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Bernese GPS Software Version 4.0

Appendix:

Menu Panels, Option Panels, and Help Panels

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Contents

A. Menu Panels

A.1 Primary Menu Panel and Menu Help Panel

```
Primary          Bernese GPS Software Version 4.0



   0 ..   DEFAULTS        : Defaults for Processing, Program and File Names
   1 ..   CAMPAIGNS       : Informations and Update of Campaigns
   2 ..   TRANSFER        : Data Transfer to Bernese Format; Simulation
   3 ..   ORBITS          : Orbit Computation, Check and Update
   4 ..   PROCESSING      : Preprocessing and Processing of Observations
   5 ..   SERVICES        : Service Programs
   6 ..   BPE             : Bernese Processing Engine
   7 ..   DOCU            : Documentation, Help Panels
   9 ..   USER            : Individual User Programs

  =H      HELP            : Get Help Panel
  =X      EXIT            : Terminate GPS Processing
```

```
                           HELP PANEL FOR MENU PANELS

 Input in the form i.k.l :  Select item l in sub-item k which
                            can be found under item i of CURRENT menu
                            Examples:  1,  2.7.1 , 4.5

 Input in the form =i.k.l:  same as above, but i belongs to PRIMARY menu
                            Examples:  =2.7  , =0

 Special Input :      =P :  Goto primary menu   =Q :  Go back one level
                      =X :  Exit menu system    =H :  Call help panel
                      =S :  Look for program, get list of panels

 Any other input is treated as DOS command and immediately executed.

 Upper left field:  S:  Submit status   (Y: Execute immediately)
                    C:  Execution class (0: Foreground, 1..4: Batch queue)
```

A.2 Menu 0 Panels (Defaults)

0	DEFAULTS: OPTION MENU
1 2 .. 3 .. 4 ..	PROCESSING : Default Options for Processing PROGRAM NAMES : Default Names for Programs DATASET NAMES : Default Names for Datasets SCRIPT NAMES : Default Names for Scripts/Command Files

0.2	DEFAULTS: PROGRAM NAMES
1 2 3 4 5 6	TRANSFER : Transfer and Simulation Programs RINEX : RINEX Transfer Programs ORBITS : Orbit Programs PROCESSING : Pre- and Processing Programs SERVICES : Service Programs BPE : Bernese Processing Engine Programs

0.3	DEFAULTS: DATASET NAMES
1 2 3 4 5	GENERAL : Default Names for General Datasets OBSERVATIONS : Default Names for Observation Datasets ORBITS : Default Names for Orbit Datasets MISCELLANEOUS : Default Names for Miscellaneous Datasets BPE GENERAL : Default Names for General BPE Datasets

0.4	DEFAULTS: SCRIPT NAMES
1 2	FTP : FTP Script Names BPE : Script Names for Bernese Processing Engine

A.3 Menu 1 Panels (Campaigns)

1	CAMPAIGNS: OPTION MENU
1	ADD/DEL CAMPAIGN: Add / Delete Campaign in Table
2	CREATE SUBDIR : Create Subdirectories, Default Files
3	DEFINE SESSIONS : Session Definition (Number, Start/End-Time)
4 ..	STATION FILES : Coord, Abbrev, Translation Table, Eccentr
5 ..	AUTOMATION : Prepare Automated Processing
9	REMOVE SUBDIR : Delete Files, Remove Subdirectories

1.4	STATION FILES: OPTION MENU
1	COORDINATES : Create/Update Coordinate File
2	TRANSL. TABLE : Create/Update Station Name Translation Table
3	ABBREVIATIONS : Create/Update 4 and 2 Char Abbreviation Table
4	ECCENTRICITIES : Create/Update Eccentricity File
5	ANTENNA/RECEIVER: Create/Update Rcvr/Antenna Translation Table

1.5	PREPARE AUTOMATED PROCESSING
1	FILE PARAMETERS : Define Parameters for Filenames
2	BASELINES : Predefine Baselines

A.4 Menu 2 Panels (Transfer)

2	TRANSFER: OPTION MENU
0 ..	FTP : Download Data from IGS Data Centers or CODE
2	TI-4100 FILES : Transfer TI-4100 Rawdata into Bernese Files
5 ..	RAWDATA > RINEX : Create RINEX Files from Rawdata Files
6 ..	BERNE --> RINEX : Transfer Bernese Files into RINEX Files
7 ..	RINEX --> BERNE : Transfer RINEX Files into Bernese Files
8	SIMULATION : Create Code and Phase Files by Simulation

2.0	FTP: DOWNLOAD DATA FROM IGS DATA CENTERS
1	IGS RINEX DATA : RINEX data from Global Data Centers
2	IGS ORBITS : IGS Precise Orbit Files
3	STATION INFO : IGS Station Information Files from CODE
4	SATELLITE INFO : Satellite Information Files from CODE
5	POLE : Pole Files from CODE

2.5	TRANSFER: Rawdata --> RINEX
1 ..	TRIMBLE : Trimble Rawdata Files --> RINEX Files
4 ..	ASHTECH : Ashtech Rawdata Files --> RINEX Files
5 ..	ROGUE : Rogue Rawdata Files --> RINEX Files
6 ..	CONCATENATE : Concatenate RINEX Obs/Nav or Precise Orb.Files
7	SPLIT : Split Multiple-Station RINEX Observation Files
9	METEO : Create RINEX Met.data Files

2.5.1	Trimble Rawdata Files --> RINEX Files
1	OBSERVATIONS : Rawdata Files --> RINEX Observation Files
2	BROADCAST : Rawdata Files --> RINEX Navigation Files

2.5.2	Minimac Rawdata Files --> RINEX Files
1	OBSERVATIONS : Rawdata Files --> RINEX Observation Files
2	BROADCAST : Rawdata Files --> RINEX Navigation Files

2.5.3	WM-102 PoPS Files --> RINEX Files

1 2	OBSERVATIONS : PoPS Files --> RINEX Observation Files BROADCAST : PoPS Files --> RINEX Navigation Files

2.5.4	Ashtech BEN-Files --> RINEX Files
1 2	OBSERVATIONS : B-Files --> RINEX Observation Files BROADCAST : E-Files --> RINEX Navigation Files

2.5.5	Rogue Rawdata Files --> RINEX Files
1 2	OBSERVATIONS : Rogue-Files --> RINEX Observation Files BROADCAST : Broadcast-Files --> RINEX Navigation Files

2.5.6	Concatenate RINEX Files
1 2 3	CCRINEXO : Concatenate Observation Files CCRINEXN : Concatenate Navigation Files CCPREORB : Concatenate Precise Orbit Files

2.6	TRANSFER: BERNE --> RINEX
1 2	OBSERVATIONS : Transfer Bernese Observ. Files into RINEX BROADCAST : Transfer Bernese Broadcast Files into RINEX

2.7	TRANSFER: RINEX --> BERNE
1 2 3 4 5	OBSERVATIONS : Transfer RINEX Obs. Files into Bernese Files BROADCAST : Transfer RINEX Broad. Files into Bernese Files METEO : Transfer RINEX Meteo Files into Bernese Files GRAPHICS : Create Pseudographics of RINEX Obs.Files WIDELANE TEST : Check Files using Melbourne/Wuebbena Comb.

A.5 Menu 3 Panels (Orbits)

3	ORBITS: OPTION MENU
1 ..	BROADCAST CHECK : Check Broadcast Ephemerides
2	CREATE TABULAR : Generate Tabular Orbits from Broadcast/Precise
3	CREATE STANDARD : Generate/Update Standard Orbits
6	DIFF. STANDARD : Display Differences between Standard Orbits
7	CREATE PRECISE : Generate Precise Ephem. from Standard Orbits
8	SATELLITE CLOCKS: Generate Satellite Clock File
9 ..	NEW ORBIT PROGR.: DEF093, UPD093, ORBIMP

3.1	ORBITS: BROADCAST CHECK
1	MANUAL : Manual Broadcast Message Check (BRDCHK)
2	AUTOMATIC : Automatic Broadcast Message Check (BRDTST)

3.9	ORBITS: NEW ORBIT PROGRAMS
1	CREATE STANDARD : Generate Standard Orbits, new RPR model
2	UPDATE STANDARD : Update Standard Orbits, new RPR model
3	ORB. IMPROVEMENT: Estimate Orbit Model Par. using Precise Files
4	COMPARE OSC. ELE: Comparison of the osc. elements (std. orbits)

A.6 Menu 4 Panels (Processing)

4	PROCESSING: OPTION MENU
1 2 3 4 .. 5 7 8 ..	CODE CHECK : Check Code Files for Outliers CODE PROCESSING : Single Point Positioning SINGLE DIFF. : Form Single Difference Files PHASE CHECK : Check S.Diff. Files for Cycle Slips PAR. ESTIMATION : Estimation of Relevant Parameters ION. ESTIMATION : Estimation of Ionosphere Models COMBINATION : Combination of Solutions

4.4	PROCESSING: PHASE CHECK
1 2	OLD PHASE CHECK : Old Interactive Phase Preprocessing NEW PHASE CHECK : New Automatic/Interactive Preprocessing

4.8	PROCESSING: COMBINATION OF SOLUTIONS
1 2	NORMAL EQUATIONS : Combine/manipulate Normal Equation Systems COORD. VAR/COVAR : Combine/compare Coordinates and Var./Covar.

A.7 Menu 5 Panels (Services)

```
5      SERVICES: OPTION MENU

1      OBSERVATIONS    : Browse, Edit , Update and Graphic Obs. Files
2      FILE HEADERS    : Change the Content of Obs. File Headers
3 ..   RESIDUALS       : Browse and Check Residuals
4 ..   COORDINATES     : Compare Coord. Files, Helmert Transformation
5 ..   POLE            : Update and Extract Pole Information
6 ..   EXTRACTIONS     : Generation of output summaries
7 ..   BINARY <-> ASCII: Conversion Between Binary and ASCII Files
8      DELETE FILES    : Delete GPS Specific Files
9      JOB             : Processing of Job Output
```

```
5.3    RESIDUALS: OPTION MENU

1      BROWSE RESID.   : Browse Residuals of GPSEST,MAUPRP,CODSPP
2      CHECK RESIDUALS : Check Residuals for Outliers
3      GRAPHIC TOOL    : Display Residuals with GT
```

```
5.4    SERVICES: COORDINATES

1      COMPARISON       : Comparison of Coordinate Files
2      HELMERT          : Helmert Transformation
5      COORDINATE MERGE : Merge Coordinate Files
```

```
5.5    POLE: OPTION MENU

1      POLE UPDATE     : Reformat and Update Pole Information
2      POLE EXTRACT    : Extract Pole Information from Pole Files
```

```
5.6    EXTRACTIONS

1      CODSPP OUTPUT     : CODSPP output summary                (CODXTR)
2      DEFSTD OUTPUT     : DEFSTD output summary         (DEFXTR/DEFXTP)
3      MAUPRP OUTPUT     : MAUPRP output summary                (MPRXTR)
5      GPSEST/ADDNEQ OUT: General summary (several formats)    (GPSXTR)
7      ORBIT WEIGHTS     : Change accuracy codes in precise orb.(PREWEI)
```

5.7	SERVICES: BINARY <--> ASCII CONVERSION
1	OBSFMT : Zero / Single Difference Files to ASCII
2	FMTOBS : ASCII to Zero / Single Difference Files
3	STDFMT : Standard Orbit / RPR Files to ASCII
4	FMTSTD : ASCII to Standard Orbit / RPR Files

A.8 Menu 6 Panels (BPE)

6	BPE: OPTION MENU
0 1 2 3 .. 4 .. 5 ..	PANEL UPDATE : Update Panels for New Release PANEL EDITING : Prepare Option Panels for BPE PREPARE RINEX : Prepare RINEX Files for BPE SPECIAL FILES : Prepare Special Files for BPE BPE PROCESSING : BPE Processing (Session or Campaign) BPE SERVICES : BPE Service Programs

6.3	BPE: SPECIAL FILE PREPARATION
1 2	FTP STATIONS : Files with Stations for FTP "FIXED" STATIONS : Files with Fixed or Constrained Stations

6.4	BPE: PROCESSING
1 2	SESSION PROCESSING: Process one or more Sessions of a Campaign CAMPAIGN PROCESSING: Process an Entire Campaign

6.5	BPE: SERVICE PROGRAMS
1 2	COORDINATE CHECK : Check Coordinates for Baseline Creation RINEX CRD. CHECK : Check RINEX Coord. for Baseline Creation

A.9 Menu 7 Panel (Docu)

7	DOCUMENTATION, HELP PANELS
1	HELPDISP : Display Help Panels

B. Option Panels and Help Panels

B.1 General Help Panels

B.1.1 Help Panel for Data Entry Panels

```
HELP PANEL FOR DATA ENTRY PANELS

             [ENTER] :  move cursor to first field on next line
           [c-ENTER] :  move cursor to last  field on previous line
   [TAB]  or [c-RGT] :  move cursor to next  field on same line
 [s-TAB]  or [c-LFT] :  move cursor to previous field on same line
    [UP] and  [DOWN] :  move cursor to field above or below
  [HOME] and   [END] :  move cursor to begin or end of current field
[c-HOME] and [c-END] :  move cursor to top or bottom field
  [PGUP] and  [PGDN] :  scroll screen up or down
               [DEL] :  delete character on cursor position
         [BACKSPACE] :  delete character left of cursor position
            [INSERT] :  toggle between insert and replace mode
                [F5] :  clear whole input field
                [F6] :  clear input field from cursor to end

               [ESC] :  continue
```

B.1.2 Help Panel for File Selection Panels

```
HELP PANEL FOR FILE SELECTION PANELS

[c-ENTER] and  [ENTER] :  move cursor to field above or below
     [UP] and   [DOWN] :  move cursor to field above or below
 [c-HOME] and  [c-END] :  move cursor to top or bottom field of the list
 [c-PGUP] and [c-PGDN] :  move cursor to top or bottom field on screen
   [PGUP] and   [PGDN] :  scroll screen up or down
                 [DEL] :  delete character on cursor position
                     S :  select file
                     B :  browse file (for ASCII files only!)

                 [ESC] :  continue
```

