GPSEST 27-MAY-02 10:34

BERNESE GPS

SOFTWARE VERSION 4.2

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 LIST OF INPUT AND OUTPUT FILENAMES
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 GENERAL CONSTANTS           :  X:\GEN\CONST.
 SINEX GENERAL INPUT FILE    :  X:\GEN\SINEX.
 IONEX CONTROL FILE          :  X:\GEN\IONEX.
 POLE INFORMATION            :  X:\GEN\JMK2.ERP
 LOCAL GEODETIC DATUM        :  X:\GEN\DATUM.
 SATELLITE INFO              :  X:\GEN\SATELLIT.TTT
 SATELLITE PROBLEMS          :  X:\GEN\SAT_2002.CRX
 PHASE CENTER ECCENTRICITIES :  X:\GEN\PHAS_IGS.01B
 APRIORI COORDINATES         :  C:\JMK\STA\ITRF96.CRD
 STANDARD ORBITS             :  C:\JMK\ORB\112.STD
 RADIATION PRESSURE COEFF.   :   ---
 IONOSPHERE MODELS           :   ---
 CODE BIAS INPUT FILE        :   ---
 ANTENNA ORIENTATIONS        :   ---
 TROPOSPHERE ESTIMATES INPUT :   ---
 SITE ECCENTRICITIES         :   ---
 OCEAN LOADING TABLES        :   ---
 SATELLITE CLOCKS            :   ---
 ANTENNA ORIENTATIONS        :   ---
 COORDINATE RESULTS          :  C:\JMK\STA\GGRS.CRD
 ORBIT RESULTS               :   ---
 IONOSPHERE RESULTS          :   ---
 CODE BIAS OUTPUT FILE       :   ---
 ANTENNA RESULTS (GRID)      :   ---
 ANTENNA RESULTS (HARM)      :   ---
 IONEX OUTPUT FILE           :   ---
 VAR/COVAR MATRIX COORD.     :   ---
 VAR/COVAR MATRIX TOTAL      :   ---
 NORMAL EQUATIONS            :   ---
 RESIDUALS                   :   ---
 EARTH ROTATION PARAMETERS   :   ---
 IERS FORMAT ERP OUTPUT      :   ---
```

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 TROPOSPHERE CORRECTIONS     :   ---
 TROPOSPHERE GRADIENTS       :   ---
 TROPOS. SINEX OUTPUT        :   ---
 GRID PHASE CENTER OUTPUT    :   ---
 HARM. PHASE CENTER OUTPUT   :   ---
 SATELLITE CLK. FILE         :   ---
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 1. CAMPAIGNS
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 CAMPAIGN NAME      NUM STATION NAME       NUM STATION NAME       NUM STATION NAME       NUM STATION NAME       NUM STATION NAME
 ------------------------------------------------------------------------------------------------------------------------------------

 JMK             :    7 227020               3 JMK-T1-2000

 2. OBSERVATION FILES
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 JMK
```

MAIN CHARACTERISTICS:

FILE	OBSERVATION FILE HEADER	OBSERVATION FILE	SESS
1	C:\JMK\OBS\TRT11120.PSH	C:\JMK\OBS\TRT11120.PSO	1120

FILE	TYP	FREQ.	STATION 1	STATION 2	SESS	FIRST OBSERV.TIME	#EPO	DT	#EF	#CLK	ARC	#SAT	AMB.I.+S. W	AMB.I.+S. 12	#AMB	#CLUSTERS L1	#CLUSTERS L2	#CLUSTERS L5	#CLUSTERS RM
1	P	L1	227020	JMK-T1-2000	1120	2-04-22 13:33:00	446	15	0	E	E	1	7	N	Y	N	7	1	1	7	0

SATELLITES:

FILE	#SAT	SATELLITES
1	7	1 3 11 14 20 21 25

OBSERVATION SELECTION:

SAMPLING RATE : 0 SEC
ELEVATION CUT-OFF ANGLE : 15 DEGREES

3. GENERAL OPTIONS

A PRIORI SIGMA OF UNIT WEIGHT:

A PRIORI SIGMA OF UNIT WEIGHT : 0.002 M (SIGMA OF ONE-WAY L1 PHASE OBSERVABLE AT ZENITH)
MODEL FOR ELEVATION-DEPENDENT WEIGHTING : 1/COS(Z)

CORRELATIONS AND SESSIONS:

