F10.3  mm    formal uncertainty of X-component of station position.
93-94    A2     --    component identifier: X:
96-110   F15.2  mm    value of Y-component of station position.
115-124  F10.3  mm    formal uncertainty of Y-component of station position.
127-128  A2     --    component identifier: Z:
130-144  F15.2  mm    value of Z-component of station position.
149-158  F10.3  mm    formal uncertainty of Z-component of station position.
```

3) Topocentric components of the vector of adjustments to the apriori station position. The first 8 characters of this line are STA_LCU:

```
Field    Format Units Meaning
1-8      A8     --    record type identifier: STA_LCU:
21-30    A10    --    database name with leading dollar sign
33-35    I3     --    database version number
47-56    F10.5  years time tag
59-60    A2     --    component identifier: U:
62-76    F15.2  mm    value of U-component of station position.
81-90    F10.3  mm    formal uncertainty of U-component of station position.
93-94    A2     --    component identifier: E:
96-110   F15.2  mm    value of E-component of station position.
115-124  F10.3  mm    formal uncertainty of E-component of station position.
127-128  A2     --    component identifier: N:
130-144  F15.2  mm    value of N-component of station position.
149-158  F10.3  mm    formal uncertainty of N-component of station position.
```

3.9   .bas -file

.bas file contains series of the estimates of the components of baseline
vectors of the stations whose positions were estimated as local parameters
as well as formal uncertainties of these these estimates. The list of the
estimates of baseline vectors is sorted in the order of sessions and then in
the alphabetic order of station names forming a baseline. All three component:
baseline length, transversal and and normal components are computed.

   File contains lines of two types:

1) Comment. The first character is #. Header comment contain the full name of
   the spool file.

2) Cartesian components of the vector of station position. The first
   8 characters of this line are BAS_LCL:

   Field   Format Units Meaning
   1-8   A8   --   record type identifier: BAS_LCL:
   11-20   A10   --   database name with leading dollar sign
   23-25   I3   --   database version number
   35-44   F10.5 years time tag
   46-53   A8   --   the name of the first station of the baseline
   54-54   A1   --   delimiter: "/"
   55-62   A8   --   the name of the second station of the baseline
   64-77   F14.2 mm   baseline length
   78-83   F6.2   mm   formal uncertainty of baseline length determination
   85-94   F10.2 mm   transversal (horizontal) component of baseline vector
   96-102   F7.2   mm   formal uncertainty of transversal comp. of baseline
   104-114 F11.2 mm   normal (vertical) component of baseline vector
   116-122 F7.2   mm   formal uncertainty of normal comp. of baseline vector

3.10   .eob -file

   .eob file contains series of the estimates of X pole coordinate,
Y pole coordinate, UT1-TAI angle, UT1 rate, daily offsets of nutation angles
as well as their formal uncertainties and correlations. Time tag and database
name is attached to each line. .EOB format is an extension of the IERS EOP
format.

   File contains lines of three types:
1) Comment. The first character is #. Header comments contain some information
   about solution.

2) Header. The first two symbols are blank. Header lines contain titles of the
   columns

3) Estimates.

   1   1-1   A1   ---   Usage flag

```
 2    3-14   F12.6  days    Modified Julian date of the TDT time tag for
                            pole coordinates and UT1
 3   16-25   A10    ---     Database name
 4   27-32   A6     ---     IVS session code (if available)
 5   34-41   F8.6   arcsec  The estimate of X pole coordinate
 6   43-50   F8.6   arcsec  The estimate of Y pole coordinate
 7   52-62   F11.7  sec     The UT1-TAI function
 8   64-71   F8.3   mas     Adjustment of the nutation in longitude angle with
                                  respect to IAU 1980 nutation expansion
 9   73-80   F8.3   mas     Adjustment of the nutation in obliquity angle with
                                  respect to IAU 1980 theory
10   82-90   F9.6   asc/day The estimate of X pole rate
11   92-100  F9.6   asc/day The estimate of Y pole rate
12  102-108  F7.4   ms/day  The estimate of UT1 rate
13  110-117  F8.6   arcsec  Formal uncertainty of X pole coordinate
14  119-126  F8.6   arcsec  Formal uncertainty of Y pole coordinate
15  128-136  F9.7   sec     Formal uncertainty of UT1-UTC function
16  138-144  F7.3   mas     Formal uncertainty of nutation in longitude angle
17  146-152  F7.3   mas     Formal uncertainty of nutation in obliquity angle
18  154-162  F9.6   asc/day Formal uncertainty of X pole rate
19  164-172  F9.6   asc/day Formal uncertainty of Y pole rate
20  174-180  F7.4   asc/day Formal uncertainty of UT1 rate
21  182-187  F6.4   --      Correlation between the estimates of X-pole
                                  positions and Y-pole position
22  189-194  F6.4   --      Correlation between the estimates of X-pole
                                  positions and UT1-TAI angle
23  196-201  F6.4   --      Correlation between the estimates of Y-pole
                                  positions and UT1-TAI angle
24  203-208  F6.4   --      Correlation between the estimates of nutation in
                                  longitude and nutation in obliquity
25  210-215  F6.4   --      Correlation between the estimates of X-pole
                                  positions and UT1 rate
26  217-222  F6.4   --      Correlation between the estimates of Y-pole
                                  positions and UT1-TAI date
27  224-229  F6.4   --      Correlation between the estimates of
                                  UT1-TAI angle UT1 rate
28  231-235  F5.2   hours   Session duration
29  237-243  F7.2   psec    Weighted root mean square of postfit residuals
30  245-250  I6     --      Number of used observations in the session
31  252-263  F12.6  days    Modified Julian date for nutation at TDT time
                            scale
32  265-328  A64    --      The network configuration line. Consists of
                            two characters IVS station codes listed
                            in alphabetic order for stations that participated
                            in the experiment and supplied the data that have
                            been used in processing this experiment.
```

   If the specific parameter was not estimated in this experiment, the field
for its value and formal uncertainty is replaced by filler: $$$$$$. The filler
takes entire field.

3.11   .trp -file

.trp file contains apriori zenith path delay, adjustments of zenith
path delay, totals (apriori+adjustments) and formal uncertainties of
adjustments for each session, each station. In the case if zenith apriori path
delays were not written into the spool file, then apriori zenith path delays
are reported as zeroes.