B.1.3 Help Panel for Observation File Selection Panels

```
HELP PANEL FOR OBSERVATION FILE SELECTION PANELS
```

```
[c-ENTER] and  [ENTER] :  move cursor to field above or belowo
     [UP] and   [DOWN] :  move cursor to field above or below
 [c-HOME] and  [c-END] :  move cursor to top or bottom field of the list
 [c-PGUP] and [c-PGDN] :  move cursor to top or bottom field on screen
   [PGUP] and   [PGDN] :  scroll screen up or down
                 [DEL] :  delete character on cursor position
                     S :  select file
                     X :  exit current program
                          other selection codes may be possible
                          according to main program panel

                 [c-D] :  enter command
                          command "S ALL" = select all files
                          command "RESET" = reset all selections

                 [ESC] :  continue
```

B.1.4 Help Panel for Update Panels

```
                          HELP PANEL FOR UPDATE PANELS

              [ENTER] :  move cursor to first field on next line
            [c-ENTER] :  move cursor to last  field on previous line
   [TAB]  or [c-RGT] :  move cursor to next  field on same line
 [s-TAB]  or [c-LFT] :  move cursor to previous field on same line
    [UP] and  [DOWN] :  move cursor to field above or below
  [HOME] and   [END] :  move cursor to begin or end of current field
[c-HOME] and [c-END] :  move cursor to top or bottom field
                [DEL] :  delete character on cursor position
          [BACKSPACE] :  delete character left of cursor position
             [INSERT] :  toggle between insert and replace mode
                 [F5] :  clear whole input field
                 [F6] :  clear input field from cursor to end
                 [F9] :  *** REPEAT CURRENT LINE ***
        [c-BACKSPACE] :  *** DELETE CURRENT LINE ***

                [ESC] :  continue
```