STRATEGY : CORRELATIONS CORRECTLY MODELLED
TIME INTERVAL : 1.00000 SEC (TO IDENTIFY EPOCH)

SESS	#FILE	FILE NUMBERS
1120	1	1

AMBIGUITY RESOLUTION STRATEGY:

AMBIGUITIES PRE-ELIMINATED ONCE PER SESSION

SYNCHRONIZATION ERRORS:

STRATEGY : SYNCHRONIZATION ERRORS NOT APPLIED

---

4. STATIONS

LOCAL GEODETIC DATUM:

DATUM NAME	ELL. PARAM./ SCALE	SHIFTS TO WGS-84	ROTATIONS TO WGS-84
ITRF96	A = 6378137.000 M	DX = 0.0000 M	RX = 0.00000 "
	1/F= 298.2572221	DY = 0.0000 M	RY = 0.00000 "
	SC = 0.00000D+00	DZ = 0.0000 M	RZ = 0.00000 "

A PRIORI STATION COORDINATES: C:\JMK\STA\ITRF96.CRD

			WGS-84 COORDINATES IN METERS			ELLIPSOIDAL COORDINATES IN LOCAL DATUM		
NUM	STATION NAME	OBS E/F/C	X	Y	Z	LATITUDE	LONGITUDE	HEIGHT (M)

```
------------------------------------------------------------------------------------------------------------------------------------

   7  227020           Y  FIXED    4581562.5510    2168945.8880    3858504.6450     37 27 49.481754     25 19 59.605504
219.7093
   3  JMK-T1-2000      Y  ESTIM    4582873.1827    2170838.1250    3855824.9555     37 26  1.144457     25 20 46.360562
173.6554
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-
 5. SATELLITE ORBITS
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 ARC CHARACTERISTICS:
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 ARC  START OF ARC       END OF ARC         SOURCE      #SAT SATELLITES
 ------------------------------------------------------------------------------------------------------------------------------------
-

   1  02-04-22  0:00:00  02-04-23  0:00:00  PR2002.112   27    1   2   3   4   5   6   7   8   9  10  11  13  14  15  18  20  21
22
                                                         23  24  25  26  27  28  29  30  31


 OSCULATING ELEMENTS:                     C:\JMK\ORB\112.STD
 -------------------

 REFERENCE SYSTEM:  J2000.0
 REFERENCE EPOCH :  52386.5645833 MJD   (2002  4 22 13 33  0.00)
```

SAT	S.MAJ.AXIS	ECCENTRIC.	INCLINAT.	NODE	PERIGEE	M. ANOMALY	PER.PASS.TIME
1	26559141.1	0.00529675	55.495010	84.076613	-96.853243	35.111923	52386.5159571
2	26558504.1	0.02202284	53.450746	-161.913465	-112.119062	-18.975708	52386.5908617
3	26562304.4	0.00313145	53.480647	-100.202090	-327.693086	148.944786	52386.3582741
4	26561499.5	0.00588184	55.586290	-35.650320	-17.523724	-5.145961	52386.5717109
5	26562803.3	0.00366740	53.631910	-160.657167	30.942786	-22.167164	52386.5952888
6	26559998.3	0.00645908	53.908991	-97.485234	-127.591108	45.759140	52386.5012088
7	26559904.5	0.01197121	54.010279	-99.175907	-112.393546	161.346565	52386.3411262
8	26562137.0	0.00816203	54.994125	144.680231	122.973665	54.248701	52386.4894421
9	26559094.8	0.01290392	54.204346	141.414996	46.417322	25.815306	52386.5288320
10	26560944.3	0.00504617	56.180718	23.137651	6.853060	-136.809416	52386.7540688
11	26559191.6	0.00053475	52.579026	-40.706614	-59.111313	130.995352	52386.3831685
13	26557552.2	0.00201940	55.736766	82.915006	7.840694	-95.332108	52386.6965961
14	26561158.9	0.00218282	55.430168	82.615066	-37.405625	79.591018	52386.4543458
15	26561492.2	0.00841314	55.967159	-32.949174	-254.287699	81.150088	52386.4521843
18	26560860.7	0.00257345	55.204955	25.677584	169.202610	-29.514976	52386.6054623
20	26561509.8	0.00199528	55.239372	22.695787	106.813593	-104.661090	52386.7095470
21	26558480.8	0.01811231	56.162488	23.472461	225.751256	-115.155029	52386.7240546
22	26559574.3	0.01516007	53.420964	-161.135251	44.621196	-153.385456	52386.7770108
23	26559963.2	0.01591238	56.358597	25.935247	-100.464809	-73.346072	52386.6661644
24	26559801.4	0.00915854	56.165078	-34.568050	-89.866881	32.260442	52386.5199045
25	26561027.5	0.00982343	53.795493	138.872955	-106.073909	76.015044	52386.4592995
26	26560499.1	0.01361325	55.657704	83.166366	19.285067	133.117548	52386.3802158
27	26560875.0	0.01613048	54.055369	140.287518	-140.047241	-10.331289	52386.5788924
28	26559316.1	0.00629050	54.979763	-157.007906	218.712292	-102.033979	52386.7058907
29	26540401.6	0.00841637	55.480409	81.437337	253.649152	-140.260746	52386.7586237
30	26563148.5	0.00619345	54.037639	-158.600000	75.915970	-92.504217	52386.6927206
31	26562166.4	0.01093908	53.979411	-99.196119	51.733210	94.670555	52386.4334525