```
   Field   Format Units Meaning
   1-8     A8     --    record type identifier: TRP_SEG:
   11-20   A10    --    database name with leading dollar sign
   23-25   I3     --    database version number
   32-50   A19    --    time tag of the estimates of troposphere path delay
                        in Solve format
   32-35   I4     --    year number
   37-38   I2     --    month number
   40-41   I2     --    day number
   43-44   I2     hours hour
   46-47   I2     min   minutes
   49-50   I2     sec   seconds
   56-63   A8     ---   IVS station name
   69-82   F14.3  psec  apriori troposphere zenith path delay
   88-101  F14.3  psec  adjustment of troposphere zenith path delay
  107-120  F14.3  psec  total troposphere zenith path delay
  126-139  F14.3  psec  formal uncertainty of troposphere path delay
```

3.12 .erm -file

.erm file contains numerical values of the coefficients of expansion
of the perturbation vector of the Earth rotation over the B-spline basis.

 Document is under preparation.

3.13 .heo -file

.heo file contains numerical values of the harmonic model of Earth's
orientation. Refer to document
http://vlbi.gsfc.nasa.gov/solve_root/help/heo_format.txt
for further details.

3.14 .npv -file

.erm file contains numerical values of the coefficients of expansion
of the site position expansion over B-spline and Fourier basis, as well as
covariance matrix of its estimates.

Document is under preparation.

3.15   .hps -file

.heo file contains numerical values of the harmonic model of site
position displacements. Refer to document
http://vlbi.gsfc.nasa.gov/solve_root/help/harpos_format.txt
for further details.

3.16   .bsp -file

.bsp file contains numerical values of the coefficients of expansion
of site position evolution over the B-spline basis.
Refer to document
http://vlbi.gsfc.nasa.gov/solve_root/help/bsppos_format.txt
for further details.

3.17   .rms -file

.rms file contains overall weighted root means square of postfit residuals
for all observations and a series of wrms of postfit residual for each
individual session. File is ordered in decreasing wrms.

File contains lines of three types:

1) Global statistics. Fields 11-17 are Global:

```
Field   Format Units     Meaning
1-8     A8     --        record type identifier: RMS_DEL:
11-17   A7     --        record subtype identifier: Global:
22-28   I7     --        Number of observations used in solution
36-45   F10.3  psec      overall wrms of postfit delay residuals
50-59   F10.3  psec/sec  overall wrms of postfit delay rate residuals.
                         Exception: the line with subtype identifier Global
                         does not have rate, but has chi/ndg in fields
                         62-71
```

2) Comment. The first character is #. Header comment contain the full name of
   the spool file.

3) Local statistics.

   if (GETPAR_RMS format version 1.0 of 2001.05.25) then

   Field   Format   Units   Meaning

```
1-8     A8        --      record type identifier: RMS_DEL:
11-20   A10       --      database name with leading dollar sign
22-28   I7        --      Number of observations used in solution
30:41   I12/F3.1  psec    wrms of delay in psec *
                          If WRMS > 10 psec then format is I12,
                          otherwise is F3.1
46:55   I10       fs/s    wrms of delay rate.


if ( GETPAR_RMS format version 2.0  of 2003.08.12 ) then


1-8     A8        --      record type identifier: RMS_DEL:
11-20   A10       --      database name with leading dollar sign
22-28   I7        --      Number of observations used in solution
30:41   F12.3     psec    wrms of delay.
47:58   I12       fs/s    wrms of delay rate.
```

Questions and comments about this guide should be sent to:

Leonid Petrov (sgdass@lists.nasa.gov)

Last update: 2003.08.12