B.2 Option and Help Panels for Menu 0 (Defaults)

```
0-1                          DEFAULTS: PROCESSING

  Job Processing Defaults:
    SUBMIT JOBS                 > YES <    (YES or NO)
    JOB CLASS                   > 0   <    (0:Foreground, 1-4: Batch Queues)
                                           (-1 to -4: Scheduled Execution)
    ROUTE JOB OUTPUT TO FILE    > YES <    (YES or NO)
    ROUTE ERROR MSG  TO FILE    > YES <    (YES or NO, non-interactive only)
    GENERAL PATH TO JOB OUTPUT  > U:\OUT\                          <
    DIGITS OF JOB OUTPUT NUMBER > 2 <      (2 or 3)

  Table Processing Defaults:
    CONFIRM DELETE              > YES <    (YES or NO)

  Path to Main Program Submit Files:
    PATH                        > U:\WORK\                         <
```

```
0-1                          DEFAULTS: PROCESSING                          HELP

  Job Processing Defaults:

    SUBMIT JOBS:
      Specify whether jobs will be submitted automatically (YES) or
      not (NO) after their preparation using the menu system. If you
      specify NO you have the possibility to e.g. check or modify the
      program input files (I-, F-, and N-file) created by the menu system
      before running the actual GPS program. In this case you have to
      start the GPS program manually by typing ("pgmnam" in uppercase !):
          pgmnam <RETURN>     for the PC version  or
          SJ pgmnam <RETURN>  for the UNIX or VMS versions.
      RECOMMENDED VALUE: YES

    JOB CLASS:
      On multitasking systems you have the possibility to choose between
      different batch queues. The program will run in the foreground if
      you choose 0, otherwise in the batch queue specified. Have a look
      at the Bernese startup file LOADGPS -- probably located in your
      home directory (depending on the installation) -- for the defini-
      tion of the various batch queues. There you may also define your own
      job classes.
      If you enter a value < 0 you have the possibility to specify a start
      time for the job in an additional panel {DAT011__}.
      VMS:  Symbols "batch1",...,"batch4" containing the system queue names
            of the job classes are defined in the startup file LOADGPS.COM .
            The value of JOB CLASS corresponds to the number of the batch
            symbol: e.g. 2 corresponds to the queue defined by the symbol
            "batch2".
      DOS:  No job class selection possible.
            RECOMMENDED VALUE: Always use 0.
      UNIX: The job will run in the job class with the corresponding
            priority. The various job classes are defined by the variables
            QUEUE ,   1U Q, ..., that are set in the script LOADGPS.

    ROUTE JOB OUTPUT TO FILE:
      Specify whether you want to create a job output file or not:
      YES: Creates a file with the same name as the program to be run to-
           gether with the extension
              (a)  .Lnn   with nn = 01 ..  99  (e.g. GPSEST.L89)  or
              (b)  .nnn   with nnn=001 .. 999  (e.g. GPSEST.023)
           The number nn resp. nnn is increased by one after each menu
           run of the corresponding program (see also menu 5.9 {DAT59___}).
           The numbering scheme depends on the setting of the option
           "DIGITS OF JOB OUTPUT NUMBER" in this panel here.
      NO : Job output will be written on standard output device (usually
           the screen).
      RECOMMENDED VALUE: YES
```

```
ROUTE ERROR MSG  TO FILE:
  Specify whether you want to save the error messages and warnings in
  the program output file (option "NO", e.g. saving messages in
  GPSEST.L89) or in the special error message file defined below
  (usually called ERROR.MSG, option "YES"). When running the BPE this
  option has to be set to "YES" in the BPE option panels used.
  RECOMMENDED VALUE: YES

GENERAL PATH TO JOB OUTPUT:
  Specify the directory path to save general job output files that
  are not campaign-specific (e.g. from program POLUPD). This rarely
  happens, because the normal program output files are saved in the
  campaign-specific "OUT" directory (see {DAT034__} for more details).
  RECOMMENDED VALUE: U:\OUT\

DIGITS OF JOB OUTPUT NUMBER:
  Specify how many different job output files jou want to save for
  each program by using N digits to distinct them. With two digits
  you can save 100 (00..99) and with 3 digits 1000 (000..999) output
  files.
  Job output file naming convention:
  PGMNAM.Lnn (nn=00..99)    e.g. GPSEST.L35 for value "2"
  PGMNAM.nnn (nnn=000..999) e.g. GPSEST.235 for value "3"
  RECOMMENDED VALUE: 2

Table Processing Defaults:

  CONFIRM DELETE:
    Specify whether you want the menu system to ask you to confirm the
    deletion of files (e.g deletion of observation files in menu 5.1)
    (YES) or not (NO).
    RECOMMENDED VALUE: YES

Path to Main Program Submit Files:

  PATH:
    Specify the path of the command files (resp. batch or shell files)
    that control the run of the main GPS programs and that are written
    by the menu system. These command file are named PGMNAM.COM (VAX),
    PGMNAM.BAT (DOS), or PGMNAM (UNIX).
    RECOMMENDED VALUE: U:\WORK\
                                                                        SF
```

```
0-1.1              BATCH PROCESSING: SUBMIT TIME

                        yy mm dd       hh mm ss

  Submit Job After:    > 96 02 01 <   > 12 30 00 <    (blank: immediately)
```

```
0-1.1              BATCH PROCESSING: SUBMIT TIME                      HELP

  Submit Job After:
    On multitasking systems you have the possibility to schedule a job.
    The job will only be started after the time you specify.
    The job will start immediately if you specify a time earlier than
    the actual time or when you leave all the fields blank.

    You have to enter the time in the following format:
      yy mm dd       hh mm ss

    > 96 02 01 <   > 12 30 00 <

    with:
    yy = Year   e.g. 96               hh = Hour   e.g. 12
    mm = Month  e.g. 02               mm = Minute e.g. 30
    dd = Day    e.g. 01               ss = Second e.g. 00
                                                                        SF
```

```
0.2-1                    DEFAULTS: TRANSFER PROGRAM NAMES

  Rawdata Transfer:
    ASHTECH  to RINEX  (Obs, Nav)         > ASRINEXO <    > ASRINEXN <  *)
    MINIMAC  to RINEX  (Obs, Nav)         > MCRINEXO <    > MCRINEXN <  *)
    ROGUE    to RINEX  (Obs, Nav)         > RGRINEXO <    > RGRINEXN <  *)
    TRIMBLE  to RINEX  (Obs, Nav)         > TRRINEXO <    > TRRINEXN <  *)
    WM-102   to RINEX  (Obs, Nav)         > W2RINEXO <    > W2RINEXN <  *)

  RINEX Met.File Creation                 >  RXMETEO <                  *)
  Concatenate RINEX    (Obs, Nav)         > CCRINEXO <    > CCRINEXN <  *)
  Concatenate Precise Orbit Files         > CCPREORB <                  *)
  Split RINEX obs files                   > RNXSPLIT <                  *)

  Simulation Program                      >  GPSSIM  <

  Path to the Programs                    > C:\BERN40\PGM\MAIN40\EXP\  <
  Path to the Programs *)                 > C:\BERN40\PGM\MAIN40\EXP\  <
```

```
0.2-1                 DEFAULTS: TRANSFER PROGRAM NAMES                HELP

  General Remark:
    The program names given in this panel should not be changed by the
    user.

  Rawdata Transfer:

    ASHTECH  to RINEX  (Obs, Nav):    *)
      Specify the programs you use to transform ASHTECH raw data
      to RINEX format. The first entry field contains the program to
      transform observations and the second entry field the corresponding
      program for navigation messages (see menu 2.5.4.1 and 2.5.4.2).
      RECOMMENDED VALUES: ASRINEXO  (observations)
                          ASRINEXN  (navigation messages)

    MINIMAC  to RINEX  (Obs, Nav):    *)
      Specify the programs you use to transform MINIMAC raw data
      to RINEX format. The first entry field contains the program to
      transform observations and the second entry field the corresponding
      program for navigation messages (see menu 2.5.2.1 and 2.5.2.2).
      RECOMMENDED VALUES: MCRINEXO  (observations)
                          MCRINEXN  (navigation messages)

    ROGUE    to RINEX  (Obs, Nav):    *)
      Specify the programs you use to transform ROGUE raw data
      to RINEX format. The first entry field contains the program to
      transform observations and the second entry field the corresponding
      program for navigation messages (see menu 2.5.5.1 and 2.5.5.2).
      RECOMMENDED VALUES: RGRINEXO  (observations)
                          RGRINEXN  (navigation messages)

    TRIMBLE  to RINEX  (Obs, Nav):    *)
      Specify the programs you use to transform TRIMBLE raw data
      to RINEX format. The first entry field contains the program to
      transform observations and the second entry field the corresponding
      program for navigation messages (see menu 2.5.1.1 and 2.5.1.2).
      RECOMMENDED VALUES: TRRINEXO  (observations)
                          TRRINEXN  (navigation messages)

    WM-102   to RINEX  (Obs, Nav):    *)
      Specify the programs you use to transform WM-102 raw data
      to RINEX format. The first entry field contains the program to
      transform observations and the second entry field the corresponding
      program for navigation messages (see menu 2.5.3.1 and 2.5.3.2).
      RECOMMENDED VALUES: W2RINEXO  (observations)
                          W2RINEXN  (navigation messages)

  RINEX Met.File Creation:            *)
    Specify the program you use to transform meteo data into the RINEX
    meteo file format (see menu 2.5.9).
    RECOMMENDED VALUE : RXMETEO
```

```
  Concatenate RINEX    (Obs, Nav):    *)
    Specify the programs you use to concatenate two or more data files
    in RINEX format. The first entry field contains the program to
    concatenate RINEX observation files and the second entry field
    contains the corresponding program for navigation messages (see
    menu 2.5.6.1 and 2.5.6.2).
    RECOMMENDED VALUES: CCRINEXO  (observations)
                        CCRINEXN  (navigation messages)

  Concatenate Precise Orbit Files:    *)
    Specify the program you use to concatenate two ore more satellite
    orbit files in precise orbit format (see menu 2.5.6.3).
    RECOMMENDED VALUE : CCPREORB

  Split RINEX obs files:              *)
    Specify the program you use to split up an observation file in RINEX
    format (see menu 2.5.7).
    RECOMMENDED VALUE: RNXSPLIT

  Simulation Program:
    Specify the program you use to create simulated observations (see
    menu 2.8).
    RECOMMENDED VALUE: GPSSIM

  Path to the Programs:
    Specify the path where the menu system will find the corresponding
    program executables.
    RECOMMENDED VALUES: C:\BERN40\PGM\MAIN40\EXP\

  Path to the Programs *):
    Specify the path where the menu system will find the executables of
    the programs marked with *).
    RECOMMENDED VALUES: XG:  (on DOS:  X:\EXE\)
                                                                       SF
```

```
0.2-2          DEFAULTS: RINEX TRANSFER PROGRAM NAMES

  Bernese to RINEX:
    OBSERVATIONS    > BV3RXO <
    BROADCASTS      > BV3RXN <

  RINEX to Bernese:
    OBSERVATIONS    > RXOBV3 <
    BROADCASTS      > RXNBV3 <
    METEO           > RXMBV3 <

  Pseudographics    > RNXGRA <
  Phase Test        > RNXCYC <

  Path to the Programs     > C:\BERN40\PGM\MAIN40\EXP\  <
```

```
0.2-2         DEFAULTS: RINEX TRANSFER PROGRAM NAMES            HELP

  General Remark:
    The program names given in this panel should not be changed by the
    user.

  Bernese to RINEX:

    OBSERVATIONS:
      Specify the program you use to transform observation data from
      Bernese format to RINEX format (see menu 2.6.1).
      RECOMMENDED VALUE: BV3RXO

    BROADCASTS:
      Specify the program you use to transform broadcast messages from
      Bernese format to RINEX format (see menu 2.6.2).
```

```
      RECOMMENDED VALUE: BV3RXN

  RINEX to Bernese:

    OBSERVATIONS:
      Specify the program you use to transform observation data from
      RINEX format to Bernese format (see menu 2.7.1).
      RECOMMENDED VALUE: RXOBV3

    BROADCASTS:
       Specify the program you use to transform broadcast messages from
       RINEX format to Bernese format (see menu 2.7.2).
       RECOMMENDED VALUE: RXNBV3

    METEO:
       Specify the program you use to transform meteo data from RINEX
       format to Bernese format (see menu 2.7.3).
       RECOMMENDED VALUE: RXMBV3

  Pseudographics:
    Specify the program you use to create a pseudographics in ASCII
    format showing the availability of satellites for one ore more
    RINEX observation files (see menu 2.7.4).
    RECOMMENDED VALUE: RNXGRA

  Phase Test:
    Specify the program you use to make a zero-difference observation
    check using the Melbourne/Wuebbena combination of phase and code
    (see menu 2.7.5).
    RECOMMENDED VALUE : RNXCYC

  Path to the Programs:
    Specify the path where the menu system will find the corresponding
    program executables.
    RECOMMENDED VALUES: C:\BERN40\PGM\MAIN40\EXP\
                                                                    SF
```

```
0.2-3                  DEFAULTS: ORBIT PROGRAM NAMES

Broadcast Ephemeris:
  MANUAL BROADCAST CHECK  > BRDCHK <     AUTOM. BROADCAST CHECK  > BRDTST <
  BROADCAST E. to TABULAR > BRDTAB <

Standard Orbits:
  GENERATE STD.ORBITS     > ORBGEN <     UPDATE   STD.ORBITS     > UPDSTD <
  NEW      STD.ORBITS     > NEWSTD <     COMPARE  STD.ORBITS     > STDDIF <
  STD.ORBITS to ASCII     > STDFMT <     ASCII to STD.ORBITS     > FMTSTD <
  DEFINE STD.ORBITS (NEW) > DEF093 <     UPDATE STD.ORBITS (NEW) > UPD093 <
  ORBIT IMPROVEMENT       > ORBIMP <     COMPARE OSC. ELEMENTS   > STDELE <

Precise Ephemeris:
  PRECISE EPH. to TABULAR > PRETAB <     CREATE PRECISE EPHEM.   > STDPRE <

Satellite Clocks:
  CREATE SAT.CLOCK FILE   > SATCLK <

Path to the Programs:     > C:\BERN40\PGM\MAIN40\EXP\  <
```

```
0.2-3                 DEFAULTS: ORBIT PROGRAM NAMES                 HELP

General Remark:
  The program names given in this panel should not be changed by the
  user.

Broadcast Ephemeris:

  MANUAL BROADCAST CHECK:                AUTOM. BROADCAST CHECK:
    Specify the programs you use to perform a check of broadcast messages.
```

```
    The first entry field specifies the program that does this check
    manually and the second entry field specifies the program that does the
    corresponding check automatically (see menu items 3.1.1 and 3.1.2).
    RECOMMENDED VALUES: BRDCHK (manual check)
                        BRDTST (automatic check)

  BROADCAST E. to TABULAR:
    Specify the program you use to transform broadcast ephemerides to
    tabular ephemerides (see menu 3.2).
    RECOMMENDED VALUE: BRDTAB

Standard Orbits:

  DEFINE   STD.ORBITS:
    Specify the program you use to create or update standard orbits (see
    menu 3.3). The generation of a standard orbit starts from a set of
    tabular ephemerides files. For the update of a standard orbit file
    The second entry field specifies the program that updates a standard.
    You need an orbital element file saved by GPSEST when estimating orbit
    parameters.
    RECOMMENDED VALUE: ORBGEN

  COMPARE  STD.ORBITS:
    This entry field specifies the program you use to compare two
    standard orbit files (see menu 3.6).
    RECOMMENDED VALUES: STDDIF

  STD.ORBITS to ASCII:                  ASCII to STD.ORBITS:
    The first entry field specifies the program you use to create an ASCII
    version of a standard orbit file (see menu 5.7.3).
    The second entry field specifies the program you use to transform an
    ASCII version of a standard orbit file back into a binary standard
    orbit file (see menu 5.7.4).
    RECOMMENDED VALUE: STDFMT (Binary standard orbit to ASCII)
                       FMTSTD (ASCII standard orbit to binary)

  DEFINE STD.ORBITS (NEW):              UPDATE STD.ORBITS (NEW)
    These entry fields specify the programs that are used to create
    and update standard orbits using a new (special) radiation pressure
    model (see menu 3.9.1 and 3.9.2).
    You should not use these programs to handle standard orbits.
    RECOMMENDED VALUES: DEFO93 (create standard orbits)
                        UPDO93 (update standard orbits)

  ORBIT IMPROVEMENT:                    COMPARE OSC. ELEMENTS
    The first entry field specifies the program you use to do an orbit
    improvement handling the new (special) radiation pressure model (see
    menu 3.9.3).
    The second entry field specifies the program you use to compare the
    osculating elements of two standard orbits (see menu 3.9.4).
    RECOMMENDED VALUES: ORBIMP (orbit improvement)
                        STDELE (compare osculating elements)

Precise Ephemeris:

  PRECISE EPH. to TABULAR:              CREATE PRECISE EPHEM.
    The first entry field specifies the program you use to transform
    precise ephemerides to tabular ephemerides (see menu 3.2).
    The second entry field specifies the program you use to create precise
    ephemerides using standard orbits (see menu 3.7).
    RECOMMENDED VALUES: PRETAB (precise to tabular)
                        STDPRE (create precise ephemerides)

Satellite Clocks:

  CREATE SAT.CLOCK FILE:
    Specify the program you use to extract the satellite clock information
    from one ore more broadcast message files (see menu 3.8).
    RECOMMENDED VALUE: SATCLK

Path to the Programs:
    Specify the path where the menu system will find the corresponding
    program executables.
    RECOMMENDED VALUES: C:\BERN40\PGM\MAIN40\EXP\
                                                                          SF
```

```
0.2-4                DEFAULTS: PROCESSING PROGRAM NAMES

  Preprocessing:
    CODE PREPROCESSING          > CODCHK <
    SINGLE POINT POSITIONING    > CODSPP <
    SINGLE DIFFERENCE FILES     > SNGDIF <
    OLD PHASE PREPROCESSING     > OBSTS1 <
    NEW PHASE PREPROCESSING     > MAUPRP <

  Processing:
    PARAMETER ESTIMATION        > GPSEST <
    IONOSPHERE ESTIMATION       > IONEST <
    ADD NORMAL EQUATIONS        > ADDNEQ <

  Path to the Programs          > C:\BERN40\PGM\MAIN40\EXP\  <
```

```
0.2-4            DEFAULTS: PROCESSING PROGRAM NAMES              HELP

  General Remark:
    The program names given in this panel should not be changed by the
    user.

  Preprocessing:

    CODE PREPROCESSING:
      Specify the program you use to perform the preprocessing of one or
      more code observation files (see menu 4.1).
      RECOMMENDED VALUE: CODCHK

    SINGLE POINT POSITIONING:
      Specify the program you use to do a code single point positioning
      for one or more code observation files (see menu 4.2).
      RECOMMENDED VALUE: CODSPP

    SINGLE DIFFERENCE FILES:
      Specify the program you use to form single difference observation
      files (see menu 4.3).
      RECOMMENDED VALUE: SNGDIF

    OLD PHASE PREPROCESSING:
      Specify the program you use to MANUALLY check one or more phase
      single-difference observation files (old version of phase
      preprocessing). The default name OBSTS1 stands for the menu version
      of the program OBSTST (see menu 4.4.1).
      You preferably should use the new automatic preprocessing (see
      next input field).
      RECOMMENDED VALUE: OBSTS1

    NEW PHASE PREPROCESSING:
      Specify the program you use to AUTOMATICALLY check one or more phase
      single-difference observation files (new version of phase pre-
      processing, see menu 4.4.2).
      RECOMMENDED VALUE: MAUPRP

  Processing:

    PARAMETER ESTIMATION:
      Specify the main program for parameter estimation (see menu 4.5).
      RECOMMENDED VALUE: GPSEST

    IONOSPHERE ESTIMATION:
       Specify the program you use to estimate ionosphere models (see
       menu 4.6) that may later be included into the parameter estimation
       program GPSEST or into the program MAUPRP.
       RECOMMENDED VALUE: IONEST

    ADD NORMAL EQUATIONS:
        Specify the program you use to stack normal equation systems (see
        menu 4.8.1) computed by the program GPSEST (see above).
        RECOMMENDED VALUE: ADDNEQ
```

```
 Path to the Programs:
   Specify the path where the menu system will find the corresponding
   program executables.
   RECOMMENDED VALUES: C:\BERN40\PGM\MAIN40\EXP\
                                                                     SF
```

```
 0.2-5                    DEFAULTS: SERVICE PROGRAM NAMES

 Observation Files:
   BINARY TO FORMATTED     > OBSFMT <    FORMATTED TO BINARY     > FMTOBS <
   GRAPHICS OF OBSERV.FILE > SATGRA <    MARK/RESET OBSERVATIONS > SATMRK <
   SPLIT OBSERVATION FILES > OBSSPL <    CHANGE HEADER CONTENT   > CHGHED <
 Residuals:
   DISPLAY RESIDUALS       > REDISP <    GRAPHIC TOOL (GT)  *)   > GT     <
   CHECK RESIDUALS         > RESRMS <
 Coordinates:
   HELMERT TRANSFORMATION  > HELMR1 <    COMPARE COORD.FILES     > COMPAR <
   MERGE COORDINATE FILES  > CRDMRG <
 Pole:
   UPDATE POLE FILE        > POLUPD <    EXTRACT POLE INFO       > POLXTR <
 Job Output Extractions
   CODXTR (CODSPP)         > CODXTR <    DEFXTR (ORBGEN)         > DEFXTP <
   MPRXTR (MAUPRP)         > MPRXTR <    GPSXTR (GPSEST,ADDNEQ)  > GPSXTR <
   PREWEI (ORBIMP,PRECISE) > PREWEI <

 Path to the Programs      > C:\BERN40\PGM\MAIN40\EXP\  <
 Path to the Programs *)   > X:\EXE\                    <
```

```
 0.2-5                  DEFAULTS: SERVICE PROGRAM NAMES                HELP

 General Remark:
   The program names given in this panel should not be changed by the
   user.

 Observation Files:

   BINARY TO FORMATTED:                  FORMATTED TO BINARY:
    The first entry field specifies the program you use to transform
    observations from Bernese binary format to ASCII format (see menu
    5.7.1).
    The second entry field specifies the program you use to transform the
    ASCII version of Bernese observations into the binary format (see
    menu 5.7.2).
    You use these transformations when you have to do some changes to
    observations given in Bernese format.
    RECOMMENDED VALUE: OBSFMT (binary to ASCII)
                       FMTOBS (ASCII to binary)

   GRAPHICS OF OBSERV.FILE:              MARK/RESET OBSERVATIONS:
    The first entry field specifies the program you use to create a
    pseudographics in ASCII format showing the observation intervals of
    satellites for one or more observation files in Bernese format.
    The second entry field specifies the program you use to mark and reset
    observations in Bernese observation files.
    RECOMMENDED VALUES: SATGRA (graphics of observation files)
                        SATMRK (mark/reset observations)

   SPLIT OBSERVATION FILES:              CHANGE HEADER CONTENT:
    The first entry field specifies the program you use to split
    observation files in Bernese format into two or more parts.
    The second entry field specifies the program you use to change the
    header information of observation files in Bernese format (see
    menu 5.2).
    RECOMMENDED VALUES: OBSSPL (split observation files)
                        CHGHED (change header content)

 Residuals:
```

```
  DISPLAY RESIDUALS:                    GRAPHIC TOOL (GT): *)
    The first entry field specifies the program you use to look at the
    residuals stemming from GPSEST, DEFSTD, ADDNEQ in a ASCII file
    (see menu 5.3.1).
    The second entry field specifies the graphic tool that displays the
    residuals stemming from GPSEST, DEFSTD, ADDNEQ as an x-terminal
    graphics. At present this program runs on UNIX machines only (see
    menu 5.3.3).
    RECOMMENDED VALUES: REDISP (display residuals)
                        GT     (graphic tool GT)

  CHECK RESIDUALS:
    Specifies the program you use to determine a baseline- and satellite-
    specific rms of the residuals in residual files generated by GPSEST
    and to get a list of bad observations to be marked (see menu 5.3.2).
    RECOMMENDED VALUE: RESRMS

Coordinates:

  HELMERT TRANSFORMATION:               COMPARE COORD.FILES:
    The first entry field specifies the program you use to compute a
    Helmert transformation between two sets of station coordinates.
    The second entry field specifies the program you use to compare
    baseline lengths, latitudes, longitudes, heights of different
    station coordinate files (see menu 5.4.2 and 5.4.1 respectively).
    RECOMMENDED VALUES: HELMR1 (Helmert transformation)
                        COMPAR (compare coord. files)

  MERGE COORDINATE FILES:
    Specifies the program you use to merge two station coordinate files.
    This program can be used to update a coordinate file automatically
    (see menu 5.4.5).
    RECOMMENDED VALUES: CRDMRG

Pole:

  UPDATE POLE FILE:                     EXTRACT POLE INFO:
    The first entry field specifies the program you use to update the
    earth rotation parameters using bulletin A or B from IERS (see menu
    5.5.1).
    The second entry field specifies the program you use to extract the
    pole values estimated by the program GPSEST or ADDNEQ (see menu
    5.5.2).
    RECOMMENDED VALUES: POLUPD (update pole file)
                        POLXTR (extract pole info)

Job Output Extractions:

  CODXTR (CODSPP):                      DEFXTR (ORBGEN):
    The first entry field specifies the program you use to extract the
    most important information from CODSPP output files (see menu 5.6.1).
    The second entry field specifies the program you use to extract the
    most important information from ORBGEN output files (see menu 5.6.2).
    RECOMMENDED VALUES: CODXTR (CODSPP output)
                        DEFXTP (ORBGEN output)

  MPRXTR (MAUPRP):                      GPSXTR (GPSEST,ADDNEQ):
    The first entry field specifies the program you use to extract the
    most important information from MAUPRP output files (see menu 5.6.3).
    The second entry field specifies the program you use to extract
    miscellaneous information from GPSEST or ADDNEQ output files (see
    menu 5.6.5)
    RECOMMENDED VALUES: MPRXTR (MAUPRP output)
                        GPSXTR (GPSEST,ADDNEQ output)

Path to the Programs:
   Specify the path where the menu system will find the corresponding
   program executables.
   RECOMMENDED VALUES: C:\BERN40\PGM\MAIN40\EXP\

Path to the Programs *):
   Specify the path where the menu system will find the executables of
   the programs marked with *).
   RECOMMENDED VALUES: X:\EXE\
                                                                      SF
```

```
0.2-6                    DEFAULTS: BPE PROGRAM NAMES

 Coordinates:
   CHECK COORDINATE FILES   > CRDCHK <
   CHECK RINEX COORDINATES  > CRDRNX <
   CHECK RINEX FILE HEADERS > PREPRX <

 Path to the Programs       > C:\BERN40\PGM\BPE40\EXP\   <
```

```
0.2-6                    DEFAULTS: BPE PROGRAM NAMES                  HELP

 General Remark:
   The program names given in this panel should not be changed by the
   user.

 Coordinates:

   CHECK COORDINATE FILES:
     Specifies the program you use to check the quality of coordinates in
     a coordinate file (see menu 6.5.1).
     RECOMMENDED VALUE: CRDCHK

   CHECK RINEX COORDINATES:
     Specifies the program you use to read coordinates in RINEX headers
     and write a list of nearby IGS stations to be used for computing
     good a priori coordinates (see menu 6.5.2).
     RECOMMENDED VALUE: CRDRNX

   CHECK RINEX FILE HEADERS:
     Specifies the program you use to check and modify the header
     information of RINEX files (menu 6.3).
     RECOMMENDED VALUE: PREPRX

 Path to the Programs:
    Specify the path where the menu system will find the corresponding
    program executables.
    RECOMMENDED VALUES: C:\BERN40\PGM\BPE40\EXP\
                                                                         SF
```

```
0.3-1                    DEFAULTS: GENERAL DATASET NAMES

General Datasets:
  GEODETIC DATUM     > DATUM.       <    CONSTANTS          > CONST.       <
  PHASE CENTER ECC.  > PHASITRF.    <    RECEIVER INFO      > RECEIVER.    <
  EARTH POTENTIAL    > GEMT3.       <    POLE INFORMATION   > RAP_1996.ERP <
  POLE OFFSET COEF.  > POLOFF.      <    LEAP SECONDS       > GPSUTC.      <
  SAT. PARAMETERS    > SATELLIT.TTT <    MANOEUVERS ETC.    > SAT_1996.CRX <
  SINEX GENERAL FILE > SINEX.       <    STATION PROBLEMS   > STACRUX.     <
Extensions:
  IERS BULLETINS     > IER <      RCVR/ANT.NAME TRANSLATION TABLES  > TRN <

Path to the Datasets:           > X:\GEN\                  <
Input Files:                      Path                         Extension
  N-,I-,F-FILES                 > U:\INP\                  <    > INP <
  SKELETON FILES                > X:\SKL\                  <    > SKL <
  PANEL UPDATE DIRECTORY LISTS  > X:\SKL\                  <    > UPD <

Auxiliary Files (Scratch Files) > U:\WORK\                 <    > SCR <