SATELLITE PROBLEMS:

SAT	PROBLEM TYPE	ACTION	FROM	TO

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---------------

  12  BAD PHASE+CODE   OBS. REMOVED   97-06-04  0:00:00  99-12-31 23:59:59
  16  BAD PHASE+CODE   OBS. REMOVED   00-09-14  0:00:00  99-12-31 23:59:59
  32  BAD PHASE+CODE   OBS. REMOVED   90-01-01  0:00:00  99-12-31 23:59:59
 102  BAD PHASE+CODE   OBS. REMOVED   00-01-01  0:00:00  99-12-31 23:59:59
 110  BAD PHASE+CODE   OBS. REMOVED   99-09-05  0:00:00  99-12-31 23:59:59
 114  BAD PHASE+CODE   OBS. REMOVED   99-07-08  0:00:00  99-12-31 23:59:59
 115  BAD PHASE+CODE   OBS. REMOVED   01-01-29  0:00:00  99-03-31 23:59:59
 101  BAD PHASE+CODE   OBS. REMOVED   00-01-01  0:00:00  99-12-31 23:59:59
 108  BAD PHASE+CODE   OBS. REMOVED   00-01-01  0:00:00  99-12-31 23:59:59
 117  BAD PHASE+CODE   OBS. REMOVED   00-01-01  0:00:00  99-12-31 23:59:59
 118  BAD PHASE+CODE   OBS. REMOVED   00-01-01  0:00:00  99-12-31 23:59:59
 124  BAD PHASE+CODE   OBS. REMOVED   00-01-01  0:00:00  99-12-31 23:59:59
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 6. ATMOSPHERE
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 TROPOSPHERE MODEL:
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 NO TROPOSPHERE CORRECTIONS APPLIED