Error Message File (Full Name): > U:\WORK\ERROR.MSG                <
```

```
0.3-1                    DEFAULTS: GENERAL DATASET NAMES              HELP
```

```
General Datasets:
  General remark concerning the general datasets:
  All these general files are used by many of the GPS programs. You do
  not have the possibility to select any of these general files in the
  program-specific part of the menu (e.g. the name of the pole file to
  be used in the parameter estimation program GPSEST cannot be specified
  in menu 4.5 dealing with the preparation of GPSEST runs). The menu
  system will not even show you which of these general files are used.
  It is therefore very important to CHECK WHETHER YOU USE THE CORRECT
  GENERAL FILES at the beginning of the processing of a campaign.

  GEODETIC DATUM:                       CONSTANTS:
    Geodetic datum: This file contains the definition of the geodetic
      datum and of the ellipsoid to be used to compute ellipsoidal
      coordinates. It is used to apply antenna heights and for the
      printing of coordinates in the local system (north, east, up).
      You only have to modify this file when you want to introduce a
      new reference ellipsoid (see {X:\GEN\DATUM.} as an example).
    Constants: This file contains all the physical and astronomical
      constants used in the Bernese GPS Software and therefore it is used
      by most of the programs. Most probably you will never have to
      modify this file (see {X:\GEN\CONST.})
    RECOMMENDED VALUES: Geodetic datum: DATUM.
                        Constants:      CONST.

  PHASE CENTER ECC.:                    RECEIVER INFO:
    Phase center ecc: This file contains the phase center offsets and,
      possibly, elevation-dependent phase center variations for most
      of the commonly used receiver/antenna pairs. This file is used
      in programs where o-c (observed-computed) values have to be calcu-
      lateds. You have to modify this file when you use a new receiver/
      antenna pair or when you introduce new elevation-dependent correc-
      tions. See {X:\GEN\PHAS_IGS.01} for an example.
    Receiver info: This file contains receiver information and is only
      used to generate simulated observations (program GPSSIM). It has
      to be modified when you introduce a new receiver type. An example
      may be found in {X:\GEN\RECEIVER.}.
    RECOMMENDED VALUES: Phase center ecc: PHASITRF.
                        Receiver info:    RECEIVER.

  EARTH POTENTIAL:                      POLE INFORMATION:
    Earth potential: This file contains the earth potential coefficients.
      It is used in most of the programs dealing with satellite orbits.
      This file does not have to be modified. Example: {X:\GEN\GEMT3.}.
    Pole information: This file contains the earth rotation parameters
      (ERP's). It is used in all programs where transformations between
      the International Celestial Reference Frame (ICRF) and the
      International Terrestrial Reference Frame (ITRF) have to be made.
      This file has to be updated each time you ave to process data of a
      time span that is not yet covered by the information given in the
      pole file. Therefore it is best to regularly update the file from
      the IERS Bulletin B (C04 series) or IERS Bulletin A (rapid pole
      series). The C04 IERS solution contains the final ERP information
      of the IERS and will only become available about 2 months after the
      observations. Predictions are made available for most of these 2
      months. If you have to process a campaign that has been measured
      very recently you will have to use the rapid pole series coming
      from the IERS Subbureau. This pole series also contains predictions.
      If you have an FTP (File Transfer Protocol) connection then you can
      omit the update by getting the two ERP series mentioned above from
      our anonymous ftp account. You can copy these files as follows:

        ftp UBECLU.UNIBE.CH        (130.92.4.11)
        userid: anonymous
        passwd: "e-mail address"
        cd aiub$ftp             (enter this command even if this
                                 directory does not appear in a listing)
        cd bswuser
        cd gen
      If you need the C04 pole series then type
        get C04_yyyy.ERP              where yyyy=Year  e.g C04_1996.ERP
      If you need the rapid pole series then type
        get RAP_yyyy.ERP              where yyyy=Year  e.g RAP_1996.ERP

      Examples are {X:\GEN\C04_1996.ERP} and {X:\GEN\RAP_1996.ERP}.
      IGS ERP values are available together with the precise IGS orbits
      at the global IGS data centers.
```

```
    RECOMMENDED VALUES:  Earth potential:  GEMT3.
                         Pole information: C04_yyyy.erp (yyyy=year) or
                         the pole file corresponding to the precise orbit
                         file used

  POLE OFFSET COEF.:                     LEAP SECONDS:
    Pole offset coef: This file contains the pole offset information that
      is used to transform C04-pole and Rapid-pole information to the
      actual epoch (e.g. C04 ITRF 1988 to C04 ITRF 1996). This file has to
      be updated every year to introduce the new "constants" given in the
      annual report of the IERS. You do not need this file at all if you
      use the C04- or the Rapid-pole from the anonymous ftp account of AIUB
      (Astronomical Institute of the University of Berne) (access see
      above). Example: {X:\GEN\POLOFF.}.
    Leap seconds: This file contains a table of all the leap seconds during
      the last ten years. This information is used to transform the
      pole information from Bulletin A and B (see above) into the Bernese
      pole format. You have to modify this file whenever a new leap
      second is announced by the IERS. You do not need this file at all if
      you use the C04- or the Rapid-pole from the anonymous ftp account of
      AIUB (access see above). Example: {X:\GEN\GPSUTC.}.
    RECOMMENDED VALUES: Pole offset coef: POLOFF.
                        Leap seconds:     GPSUTC.

  SAT. PARAMETERS:                       MANOEUVERS ETC.:
    Sat. parameters: This file contains different satellite information.
      It is used by all programs that use satellite orbits. You have to
      modify this file every time you need to introduce new launched
      satellites. Each satellite has to appear once (and only once) in this
      table. Example: {X:\GEN\SATELLIT.TTT}.
    Manoeuvres etc: This file contains information on satellite problems.
      It is used to exclude bad satellites and their observations in all
      the processing. This file has to be updated every time when a new
      satellite problem appears (satellite manoeuvers, bad data,...).
      If you have FTP access then you can copy this file from the
      anonymous FTP account of AIUB.
      After login into this account and changing into the corresponding
      directory (access and directory see above) you just have to type
        get SAT_yyyy.CRX              where yyyy=Year  e.g SAT_1996.CRX
      Example: {X:\GEN\SAT_1996.CRX}.
    RECOMMENDED VALUES: Sat. Parameters: SATELLIT.TTT
                        Manoeuvres etc:  SAT_yyyy.CRX    (yyyy=year)

  SINEX GENERAL FILE:                    STATION PROBLEMS:
    Sinex general file: This file contains the general input information
      you use when you want to create SINEX (Software independent
      exchange format) files. It has to be modified each time you want
      to change some of the general sinex information.
      Example: {X:\GEN\SINEX.}.
    Station problems: This file contains information on station problems.
      It is used to change station names, antenna heights etc when
      processing normal equation files with the program ADDNEQ.
      Example: {X:\GEN\STACRUX}.
    RECOMMENDED VALUES: Sinex General file : SINEX.
                        Station problems   : leave this entry field "blank"

Extensions:

  IERS BULLETINS:                 RCVR/ANT.NAME TRANSLATION TABLES:
    IERS Bulletin: This entry field contains the extension of the IERS
      Bulletin A or B files. The menu system uses this information to
      search for these Bulletins.
      Example: {X:\INX\EXAMPLE.IER}
    Rcvr/ant.name translation tables: This entry field contains the
      extension of the receiver/antenna name translation table. This table
      is used to ensure consistent receiver/antenna names are used in the
      Bernese observation files when transferring RINEX to Bernese.
      Example: {X:\INX\EXAMPLE.TRN}
    RECOMMENDED VALUES: Iers bulletins :                 IER
                        Rcvr/ant.name translation tables: TRN

Path to the Datasets:
  Specify the path where the menu system will find the corresponding
  files.
  RECOMMENDED VALUES: X:\GEN\
```

```
Input Files:                      Path                          Extension

  N-,I-,F-FILES:
    The first entry field specifies the path to the three major program
      input files. If you need the menu system you never have to modify
      these files (see manual for more information).
    The second entry field contains the extension of these input files.
    RECOMMENDED VALUES: path  U:\INP\  and extension  INP

  SKELETON FILES:
   The first entry field specifies the path to the skeleton files of the
     major program input files (see above). The skeleton files are used to
     create the input files (see manual for more information).
   The second entry field contains the extension of these skeleton files.
   RECOMMENDED VALUES:  path  X:\SKL\  and extension  SKL

  PANEL UPDATE DIRECTORY LISTS:
   The first entry field specifies the path to the directory list files.
     Such a file is used to define a list of directories in which panels
     have to be updated using menu 6.0.
     Example: {X:\INX\EXAMPLE.UPD}
   The second entry field contains the extension of these update files.
   RECOMMENDED VALUES:  path  X:\SKL\  and extension  UPD

Auxiliary Files (Scratch Files):
  The first entry field specifies the path to temporary used files.
    These files are created and deleted during program runs.
  The second entry filed specifies the extension of these scratch files.
  RECOMMENDED VALUES: path  U:\WORK\  and extension  SCR

Error Message File (Full Name):
  Specify the path and name of the error message file. If an error happens
    during a program run (interactive only) then this error message will
    be written to this file. After the program stops you can read and
    delete this file using the command ERRDEL.
  RECOMMENDED VALUES: U:\WORK\ERROR.MSG
                                                                          SF
```

```
0.3-2            DEFAULTS: OBSERVATION DATAFILES

  Code:                   Extension                          Extension
    HEADERS                > CZH <       OBSERVATIONS          > CZO <
    S.DIFF. HEADERS        > CSH <       S.DIFF. OBSERVATIONS  > CSO <
    FORMATTED              > FCO <
  Phase:
    HEADERS                > PZH <       OBSERVATIONS          > PZO <
    S.DIFF. HEADERS        > PSH <       S.DIFF. OBSERVATIONS  > PSO <
    FORMATTED              > FPH <
  Ranges:
    HEADERS                > CZH <       OBSERVATIONS          > CZO <
    FORMATTED              > FCO <

  Path from Campaign Subdirectory to Files
    OBS.FILES              > OBS\                                    <
    RAWDATA (RINEX)        > RAW\                                    <
    ORIGINAL RINEX FILES   > ORX\                                    <
```

```
0.3-2            DEFAULTS: OBSERVATION DATAFILES                    HELP

  General remark:
    All entry fields of this panel specify extensions of and the paths to
    the observation files and observation header files.
    RECOMMENDED VALUE: The recommended values are given in brackets. These
                       should NOT be changed by the user.

  Code:                   Extension                          Extension

    HEADERS:               ( CZH )       OBSERVATIONS          ( CZO )
      CZH : Code Zero difference Headers
```

```
      CZO : Code Zero difference Observations

    S.DIFF. HEADERS:       ( CSH )       S.DIFF. OBSERVATIONS   ( CSO )
      CSH : Code Single difference Header
      CSO : Code Single difference Observations

    FORMATTED:             ( FCO )
      FCO : Formatted COde observation

  Phase:

    HEADERS:               ( PZH )       OBSERVATIONS           ( PZO )
      PZH : Phase Zero difference Header
      PZO : Phase Zero difference Observation

    S.DIFF. HEADERS:       ( PSH )       S.DIFF. OBSERVATIONS   ( PSO )
      PSH : Phase Single difference Header
      PSO : Phase Single difference Observation

    FORMATTED:             ( FPH )
      FPH : Formatted PHase observation

  Ranges:

    HEADERS:               ( CZH )       OBSERVATIONS           ( CZO )
      CZH : Zero difference range observation header (SLR)
      CZO : Zero difference range observation (SLR)

    FORMATTED:             ( FCO )
      FCO : Formatted range observations (SLR)

  Path from Campaign Subdirectory to Files

    OBS.FILES:
     Specifies the part of the path from the campaign subdirectory to
     the bernese observation files.
     RECOMMENDED VALUE:   OBS\

    RAWDATA (RINEX):
     Specifies the part of the path from the campaign subdirectory to
     the RINEX observation files to be processed.
     RECOMMENDED VALUE:   RAW\

    ORIGINAL RINEX FILES:
     Specifies the part of the path from the campaign directory to
     the original RINEX observation files (e.g. before concatenation).
     RECOMMENDED VALUE:   ORX\

                                                                      SF
```

```
0.3-3                    DEFAULTS: ORBIT DATASET EXTENSIONS

  Orbits:
    BROADCAST EPHEMERIS    > BRD <       TABULAR   ORBITS       > TAB <
    STANDARD  ORBITS       > STD <       RAD.PRESSURE COEFF.    > RPR <
    ORBITAL   ELEMENTS     > ELE <       PRECISE   EPHEMERIS    > PRE <

  Orbit files in ASCII:
    STANDARD  ORBITS       > FSO <       RAD.PRESSURE COEFF.    > FRP <

  Path from Campaign Subdirectory to Files
    ALL ORBIT FILES        > ORB\                                     <
```

```
0.3-3               DEFAULTS: ORBIT DATASET EXTENSIONS              HELP

  General remark:
    All entry fields of this panel specify extensions of and the path to
    orbit files.
```

```
  RECOMMENDED VALUE: The recommended values are given in brackets. These
                     should NOT be changed by the user.

Orbits:

  BROADCAST EPHEMERIS:   ( BRD )      TABULAR   ORBITS      ( TAB )
   BRD : BRoadCast ephemerides
   TAB : TABular orbits

  STANDARD  ORBITS:      ( STD )      RAD.PRESSURE COEFF.   ( RPR )
   STD : STanDard orbits
   RPR : Radiation PRessure coefficients

  ORBITAL   ELEMENTS:    ( ELE )      PRECISE   EPHEMERIS   ( PRE )
   ELE : orbital ELEments
   PRE : PREcise ephemerides

Orbit files in ASCII:

  STANDARD  ORBITS:      ( FSO )      RAD.PRESSURE COEFF.   ( FRP )
    FSO : Formatted Standard Orbits
    FRP : Formatted Radiation Pressure coefficients

Path from Campaign Subdirectory to Files

  ALL ORBIT FILES:
   Specifies the part of the path from the campaign directory to the
   orbit files.
   RECOMMENDED VALUE:    ORB\
                                                                       SF
```

```
 0.3-4  |             DEFAULTS: MISCELLANEOUS DATASETS

Miscellaneous:              Extension      Path fm Campaign Subdir to File
  COORDINATES                > CRD <     > STA\                            <
  STATION VELOCITIES         > VEL <     > STA\                            <
  STATION ECCENTERS          > ECC <     > STA\                            <
  STATION NAME TRANSL.       > STN <     > STA\                            <
  ANTENNA HEIGHT TRANS.      > HTR <     > STA\                            <
  BASELINE DEFINITIONS       > BSL <     > STA\                            <
  CLUSTER  DEF. INPUT        > CLU <     > STA\                            <
  CLUSTER  DEF. OUTPUT       > CLB <     > STA\                            <
  SPECIAL FIXED STAT FILE    > FIX <     > STA\                            <
  SPECIAL STATION FTP FILE   > FTP <     > STA\                            <
  TROPOSPHERE APRIORI SIGMA  > SIG <     > STA\                            <
  REC. ANT. ORIENTATIONS     > AZI <     > STA\                            <
  METEO DATA                 > MET <     > ATM\                            <
  TROPOSPHERE PARAMETERS     > TRP <     > ATM\                            <
  IONOSPHERE MODELS          > ION <     > ATM\                            <
  IONOSPHERE MAPS (IONEX)    > INX <     > ATM\                            <
  REC./SAT. CLOCKS           > CLK <     > ORB\                            <
  RESIDUALS                  > RES <     > OUT\                            <
  PROGRAM OUTPUT             > OUT <     > OUT\                            <
  COVARIANCES                > COV <     > OUT\                            <
  NORMAL EQUATIONS           > NEQ <     > OUT\                            <
  OUTPUT FILES               > LST <     > OUT\                            <
  PLOT FILES                 > PLT <     > OUT\                            <
  EARTH ROTATION PARAMETERS  > ERP <     > OUT\                            <
  IERS FORMAT ERP FILE       > IEP <     > OUT\                            <
  SINEX FORMAT (CRD,VEL,ERP)> SNX <      > OUT\                            <
  COVARIANCE COMPONENTS      > WGT <     > OUT\                            <
  SATMARK EDIT INFO FILE     > EDT <     > OUT\                            <
  LIST OF FILE TO DELETE     > DEL <     > OUT\                            <
  SUMMARY OUTPUT FILE        > SUM <     > OUT\                            <
  JOB OUTPUT SUMMARIES   > SMC < > SME < > OUT\                            <
  JOB OUTPUT FILES                       > OUT\                            <
```

```
 0.3-4  |             DEFAULTS: MISCELLANEOUS DATASETS            |  HELP
```

```
  General remark:
    All entry fields of this panel specify extensions of and the path to
    miscellaneous file types. Only the path from the campaign directory
    to the directory containing the miscellaneous files is specified.
    RECOMMENDED VALUE: The recommended values are given in brackets. These
                       should NOT be changed by the user.

Miscellaneous:             Extension

  COORDINATES:              ( CRD )
    CRD : station CooRDinates
    Recommended path:  STA\
    Example: {X:\INX\EXAMPLE.CRD}

  STATION VELOCITIES:       ( VEL )
    VEL : VELocities of stations
    Recommended path:  STA\
    Example: {X:\INX\EXAMPLE.VEL}

  STATION ECCENTERS:        ( ECC )
    ECC : station ECCentricities
    Recommended path:  STA\
    Example: {X:\INX\EXAMPLE.ECC}

  STATION NAME TRANSL.:     ( STN )
    STN : STation Name translation table
    Recommended path:  STA\
    Example: {X:\INX\EXAMPLE.STN}

  ANTENNA HEIGHT TRANS.:    ( HTR )
    HTR : antenna Height TRanslation table
    Recommended path:  STA\
    Example: {X:\INX\EXAMPLE.HTR}

  BASELINE DEFINITIONS:     ( BSL )
    BSL : BaSeLine definitions
    Recommended path:  STA\
    Example: {X:\INX\EXAMPLE.BSL}

  CLUSTER  DEF. INPUT:      ( CLU )
    CLU : input definition of CLUstered baselines
    Recommended path:  STA\
    Example: {X:\INX\EXAMPLE.CLU}

  CLUSTER  DEF. OUTPUT:     ( CLB )
    CLB : output definition of CLustered Baselines
    Recommended path:  STA\
    Example: {X:\INX\EXAMPLE.CLB}

  SPECIAL FIXED STAT FILE:  ( FIX )
    FIX : file containing the FIXed stations
    Recommended path:  STA\
    Examples: {X:\INX\EXAMPLE.FIX},
              {X:\INX\EXAMPLE1.FIX}

  SPECIAL STATION FTP FILE: ( FTP )
    FTP : file containing FTP information
    Recommended path:  STA\
    Example: {X:\INX\EXAMPLE.FTP}

  TROPOSPHERE APRIORI SIGMA:( SIG )
    SIG : troposphere a priori SIGma (constraints)
    Recommended path:  STA\
    Example: {X:\INX\EXAMPLE.SIG}

  REC. ANT. ORIENTATIONS:   ( AZI )
    AZI : receiver antenna orientation AZImuth
    Recommended path:  STA\
    Example: {X:\INX\EXAMPLE.AZI}

  METEO DATA:               ( MET )
    MET : METeo data files
    Recommended path:  ATM\
    Examples: {X:\INX\EXAMPLE1.MET},
              {X:\INX\EXAMPLE2.MET},
              {X:\INX\EXAMPLE3.MET}
```

```
TROPOSPHERE PARAMETERS:   ( TRP )
  TRP : files containing TRoposphere Parameters
  Recommended path:  ATM\
  Example: {X:\INX\EXAMPLE.TRP}

IONOSPHERE MODELS:        ( ION )
  ION : IONosphere model files
  Recommended path:  ATM\
  Examples: {X:\INX\EXAMPLE1.ION},
            {X:\INX\EXAMPLE2.ION}

IONOSPHERE MAPS (IONEX):  ( INX )
  INX : ionosphere maps in IoNeX format
  Recommended path:  ATM\
  Example: {X:\INX\EXAMPLE.INX}

REC./SAT. CLOCKS:         ( CLK )
  CLK : receiver and satellite CLocK information files
  Recommended path:  ORB\
  Examples: {X:\INX\EXAMPLE1.CLK},
            {X:\INX\EXAMPLE2.CLK}

RESIDUALS:                ( RES )
  RES : RESidual files
  Recommended path:  OUT\

PROGRAM OUTPUT:           ( OUT )
  OUT : program OUTput files
  Recommended path:  OUT\

COVARIANCES:              ( COV )
  COV : variance COVariance information
  Recommended path:  OUT\
  Example: {X:\INX\EXAMPLE.COV}

NORMAL EQUATIONS:         ( NEQ )
  NEQ : Normal EQuation files
  Recommended path:  OUT\

OUTPUT FILES:             ( LST )
  LST : Special program output files
  Recommended path:  OUT\

PLOT FILES:               ( PLT )
  PLT : PLoT files
  Recommended path:  OUT\

EARTH ROTATION PARAMETERS:( ERP )
  ERP : Earth Rotation Parameter files
  Recommended path:  OUT\
  Example: {X:\INX\EXAMPLE.ERP}

IERS FORMAT ERP FILE:     ( IEP )
  IEP : Iers-format Earth rotation Parameter
  Recommended path:  OUT\
  Example: {X:\INX\EXAMPLE.IEP}

SINEX FORMAT (CRD,VEL,ERP): ( SNX )
  SNX : output files in SiNeX format
  Recommended path:  OUT\

COVARIANCE COMPONENTS:    ( WGT )
  WGT : covariance components that are need to compute the WeiGhTed
        rms of station coordinates
  Recommended path:  OUT\
  Example: {X:\INX\EXAMPLE.WGT}

SATMARK EDIT INFO FILE:   ( EDT )
  EDT : EDit (log-) file created by the program satmrk
  Recommended path:  OUT\
  Example: {X:\INX\EXAMPLE.EDT}

LIST OF FILE TO DELETE:   ( DEL )
  DEL : list of files to DELete
  Recommended path:  OUT\
  Example: {X:\INX\EXAMPLE.DEL}
```

```
  SUMMARY OUTPUT FILE:      ( SUM )
    SUM : files containing a program output SUMmary
    Recommended path:  OUT\
    Examples: {X:\INX\EXAMPLE1.SUM},
              {X:\INX\EXAMPLE2.SUM},
              {X:\INX\EXAMPLE3.SUM},
              {X:\INX\EXAMPLE4.SUM},
              {X:\INX\EXAMPLE5.SUM},
              {X:\INX\EXAMPLE6.SUM},
              {X:\INX\EXAMPLE7.SUM},
              {X:\INX\EXAMPLE8.SUM}

  JOB OUTPUT SUMMARIES: ( SMC ) ( SME )
    SMC : codspp SuMmary file of geocentric Coordinates (x,y,z)
    SME : codspp SuMmary file of Ellipsoidal coordinates
    Recommended path:  OUT\
    Examples: {X:\INX\EXAMPLE.SMC},
              {X:\INX\EXAMPLE.SME}

  JOB OUTPUT FILES:
    Path to the program-specific job output files named pgmnam.Lxx or
    pgmnam.xxx.
    Recommended path:  OUT\

                                                                       SF
```

```
 0.3-5 |                  DEFAULTS: BPE GENERAL DATASETS

  Process Control Files:
    PATH TO PCF FILES      > U:\PCF\    <     PCF FILE EXTENSION > PCF <

  Process Scripts:
    PATH TO USER SCRIPTS   > U:\SCRIPT\ <     SCRIPT EXTENSION   > BAT <

  Panel Set Directory Starting Path:
    PATH TO PANEL SETS     > U:\OPT\    <

  CPU and Queue selection:
    CPU FILE NAME          > U:\WORK\PCFCTL.CPU   <
```

```
 0.3-5 |               DEFAULTS: BPE GENERAL DATASETS               | HELP

  General remark:
    All entry fields in this panel specify the paths to and the extensions
    of files specific to the Bernese Processing Engine (BPE).
    The recommended values should NOT be changed by the user.

  Process Control Files:

    PATH TO PCF FILES:                        PCF FILE EXTENSION
      PCF : Process Control Files
      RECOMMENDED VALUE : for the path          U:\PCF\
                          for the extension:    PCF

  Process Scripts:

    PATH TO USER SCRIPTS:                     SCRIPT EXTENSION
      RECOMMENDED VALUE : for the path:        U:\SCRIPT\
                          for the extension:   COM (VMS), blank (UNIX),
                                               BAT (DOS)
  Panel Set Directory Starting Path:

    PATH TO PANEL SETS:
     Path the to panel sets used by BPE.
     RECOMMENDED VALUE:  U:\OPT\

  CPU and Queue selection:
```

```
    CPU FILE NAME:
      Name of the file containing the information on how to distribute
      the different program runs on different machines (CPU's).
      RECOMMENDED VALUE:  U:\WORK\PCFCTL.CPU
                                                                        SF
```

```
0.3-6                 DEFAULTS: BPE MISCELLANEOUS DATASETS

Miscellaneous:             Extension      Path fm Campaign Subdir to File
  BASELINE LIST FILE        > BSL <     > STA\                          <
```

```
0.3-6               DEFAULTS: BPE MISCELLANEOUS DATASETS             HELP

Miscellaneous:

  BASELINE LIST FILE:
    The first entry field specifies the extension of the baseline list
      file. This file is used by the Bernese Processing Engine (BPE).
      BSL : BaSeline List file
    The second entry field specifies the path from the campaign
      directory to the baseline list file.
    RECOMMENDED VALUE: Extension of Baseline list file: BSL
                       Path to Baseline list file:      STA\
                                                                        SF
```

```
0.4-1                         DEFAULTS: FTP SCRIPT NAMES

  FTP Scripts:
    DOWNLOAD IGS RINEX DATA         > FTPRNX   <
    DOWNLOAD IGS PRECISE ORBITS     > FTPORB   <
    DOWNLOAD CODE STATION INFO      > FTPSTA   <
    DOWNLOAD CODE SATELLITE INFO    > FTPSAT   <
    DOWNLOAD CODE POLE INFO         > FTPPOL   <

  Path to the Scripts       > X:\EXE\                  <
```

```
0.4-1                     DEFAULTS: FTP SCRIPT NAMES                 HELP

  General remark:
    The entry fields in this panel specify names of the scripts/command
    files used to ftp observation, ephemeris, or other data files from
    global data centers or analysis centers.

  FTP Scripts:

    DOWNLOAD IGS RINEX DATA:
      Specifies the name of the script to automatically download RINEX
      files of IGS stations from the global data centers.
      RECOMMENDED VALUE: FTPRNX

    DOWNLOAD IGS PRECISE ORBITS:
      Specifies the name of the script to automatically download IGS
      precise orbit files.
      RECOMMENDED VALUE: FTPORB

    DOWNLOAD CODE STATION INFO:
      Specifies the name of the script to automatically download CODE
      station information files.
```

```
      RECOMMENDED VALUE: FTPSTA

    DOWNLOAD CODE SATELLITE INFO:
      Specifies the name of the script to automatically download CODE
      satellite information.
      RECOMMENDED VALUE : FTPSAT

    DOWNLOAD CODE POLE INFO:
      Specifies the name of the script to automatically download CODE
      pole information (ERP's).
      RECOMMENDED VALUE: FTPPOL

  Path to the Scripts:
    The path where the menu system will find the corresponding
    scripts/command files.
    RECOMMENDED VALUES:  X:\EXE\

                                                                       SF
```

```
0.4-2   |               DEFAULTS: BPE SCRIPT NAMES

  BPE Scripts:
    PROCESS CONTROL SCRIPT          > PCS      <

  Path to the Scripts       > X:\EXE\                  <
```

```
0.4-2   |             DEFAULTS: BPE SCRIPT NAMES               |  HELP

  BPE Scripts:

    PROCESS CONTROL SCRIPT:
     Specifies the name of the process control script (command file)
     used by the Bernese Processing Engine.
     RECOMMENDED VALUE: PCS

  Path to the Scripts:
    Path to this process control script.
    RECOMMENDED VALUES:  X:\EXE\

                                                                       SF
```

```
0.9-7   |             DEFAULTS: WD2PWV PROGRAM NAMES

 Transformation of Wet Delay to PWV:

   TRANSFORM WET DELAY FILES   > WD2PWV <

 Path to the Programs          > C:\BERN40\PGM\MAIN40\EXP\  <
```

```
0.9-7   |           DEFAULTS: WD2PWV PROGRAM NAMES             |  HELP

 Transformation of Wet Delay to PWV:

   TRANSFORM WET DELAY FILE:
     Specifies the program you use to transform troposphere wet delay data
     into precipitable water vapor (PWV).
     RECOMMENDED VALUES: WD2PWV
```

```
Path to the Programs
  Specifies the path where the menu systems looks for this program.
  RECOMMENDED VALUES: C:\BERN40\PGM\MAIN40\EXP\
                                                                    MR
```

B.3 Option and Help Panels for Menu 1 (Campaigns)

```
1-1                    CAMPAIGNS: DEFINITION OF NAMES

  Campaign       Start Date     End Date     Path          Comments

> EUROCLUS <   > 13-JUN-96 < > 14-JUN-96 < > X:\  < > BPE DEMO CAMPAIGN   <
```

```
1-1                  CAMPAIGNS: DEFINITION OF NAMES                      HELP

  Campaign       Start Date     End Date     Path          Comments

> EUROCLUS <   > 13-JUN-96 < > 14-JUN-96 < > X:\  < > BPE DEMO CAMPAIGN   <

  This panel contains the basic campaign definitions that are used by the
  menu system to work with campaigns. This information is used by all
  menu and processing programs.
  It is absolutely necessary to have one entry per campaign in this table.
  The first field contains the name of the campaign. The value of this
    field has to be unique (it is not permitted to have to different
    campaigns using the same name). The campaign name serves as name for
    the campaign directory. Only characters valid in directory names may
    therefore be used for the campaign name.
  The second and the third field contain the starting and the end date
    of the campaign. These two fields are not used by the menu system and
    are therefore not mandatory.
  The fourth field contains the beginning of the path to the campaign
    directory. The logicals (VMS), substitutions (DOS), or environment
    variables (UNIX) used to make the path to the campaign directory very
    short are defined in the LOADGPS procedure. Different such path abbre-
    viations may be used pointing to different disks or disk areas.
  The last field is reserved for a comment of your choice.
  To display the help panel describing the keys that are used to e.g.
  dublicate or delete lines in this campaign table, press the F1 key
  (help key).
                                                                          SF
```

```
1.2        CAMPAIGNS: CREATE SUBDIRECTORIES  Selection of the Campaign

  CAMPAIGN      >          <     (blank for selection list)
```

```
1.2      CAMPAIGNS: CREATE SUBDIRECTORIES  Selection of the Campaign     HELP

 This panel gives you a list of campaign-specific directories (subdirec-
 tories of the campaign directory to be created for the processing of a
 campaign. You may add, delete, or change the directories shown in this
 list. The menu system then automatically creates the directories
 according to the updated list.
 RECOMMENDED VALUE: Keep the directory names and the directories as pro-
                    posed in the list.
                                                                          SF
```

```
1.3-1      CAMPAIGNS: SESSION DEFINITION   Selection of the Campaign

  CAMPAIGN      >          <     (blank for selection list)
```

```
1.3-1  CAMPAIGNS: SESSION DEFINITION   Selection of the Campaign   HELP

    General Remark:
      A campaign consists of one or more sessions that together cover
      the total observation interval. Since the Bernese GPS Software
      uses a session-wise processing strategy you have to define at least
      one session. The session definitions are used e.g. to generate the
      names of observation files, to concatenate/extract orbit information
      for the time interval of a session, to define the orbit arc length,
      or to set up a user-specified number of troposphere delay parameter
      for the session(s) to be processed.
                                                                       SF
```

```
1.3-2                 CAMPAIGNS: SESSION DEFINITION

SESSION NUMBER          START DATE                   END DATE

    nnnn           yy mm dd     hh mm ss       yy mm dd     hh mm ss

  > ???0 <       >         < > 00 00 00 <   >         < > 23 59 59 <
```

```
1.3-2                CAMPAIGNS: SESSION DEFINITION                    HELP

SESSION NUMBER          START DATE                   END DATE

    nnnn           yy mm dd     hh mm ss       yy mm dd     hh mm ss

 Example:

  > 2431 <       > 94 08 31 < > 00 00 00 <   > 94 08 31 < > 23 59 59 <

    The first field defines the 4-character (old: 3-character)
      session identifier. Any alphanumeric characters may be used in the
      identifier and the length of the session identifier may be 3 or 4
      characters, although 4-character session identifiers are the
      standard now. You have to make sure, in any case, that you specify
      the correct length of the session identifier in the option panels
      for the programs RXOBV3 (menu 2.7.1) and SNGDIF (menu 4.3) (see
      {DAT2711_.PAN LENGTH OF SESSION} and {DAT431__.PAN LENGTH OF SESSION}
      respectively).
    The second and the third fields define the session starting date and
      time in UT.
      The format for the date is:      yy mm dd
                   where  yy = year    mm = month     dd= day of month
      The format for the time is:      hh mm ss
                   where  hh = hour    mm = minute    ss= second
    The fourth and the last fields define the session end date and time
      using exactly the same format as given above.

    To get information on how to dublicate or delete lines in the session
    table, press the F1 key (help key).

    There are two different possibilities to define sessions:
      1) using explicit session numbers
      2) using wildcards

    1) Defining sessions using explicit session numbers:
      - You may name the session according to your choice. The session
          naming convention we recommend is: use the first three digits for
          the day of year (DOY) of the start time of the session and the
          last digit to identify the session number within the day.
      - You have to define both, the start and end date and time of the
          session.
      - The set of sessions you define must cover the full time span of
          your observation data.
      - An example for a campaign with 3 24-hour sessions is given below.
```

```
        These sessions always begin at midnight and end one second
        before the end of the day:

> 2431 <       > 94 08 31 < > 00 00 00 <   > 94 08 31 < > 23 59 59 <
> 2441 <       > 94 08 31 < > 00 00 00 <   > 94 09  1 < > 23 59 59 <
> 2451 <       > 94 09 01 < > 00 00 00 <   > 94 09  2 < > 23 59 59 <

  2) Defining sessions using wildcards:
    - You have to use the following format ???x where x is a character
      or a digit in [0..9,A..Z] e.g ???A . The menu system will then
      replace the wildcard characters by the corresponding DOY.
    - You only define the start and end time of the session in this case.
      Leave the starting and end date blank.
    - The set of sessions you define are valid for any DOY.
      If the session end time is smaller than the corresponding starting
      time, the session will continue over midnight and end the next
      day.
    - The following example defines three sessions of 8 hours each.
      The wildcard ??? will be replaced by the day of year (DOY)
      actually processed. Using these values the menu system that the
      same session definition is valid for any day of the year.

> ???A <       >          < > 00 00 00 <   >          < > 07 59 59 <
> ???B <       >          < > 08 00 00 <   >          < > 15 59 59 <
> ???C <       >          < > 16 00 00 <   >          < > 23 59 59 <

  A general remark concerning the session definition has to be added:
    - do not merge explicit and wildcard session definitions.
    - if possible, sessions intervals should not overlap.
                                                                      SF
```

```
1.4.1                    CREATE/UPDATE COORDINATE FILE

  CAMPAIGN            >          <   (blank for selection list)


  OPTION                > C <        (C: Create ; U: Update)

Output File:
  COORDINATES         > APRIORI  <   (blank for selection list (Option U) )
```

```
1.4.1                 CREATE/UPDATE COORDINATE FILE                  HELP

  General remark:
    This menu program helps you to manually create or update a station
    coordinate file. An example of a coordinate file is given in
    {X:\INX\EXAMPLE.CRD}.

  OPTION
    Specify whether you want to create (C) a new coordinate file or just
    update (U) an old coordinate file.

Output File:

  COORDINATES:
     If you select option C (create) you have to specify the name of the
     new station coordinate file (without extension).
     If you select option U (update) you have two possibilities:
       a) leave this filed blank: The menu system will show you a
          selection list of existing coordinate files. You may then
          select the file you want to update.
       b) directly enter the name of the coordinate file you want to
          modify.

                                                                      SF
```

```
1.4.2  |           CREATE/UPDATE STATION NAME TRANSLATION TABLE

  CAMPAIGN          >          <   (blank for selection list)


  OPTION               > U <       (C: Create ; U: Update)

 Input File:
  COORDINATES       > NO       <   (blank for selection list,
                                    NO: not to be used)
 Input/Output File:
  TRANSLATION TABLE  > ITRFCODE <  (blank for selection list (option U))
```

```
1.4.2  |      CREATE/UPDATE STATION NAME TRANSLATION TABLE      |  HELP

 General Remark:
   This program helps you to create or update a station name translation
     table. Such a table may be used to transform e.g. differently written
     versions of a station name to a well defined name when transferring
     RINEX files to Bernese (menu 2.7.1). If ZIMM95, ZIMMGPS, and
     ZIMMERWALD are names used in the RINEX headers for the same station
     then you may define a translation table with an entry:
        ZIMM*     ZIMMERWALD
     All the station names given in the RINEX files beginning with ZIMM*
     will then be converted to ZIMMERWALD (if this station name translation
     table is specified in menu 2.7.1, panel {DAT271__}.
     Example of a station name translation table: {X:\INX\EXAMPLE.STN}.

   OPTION:
     Specify whether you want to create (C) or update (U) a station
       name translation table.

 Input File:

   COORDINATES:
     If you specify a coordinate file, the station names in this coordinate
       file will be used as "new names" in the station translation table
       to be created/updated, i.e. the names to which the station names in
       the RINEX headers will be translated to.
     If you leave this field blank then the menu system will show a list
       of files you may select as coordinate input file.
     If you specify a file name, the menu system will directly use this
       file without showing a selection list.
     If you specify NO then the menu system will not use a coordinate
       file.

 Input/Output File:

   TRANSLATION TABLE:
    If you specified the option C (Create) above, you have to give the
      name of the new station name translation table you want to create.
      If you specified the option U (Update), you have two possibilities:
        a) leave this field blank: The menu system will show you a
           selection list of possible station name translation files.
           You may then select one of these files.
        b) enter the name of a station name translation table. The menu
           system then display this file to you for the update.

                                                                        SF
```

```
1.4.3  |            CREATE/UPDATE STATION ABBREVIATION TABLE

  CAMPAIGN       >          <     (blank for selection list)

 Input File:
  COORDINATES    > NO       <     (blank for selection list)
                                   NO for Info/Delete/Change
```

```
1.4.3 | CREATE/UPDATE STATION ABBREVIATION TABLE | HELP

General Remarks:
  This program helps you to create or update a station name abbreviation
  table containing 4-character and 2-character abbreviations of all
  the station names available in a coordinate file. The table of abbrevi-
  ations is saved in the campaign-specific panel DAT143__.PAN in the
  directory [campaign.DATPAN] (example: {X:\INX\DAT143__.PAN}). The station
  name abbreviations are important for the programs RXOBV3 (menu 2.7.1)
  and SNGDIF (menu 4.3) to generate observation file names. The 4-character
  station name abbreviations are used to generate the zero-difference
  observation file names and the 2-character station name abbreviations
  for the generation of single-difference observation file names.
  When you run the program RXOBV3 (menu 2.7.1: transfer of RINEX observa-
  tion files to Bernese observation files) the menu system will automati-
  cally create 2- and 4-character station name abbreviations, unless these
  abbreviations already exist in the abbreviation table. Therefore, you
  only need to create an abbreviation table, if you want to use your own
  abbreviations (and not those that will be automatically created).

Input File:

  COORDINATES:
    If you specify a coordinate file, the menu system will propose you a
      list of possible 4- and 2-character station name abbreviations
      derived from the station names given in the coordinate file you
      specified above. You have two possibilities to set this field:
        a) leave this field blank: The menu system will show you a
           selection list of possible coordinate files. You may then
           select one of these files.
        b) enter the name of a coordinate file. The menu system will then
           automatically use this file to propose a set of abbreviations.
    If you want to delete, change or check the abbreviations you have to
      select NO. Otherwise the menu system will overwrite the old
      definitions.
                                                                          SF
```

```
1.4.4 | CREATE/UPDATE STATION ECCENTRICITY FILE

   CAMPAIGN           >          <   (blank for selection list)


   OPTION                > L <       (G: Create in Geocentric X/Y/Z
                                      L: Create in Local North/East/Up
                                      U: Update Existing File)

 Input File:
   COORDINATES        >          <   (blank for selection list,
                                      NO: not to be used)
 Input/Output File:
   ECCENTRICITIES     > ECCENT   <   (blank for selection list (option U))
```

```
1.4.4 | CREATE/UPDATE STATION ECCENTRICITY FILE | HELP

   General Remark:
     This program helps you to create or update a station eccentricity
     file. Such a file contains the eccentricity vectors from station
     markers to antenna ground markers. Example: {X:\INX\EXAMPLE.ECC}.

   OPTION:
     You may choose between the following options:
```

```
    G: To create a station eccentricity file with values given in
       a geocentric reference frame (DX,DY,DZ coordinates).
    L: To create a station eccentricity file with values given in
       a local reference frame (North/East/Up coordinates).
    U: To update an existing station eccentricity file.

Input File:

  COORDINATES:
    If you specify a coordinate file, the information in the coordinate
      file (e.g. the station names, station numbers) will be used to
      support the creation of the eccentricity files.
    If you want to use a coordinate file, you have two possibilities:
       a) leave this field blank: The menu system will show you a
          selection list of possible coordinate files. You may then
          select one of these files.
       b) enter the name of a coordinate file. The menu system will then
          use this file to propose entries to the eccentricity file.
    If you do not want to use a coordinate file, then specify NO.


Input/Output File:

  ECCENTRICITIES:
     If you specify option G or L (create), you have to enter the name
       of the new station eccentricity file to be created in this field.
     If you specify option U (update) you have two possibilities:
       a) leave this field blank: The menu system will show you a
          selection list of possible eccentricity files. You may then
          select one of these files.
       b) enter the name of the eccentricity file to be updated.

                                                                       SF
```

```
1.4.5  |          CREATE/UPDATE RECEIVER/ANTENNA TRANSLATION TABLE

Input File:
  TRANSLATION TABLE   > NO       <        (NO: not used)

Output File:
  TRANSLATION TABLE   > RECANT   <        (blank: same as input file)
```

```
1.4.5  |     CREATE/UPDATE RECEIVER/ANTENNA TRANSLATION TABLE      |  HELP

General Remark:
  Program to create or update a receiver/antenna name translation table.
  An example of such a table is given in {X:\INX\EXAMPLE.TRN}. The recei-
  ver/antenna name translation table is used by the program RXOBV3 (menu
  2.7.1) to translate the names given in the RINEX file headers to the
  names you want to have in the Bernese observation file headers.
  Example: if you use the translation table given here

  OLD RECEIV. TYPE  OLD ANTENNA TYPE  NEW RECEIV. TYPE  NEW ANTENNA TYPE

  *4000*SSE         *4000*SSE         TRIMBLE 4000SSE   4000ST L1/L2 GEOD

  then all the following receiver/antenna names in the RINEX headers
  will be translated to "TRIMBLE 4000SSE   4000ST L1/L2 GEOD":

  TRIMBLE 4000SSE   TRIMBLE 4000SSE
  TRIMBLE 4000 SSE  TRIMBLE 4000 SSE
  4000 SSE          TRIMBLE 4000 SSE        etc.

  See also {DAT271__} for additional information.

Input File:

  TRANSLATION TABLE:
```

```
    Specify the name of the file you want to update.
    Type NO to create a new receiver/antenna name translation table.

Output File:

  TRANSLATION TABLE:
    Specify the name of the file where you want to save the new values.
    If you want to save the changes to the same file as the input file
    (update) then you may leave this field blank.
                                                                       SF
```

```
 1.5.1    PROCESSING: FILENAME PARAMETERS FOR AUTOMATIC PROCESSING


  Station Parameters:
    $STATION1 > ZIMMERWALD      <     $STATION2 >                <
    ($i will be set to 2-char station abbrev, $STi to 4-char abbrev)

  4-character Parameters:
    $CD1      >                <       $CD2      >                <
    $CD3      >                <       $CD4      >                <

  3-character Parameters:
    $D1       >             <          $D2       >             <
    $D3       >             <          $D4       >             <

  2-character Parameters:
    $M   >          <       $O   >          <       $T   >          <
    $U   >          <       $V   >          <       $W   >          <
    $X   >          <       $Y   >          <       $Z   >          <

  6-character Session Parameters (+ - allowed):
    $JRSS1    >                      <  $JRSS2    >                      <
    $JRSS3    >                      <  $JRSS4    >                      <
    $JRS+1    >                      <  $JRS-1    >                      <
    $JRS+2    >                      <  $JRS-2    >                      <

  5-character Session Parameters (+ - allowed):
    $JRD1     >                      <  $JRD2     >                      <
    $JRD3     >                      <  $JRD4     >                      <
    $JD+1     >                      <  $JD-1     >                      <
    $JD+2     >                      <  $JD-2     >                      <

    $GDY1     >                      <  $GDY2     >                      <
    $GD+1     >                      <  $GD-1     >                      <
    $GD+2     >                      <  $GD-2     >                      <

  4-character Session Parameters (+ - allowed):
    $SS1      >                <       $SS2      >                <
    $SS3      >                <       $SS4      >                <
    $S+1      >                <       $S-1      >                <
    $S+2      >                <       $S-2      >                <

    $GW1      >                <       $GW2      >                <
    $G+1      >                <       $G-1      >                <
    $G+2      >                <       $G-2      >                <
```

```
 1.5.1   PROCESSING: FILENAME PARAMETERS FOR AUTOMATIC PROCESSING   HELP


  General Remarks:
    All the input fields of this panel specify some sort of
    "place holder" parameters. These parameters can be used to prepare an
    automatic processing: Each time such a parameter name appears
    in a panel input field the name of the parameter will be replaced by
    the corresponding parameter value defined in this panel {DAT151__.PAN}.

    Example: Let's have a look at the parameter $CD1 (the parameter name
             always starts with a $ character). Let's further assume that
             the value of this parameter (specified in panel DAT151__.PAN)
```

```
          is "ABCD". If the string $CD1 appears somewhere in an input
          field of a panel in the menu system this string will be
          replaced by the value "ABCD".

  Such $-variables may not be used in ALL panel input fields, but in all
  fields, where file names have to be specified as well as in the fields
  asking for a title line and in the panel {DAT031__.PAN} defining
  general file names.
  These $-variables can be used to prepare a semi-automated processing
  (e.g. CODCHK, CODSPP, MAUPRP, GPSEST .....) of a session.
  Once you have prepared all the panels using e.g. a $-variable for the
  session identification you will not have to change all the panels again
  when you process another session, but only the setting of the
  $-variable in the panel {DAT151__.PAN}.
  The Bernese Processing Engine (BPE) makes extensive use of these
  $-variables. The BPE, when starting the processing of a specific
  session, automatically sets most of these parameters. A list of the
  $-variables set by the BPE is given below at the end of this help
  panel.

Station Parameters:

  $STATION1, $STATION2:
    These parameters are mainly used to define station names (e.g. the
    name of the station to be fixed in GPSEST or of the station to be
    in the program SNGDIF to form baselines in a star pattern with this
    as center). The $-variables $1 and $2 will then automatically be set
    to the 2-character abbreviations of the station name $STATION1 and
    $STATION2 respectively. $ST1 and $ST2 will contain the corresponding
    4-character abbreviations. The abbreviations are given in the stat-
    ion abbreviation table (example: {X:\INX\DAT143__.PAN}) and may be
    defined or changed in menu 1.4.3.
    REMARK:
      - Make sure that the station coordinate file you use contains these
        stations.
      - Make sure that there exist 2- and 4-character abbreviations for
        these stations.

4-character Parameters:

  $CD1, $CD2, $CD3, $CD4:
    These parameters can be used as place-holders for any 4-character
    string. You may enter more than one 4-character string in these
    fields. If e.g. you specify the string "2001 2011 2021" in the field
    $CD1 and you use "*$CD1" in a file selection field in any panel then
    all the files with file names *2001, *2011, and *2021 will be
    selected (the asterisk is interpreted as wildcard character).
    RECOMMENDED VALUE: Use these parameters to replace strings containing
                       4 characters.

3-character Parameters:

  $D1, $D2, $D3, $D4:
    These parameters can be used as place-holder for any 3-character
    string. You may enter more than one 3-character string in these
    fields.
    RECOMMENDED VALUE: Use these parameters to replace strings containing
                       3 characters.

2-character Parameters:

  $M, $O, $T, $U, $V, $W, $X, $Y, $Z:
    These parameters can be used as place-holders for any 2-character
    string. See below what meaning these parameters have in the context
    of the BPE.
    RECOMMENDED VALUE: Use these parameters to replace strings containing
                       2 characters.

6-character Session Parameters (+ - allowed):
  These parameters should be used as place-holders for the specification
  of year and session in the format "yyssss" (yy=year, ssss=session,
  e.g. 962001). You may enter more than one 6-character string in these
  fields. E.g. "962001 962011 962021" could be entered for the variable
  $JRSS1 and this variable could then be used in any panel to select
  files of the three consecutive sessions. Another possibility is the
  use of "plus" and "minus" specifications in the form "yyssss +n -m",
  where yy=year, ssss=session, and n and m are integers. Example:
```

```
    962011 +1 -1 will be equivalent to the three sessions listed in the
    example above, namely 962001, 962011, and 962021.

  5-character Session Parameters (+ - allowed):
    These parameters should be used as place-holders for the specification
    of year and day of year in the format "yyddd" (yy=year, ddd=day of
    year). More than one string of 5 characters may be entered in these
    fields and "plus" and "minus" specifications are allowed (see above).

  4-character Session Parameters (+ - allowed):
    These parameters should be used as place-holders for the specification
    of 4-character sessions ($SSi) and the GPS week ($GWi). More than one
    string of 4 characters may be entered in these fields and "plus" and
    "minus" specifications are allowed (see above).


    List of $-variables set by the BPE (depending on the session to be
    processed; example: session 1121 of the year 1996 with +- parameters
    set to +1 -2, one session per day):

      Variable    Value                                        Example

      $D1         Day of the year of the session start time    112
      $M          Month of the session start time              04
      $O          *)
      $T          Day of the month of the session start time   21
      $U          *)
      $V          *)
      $W          *)
      $X          *)
      $Y          Year of the session start time               96
      $Z          *)
      $SS1        Session to be processed (with +- param.)     1121 +1 -1
      $SS2        Session to be processed (w/o  +- param.)     1121
      $S+1        Next session (in session table)              1131
      $S+2        Next session but one                         1141
      $S-1        Previous session                             1111
      $S-2        Previous session but one                     1101
      $JRD1       Year and day of the year (with +- param.)    96112 +1 -1
      $JRD2       Year and day of the year (w/o  +- param.)    96112
      $JD+1       Year and day of year of next session         96113
      $JD+2       Year and day of year of next but one session 96114
      $JD-1       Year and day of year of previous session     96111
      $JD-2       Year and day of year of prev. but one sess.  96110
      $JRSS1      Year and session (with +- param.)            961121 +1 -1
      $JRSS2      Year and session (w/o  +- param.)            961121
      $JRS+1      Year and session of next session             961131
      $JRS+2      Year and session of next but one session     961141
      $JRS-1      Year and session of previous session         961111
      $JRS-2      Year and session of previous but one sess.   961101
      $GW1        GPS week of session (with +- param.)         0850 +1 -1
      $GW2        GPS week of session (w/o  +- param.)         0850
      $G+1        GPS week of next session                     0850
      $G+2        GPS week of next but one session             0850
      $G-1        GPS week of previous session                 0849
      $G-2        GPS week of previous but one session         0849
      $GDY1       GPS week and day of week of session (with)   08500 +1 -1
      $GDY2       GPS week and day of week of session (w/o)    08500
      $GD+1       GPS week and day of next session             08501
      $GD+2       GPS week and day of next but one session     08502
      $GD-1       GPS week and day of previous session         08496
      $GD-2       GPS week and day of previous but one sess.   08495

    *) The variables $O, $U, $V, $W, $X, $Z will be set by the BPE if the
       variables V_O, V_U, ... are specified in the PCF-files.

                                                                          MR
```

```
 1.5.2   |            AUTOMATED PROCESSING: PRE-DEFINE BASELINES

   CAMPAIGN           >          <    (blank for selection list)
```

```
  OPTION                 > C <        (C = Create ; U = Update)

Input File:
  COORDINATES         >         <    (blank for selection list,
                                      NO: not to be used)
Input/Output File:
  BASELINE DEFINITION > BASLST   <    (Option U: blank for selection list)
```