 SITE-SPECIFIC TROPOSPHERE PARAMETERS:
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 MAPPING FUNCTION USED FOR DELAY ESTIMATION:  DRY NIELL
```

TROPOSPHERE GRADIENT ESTIMATION : NO

PAR	STATION NAME	VALIDITY START	VALIDITY END	SIG_N (M)	SIG_E (M)	SIG_U (M)	ABS/REL
1	227020	2002 04 21 24.0	2002 04 22 6.0			5.00000	ABS
2	227020	2002 04 22 6.0	2002 04 22 12.0			5.00000	REL
3	227020	2002 04 22 12.0	2002 04 22 18.0			5.00000	REL
4	227020	2002 04 22 18.0	2002 04 23 0.0			5.00000	REL
5	JMK-T1-2000	2002 04 21 24.0	2002 04 22 6.0			5.00000	ABS
6	JMK-T1-2000	2002 04 22 6.0	2002 04 22 12.0			5.00000	REL
7	JMK-T1-2000	2002 04 22 12.0	2002 04 22 18.0			5.00000	REL
8	JMK-T1-2000	2002 04 22 18.0	2002 04 23 0.0			5.00000	REL

IONOSPHERE MODELS:

NO IONOSPHERE MODELS APPLIED

8. POLE COORDINATES AND TIME INFORMATION

A PRIORI POLE AND TIME INFORMATION FORM THE POLE FILE:

DATUM	TIME	X-POLE (")	Y-POLE (")	UT1-UTC (S)	GPS-UTC (S)	RMS XP (")	RMS YP (")	RMS DT (S)
		EP-CPO (")	PS-CPO (")			RMS EP (")	RMS PS (")	

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---------------

 02-04-22 12:00:00     0.03630     0.55510    -0.201859       13.        0.00003     0.00003     0.000009
                       0.00000     0.00000                               0.00000     0.00000
 02-04-23 12:00:00     0.03949     0.55492    -0.202780       13.        0.00003     0.00003     0.000010
                       0.00000     0.00000                               0.00000     0.00000
 CELESTIAL POLE OFFSET MODEL:  NO MODEL
 SUBDAILY POLE MODEL:          RAY
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 11. TEST OUTPUT
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 MIN. AND MAX. ELEVATION ANGLES AND MAX. SYNCHRONIZATION ERRORS:
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 SESS  FILE  STATION NAME 1    STATION NAME 2    MIN/MAX ELEV.  SYNCH. ERR. (NS)
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 1120    1   227020            JMK-T1-2000        15.0  83.7               0.0
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12. RESULTS (PART 1)

NUMBER OF PARAMETERS (PART 1):

PARAMETER TYPE	#PARAMETERS	#PRE-ELIMINATED		#SET-UP	#NO-OBS	#REF	#SINGULAR
STATION COORDINATES	3	0		3	0	0	0
AMBIGUITIES	0	0	(BEFORE INV)	1	1	0	0
SITE-SPECIFIC TROPOSPHERE PARAMETERS	8	0		8	0	0	0
TOTAL NUMBER OF PARAMETERS	11	0		12	1	0	0

NUMBER OF OBSERVATIONS (PART 1):

TYPE	FREQUENCY	FILE	#OBSERVATIONS
PHASE	L1	ALL	1727

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 TOTAL NUMBER OF OBSERVATIONS                              1727
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 A POSTERIORI SIGMA OF UNIT WEIGHT (PART 1):
 ------------------------------------------
 A POSTERIORI SIGMA OF UNIT WEIGHT  :    0.0028 M  (SIGMA OF ONE-WAY L1 PHASE OBSERVABLE AT ZENITH)
 DEGREE OF FREEDOM (DOF)            :      1716
 CHI**2/DOF                         :      2.00
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 STATION COORDINATES:                      C:\JMK\STA\GGRS.CRD
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 NUM  STATION NAME     PARAMETER    A PRIORI VALUE       NEW VALUE     NEW- A PRIORI  RMS ERROR   3-D ELLIPSOID
2-D ELLIPSE
 ------------------------------------------------------------------------------------------------------------------------
---------------
   3  JMK-T1-2000      X            4582873.1827       4582872.9644     -0.2183      0.0020
                       Y            2170838.1250       2170837.3504     -0.7746      0.0011
                       Z            3855824.9555       3855824.7012     -0.2543      0.0015
```

HEIGHT	173.6554	173.0809	-0.5746	0.0025	0.0025	7.2	
LATITUDE	37 26 1.144457	37 26 1.148334	0.1197	0.0009	0.0003	77.9	0.0003 77.6
LONGITUDE	25 20 46.360562	25 20 46.335887	-0.6051	0.0003	0.0009	-0.3	0.0009

SITE-SPECIFIC TROPOSPHERE PARAMETERS: (NOT SAVED)

		CORRECTIONS (M)			RMS ERRORS (M)			ZENITH VECTOR (")				ERROR ELLIPSE (M)	
REQU.	STATION NAME	NORTH	EAST	ZENITH	NORTH	EAST	ZENITH	ANGLE	RMS	RATIO	AZI	MAX RMS	MIN RMS AZI
1	227020			-0.84476			5.47614						
2	227020			-1.68952			4.47295						
3	227020			-4.22381			0.33782						
4	227020			-2.11190			5.00148						
5	JMK-T1-2000			-0.84580			5.47614						
6	JMK-T1-2000			-1.69160			4.47295						
7	JMK-T1-2000			-4.22899			0.33820						
8	JMK-T1-2000			-2.11449			5.00149						

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RMS ERRORS OF ELLIPS. COORDINATES AND COORDINATE DIFFER. IN MM (PART 1):

NUM		3
3	B	0.9
	L	0.3
	H	2.5

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SLOPE DISTANCES AND RMS ERRORS IN M (PART 1):

NUM		7 F
3	O	3532.5702
N	N	3532.2673
	RMS	0.0009