1.5.2	AUTOMATED PROCESSING: PRE-DEFINE BASELINES	HELP

```
  General Remark:
    This program can be used to generate a so-called baseline definition
    file containing a list of baselines.
    Baseline definition files may be used by the following programs:
     - by SNGDIF (menu 4.3) to enforce the forming of pre-defined base-
       lines.
     - by COMPAR (menu 5.4.1) to limit the baseline statistics to the
       baselines listed in this baseline definition file.
     - by ADDNEQ (menu 4.8.1) to limit baseline statistics (repeatability)
       to the baselines listed in the baseline definition file.
   An example of a baseline definition file: {X:\INX\EXAMPLE.BSL}.

  OPTION:
    With this option you specify whether you want to create (C) a new or
    update (U) an existing baseline definition file.

Input File:

  COORDINATES:
    If you specify a coordinate file name in this field, the station names
      given in the coordinate file will be available to you for the
      definition of the baseline. You may then reference the stations by
      numbers instead of having to type the full station names.
    If you leave this field blank then the menu system will
      show a selection list from where you can select the file of your
      choice.
    If you specify a file name then the menu system will directly use
      this file without showing a selection list.
    If you specify NO the menu system will not use a coordinate file.

Input/Output File:

  BASELINE DEFINITION:
    If you select option C (create) you have to specify the name of the
      new baseline definition file.
    If you selected the option U (update), you have two possibilities:
      a) leave this field blank: The menu system will show you a
         selection list of possible baseline definition files.
         You may then select one of these files.
      b) enter the name of the baseline definition file you want to
         update.
                                                                      SF
```

1.5.2-1	PREDEFINITION OF BASELINES: SELECT STATION PAIRS	HELP

```
General Remarks:
  If you specified a coordinate input file you will see the list of
  stations available in the coordinate file to the left of the panel. You
  may then use the station numbers in the fields "# 1" and "# 2" instead of
  having to type the full station name in the fields "STATION 1" and
  STATION 2". The menu program will automatically update these columns.
  Press F1 to get help on the keys you may use to repeat or delete lines
  from the baseline table here.
                                                                      MR
```

```
1.9  |  CAMPAIGNS: REMOVE SUBDIRECTORIES  Selection of the Campaign

CAMPAIGN      >         <     (blank for selection list)
```

```
1.9  | CAMPAIGNS: REMOVE SUBDIRECTORIES  Selection of the Campaign | HELP

General Remark:
  This utility allows you to remove ALL the data files and directories
  of a campaign (defined in the campaign table).
  If you created (manually or using the menu system) some additional
  campaign-specific subdirectories you will have to add them to the list
  that will be displayed to you after this panel (see also {DAT12___}).
  If you work on a multi-user system then please make sure that you have
  the privileges to delete the corresponding directories.
  Before the data files and directories are actually deleted you will
  be asked for a confirmation. Use this utility with care !
                                                                      SF
```

B.4 Option and Help Panels for Menu 2 (Transfer)

```
2.0.1               FTP: RINEX DATA FROM GLOBAL DATA CENTERS

  CAMPAIGN          >         <        (blank for selection list)

 Download:
  STATION LIST      >         <        (blank for selection list )
  DATA CENTER       > CDDIS <          (CDDIS, IGN, SIO)
  OPTION            > REPLACE <        (ADD or REPLACE)

 Time Interval:
                      yy     ddd                yy     ddd
  FROM              > 94 < > 364 <     TO    > 95 < > 003 <
   or
  SESSION NUMBER    >     <            YEAR  >     <

 Output Files:
  PATH              > RAW  <     (blank for default name)
```

```
2.0.1             FTP: RINEX DATA FROM GLOBAL DATA CENTERS              HELP

 Download:
  This program is used to download RINEX files from the global IGS net-
  work available at one of the IGS global data centers. The program
  is, at present, only available on UNIX systems.

  STATION LIST:
   Enter the name of a file containing a list of 4-character site
   identifiers. An example of such a file is {X:\INX\EXAMPLE.FTP}.
   The 4-character site id should match the first 4 characters of the
   RINEX file(s) to be downloaded.

  DATA CENTER:
   Specify the IGS global data center from which you want to download
   the RINEX files. To minimize the internet traffic, you should ftp the
   RINEX data from the nearest global data center.

  OPTION:
   If "REPLACE" is set, the RINEX files are downloaded even if a copy
   already exists in the target directory. The existing version is
   overwritten. If "ADD" is specified, the program first checks whether
   the RINEX file has already been downloaded before. The ftp procedure
   gets the file only, if no local copy exists.


 Time Interval:
  The time interval for which you need RINEX data of some IGS sites may
  be specified in two ways: with the year and day of year of the start
  and end of the interval or with the session number and the year.
  Global IGS RINEX files always span 24 hours from 0:00 UT to 23:59:30 UT.
  Example 1 (time window):
                      yy     ddd                yy     ddd

  FROM:             > 94 < > 364 <     TO    > 95 < > 003 <

  Example 2 (session and year):

  SESSION NUMBER:   > 3640 <           YEAR  > 94   <


 Output Files:

  PATH:
   Specify the path of the directory (starting at the campaign directory)
   to which the RINEX files should be written. The default directory is
   given in {DAT032__.PAN RAWDATA (RINEX)}.
                                                                       MR
```

```
2.0.2 |                  FTP: IGS PRECISE ORBIT FILES

   CAMPAIGN       >          <    (blank for selection list)

 Download Options:
   ORBIT IDENT.   > IGS <         (IGS, COD, EMR, ESA, GFZ, JPL, NGS, SIO)
   DATA CENTER    > CDDIS <       (CDDIS, CODE, IGN, SIO)
   OPTION         > REPLACE <     (ADD or REPLACE)

 Time Interval:
                    yy     ddd                yy     ddd
   FROM           > 94 < > 220 <       TO    > 94 < > 240 <
     or
   SESSION NUMBER >      <             YEAR  >      <

 Output Files:
   PATH           > ORB  <        (blank for default name)
```

```
2.0.2 |                FTP: IGS PRECISE ORBIT FILES                | HELP

 Download Options:
   This program (script) is used to download IGS precise orbit files from
   one of the global data centers of from CODE. Orbits of a specific IGS
   Analysis Center may also be downloaded. This program is only available
   on a UNIX system at present.

   ORBIT IDENT.:
     Specify the 3-character code (also used as the first 3 characters of
     the precise orbit file name) of the IGS Analysis Center to get the
     precise orbits computed by this center by ftp or specify "IGS" to
     the IGS combined orbits.

   DATA CENTER:
     Specify the IGS global data center from which you want to download
     the precise orbit files. To minimize the internet traffic, you should
     ftp the precise orbit files from the nearest global data center.
     Setting "CODE" as data center name, the orbits will be downloaded
     from the anonymous ftp area at the AIUB.

   OPTION:
     If "REPLACE" is set, the precise orbit files are downloaded even if a
     copy already exists in the target directory. The existing version is
     overwritten. If "ADD" is specified, the program first checks whether
     the precise orbit file has already been downloaded before. The ftp
     procedure gets the file only, if no local copy exists.


 Time Interval:
   The time interval for which you need precise orbits may be
   specified in two ways: with the year and day of year of the start
   and end of the interval or with the session number and the year.
   Precise orbit files of the IGS Analysis Centers usually span a time
   interval of 24 hours (from 0:00 UT to 23:45:00 UT).
   Example 1 (time window):
                       yy     ddd                yy     ddd

   FROM:             > 94 < > 364 <       TO    > 95 < > 003 <

   Example 2 (session and year):

   SESSION NUMBER:   > 3640 <             YEAR  > 94   <


 Output Files:

   PATH:
     Specify the path of the directory (starting at the campaign directory)
```

```
     to which the precise orbit files should be written. The default
     directory is given in {DAT033__.PAN ALL ORBIT FILES}.

                                                                     MR
```

```
2.5.1.1 |       Trimble Rawdata Files to RINEX Files  (Main Data Panel)

   CAMPAIGN                >          <           (blank for selection list)

 Rawdata Observation File:
   FILELIST       >                                  <  (blank: create list)
   PATH           > X:\EUROCLUS\RAW\                 <
   EXTENSION                 >     <

 Output Files:
   SUMMARY FILE EXTENSION    > SUM <                    (blank: don't create)
```

```
2.5.1.1 |   Trimble Rawdata Files to RINEX Files  (Main Data Panel)   | HELP

 General remarks:

   With this and the following panels you select the processing options for
   the program TRRINEXO. The main purpose of this program is the creation
   of RINEX observation files from Trimble raw data files.

   The RINEX converter programs also run independently from the Bernese
   GPS Software. They use as primary options file a file called
   xxRINEXt.OPT (xx: 2-character program code, TR for Trimble, t: RINEX
   file type, O=observation, N=navigation) which has to exist in the
   current or default directory.

   More informations about the RINEX converter programs can be found in the
   file PCRINEX.TXT which is distributed together with the converters. The
   most recent converters (at least the PC executables) can be downloaded
   from our anonymous ftp account (ubeclu.unibe.ch, cd aiub$ftp, cd pcrinex).

 Rawdata Observation File:

   FILELIST:
     Full name (i.e. including path) of a file containing a list of the raw
     data file names (body of filenames plus extensions, no paths!).
     The list has to be left-justified, one filename per line.
     If this input field is left blank, the file list will be created
     interactively.
     RECOMMENDED VALUE: blank

   PATH:
     Path to the raw data files.
     EXAMPLE:  D:\TESTV34\RAW\

   EXTENSION:
     Extension of the raw data filenames. Used to generate a selection
     list for the interactive generation of the file list.
     RECOMMENDED VALUE: DAT

 Output Files:

   SUMMARY FILE EXTENSION:
     The RINEX converter program may create a summary file, the body of the
     filename is identical to the RINEX observation filename. It's extension
     may be selected here. An extension of the form %%S will be translated
     into yyS where yy is the two-digit year.
     To leave it blank will prevent the program from creating summary files.
     RECOMMENDED VALUE: %%S or blank

                                                                     WG
```

```
2.5.1.1.1          Trimble Rawdata Files to RINEX Files: Input 1

  Comments: > TRIMBLE TO RINEX                                           <
            >                                                            <
            >                                                            <

  Agency Running Program                    > ANONYMOUS          <

  Default Receiver Type:  Single Freq.      > TRIMBLE 4000ST     <
                          Dual   Freq.      > TRIMBLE 4000SSE    <

  Default Antenna Type :  Single Freq.      > 4000ST L1 GEODETIC  <
                          Dual   Freq.      > 4000ST L1/L2 GEOD   <

  Include Doppler Counts as Observations    > NO    <    (NO, L1, L1&L2)
  Include S/N Counts as "Observations"      > NO    <    (NO, L1, L1&L2)
```

```
2.5.1.1.1        Trimble Rawdata Files to RINEX Files: Input 1          HELP

   Comments:
     Up to three lines of comments that will be included into the headers
     of each generated RINEX file.

   Agency Running Program:
     Name of the agency/institution creating the RINEX files. Will be
     included into the RINEX headers.

   Default Receiver Type
     Single Frequency:
     Dual   Frequency:

   Default Antenna  Type
     Single Frequency:
     Dual   Frequency:

       Names for the receiver and antenna types that will be proposed to
       to the operator during execution of the RINEX converter program
       (provided the program runs in interactive mode, see next help panel).
       Depending on the type of the receiver (single or dual frequency
       receiver) the converter program assumes to have detected the program
       will propose the names in the "Single Frequency" or "Dual Frequency"
       input field.
       The final values will be included into the RINEX headers. They also
       have to agree with the values in the antenna phase center file (see
       e.g. {X:\GEN\PHAS_IGS.01}).
       RECOMMENDED VALUE: Use the values proposed by the International
                          GPS Service for Geodynamics (see
                          {X:\GEN\RCVR_ANT.TAB} and
         ftp://igscb.jpl.nasa.gov/igscb/station/general/rcvr_ant.tab)

   Include Doppler Counts as Observations:
     If L1 or L1&L2 is specified the doppler counts found in the raw data
     files are stored as D1 or D1 and D2 observations into the RINEX files.
     RECOMMENDED VALUE:  NO

   Include S/N Counts as "Observations":
     If L1 or L1&L2 is specified the raw signal strength values found in
     the raw data files are stored as S1 or S1 and S2 observations into the
     RINEX files.
     RECOMMENDED VALUE:  NO
                                                                          WG
```

```
2.5.1.1.2          Trimble Rawdata Files to RINEX Files: Input 2

   Signal to Noise Ratio              Minimum    Threshold    Maximum
     Frequency L1                    >    3  <   >    8  <   >   42  <
```